PLANNING COMMISSION AGENDA

October 20, 2020

WE PROVIDE EFFICIENT DELIVERY OF QUALITY PUBLIC SERVICES THAT ARE ESSENTIAL TO THOSE WHO LIVE AND WORK IN SAN RAMON

Eric Wallis, Chairperson • Jean Kuznik, Vice Chairperson
Gary Alpert, Planning Commissioner • Howard Frank, Planning Commissioner
Rick Marks, Planning Commissioner

TELECONFERENCE **Regular Meeting – 7:00 PM**

Agenda Questions: Please Call the Planning Services Division (925) 973-2560

Documents received after publication of this Agenda and considered by the Planning Services Division in its deliberation will be available for inspection only via electronic document transfer, due to the COVID-19 outbreak. See the COVID-19 provisions outlined below. Please call or email the Planning Services Division during normal business hours if you require access to any such documents.

CORONAVIRUS DISEASE (COVID-19) ADVISORY AND MEETING PROCEDURE

On September 14, 2020, the Health Officer of Contra Costa County issued Order No. HO-COVID19-28 that directed that all individuals living in the county to continue to comply with social distancing and face covering requirements and avoid most gatherings, and directing government agencies to comply with specified restrictions necessary to slow the spread of COVID-19.

Under the Governor's Executive Order N-29-20, this meeting may utilize teleconferencing. As a precaution to protect the health and safety of staff, officials, and the general public. Commissioners will not be physically in attendance, but will be available via video conference.

There will be no physical location for members of the public to participate in the meeting. We encourage members of the public to shelter in place and access the meeting online using the web-video communication application, Zoom. Zoom participants will have the opportunity to speak during Public Comment (for topics not on the agenda), in addition to each of the agendized items.

If you are submitting public comment via email, please do so by 6:00 p.m. on Tuesday, October 20, 2020 to planningcommission@sanramon.ca.gov. Please include "Public Comment 10/20/2020" in the subject line. In the body of the email please include your name and the item you wish to comment on. Written public comments submitted will be provided to the Commission prior to the start of the meeting. If you wish to make your comments heard during the public comments portion of the agenda item, you must participate in the Zoom conference and raise your hand using the "raise your hand" zoom function.

This Planning Commission meeting will be conducted on the web-video communication platform, Zoom. In order to view and/or participate in this meeting, members of the public will need to download Zoom from its website, www.zoom.com. It is recommended that anyone wishing to participate in the meeting complete the download process before the start of the meeting.

There will be zero tolerance for any person addressing the Commission making profane, offensive and disruptive remarks, or engaging in loud, boisterous, or other disorderly conduct, that disrupts the orderly conduct of the public meeting.

How to view the meeting remotely:

1. Livestream online at: https://cityofsanramon.zoom.us/j/95127232493
   Webinar ID: 951 2723 2493

2. Livestream online at: www.sanramon.ca.gov/YouTube

3. For audio access to the meeting by telephone, use the dial-in information below:

   +1 (669) 900-6833

   Webinar ID: 951 2723 2493

How to participate in the meeting remotely:

1. Provide live remote public comments: https://cityofsanramon.zoom.us/j/95127232493
   From a PC, Mac, iPad, iPhone or Android device

   Webinar ID: 951 2723 2493

   (To supplement a PC, Mac, tablet or device without audio, please also join by phone: +1 (669) 900-6833)

   To comment by video conference, click the "Raise Your Hand" button or *9 on your telephone to request to speak when Public Comment is being taken on the Agenda item. You will then be unmuted when it is your turn to make your comment for up to three (3) minutes. After the allotted time, you will then be re-muted.

2. Provide public written comments prior to the meeting by email, to planningcommission@sanramon.ca.gov.

   If you are submitting public comment via email, please do so by 6:00 p.m. on Tuesday, October 20, 2020 to planningcommission@sanramon.ca.gov. Please include "Public Comment 10/20/2020" in the subject line. In the body of the email please include your name and the item you wish to comment on. Written public comments submitted will be provided to the Commission prior to the start of the meeting. If you wish to make your comments heard during the public comments portion of the agenda item, you must participate in the Zoom conference and raise your hand using the "raise your hand" zoom function.

To assist you in preparing your testimony, please review the Planning Commission's guidelines

Suggestions for Providing Effective Testimony at a Planning Commission Public Hearing.

Welcome to the Planning Commission meeting.

No new matter will commence after 11:00 p.m. and meetings will be adjourned at 12:00 a.m. unless the Commission votes to extend the meetings for 30-minute increments.

Members of the audience may request to speak if the subject is listed as a PUBLIC HEARING. The Chairperson will recognize you during the course of the hearing and may specify the number of minutes you will be allotted to speak. Such limitation will take into account the number of persons wishing to speak and the time available. The procedure for the hearing is to have staff make a presentation, the applicant present the proposal and then the persons for and against the item may speak. Finally, the applicant has time for rebuttal. The hearing is then closed and brought to the Commission for discussion and action. There is no further comment permitted from the audience unless invited by the Planning Commission.

Public hearings may be continued from time to time. Notice of the continuance will be provided following the conclusion of each item no additional notification will be provided unless there is a change in the meeting date, time or location.

If the applicant or his/her representative fails to attend the Public Hearing concerning his/her application, the Planning Commission may take action to deny the application. An application may be entertained for continuance upon receipt of written notification of the applicant's inability to attend the hearing.

If you challenge in Court any zoning or planning actions taken by the Planning Commission, you may be limited to raising only those issues you or someone else raised at the public hearing conducted herein or in written correspondence delivered to the Planning Commission at or prior to the public hearing.

Decisions of the Planning Commission may be appealed within 10 (ten) calendar days of decision by filing a letter stating the grounds for the appeal along with the appropriate filing fee in the City Clerk's office.

1. CALL TO ORDER

2. ROLL CALL

3. PLEDGE OF ALLEGIANCE

4. PUBLIC COMMENTS OR WRITTEN COMMUNICATION

At this time, members of the public are encouraged to address the Planning Commission on any item not already included in tonight's agenda. Members of the public who are participating via Zoom will have the opportunity to make comments to the Planning Commission live through the Zoom application. Comments should not exceed three (3) minutes. No Commission action can be taken at this meeting on issues raised during Public comment, whether submitted by email or Zoom.

5. ADDITIONS AND REVISIONS

The Planning Commission Chair, by majority consent of the members, may introduce agendized items out of the regular agenda order of business.

6. CONSENT CALENDAR

7. APPROVAL OF MINUTES

7.1 Planning Commission - Regular Meeting - Oct 6, 2020 7:00 PM

8. CONTINUED ITEMS AFTER CLOSING OF PUBLIC HEARING

9. CONTINUED ITEMS - OPEN PUBLIC HEARING

9.1 Public Hearing: Bridges Golf Club Deck Addition (DPA 17-310-003; AR 17-200-027; and MUP 20-501-006); 9000 South Gale Ridge Rd.

Recommendation: Receive the Staff Report, Continue the Open Public Hearing, Take Public Testimony, and Continue the Open Public Hearing to November 17, 2020.

Location: 9000 South Gale Ridge Road (APNs: 222-020-013, 222-020-014, & 222-020-030) (see Attachment A for Vicinity Map)

Staff Report By: Ryan Driscoll, Associate Planner

9.2 CityWalk Development Agreements (DA 20-850-001 (BR 1A), DA 20-850-002 (BR 3A), and DA 20-850-003(BR 2600))

Recommendation: Staff Recommends that the Planning Commission Receive the Staff Report, Open the Public Hearing, Take Public Testimony, Close the Public Hearing, Discuss and Deliberate, and Adopt Resolution Nos. 15-20, 16-20, and 17-20 Recommending City Council Approval of the Proposed Development Agreements.

Location: Bishop Ranch 1A (APN: 213-120-121, 122, and 128), Bishop Ranch 3A (APN: 213-133-098, 099, and 100), Bishop Ranch 2600 (APN: 213-133-093, 096, and 097)

Staff Report By: Debbie Chamberlain, Community Development Director

10. PUBLIC HEARING - NEW ITEMS

10.1 Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001)

Recommendation: Receive the Staff Report, a Presentation by the Applicant, Open the Public Hearing, Take Public Testimony, Close the Public Hearing, Consider the Project, and If Appropriate, Adopt Resolution No. 18-20 Approving the Proposed Project.

Location: 3111 Fostoria Way (APN 218-112-014)

Staff Report By: Shinei Tsukamoto, Associate Planner

11. NON-PUBLIC HEARING ACTION ITEMS

12. STUDY SESSION/COMMISSIONER LIAISON REPORT AND INTEREST ITEMS/STAFF REPORTS

13. ADJOURNMENT

I hereby certify that the attached Planning Commission Agenda was posted 72 hours before the noted meeting:

Christina Franco

Christina Franco, City Clerk

Dated: October 16, 2020

MINUTES OF THE
CITY OF SAN RAMON PLANNING COMMISSION
October 6, 2020

1. CALL TO ORDER

2. ROLL CALL

Attendee Name	Title	Status	Arrived
Howard Frank	Commissioner	Present	7:00 PM
Gary Alpert	Commissioner	Present	7:00 PM
Eric Wallis	Commissioner	Present	7:00 PM
Rick Marks	Commissioner	Present	7:00 PM
Jean Kuznik	Commissioner	Present	7:00 PM

Prior to roll call, the Assistant City Attorney made an announcement that the meeting was conducted pursuant to the Governor's Executive Orders relaxing the requirements pertaining to remote meetings under the Brown Act. To facilitate social distancing and slow the spread of the Coronavirus (COVID-19) pandemic the Executive Orders authorize state and local legislative bodies, including the Planning Commission, to hold public meetings by teleconference. The Executive Orders allow public meetings accessible to the public via electronic means, including telephone.

The Planning Commission and Recording Secretary were instructed to take roll call votes for the meeting.

The Recording Secretary conducted Roll Call.

3. PLEDGE OF ALLEGIANCE

The Pledge of Allegiance was led by the Recording Secretary.

4. PUBLIC COMMENTS OR WRITTEN COMMUNICATION

5. ADDITIONS AND REVISIONS

6. CONSENT CALENDAR

7. APPROVAL OF MINUTES

7.1 Planning Commission - Regular Meeting - Sep 15, 2020 7:00 PM

Commissioner Marks's motion to approve Item 7.1, the minutes from the September 15, 2020 Planning Commission meeting, was seconded by Commissioner Alpert and approved 4-0-1.

RESULT:	**ACCEPTED [4 TO 0]**
MOVER:	Rick Marks, Commissioner
SECONDER:	Gary Alpert, Commissioner
AYES:	Alpert, Wallis, Marks, Kuznik
ABSTAIN:	Frank

8. CONTINUED ITEMS AFTER CLOSING OF PUBLIC HEARING

9. CONTINUED ITEMS - OPEN PUBLIC HEARING

10. PUBLIC HEARING - NEW ITEMS

10.1 CityWalk Development Agreements (DA 20-850-001 (BR 1A), DA 20-850-002 (BR 3A), and DA 20-850-003(BR 2600))

Recommendation: Staff Recommends that the Planning Commission Receive the Staff Report, Open the Public Hearing, Take Public Testimony, Close the Public Hearing, Discuss and Deliberate, and Adopt Resolution Nos. 15-20, 16-20, and 17-20 Recommending City Council Approval of the Proposed Development Agreements.

Community Development Director Debbie Chamberlain provided a PowerPoint presentation on the CityWalk Development Agreement and introduced the applicants.

Jerry Engen, Senior Vice President of Development for Sunset Development, further discussed the CityWalk Master Plan and the Development Agreement, and addressed parks and open space, as well as other components of the Development Agreement.

Patty Curtin, Sunset Development's land use attorney, spoke briefly about the Development Agreement.

Chair Wallis opened public comment.

Written late communication was received from Greenfire Law, on behalf of Jim Blickenstaff, raising concerns with the parks and open space impact and dedication fees, the affordable housing linkage fee, and other impact fees, and with the amount of affordable housing constructed, as well as concerns with the implementation of the EIR and traffic mitigation.

Additional written, late communication was received from Luz Gomez, commenting on the police substation, parks, the open space fee payment, the economic and fiscal impact analysis, project and zoning code changes, permitted uses, inclusionary housing, density, funding of City Services, and other terms and conditions outlined in the development agreement.

All written, late communication was provided to the Planning Commission prior to the meeting.

Minutes Acceptance: Minutes of Oct 6, 2020 7:00 PM (APPROVAL OF MINUTES)

Joyce Carr, San Ramon resident, voiced concerns about traffic.

Luz Gomez, San Ramon resident, voiced concerns with community engagement and public noticing.

Chair Wallis closed public comment.

Mr. Engen and staff responded to comments made by the public.

Commissioners asked several questions of the applicant and of staff, related to parks, open space, impact, and dedication fees.

Commissioners discussed concerns about the parks credit and impact fee, park facility amenities, improvement, and construction costs, as well as the Development Agreement's consistency with the findings in the Zoning Ordinance and General Plan, affordable housing units, and other terms and conditions of the Development Agreement.

Commissioner Alpert's motion to continue Item 10.1 to October 20, 2020 was seconded by Vice Chair Kuznik and approved 5-0.

RESULT:	**CONTINUED**	**Next: 10/20/2020 7:00 PM**

11. NON-PUBLIC HEARING ACTION ITEMS

12. STUDY SESSION/COMMISSIONER LIAISON REPORT AND INTEREST ITEMS/STAFF REPORTS

Commissioner Marks attended the Parks and Community Services commission meeting, where the proposed CityWalk Development Agreement was discussed.

Vice Chair Kuznik attended the Transportation Advisory Committee and shared updates on the Innovate 680 project, permit parking, the Crow Canyon widening project, the street smarts program, and the residential traffic calming program.

Vice Chair Kuznik and Chair Wallis attended the EBMUD presentation on water supply and water treatment plans.

Planning Manager Lauren Barr shared the calendar for upcoming Planning Commission meetings.

13. ADJOURNMENT

The meeting was adjourned at 10:03 PM.

Minutes Acceptance: Minutes of Oct 6, 2020 7:00 PM (APPROVAL OF MINUTES)

PLANNING COMMISSION
Staff Report

DATE: **October 20, 2020**

TO: **Planning Commission**

FROM: **Debbie Chamberlain, Community Development Director**
By: Ryan Driscoll, Associate Planner

SUBJECT: **Public Hearing: Bridges Golf Club Deck Addition (DPA 17-310-003; AR 17-200-027; and MUP 20-501-006); 9000 South Gale Ridge Rd.**

EXECUTIVE SUMMARY

The Applicant submitted project plans for a Development Plan Amendment, Architectural Review, and Minor Use Permit applications to construct deck addition on the west elevation of the existing Bridges Golf Club building for expanded private events and restaurant operations located at 9000 South Gale Ridge Road. The project also includes a request to allow a parking reduction with a valet parking service during private events.

On September 15, 2020, the Planning Commission held a public hearing for the proposed project, Upon receiving public comment on the project, the Planning Commission continued the open public hearing to the October 20, 2020 Planning Commission meeting and requested the Applicant address the Commission's comments.

The Applicant was unable to respond to the Planning Commission's comments by the October 20, 2020 continued public hearing date. However, the Applicant continues to work towards preparing a response regarding the Planning Commission's comments on the proposed project. Staff requests the Planning Commission continue the open public hearing to November 17, 2020 for continued review of the proposed project

RECOMMENDED ACTION

Receive the staff report, continue the open public hearing, take public testimony, and continue the open public hearing to November 17, 2020.

INTRODUCTION

Application:	Description:
DPA 17-310-003	Development Plan Amendment application to allow the modification of the existing site plan for a new deck addition on the west elevation of the existing Bridges Golf Club building and to expand the capacity of private events and restaurant operations.
AR 17-200-027	Architectural Review application for the proposed architectural building design and landscape improvements.
MUP 20-501-006	Minor Use Permit application to allow a parking reduction with a valet parking service during private events.

Location:

9000 South Gale Ridge Road (APNs: 222-020-013, 222-020-014, & 222-020-030) (see Attachment A for Vicinity Map)

Applicant:	Property Owner:
Mr. Thomas J. Owens Owens Design Consultants 145 N. 2nd Avenue, Suite 5 Oakdale, CA 95361	Shiv Resort Inc. (Mr. Anil Yadav) 3550 Mowry Ave., Suite 301 Fremont, CA 94538

BACKGROUND

On September 15, 2020, the Planning Commission held a public hearing for the proposed project, with a staff report describing the proposed project design and additional background information. At the public hearing, the Planning Commission received written and oral public comments with the majority of the public comments concerned with impacts related to noise, traffic, parking, pedestrian safety, hours of operation, and concerns with the proposed valet parking operation. The Planning Commission adopted a motion to continue the open public hearing to the October 20, 2020 Planning Commission meeting and requested the Applicant address the following comments:

- Revise the Parking Analysis to include the entire deck addition and outdoor patio areas
- Provide detailed information about the proposed valet parking service program operation
- Consider vehicle queueing if all 282 peak parking demand spaces are provided with the valet parking service
- To limit noise impacts to the surrounding area, prohibit use of the outdoor deck addition areas after 12:00 a.m.
- Provide a security and trash plan
- Revise the project plans to be internally consistent

- Conduct a community meeting with surrounding community

DISCUSSION/ANALYSIS

The Applicant was unable to respond to the Planning Commission's comments by the October 20, 2020 continued public hearing date. However, the Applicant continues to work towards preparing a response regarding the Planning Commission's comments on the proposed project. As a result, staff requests the Planning Commission continue the open public hearing to November 17, 2020 for continued review of the proposed project.

ATTACHMENT:

A: Vicinity Map

CITY OF SAN RAMON PLANNING SERVICES
Vicinity Map

San Ramon CALIFORNIA	**Development Plan Amendment (DPA 17-310-003), Architectural Review (AR 17-200-027), & Minor Use Permit (MUP 20-501-006)** **Bridges Golf Club Deck Addition** **9000 S. Gale Ridge Rd.** **(APNs: 222-020-013, 222-020-014, & 222-020-030)**	N (Not to Scale)

PLANNING COMMISSION
Staff Report

DATE: **October 20, 2020**

TO: **Planning Commission**

FROM: **Debbie Chamberlain, Community Development Director**
By: Debbie Chamberlain, Community Development Director

SUBJECT: **CityWalk Development Agreements (DA 20-850-001 (BR 1A), DA 20-850-002 (BR 3A), and DA 20-850-003(BR 2600))**

EXECUTIVE SUMMARY

The Applicant has submitted Development Agreements for the CityWalk, the approved Master Plan would be developed over 25 years and include up to 4,500 multi-family dwelling units, a 169-key hotel, 166,000 square feet of commercial space, several new parking structures, parks that are privately owned and maintained, and fully open to the public. Bishop Ranch 1A (9.87 acres) would be developed with approximately 550 to 750 dwelling units. Bishop Ranch 3A (10.43 acres) would be developed with approximately 650 to 950 dwelling units; a multi-story, 169-key hotel; and 70,000 square feet of office/retail uses. Bishop Ranch 2600 (100.1 acres) would be developed with approximately 2,600 to 3,525 dwelling units and 96,000 square feet of office/retail uses. Parking would be provided in structures as the Master Plan builds out. In certain cases, shared parking arrangements have been proposed where appropriate. Landscaping, bio-retention swales, and drainage basins would be installed throughout the planning area.

RECOMMENDED ACTION

Staff recommends that the Planning Commission receive the staff report, open the public hearing, take public testimony, close the public hearing, discuss and deliberate, and adopt Resolution Nos. 15-20, 16-20, and 17-20 recommending City Council approval of the proposed development agreements.

INTRODUCTION

Site Description:

The Master Plan area encompasses the Bishop Ranch 1A, Bishop Ranch 3A, and Bishop Ranch 2600 complexes (approximately 134.98 acres) and is surrounded by commercial developments within the City Center Mixed Use (CCMU) district, residential uses, and parks. The Bishop Ranch 1A and 3A complexes are currently undeveloped. The Bishop Ranch 2600 complex is

currently developed with a 1.75 million square-foot office building, a parking structure, surface parking lots, two water features, and pedestrian amenities. All of the sites can be accessed via Camino Ramon. Additionally, Bollinger Canyon Road provides access to Bishop Ranch 1A and Bishop Ranch 3A, and Bishop Drive and Executive Parkway provide access to Bishop Ranch 2600. The Master Plan area is currently served, and would continue to be served, by existing utilities and public services.

Location:

Bishop Ranch 1A	(APN: 213-120-121, 122, and 128)
Bishop Ranch 3A	(APN: 213-133-098, 099, and 100)
Bishop Ranch 2600	(APN: 213-133-093, 096, and 097)

Applicant:

Jerry Engen
Senior Vice President Development
Sunset Development Company
2600 Camino Ramon, Suite 201
San Ramon, CA 94583

Property Owner:

SBCA, LLC; BR3A, LLC;
BR 2600 CR, LLC
C/O Sunset Development Company
2600 Camino Ramon, Suite 201
San Ramon, CA 94583

General Plan Designation:
Mixed Use - City Center

Zoning District
CCMU (City Center Mixed Use)

Applications
Development Agreement applications (DA 20-850-001 (BR 1A), DA20-850-002 (BR 3A) DA20-850-003 (BR2 600)) with a 25-year term to ensure that the Applicant can implement the project in exchange for additional community-wide benefits.

Environmental Impact Report
The City Council adopted Resolution 2020-090 denying the appeal of the Planning Commission's certification of the Final Environmental Impact Report (FEIR), upholding, and recertifying the FEIR.

The FEIR consists of the Draft Environmental Impact Report, Response to Comments document, and the Mitigation Monitoring and Reporting Program and may be found at the following links:

Draft EIR and appendices:
<http://www.sanramon.ca.gov/CityWalkEIR> (EIR Project Page)

FEIR Response to Comments:
<http://www.sanramon.ca.gov/CityWalkEIRResponsetoComments>

Mitigation Monitoring Program:
<http://www.sanramon.ca.gov/CityWalkMitigationMonitoringReporting>

Memorandum Additional Response to Comment (August 4, 2020 staff report Attachment C link):
C: Memorandum- Responses to Late Comments Received on CityWalk Master Plan Draft EIR
<http://sanramonca.iqm2.com/Citizens/FileOpen.aspx?Type=4&ID=3622&MeetingID=2941>

Public Outreach/Notification:

On September 25, 2020 a notice of a Planning Commission public hearing for October 6, 2020 was mailed to all property owners within approximately 1,000 ft. of the subject property pursuant to Government Code Section 65091(a)(4) and Chapter D7-IV of the Municipal Code. On October 6, 2020, the Planning Commission continued the Public Hearing to October 20, 2020.

BACKGROUND/DISCUSSION

On July 18, 2019, Sunset Development filed a preliminary application for approval of a Master Plan concept for the CityWalk areas within Bishop Ranch Office Park. The Master Plan will build on the existing City Center approvals, respond to the General Plan Economic Element, and reflect the City's goal to prioritize housing growth in the City core while preserving existing retail, commercial, and open space. The Master Plan is intended to guide the development of residential uses, commercial uses, and public amenities within the Master Plan area to complement and support City Center Bishop Ranch. Buildout potential of the Master Plan is up to 4,500 dwelling units (over 27 years), a 169-key hotel, 166,000 square feet of commercial uses, three new parking structures, and 40.35 acres of park, privately owned and maintained, and fully open to the public.

Following public hearings on June 16, 2020 and July, 21, 2020, on August 4, 2020, the Planning Commission adopted Resolution No. 10-20 and No. 11-20 certifying the Environmental Impact Report and approving the CityWalk Master Plan. On August 14, 2020, Jim Blickenstaff and Joyce Carr (Appeal Letter), Aparna Madireddi, Rama Mehra collectively filed an appeal of Planning Commission approval of the CityWalk Master Plan and certification of the FEIR. On September 8, 2020, the City Council held the public hearing on the appeal, and adopted Resolution 2020-90 and 2020-091, denying the appeal, upholding, and recertifying the FEIR; and approving the CityWalk Master Plan.

DISCUSSION/ANALYSIS

The project applicant is requesting approval of three Development Agreements ("Agreements") for the CityWalk Master Plan Development, one for BR 1A, BR 3A, and BR 2600. More specifically, the Agreements would allow the development of the CityWalk Project to proceed in accordance with existing policies, rules and regulations, subject to the conditions of approval tied to the vesting tentative map, development plan, land use permit and architectural review applications.

The revised Development Agreements include only those exhibits which have been amended and discussed in this staff report. Those exhibits that have not been amended can be found in the

October 6, 2020 Planning Commission packet at the following link:
<http://sanramonca.iqm2.com/citizens/FileOpen.aspx?Type=1&ID=2693&Inline=True>

Planning Commission Meeting

The Planning Commission met on October 6, 2020 to discuss the proposed Agreements. Overall, the Commission acknowledged the value of entering into the Agreements but raised concerns regarding the proposed Park Credit and Fee payment. The Commission felt the land acquisition cost and construction cost assumptions in the Keyser Marsten Study that informed the Park Credit and Fee calculation were dated and should be updated, should contain an inflationary factor, and should not include land value as part of the credit. Additionally, the Commission felt the maintenance costs should be acknowledged.

Revised Park Credit and Fee Proposal

Development agreements provide cities the ability to negotiate community-wide benefits or improvements and ensure those improvements are constructed in a specified timeframe. Absent an agreement, improvements desired by the City may take years to be realized. Park funds are collected incrementally and prorated based on each building permit from a specific project. The funds are deposited into the Park Fund account and may be used citywide for capital improvements to existing parks or construction of new parks. Park funds collected are not required to be committed to a specific project area. Future residential projects will contribute to the Park Fund to facilitate construction of project identified in the City's Parks, Trails and Open Space Masterplan.

In the case of these Agreements, Sunset Development is requesting Fee Credit to offset their $49.3 million fee obligation, while providing privately owned, maintained, and publicly accessible parks, in perpetuity. The Amenity Phasing Schedule provides assurance that the CityWalk parks will be constructed as residents move in, and not years later. Absent the Agreements, Sunset is only obligated to pay the $49.3 million Park and Recreation Facility Impact Fee, with no guarantee as to when, or if, the City will be able to construct the required parks or even acquire the land for those parks. There is no nexus for the City to require construction, public access, and fee payment.

Staff has summarized the questions/comments from the Planning Commission's October 6th meeting, and included Sunset's revised Park Credit and Fee proposal. Additionally, Attachment G provides responses from Sunset Development to the Planning Commission comments.

1. *Parks must be a minimum of 2 acres to comply with the General Plan*
   The CityWalk project brings an urban, in-fill design to San Ramon. Traditionally, San Ramon has been developed as a suburban community, with single-family homes, and neighborhood parks that have been owned and maintained by the City. As an in-fill project, CityWalk will provide its residents and the City with new and unique park opportunities, supporting the following General Plan Policy 6.5-I-2: "Provide varied community park and recreational opportunities accessible to all City residents."

The Commission further discussed if the CityWalk parks less than 2-acres in size should receive park credit. General Plan Policy 6.5-I-3 states as follows: "Maintain a minimum of 2-acres in size for neighborhood parks." The supporting Policy language speaks to discouraging City maintained parks less than 2-acres in size. However, in the case of CityWalk, where the parks are publicly accessible, privately owned and maintained, and are not a mandate of the City to maintain, may receive park credit.

2. *Granting Parkland Dedication Credit for Private Parks is inconsistent with City Policy*
General Plan Policy 6.5-I-19 states, "Where appropriate, require new development to provide Public Spaces to enhance the recreation or leisure interactive experience of residents or visitors for passive or active use." The supporting text notes that "Public Spaces" may include such items as "interactive water elements, public art, gardens, trails and paths, plazas, labyrinths, picnic areas, tot-parks, pocket parks, basketball, bocce, or tennis courts and includes a balance of hardscape and landscape areas." The Policy further provides that the City may allow for partial or full parkland dedication credit for these types of public spaces. While the General Plan definition of public spaces identifies these facilities as being "publicly owned" by the City, providing a public easement over the property ensures public access in perpetuity, meeting the spirit and intent of "public space," Therefore, the City has the discretion to give credit for parks less than 2-acres in size.

3. *Can park credit be provided for the lakes?*
General Plan Policy 6.5-I-4 states "Provide passive and active recreational amenities within the City's parks to meet the needs of citizens of all ages and interests." The supporting text further states, "[w]hile it is important to provide recreation facilities for athletics and team sports, it is equally important to develop natural settings for the enjoyment of passive activities, such as picnicking or walking." The lakes provide a natural setting and a unique opportunity for passive activities, such as walking, boating and fishing. For reasons stated above, the City has the discretion to give full or partial credit for the lakes.

4. *Will a funding mechanism for park maintenance be required?*
The Agreements requires a Funding Mechanism, to be formed if expenditures exceed the revenues of the project, thus ensuring the project is cost-neutral to the City. However, the financial analysis conducted on the project indicates a net positive revenue to the City by project completion. Should the City have to bear the costs of maintenance, the calculations would first reduce the net positive revenue to the City to zero before the formation of a Funding Mechanism would be required. Given this, the City would realize a reduction in revenue prior to any Funding Mechanism being formed; therefore, credit for maintenance by Sunset is appropriate. .

Revised Park Credit and Fee Proposal

As discussed in Attachment A, the following is the revised proposal offered by Sunset Development.

Park Credit

- Total park credit is decreased from 48% to 43%, for a reduction in value from $36.7 million to $33.1 million. Credit for parks is proposed as follows:
    - City Green and Parkways receive 100% credit
    - Lake Parks receive 15% credit
    - Neighborhood Parks receive 25% credit

Off-site Park Construction

- Cost to construct off-site parks has increased from $8.81 million to $10.4 million
    - Includes cost of design
    - Adjustment of 3% for inflation every 5-years, commencing with construction of CityWalk

Park and Recreation Facility Park Impact Fee

- The Park Credit was decreased and the Park fee payment increased by $2 million, from $6.151 for a total fee payment of $8.157 million

The following is a summary table of the revised Park Credit and Fee Contribution:

City Receives	Revised Developer Contribution (2020 dollars)	Developer Contribution without Agreements (2020 dollars)
40.35 acres of Parkland	$33.1 million	$0
Off-site Park Construction Cost	$10.4 million	$0
Park and Recreation Facility Fee Payment	$8.157 million	$49.3 million
Total Contribution/Value	$51.657 million	$49.3 million

The revised park credit calculation retains the land valuation. CityWalk parks will have an easement, or other mechanism, to ensure public access in perpetuity, as if the land were dedicated to the City in fee for public purpose. Land dedicated for public purpose provides value to the City and its residents by bringing residents together through social and recreational activities. While the public access benefit is significant, the land value is significantly reduced, since it is no longer available for private development. By law, the City must provide compensation for public access over this private land.

Maintenance cost has not been included in the revised Park Credit and Fee Proposal. Sunset estimates over $18 million in maintenance cost to operate and maintain the 40.35 acres of park over the life of the project. If the parks were publicly dedicated, maintenance cost would be incurred by the City, and as discussed above, may or may not require a separate funding mechanism. If General Fund Revenues exceed City cost, the cost to maintain the parks would reduce the project revenues that would otherwise be contributed to the General Fund. It should

be noted that the cost of insurance and liability of owning the parks, which will be borne by Sunset, is not included.

Staff contacted Keyser Marsten to obtain updated land acquisition cost. The 2017 study identified a land acquisition cost of $36 per square foot. The updated land acquisition cost is approximately $40.37 per square foot, or $1.77 million per acre. Additionally, City staff independently verified Sunset's revised construction cost proposal against Engineering Services updated park construction cost. In 2020 dollars, the City estimates per-acre construction cost for facilities similar to Henry Ranch and the Wood Lot are approximately $331,000 per acre. The updated per-acre land acquisition and construction cost would apply when determining both a value for the park credit, and the City's cost to acquire and improve 38.65 acres of parkland elsewhere in the City. In 2020 dollars, 38.65 acres of parkland would cost the City $81.36 million, or for 40.35 acres, $85 million, exceeding Sunset's $49.3 million in park fee obligation.

Additional Planning Commission Questions and Comments Related to the Development Agreements.

Will the affordable housing units be built on site?
Sunset has committed to constructing all affordable housing units on site.

What is the timing for completion of off-site parks?
The Agreements have been revised so that construction of the off-site parks will be completed 6-months after commencement of construction.

How will changes to the timing of project construction, phasing and completion be considered?
There are a number of factors which may affect the phases in which a project will be constructed, ranging from market and economic shifts, lack of labor and materials, and as we have seen with the recent pandemic. Providing flexibility in construction phasing, while tying construction of amenities to a specific building permit, provides the developer with flexibility in constructing the project, but also the assurance the City receives the amenities required by the Agreements. The modification to Section 5.3 of the Agreements proposes, "changes will be reviewed by the Community Development Director and may not reasonably be withheld."

How is "publicly accessible" defined?.
Section 9(c) has been included to require the parks are open from dawn to dusk, consistent with City standards for public parks.

Provide design elements that will be anticipated in the all of the parks.
Section 9.1 (b) *Obligations and Credit under Park and Recreation Facility Impact Fee* have been modified to reference the adopted Design Guidelines and tie the amenities located within each park to the Design Guidelines and Parks and Community Services Department review of CityWalk parks programming and design.

Who decides and pays for future capital park improvements?
Section 9.1 (b) *Obligations and Credit under Park and Recreation Facility Impact Fee* has been updated to state Sunset will be responsible for future capital improvements, and such changes will be reviewed by the Parks and Community Services Department.

Benefits of a Development Agreement
Development agreements provide assurance to the applicant and the City that approval of the project will allow the applicant to proceed with the project under the existing policies, rules and regulations in effect at the time of approval for the duration of the project, subject to conditions of approval, and allows the City to receive certain community-wide benefits. Staff has provided the table below to summarize the key benefits the City is provided with and without the Agreements.

Executed Development Agreement	No Development Agreement
40.35 acres of privately maintained, publicly accessible parkland	• If constructed, 40.35 acres of parkland may be privately held with no public access, including City Green and Anabelle Lake • City will need to acquire and construct, and maintain 38.65 acres of parkland to meet General Plan build out projections, which creates a situation where required affordable housing may compete for land with required parkland. • Increases to the Park and Recreation Facility Impact fee will be limited due to Vesting protections under State law.
Input on design and programming of parks, including City Green and Anabelle Lake	With no public basis, no input on design and programming of parks, including City Green and Anabelle Lake
Sunset will construct and maintain a significant portion of the Walking District	Walking District constructed at City cost, including land acquisition costs.
Design and Construction of three (3) off-site parks	City responsible to fund, design, and construct 3 off-site parks
Open Space Fee paid by the 600th unit	Open Space Fee paid over build-out of the project. This could result in lack of critical funding mass to implement larger projects, and competing needs for the same resources.
Police Substation provided	No police substation provided
$750,000 Park Fund Contribution if Anabelle Lake amphitheater not constructed	No Park Fund Contribution
Sunset accepts liability for the parks	City would have liability and associated insurance costs for the parks
Future capital improvements covered	City responsible for future capital improvements

Additional Modifications to the Development Agreements

Section 4.2 Term
This section has been modified to reflect a term of 15-years, with one automatic 10-year extension.

Exhibit E - Park Fees and Credits
This exhibit has been updated to reflect the revised proposal.

Exhibit H - City Impact Fees
This exhibit has been updated to acknowledge payment of all necessary City Impact Fees.

Exhibit I - Park Credit
This exhibit has been updated to reflect the accelerated construction of the off-site parks.

FISCAL ANALYSIS

As presented at the October 6th Planning Commission meeting, and as modified with the amendments to the Agreements, not just focusing on the Park Credit and Fee proposal, the CityWalk project and the Agreements as negotiated provide the following estimated financial benefits to the City:

- $33.1 Million of constructed publicly accessible, privately owned CityWalk parks - City's cost to acquire and construct would be $83.5 Million (2020), resulting in $50.4 Million in value added
- $10.4 Million of off-site constructed parks
- $8.157 Million in Park Fees
- $3.3 million in accelerated open space fee payment
- $18 million in maintenance cost over the life of the Agreements
- $200,000 in construction sales tax annually

NEXT STEPS

Modifications recommended by the Planning Commission will be incorporated into updated Agreements for consideration by City Council.

ATTACHMENT:

A: Draft Planning Commission Resolution No. 15-20 for CityWalk Development Agreement Regarding Bishop Ranch Parcel 1A (DA 20-850-001)
B: Draft Planning Commission Resolution No. 16-20 for CityWalk Development Agreement Regarding Bishop Ranch Parcel 3A (DA 20-850-002)
C: Draft Planning Commission Resolution No. 17-20 for CityWalk Development Agreement Regarding Bishop Ranch Parcel 2600 (DA 20-850-003)

D: Exhibit E - Preliminary Parks and Amenity Improvement Plan to Proposed Development Agreements
E: Exhibit H - Excerpt from Adopted City Council Resolution No. 2020-033, Planning Services Fees to Proposed Development Agreements
F: Exhibit I - Park Fees and Credits Template to Proposed Development Agreements
G: Letter from Sunset Development to the Planning Commission, dated October 15, 2020
H: Letter from Patricia Curtin, Wendel Rosen, LLP to Chair Wallis and Planning Commissioners, dated October 15, 2020

RESOLUTION NO. 15-20

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF SAN RAMON RECOMMENDING APPROVAL OF A DEVELOPMENT AGREEMENT BETWEEN THE CITY OF SAN RAMON AND SBCA LLC REGARDING BISHOP RANCH PARCEL 1A

WHEREAS, the City of San Ramon ("City") is authorized, pursuant to Article 2.5 of Chapter 4 of Title 7 of the Government Code, Section 65864 through 65869.5 (the "Development Agreement Statute"), to enter into binding development agreements with persons having a legal or equitable interest in real property for the development of such property in order to establish certainty in the development process; and

WHEREAS, in accordance with the Development Agreement Statute the City adopted San Ramon Zoning Ordinance, Division D6, Chapter IV, establishing rules, regulations, procedures and requirements for consideration and adoption of development agreements; and

WHEREAS, the area of the city known as Bishop Ranch consists of approximately 585 acres and has been developed as a private business park community, and more recently approximately 14.57 acres has been developed as a retail shopping center, commonly known as City Center; and

WHEREAS, SBCA LLC ("Developer") has a legal interest in approximately 9.87 acres of property commonly known as Bishop Ranch located in the City ("Parcel 1A"). and

WHEREAS, it is the intent of Developer to develop Parcel 1A in accordance with the CityWalk Masterplan and the City's General Plan 2035; and

WHEREAS, City has determined that the CityWalk Masterplan is a development project for which this Development Agreement is appropriate, and that this Agreement will eliminate uncertainty in planning, provide for the orderly development of Parcel 1A and otherwise achieve the goals and purposes of the Development Agreement Statute; and

WHEREAS, Developer desires to receive the assurance that upon approval of the Development Agreement it may proceed with development of Parcel 1A as approved under the CityWalk Masterplan in compliance with the City's General Plan 2035, and its policies, objectives, land uses, standards, regulations, and designations; and

WHEREAS, this Development Agreement is consistent with the goals and policies established by the General Plan, as well as applicable provisions of the City's Zoning Ordinance, City Subdivision Ordiance, and the CityWalk Masterplan; and

WHEREAS, the Development Agreement as an implementation measure of the approved CityWalk Masterplan will not be detrimental to the health, safety and welfare of persons residing or working in the surrounding neighborhood or elsewhere in the City and will not be injurious or

detrimental to property or improvements in the surrounding neighborhood or elsewhere in the City; and

WHEREAS, an Environmental Impact Report (EIR) has been prepared and certified in accordance with the requirements of the California Environmental Quality Act of 1970 (CEQA) as amended for the CityWalk Masterplan and this Development Agreement is within the scope of the EIR since the Development Agreement implements the CityWalk MasterPlan.

WHEREAS, on October 6, 2020 and October 20, 2020, the Planning Commission, after giving notice pursuant to Government Code Sections 65090 and 65091 and San Ramon Zoning Ordinance Section D6-43 held public hearings on Developer's application for this Development Agreement, and

NOW, THEREFORE, BE IT RESOLVED, that the Planning Commission, in the exercise of its independent judgment, and based upon all the evidence in the record (including but not limited to all application materials, related CEQA documents, the written and oral staff reports, oral and written comments received by the City, and all other relevant documents contained in the administrative record) finds and determines as follows:

1. The recitals above are true and correct and are incorporated herein by reference.

2. For the reasons set forth more fully in Resolution 2020-091, the CityWalk Masterplan, and hence Development Agreement, are consistent with the General Plan 2035 Implementation Policy 2.3-I-14 in addition to other economic, land use, and park and recreation policies calling for the implementation of the "approved CityWalk Masterplan."

3. The Development Agreement will further those GP 2035 policies related to City Center and bring to fruition the City Center vision, which has been developed by the City over the last 20 years;

4. The Development Agreement is consistent with all provisions of Division 6, Chapter IV of the San Ramon Zoning Ordinance, and the City Code. The City complied with all provisions in the City Code applicable to development agreements. For the reasons set forth more fully in Resolution 2020-091, the CityWalk Masterplan, and hence the Development Agreement, are consistent with all Zoning Ordinance requirements in that it furthers the goals of the CityWalk Masterplan;

5. The Development Agreement will not be detrimental to the health, safety and general welfare; itwill not adversely affect the orderly development of the property or the preservation of property values for the reasons set forth more fully in Resolution 2020-091, because it implements an already approved and analyzed project; and

6. The Planning Commission has considered the effects of the Development Agreement on the housing needs of the region in which the City is situated and has balanced these needs against the public service needs of its residents and available fiscal and environmental resources. This Development Agreement further implements and is consistent with the approvals

for the reasons set forth more fully in Resolution 2020-091. Hence the Development Agreement, is consistent with all Zoning Ordinance requirements.

NOW, THEREFORE, BE IT FURTHER RESOLVED, that the Planning Commission, after considering all information in the administrative record and making the findings set forth above for consistency with the General Plan, does hereby adopt Planning Commission Resolution Number 15-20 recommending City Council adoption of the Development Agreement by and between the City of San Ramon and SBCA LLC, a copy of which is attached hereto as Exhibit A

PASSED, APPROVED AND ADOPTED on this 20th day of October, 2020 by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

_____
Eric Wallis,
Planning Commission Chairperson

ATTEST

_____
Jennifer Chavez, Planning Commission Clerk

Exhibit A - Development Agreement by and between the City of San Ramon and SBCA LLC Regarding Bishop Ranch Parcel 1A

DRAFT
~~9/22/20~~
10/15/20

Recording Requested By:

City of San Ramon

When Recorded Mail To:

City Clerk
City of San Ramon
7000 Bollinger Canyon Road
San Ramon, CA 94583

Space above this line for Recorder's Use

DEVELOPMENT AGREEMENT

BETWEEN THE

CITY OF SAN RAMON

AND

SBCA LLC

REGARDING BISHOP RANCH PARCEL 1A

023230.0001\5935243.1

DRAFT
~~9/22/20~~
10/15/20

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10/15/20~~9/22/20~~

THIS DEVELOPMENT AGREEMENT ("**Development Agreement"** or **"Agreement**") is between the CITY OF SAN RAMON, a Municipal Corporation ("**City**"), and SBCA LLC ("**Developer**") on certain property in the Bishop Ranch area and is entered into under the authority of §65864 et seq. of the California Government Code. The City and Developer are sometimes hereafter referred to collectively as the "**Parties**," or individually as a "**Party**."

RECITALS

A. California Government Code §65864 et seq. authorizes the City to enter into an agreement for the development of real property with any person or entity having a legal or equitable interest in such property in order to establish certain development rights in such property.

B. Pursuant to Government Code section 65865, City has adopted rules and regulations establishing procedures and requirements for consideration of development agreements (Title D6, Division D6 of the City Municipal Code) **("City Development Agreement Rules**"). This Development Agreement has been processed, considered and executed in accordance with the City Development Agreement Rules including, without limitation, Section D6, Chapter IV of the City Municipal Code.

C. Developer has a legal interest in approximately 585 acres of property commonly known as Bishop Ranch located in the City ("**Bishop Ranch Property**"). Developer has developed most of the Bishop Ranch Property as a business park community and more recently developed approximately 14.57 acres of the Bishop Ranch Property as a retail shopping center, commonly known as City Center.

D. On July 18, 2019, Developer filed a development plan application, titled CityWalk Master Plan ("**Master Plan**"), proposing development of Parcels 1A, 3A and 2600 which are part of the approximately 138 acres City Center Mixed Use (CCMU) District of the Bishop Ranch Property (**"Master Plan Property"**). The Master Plan included the following~~applications for~~:

(i) Vesting Tentative Map (MJ 19-900-001) to create individual parcels that would become smaller neighborhoods, allow for phased implementation of the Master Plan, and assist with financing;

(ii) Development Plan (DP 19-300-002) and Architectural Review (AR 19-200-056) to develop up to 4,500 dwelling units, a 169-key hotel, up to 166,000 square feet of retail uses, several new parking structures, and associated site improvements within Parcel 1A (9.87 acres), Parcel 3A (10.43 acres), and Parcel 2600 (100.1 acres);

(iii) Minor Use Permit (MUP 20-501-002) to allow shared parking reduction for proposed certain office uses, and a blended parking ratio for multi-family development and guest parking; ~~and~~

(iv) Land Use Permit (UP 19-500-004) to allow the community

buildings, privately-owned parks, amphitheater, lodging uses, conference/convention, and similar uses anticipated by the Master Plan; and~~.~~

(v) CityWalk Design Guidelines to guide the design of development within the Master Plan Property.

E. Developer intends to develop Parcel 1A ("**Property**") consistent with the uses in the Master Plan, including approximately 651 dwelling units and other associated improvements ("**Project"**).

F. Between August 26, 2019 and January 7, 2020, the City held twelve (12) public meetings to solicit input on the Master Plan from interested parties and the public with various City committees and commissions, including a joint study session with the City Council and Planning Commission, and three (3) study sessions with the Planning Commission.

G. On July 21, 2020 the Planning Commission held a public hearing on the Master Plan and its Final Environmental Impact Report ("**EIR**"). Public comments were made at this hearing and the Planning Commission discussed the adequacy of the EIR, Mitigation Monitoring and Reporting Program, Master Plan, and draft Resolutions and Findings recommending certification of the EIR and approval of the Master Plan. This hearing was continued to August 4, 2020 to accept additional public comment and provide further consideration of the draft Resolutions.

H. On August 4, 2020, after a duly noticed hearing, the Planning Commission took the following actions relating to the Master Plan:

(i) Environmental Impact Report for the Master Plan. Pursuant to the California Environmental Quality Act of 1970, Pub. Res. Code §§21000-21178, as amended and the Guidelines for Implementation of the California Environmental Quality Act, Cal. Code Regs. Title 14, §§15000-15387 (collectively, "**CEQA**"), certified the EIR and adopted CEQA Findings and a Mitigation Monitoring and Reporting Program for the Master Plan (SCH No. 2019090586) pursuant to Resolution No. 10-20.

(ii) Master Plan. After certification of the EIR and adoption of the related CEQA documents identified in Recital H~~G~~(i), approved the Master Plan, which included all the applications identified in Recital D~~C~~, pursuant to Resolution No. 11-20.

I. The Planning Commission decisions certifying the EIR and approving the Master Plan were appealed to the City Council by members of the public. On September 8, 2020, after a duly noticed hearing and after considering all testimony, the City Council approved (i) Resolution No. 2020-09 denying the appeal, recertifying the EIR and adopting the CEQA Findings and a Mitigation Monitoring and Reporting Program for the Master Plan (attached as Exhibit A), and (ii) Resolution No. 2020-091 denying the appeal and upholding the Planning Commission Resolution No. 11-20 approving the Master Plan (attached as Exhibit B).

J. The Property is subject to a development agreement between Developer and City, which has been amended seven times since it was originally approved and recorded in 1987. The last amendment, the "Seventh Amendment to that Portion of the Chevron Park Annexation and Development Agreement By and Between the City of San Ramon and SBCA, LLC and SBCB, LLC Relative to the City Center Project" was approved by the San Ramon City Council on February 25, 2020 and recorded on April 28, 2020, in the Official Records of Contra Costa County, California, as document number 20200079878 ("**Original Development Agreement as Amended**"). This Development Agreement supersedes the Original Development Agreement as Amended as it relates to the Property.

K. On September 22, 2020, Developer and the respective landowners filed applications for separate development agreements on Parcels 1A, 3A and 2600. This Development Agreement relates to Parcel 1A only.

L. The City Council has found that, among other things, this Development Agreement is consistent with its General Plan, Zoning Ordinance and implements the Master Plan as explained in the attached City Council Resolution Nos. 2020-090 and 2020-091. ~~.~~ The EIR, Master Plan, and this Development Agreement are referred to as "**Project Approvals**."

M. This Development Agreement vests Developer with the right to develop the Property consistent with the Project Approvals and any other necessary approvals required by the City that are consistent with and necessary to implement the Project Approvals ("**Subsequent Approvals**").

N. This Development Agreement has been properly reviewed and evaluated by the City in accordance with CEQA. The EIR thoroughly analyzed and reviewed all potential significant environmental impacts that could result from approval and implementation of the Project Approvals and thus, implementation of this Agreement.

O. On October 6, 2020 the Planning Commission held its first public hearing on the Development Agreement and on _____, the Planning Commission recommended adoption of this Development Agreement. On _____, the City Council waived the first reading, and introduced an ordinance relating to the approval of this Agreement. On _____, the City Council waived the second reading and adopted Ordinance No. _____ approving this Agreement (attached as Exhibit C).

NOW, THEREFORE, with reference to the foregoing recitals and in consideration of the mutual promises, obligations and covenants herein contained, City and Developer agree as follows:

AGREEMENT

Section 1. Description of Property.

The Property which is the subject of this Development Agreement consists of 9.87 acres and is depicted and described in the attached Exhibit D.

Section 2. Interest of Developer.

The Developer has a legal interest in the Property in that it desires to develop the Property consistent with the Project Approvals.

Section 3. Relationship of City and Developer.

It is understood that this Development Agreement is a contract that has been negotiated and voluntarily entered into by the City and Developer and that the Developer is not an agent of the City. The City and Developer hereby renounce the existence of any form of joint venture or partnership between them and agree that nothing contained herein or in any document executed in connection herewith shall be construed as making the City and Developer joint venturers or partners.

Section 4. Effective Date and Term.

Section 4.1 Effective Date.

The effective date of this Development Agreement shall be thirty (30) days after adoption of Ordinance No. _____approving this Agreement, as set forth in Recital N ("**Effective Date**").

Section 4.2 Term.

Consistent with City Development Agreement Rules outlined in Chapter IV, Division D-6 of the Municipal Code, ~~Section D6-46.A, t~~The initial term of this Development Agreement ("**Initial Term**") shall be twenty-five (25) years commencing on the Effective Date and extending to_____, 2035 as provided in Municipal Code Section D6-46.A. ~~, unless the Term is otherwise terminated, modified or extended by circumstances set forth in this Agreement.~~ Consistent with ~~City Development~~Municipal Code ~~Agreement Rules~~, Section D6-46.B, this Agreement shall automatically extend ten (10) years beyond the Initial Term to _____, 2045 ("**Term**") so long as the Parties are in good faith compliance with the terms and conditions of this Agreement. Written acknowledgement of this extension shall be provided by the City Manager. The Initial Term or Term may be terminated, modified or extended by circumstances set forth in this Agreement.

Section 4.3 Life of Project Approvals and Subsequent Approvals.

The term of any time-limited City approval, including but not limited to the Project Approvals and Subsequent Approvals, if initially shorter than the remaining term of this Development Agreement, shall automatically be extended for the duration of this Agreement (including any extensions). The term of any approval that is longer than the remaining Term of this Agreement shall only be extended as provided by State or City law. Consistent with Section 23 below, Excusable Delay; Extension of Time of Performance and Agreement, the Term of this Agreement and the term of any Project Approvals or Subsequent Approvals shall not include any period of time specified in Section 23 or which a development moratorium (including, but not limited to, a water or

sewer moratorium or water and sewer moratorium) or the actions of other public agencies that regulate land use, development or the provision of services to the land, prevents, prohibits or delays the construction of the Property or a lawsuit involving any such development approvals or permits is pending.

Section 5. Use of the Property.

Section 5.1 Right to Develop.

Developer shall have the vested right to develop the Property in accordance with the terms and conditions of the Project Approvals, Subsequent Approvals and this Development Agreement. To the extent the Project Approvals conflict with this Development Agreement, this Agreement shall prevail.

Section 5.2 Permitted Uses.

The permitted uses of the Property, the density and intensity of use, the height, bulk and size of proposed buildings, general provisions for reservation or dedication of land for public purposes and general location and maintenance of on-site and off-site improvements, general location of public utilities, and other terms and conditions of development applicable to the Property, shall be those set forth in the Project Approvals, Subsequent Approvals and this Development Agreement.

Section 5.3 Timing of Project Construction, Phasing and Completion.

Developer intends to build the Project in accordance with the Preliminary Parks and Amenity Improvement Phasing Plan as shown in Exhibit E attached to this Agreement ("**Phasing Plan**"). The Phasing Plan depicts the phasing of the Project that was created at the time this Agreement was negotiated. The purpose of the Phasing Plan is to improve the economic viability of the Project by allowing the phasing of infrastructure improvements to certain milestones. The Parties acknowledge that the ultimate Project phasing will be driven by market conditions and may deviate from the Phasing Plan. Before any changes are made by Developer ~~Any changes~~ to the Phasing Plan, Developer shall ~~will be~~ obtain the written ~~discussed in advance with~~ consent of the ~~the~~ Community Development Director, which shall not be unreasonably withheld. ~~Planning Director~~ The Parties acknowledge that changes to the Phasing Plan will likely occur and have determined that any changes will not require the Development Agreement or Project Approvals to be amended and shall automatically be incorporated into this Agreement and Project Approvals.

Notwithstanding the Phasing Plan or any provision of this Development Agreement, City and Developer expressly agree that there is no requirement that Developer initiate or complete development of the Property or any particular phase of the Property within any particular period of time, and City shall not impose such a requirement on any Project Approvals or Subsequent Approvals, except to ensure that necessary infrastructure is completed in an orderly fashion. Developer's discretion regarding the timing of construction and completion of the Property shall not affect Developer's obligation to diligently pursue to completion all phases of the development

once initiated. The Parties otherwise acknowledge that Developer cannot at this time predict when or the rate at which or the order in which phases will be developed. Such decisions depend upon numerous factors that are not within the control of Developer, such as market orientation and demand, interest rates, competition, excusable delays as defined in Section 23, below), and other similar factors. In light of the foregoing, the Parties agree that Developer shall be able to develop in accordance with Developer's own time schedule as such schedule may exist from time to time, and Developer shall determine which part of the Property to develop first, and at Developer's chosen schedule. In particular, and not in limitation of any of the foregoing, since the California Supreme Court held in *Pardee Construction Co. v. City of Camarillo*, 37 Cal.3d 465 (1984), that the failure of the parties therein to consider and expressly provide for the timing of development resulted in a later-adopted initiative restricting the timing of development to prevail over such parties' agreement, it is the Parties' desire to avoid that result by acknowledging that Developer shall have the right to develop the Property in such order and at such rate and at such times as Developer deems appropriate within the exercise of its subjective business judgment. Nothing in this Agreement shall exempt Developer from completing work required by a subdivision agreement, road improvement agreement or similar agreement in accordance with the terms thereof, nor shall this section of the Agreement affect the term of this Agreement or any related Project Approvals or Subsequent Approvals.

Section 5.4 Project Changes.

The Parties acknowledge that flexibility may be needed at the time of actual construction of the Project to respond to market demands and conditions. By way of example only, market conditions may dictate the timing and phasing of certain Project components. These potential changes are referred to as "**Project Changes**." As long Project Changes are substantially consistent with the Project Approvals and do not cause any new or increased significant environmental impacts, the Project Changes shall be approved administratively by the City without requiring an amendment to the Project Approvals or this Development Agreement; such Project Changes shall automatically be incorporated into the Project Approval and this Agreement.

Section 6. Applicable Law, Regulations and Official Policies

Section 6.1 Rules for Permitted Uses.

Unless otherwise expressly provided in this Section 6 of this Development Agreement, for the Term of this Agreement, the City's ordinances, resolutions, rules, regulations and official policies governing the permitted and conditional permitted uses of the Property; governing density and intensity of uses of the Property; governing design, improvement, and construction standards and specifications; governing the maximum height, bulk and size of proposed buildings; and those in the Project Approvals, shall be those in force and effect on the Effective Date of this Agreement ("**Applicable Law**"). Notwithstanding the foregoing, Developer may elect at its sole discretion to comply with or receive the benefits of changes in Applicable Law by providing written notice to City of said election.

Section 6.2 Uniform Codes Applicable.

Unless expressly provided in Section 5 of this Agreement, development of the Property shall be constructed in accordance with the provisions of the City's adopted Uniform Building, Mechanical, Plumbing, Electrical and Fire Codes and Title 24 of the California Code of Regulations, relating to Building Standards, in effect at the time of approval of the appropriate building, grading, or other construction permits for such development.

Section 6.3 Inclusionary Housing Obligations.

Developer shall comply with the inclusionary housing obligations set forth in Municipal Code Section C4-177, attached as Exhibit F. City agrees that Developer may satisfy a portion or all the affordable requirements through an alternative approach in accordance with the City Municipal Code Sections C4-179 and C4-177. Developer has agreed to provide all inclusionary housing units on the Master Plan Property.

Section 6.4 Point of Sale Determination.

The Parties desire to identify the Project site as the "point of sale" location to allow the remittance of construction sales tax to the City. The Parties shall work together to designate the Property as the point-of-sale location for construction sales tax purposes consistent with all applicable local, state and federal laws. Compliance with this Section 6.4 satisfies Developer's obligations in Condition of Approval no.11 (Construction Sale Tax Sub-Permit) in City Council Resolution 2020-091 approving the Master Plan.

Section 6.5 Allocation and Transfer of Dwelling Units and Building Square Footage.

The Master Plan includes the approval of up to 4,500 dwelling units and 166,000 square feet of commercial uses (in addition to other uses). The allocation of the dwelling units and commercial square footage approved shall be identified in Subsequent Approvals for each parcel (Parcel 1A, 3A and 2600) within the Master Plan area. The units and commercial square footage can be transferred amongst the parcels so long as the uses in the Master Plan for that parcel are allowed by the City Center Mixed Use (CCMU) zoning district and the maximum approved unit count or commercial square footage in the Master Plan is not otherwise exceeded. Such transfers are contemplated and shall not require an amendment to this Development Agreement or the Project Approvals.

Section 7. Funding of City Services.

The Bishop Ranch Economic and Fiscal Impact Analysis, Summary of Results, (February 7, 2020) prepared by HR&A Advisors, Inc. ("**2020 BR FIA**") concluded that, after full buildout of the Master Plan Properties, the development would generate approximately $600,000 (in 2019 dollars) annually in new net revenue to the City in excess of the projected cost for providing city services. This conclusion is dependent

on Contra Costa County agreeing to Amendment #4 to the Bishop Ranch Tax Sharing Agreement, which would allow the City to receive property tax on residential uses in perpetuity. The Parties recognize that material changes to the Project and/or in the assumptions used in the methodology of the 2020 BR FIA (collectively, referred to as "**Material Change**") could create a revenue shortfall up to Project Completion as defined below. If a shortfall occurs, the Parties shall establish an appropriate funding mechanism to fund the shortfall, as described below, in providing certain city services in accordance with this Section 7. "**City Services**" as defined hereafter in this Section 7 means the actual cost of city services directly caused by the Project that are not already financed and provided by Developer to the Project. Compliance with this Section 7 satisfies Developer's obligations in Condition of Approval n~~N~~o. 12 (Funding City Services) in City Council Resolution 2020-091~~(Funding City Services)~~ (**"COA no. 12"**) approving the Master Plan (**"Funding Mechanism"**).

Section 7.1 Determining Need for Funding Mechanism.

(a) Determination of Shortfall During Project Construction.

If during Project Construction and before Project Completion (as both defined below), the Parties determine that a Material Change has occurred, the Parties shall meet and confer to determine if an Updated Fiscal Impact Analysis (**"Updated FIA"**) needs to be prepared for the purpose of assessing whether a Construction Shortfall exists. If an Updated FIA shows that a Construction Shortfall exists or is projected to occur, a Funding Mechanism shall be formed to cover the Construction Shortfall. If at any time the Parties determine a Material Change does not result in a Construction Shortfall, and a Funding Mechanism is in place, the City shall no longer levy the assessment or tax in place unless and until a future Material Change occurs consistent with this Section 7.

"**Construction Shortfall"** is defined in this Section 7 as a shortfall during Project Construction between the General Fund Revenues generated by the Project, exclusive of construction sales tax, and the cost of providing City Services to the Project. "**Project Construction**" is defined in this Section 7 as the time between the issuance of the first building permit and the issuance of the last certificate of occupancy on the Project.

(b) Determination of Shortfall At Project Completion.

If at Project Completion (as defined below), the Parties determine that a Material Change has occurred, the Parties shall meet and confer to determine if an Updated FIA needs to be prepared for purposes of assessing whether a Completion Shortfall exists.

"Completion Shortfall" is defined in this Section 7 as a shortfall at Project Completion between the permanent on-going General Fund Revenues generated from the Project and the cost of providing City Services to the Project. **"Project Completion"**

is defined in this Section 7 as the date of the issuance of the last certificate of occupancy on the Project. Developer shall provide written notice of Project Completion to the City Manager.

i. Funding Mechanism Already in Place.

If a Material Change occurs and an Updated FIA substantiates that a Completion Shortfall exists or is projected to occur, the Funding Mechanism shall remain in place and shall be reviewed as part of the Annual Review as set forth in Section 7.2(c). As part of the Annual Review, if the City determines that a Completion Shortfall continues to exist, the Parties shall determine the proper amount of the assessment or tax to levy for that given year.

If, based on an Updated FIA or if one was not required, it is determined that a Completion Shortfall does not exist and is not projected to occur, the City agrees to terminate and remove the Funding Mechanism.

ii. Funding Mechanism Not in Place.

If a Material Change occurs and an Updated FIA substantiates that a Completion Shortfall exists or is projected to occur, and there is no Funding Mechanism in place, a Funding Mechanism shall be created to address this Completion Shortfall. Developer agrees to participate in the formation of the Funding Mechanism and vote in favor of the Funding Mechanism and assessment or tax amount consistent with Section 7.2(d) below.

If, based on an Updated FIA or if one was not required, it is determined that a Completion Shortfall does not exist and is not projected to occur, a Financing Mechanism shall not be created for the Project and Developer shall have no further obligations under this Section 7.

Section 7.2 General Provisions.

(a) Formation of a Funding Mechanism.

The documents related to forming a Funding Mechanism shall calculate and determine the rate and method of apportionment of the Funding Mechanism, including an annual adjustment to account for cost increases. The Parties agree that the maximum annual adjustment shall be the lesser of (i) CPI (Consumer Price Index - All Urban Consumers (San Francisco-Oakland-Hayward, CA) plus two (2) percent or (ii) CPI plus four (4) percent, for any given year.

(b) City Services Does Not Include Services Performed by Developer under Maintenance Agreements.

The services provided by Developer under (i) the City's required standard agreement to be prepared for maintenance of building exteriors, landscaping and parking lot areas between Developer and City that will be finalized and recorded before a

certificate of occupancy is issued under the first building permit for the Project, and (ii) the Agreement for Maintenance of Landscaping Within the Public Rights-of-Way in Bishop Ranch between Sunset Development Company and City dated _____ (a copy of this agreement is attached as Exhibit G) shall not be considered in determining if a Construction Shortfall or Completion Shortfall exists since those agreements will include or include their own remedies.

(c) Timing to Determine if Material Change has Occurred.

Beginning in year five after commencement of Project Construction, and with every Annual Review up until Project Completion, Developer shall demonstrate, to the satisfaction of the City Manager, whether a Material Change has occurred. If a Material Change has occurred, the Parties shall determine if an Updated FIA is needed to determine a Construction Shortfall or Completion Shortfall. If no Material Change has occurred, then no further action shall be required by either Party.

(d) Developer Obligations and Methodology of Updated Fiscal Impact Analysis

Developer shall be responsible for funding any Updated FIA, if required, and all administrative costs associated with the creation and imposition of a needed tax or assessment. The Updated FIA shall be prepared using the same methodology used in the 2020 BR FIA. Developer agrees not to create a barrier that would allow a majority protest to prevent a tax or an assessment pursuant to this Section 7 from being approved and levied. If necessary, Developer will cause a Funding Mechanism to be in place and funded before a sale of a portion of the Project is completed, if that sale could prevent the Developer from forming and funding a Funding Mechanism on the Property, and if a Material Change will occur as a result of the sale and an Updated FIA determines a Construction Shortfall or Completion Shortfall exists. In addition, Developer hereby agrees not to protest the amount of a tax or an assessment limit or levy imposed pursuant to this Section 7 and as substantiated by an Updated FIA.

Section 7.3 Police Services.

Before occupancy of the 1700th residential unit within the Master Plan Property, developer of Parcel 3A shall construct one office of no more than approximately 200 sq. ft for a police substation and the City agrees to furnish and provide all necessary equipment for the substation. This agreement is set forth in the development agreement between BR3 LLC, the developer of Parcel 3A, and the City that is being processed by the City at the same time as this Agreement. Developer will assure adequate financing of City Services, including police services, are provided to the Project as discussed in this Section 7. The City acknowledges that these obligations relating to funding police services by Developer are complete and full satisfaction of Condition of Approval n~~N~~o. 14 (Police Services) in City Council Resolution No. 2020-091 approving the Master Plan.

Section 8. Applicable Fees.

Section 8.1 Processing Fees.

The Project shall be subject to the processing fees in the amounts in effect at the time of the applicable application filing, so long as the amounts then in effect are applicable Citywide and to similar applications.

Section 8.2 Impact Fees.

The Project shall be subject to only those City D~~d~~evelopment I~~i~~mpact F~~f~~ees (and the associated cost of inflation adjustments specified in the enabling legislation for that development impact fee) and amounts listed o~~i~~n pages 4 and 5 in the attached Exhibit H~~, City Impact Fees~~. City shall not impose on the Project any new fees ~~categories~~ or increases in any development impact fees not listed on Exhibit H~~, on the Project~~, including Subsequent Approvals, provided the Subsequent Approvals are substantially consistent with the terms of this Agreement and the General Plan.

Section 9. Parks and Fee Credits, and Open Space.

Section 9.1 Provision and Maintenance of Parks and Fee Credits

(a) Application of Parkland Dedication Rules.

The Parties acknowledge the City's Parkland Dedication rules and regulations in Title C, Division C5, Chapter X of the City's Municipal Code do not apply to rental units ("Parkland Dedication Rules"). If the Developer builds for-sale units or other products that would invoke the application of the Parkland Dedication Rules, the City may impose the Parkland Dedication Rules on those products.

(b) Obligations and Credit under Park and Recreation Facility Impact Fee.

Developer is subject to the Park and Recreation Facility Impact Fee in Title C, Division C4, Chapter IX of the City's Municipal Code ("Park and Recreation Facility Impact Fee"). Consistent with Condition of Approval no. 13 (Park Fees) in City Council Resolution 2020-091, Developer shall design, ~~and~~ construct and maintain the parks within the Master Plan Property ("Master Plan Parks"). The Master Plan Parks shall be open to the public and operate in accordance with the City's park access rules (open from dawn to dusk). Developer shall work with the Community Development Director in preparing and executing written recordable agreement(s) (i.e., easement, right of access agreement, license) to assure the Master Plan Parks remain accessible to the public in perpetuity. Separate agreements may be prepared for each Master Plan Park to allow recordation of the agreement on each Park property before the Park is built. Developer shall work with the Parks and Community Services Department on programming (i.e., scheduling of special events and activities) and the design of the Master Plan Parks consistent with the CityWalk Design Guidelines.

In addition, Developer shall design and construct Henry Ranch and Wood Lot parks and install a synthetic turf field at Iron Horse Middle School ("Off-site Parks") in accordance with Exhibits E and I. ~~publicly accessible community and neighborhood parks, and provide landscaped areas as set forth in the Project Approvals~~. Developer shall work with the Parks and Community Services Department the design of the Off-site Parks.

Developer shall receive credit against the ~~City's~~ Park and Recreation Facility Impact Fee for the provision, construction and maintenance of the Master Plan Parks and for the design and construction of the Off-site Parks as shown in Exhibit I. ~~se parks and landscaped areas as detailed in the attached Exhibit I, Park Fees and Credits.~~

(c) Maintenance of and Capital Improvements in Master Plan Parks.

Developer agrees to maintain the Master Plan Parks in accordance with the City's adopted rules and regulations relating to maintenance of public parks and shall be responsible for all future capital improvements in these Parks during the Term of this Agreement. Prior to the expiration of the Term, the Parties shall meet to determine the future maintenance and capital improvement obligations for the Master Plan Parks. Developer may elect to continue with these obligations at its own expense or the City shall assume these obligations. If the City assumes these maintenance and capital improvement obligations and a shortfall exists from the revenues generated by the Project and the cost of providing these services, Developer shall make up that financial shortfall.

(d) Full Satisfaction of Park Obligations.

The City acknowledges that the requirements set forth in this Agreement are complete and full satisfaction of Developer's obligations in Condition of Approval no. 13 and pursuant to the Park and Recreation Facility Impact Fee.

Section 9.2 Open Space Fee.

Developer is subject to the City's Open Space Development Impact Fee in Title C, Division C4, Chapter XI of the City's Municipal Code ("Open Space Fee"). Developer shall pay the Open Space Fee at a maximum of $750 per unit in two payments. Developer shall pay fifty percent (50%) of the total Open Space Fee for the Project upon the issuance of the first building permit for the Project and the remaining fifty percent (50%) upon the issuance of the 600th building permit or the last building permit for the Project, whichever is sooner. ~~The City acknowledges that these obligations relating to parks are complete and full satisfaction of Condition of Approval No. 13 (Park Fees) in City Council Resolution No. 2020-091 approving the Master Plan.~~

Section 10. Moratorium Not Applicable.

Notwithstanding anything to the contrary contained herein, in the event an ordinance, resolution or other measure is enacted, whether by action of City, by initiative, referendum, or otherwise, that imposes a building moratorium, a limit on the rate of development, or a voter-approval requirement which affects the Developer's ability to develop all or any part of the Property, City agrees that such ordinance, resolution or other measure shall not apply to the Property, this Development Agreement, the Project Approvals or the Subsequent Approvals unless lawfully imposed by City as part of a validly adopted declaration of a local emergency.

Section 11. Amendment or Cancellation.

Section 11.1 Modification to Address Conflict with State or Federal Laws.

In the event that state or federal laws or regulations enacted after the Effective Date of this Development Agreement prevent or preclude compliance with one or more provisions of this Agreement or require changes in plans, maps, permits or entitlements approved by the City, the Parties shall meet and confer in good faith in a reasonable attempt to modify this Agreement to comply with such federal or state law or regulation. Any such amendment or suspension of the Agreement shall be approved by the City Council in accordance with California Government Code §65864 et seq. To the extent any State or Federal regulation caused a delay, the Parties may invoke the provisions in Section 22, Excusable Delay; Extension of Time of Performance and Agreement.

Section 11.2 Amendment by Mutual Consent.

This Development Agreement may be amended in writing from time to time by mutual consent of the Parties hereto and in accordance with the procedures of California Government Code §65864 et seq. and this Agreement.

Section 11.3 Insubstantial Amendments.

Notwithstanding the provisions of Section 11.2, any amendments to this Development Agreement which do not relate to (a) the Term as provided in Section 4.2; (b) the permitted uses of the Property as provided in Section 5.2; (c) the density or intensity of use of the Property; and (d) the maximum height or size of proposed buildings, may be approved by the City Manager without a public hearing before either the Planning Commission or the City Council, except to the extent otherwise required by law. The Parties acknowledge that changes to the Project Approvals shall not require any amendment to the Development Agreement and shall be automatically included within this Agreement.

Section 11.4 Cancellation by Mutual Consent.

Except as otherwise permitted herein, this Agreement may be canceled in whole or in part only by the mutual consent of the Parties or their successors in interest, in accordance with the provisions of California Government Code §65864 et seq. Any fees

paid and/or land dedicated pursuant to this Agreement prior to the date of cancellation shall be retained by City.

Section 12. Annual Review.

Section 12.1 Review Date.

This Development Agreement shall be subject to an "**Annual Review**." The annual review date for this Agreement shall be July 1, 2022 and each July 1 thereafter ("**Annual Review Date**"). If the annual review is not conducted in accordance with this Section 12, there shall not be any negative effect on the validity or enforceability of this Agreement, nor shall the City be precluded from reviewing this Agreement at another time if it has not conducted a review as scheduled. In addition, this Annual Review shall take into account any obligations required by Section 7 of this Agreement.

Section 12.2 Initiation of Review.

Developer shall initiate the annual review by providing to City thirty (30) days in advance of the Annual Review Date, a letter demonstrating that Developer is in good faith compliance with the provisions of the Development Agreement as provided in Government Code §65684 et seq.

Section 12.3 Staff Reports.

To the extent practical, City shall deliver a copy of all staff reports and related exhibits concerning the annual review to Developer by mail, email or fax, at least five (5) days prior to any annual review.

Section 13. Default.

Section 13.1 Other Remedies Available.

Upon the occurrence of an event of default, the Parties may pursue all other remedies at law or in equity that are not otherwise provided for in this Development Agreement or in City's regulations governing development agreements, expressly including the remedy of specific performance of this Agreement. Notwithstanding the foregoing, Developer shall not be compelled by specific performance to construct all or any part of the Project.

Section 13.2 Notice and Cure.

Upon the occurrence of an event of default by either Party, the nondefaulting Party shall serve written notice of such default upon the defaulting Party. If the default is not cured by the defaulting Party within thirty (30) days after service of such notice of default, the nondefaulting Party may then commence any legal or equitable action to enforce its rights under this Agreement; provided, however, that if the default cannot be cured within such thirty (30) day period, the nondefaulting Party shall refrain from any such legal or equitable action so long as the defaulting Party begins to cure such default

within such thirty (30) day period and diligently pursues such cure to completion. In any event, the nondefaulting Party shall attempt in writing to meet and confer with the defaulting Party before the nondefaulting Party commences any legal or equitable action to cure the alleged default. Failure to give notice shall not constitute a waiver of any default.

Section 13.3 No Monetary Damages against City or Developer.

In no event shall monetary damages be awarded against City or Developer upon an event of default or upon termination of this Agreement.

Section 14. Estoppel Certificate.

Either Party may, at any time, and from time to time, request written notice from the other Party requesting such Party to certify in writing that, (a) this Agreement is in full force and effect and a binding obligation of the Parties, (b) this Agreement has not been amended or modified either orally or in writing, or if so amended, identifying the amendments, and (c) to the knowledge of the certifying Party the requesting Party is not in default in the performance of its obligations under this Agreement, or if in default, to describe therein the nature and amount of any such defaults. A Party receiving a request hereunder shall execute and return such certificate within ten (10) days following the receipt thereof, or such longer period as may reasonably be agreed to by the Parties. City Manager of City shall be authorized to execute any certificate requested by Developer. Should the Party receiving the request not execute and return such certificate within the applicable period, the request shall be deemed to be granted by the Party receiving the request.

Section 15. Mortgagee Protection; Certain Rights of Cure.

Section 15.1 Mortgagee Protection.

This Development Agreement shall be superior and senior to any lien placed upon the Property, or any portion thereof after the date of recording this Agreement, including the lien for any deed of trust or mortgage ("**Mortgage**"). Notwithstanding the foregoing, no breach hereof shall defeat, render invalid, diminish or impair the lien of any Mortgage made in good faith and for value, but all the terms and conditions contained in this Agreement shall be binding upon and effective against any person or entity, including without limitation any deed of trust beneficiary or mortgagee ("**Mortgagee**") who acquires title to the Property, or any portion thereof, by foreclosure, trustee's sale, deed in lieu of foreclosure or similar means.

Section 15.2 Mortgagee Not Obligated.

Notwithstanding the provisions of Section 15.1 above, unless the Mortgagee assumes the rights, benefits, interests and obligations under this Development Agreement and this assumption is approved by the City Manager, no Mortgagee shall have any obligation or duty under this Agreement, before or after foreclosure or a deed in lieu of foreclosure, to construct or complete the construction of improvements, or to

guarantee such construction of improvements, or to guarantee such construction or completion, or to pay, perform or provide any fee, dedication, improvements or other exaction or imposition. Any entity issuing security for the faithful performance of a subdivision agreement shall not be considered a "Mortgagee" for purposes of this section." (In other words, sureties issuing performance bonds are obligated to construct the improvements, as compared to true mortgagees.)

Section 15.3 Notice of Default to Mortgagee and Extension of Right to Cure.

If City receives notice from a Mortgagee requesting a copy of any notice of default given Developer hereunder and specifying the address for service thereof, then City shall deliver to such Mortgagee, concurrently with service thereon to Developer, any notice given to Developer with respect to any claim by City that Developer has committed an event of default. Each Mortgagee shall have the right during the same period available to Developer to cure or remedy, or to commence to cure or remedy, the event of default claimed set forth in the City's notice. City, through its City Manager, may extend the thirty-day cure period provided in Section 15.2 for not more than an additional sixty (60) days upon request of Developer or a Mortgagee.

Section 16. Severability.

The unenforceability, invalidity or illegality of any provisions, covenant, condition or term of this Agreement shall not render the other provisions unenforceable, invalid or illegal.

Section 17. Attorneys' Fees and Costs.

If City or Developer initiates any action at law or in equity to enforce or interpret the terms and conditions of this Agreement, the prevailing Party shall be entitled to recover reasonable attorneys' fees and costs in addition to any other relief to which it may otherwise be entitled. If any person or entity not a party to this Agreement initiates an action at law or in equity to challenge the validity of any provision of this Agreement, or City's actions pursuant to this Agreement, the Parties shall cooperate in defending such action. Developer shall bear its own costs of defense as a real party in interest in any such action and shall reimburse City for all reasonable court costs and attorneys' fees expended by City in defense of any such action or other proceeding and for any attorney's fees and costs awarded to a Party to be paid by City.

Section 18. Transfers and Assignments.

Section 18.1 Right to Assign.

Developer has the right to sell or transfer all or a portion of the Property to one or more third parties (each such party is referred to as a "**Transferee**"). In connection with any such sale or transfer to a Transferee, Developer may assign to such Transferee any or all rights, interests and obligations of Developer arising under this Agreement that pertain to the portion of the Property being sold or transferred to such Transferee. No such assignment of Developer's rights, interests and obligations hereunder shall occur

without prior written notice to City and approval by the City Manager (which shall be for the purpose of assuring City that the proposed Transferee can perform Developer's obligations hereunder), which approval shall not be unreasonably withheld or delayed. The foregoing notwithstanding, Developer may, without the City or City Manager's approval, but with written notice to the City, in connection with the sale or transfer of all or a portion of the Property to any wholly-owned subsidiary of Developer, assign its interest in this Agreement that pertains to such portion of the Property sold or transferred.

Section 18.2 Approval and Notice of Assignment.

The City Manager shall consider and decide on any assignment of this Agreement within ten (10) business days after Developer's notice, excluding assignments allowed without approval as stated in Section 18.1. Notice of any such approved assignment (which includes a description of all rights, interests and obligations that have been transferred and those which have been retained by Developer) shall be recorded in the official records of Contra Costa County, in a form acceptable to the City Manager, concurrently with such assignment.

Section 18.3 Effect of Sale, Transfer or Assignment.

Developer shall be released from any obligations hereunder assigned to a Transferee, provided that: a) such sale, transfer or assignment has been approved by the City Manager (or is otherwise permitted) pursuant to Sections 18.1 and 18.2 of this Agreement; and b) such obligations are expressly assumed by Transferee; and provided further that Transferee shall be subject to all the provisions hereof and shall provide all necessary documents, certifications and other necessary information prior to City Manager approval (unless permitted without the consent of the City Manager pursuant to Section 18.1).

Section 18.4 Termination of Agreement Upon Sale of Individual Parcels to Public.

Notwithstanding any provisions of this Agreement to the contrary, the burdens of this Agreement shall terminate as to any parcels which has been subdivided and individually leased or sold to a person or entity intending to construct a building on such parcel; provided, however, that the benefits of this Agreement shall continue to run as to any such parcel until occupancy of the building to be constructed thereon and Developer's obligations hereunder shall continue until satisfied.

Section 19. Agreement Runs with the Land.

The provisions, rights, terms, covenants, and obligations contained in this Agreement shall be binding upon the Parties and any person or entity to whom this Agreement is assigned to pursuant to Section 18 ("**Benefitting Parties").** No person or entity may receive or take advantage of the benefits in this Agreement without assuming the obligations under this Agreement. With respect to Benefitting Parties, the provisions of this Agreement shall be enforceable as equitable servitudes and shall constitute

covenants running with the land pursuant to applicable laws, including, but not limited to, Section 1468 of the Civil Code of the State of California. Each covenant to do, or refrain from doing, some act on the Property hereunder, (a) is for the benefit of such properties and is a burden upon such properties, (b) runs with such properties, and (c) is binding upon Benefitting Parties during its ownership of such properties or any portion thereof.

Section 20. Bankruptcy.

The obligations of this Development Agreement shall not be dischargeable in bankruptcy.

Section 21. Indemnification.

Developer agrees to indemnify, defend and hold harmless City, and its elected and appointed councils, boards, commissions, officers, agents, employees, and representatives from any and all claims, costs (including legal fees and costs) and liability for any personal injury or property damage which may arise directly or indirectly as a result of any actions or inactions by the Developer, or any actions or inactions of Developer's contractors, subcontractors, agents, or employees in connection with the construction, improvement, operation, or maintenance of the development of the Property, provided that Developer shall have no indemnification obligation with respect to negligence or wrongful conduct of City, its contractors, subcontractors, agents or employees or with respect to the maintenance, use or condition of any improvement after the time it has been dedicated to and accepted by the City or another public entity (except as provided in an improvement agreement or maintenance bond).

Section 22. Insurance.

Section 22.1 Public Liability and Property Damage Insurance.

At all times that Developer is constructing any improvements that will become public improvements, Developer shall maintain in effect a policy of comprehensive general liability insurance with a per-occurrence combined single limit of not less than one million dollars ($1,000,000.00) and a deductible of not more than ten thousand dollars ($10,000.00) per claim. The policy so maintained by Developer shall name the City as an additional insured and shall include either a severability of interest clause or cross-liability endorsement.

Section 22.2 Workers Compensation Insurance.

At all times that Developer is constructing any improvements that will become public improvements Developer shall maintain Workers' Compensation insurance for all persons employed by Developer for work at the site or for work performed pursuant to this Agreement. Developer shall require each contractor and subcontractor similarly to provide Workers' Compensation insurance for its respective employees. Developer agrees to indemnify the City for any damage resulting from Developer's failure to maintain any such insurance.

Section 22.3 Evidence of Insurance.

Prior to commencement of construction of any improvements which will become public improvements, Developer shall furnish City satisfactory evidence of the insurance required in Sections 22.1 and 22.2 and evidence that the carrier is required to give the. City at least fifteen days prior written notice of the cancellation or reduction in coverage of a policy. The insurance shall extend to the City, its elective and appointive boards, commissions, officers, agents, employees and representatives and to Developer performing work on the Property and pursuant to this Agreement.

Section 23. Excusable Delay; Extension of Time of Performance and Agreement.

In addition to specific provisions of this Agreement, neither Party shall be deemed to be in default where delays in performance or failures to perform are due to, or are a necessary outcome of war, strikes or other labor disturbances, walk-outs, riots, floods, earthquakes, fires, casualties, pandemics, unforeseen economic or financial conditions that render development infeasible, acts of God, enactment or imposition against the Project of any moratorium, voter approved initiative or referendum, or any time period for legal challenges pertaining to a moratorium or the Project, or similar basis for excused performance which is not within the reasonable control of the Party to be excused. Litigation challenging the validity of this Agreement or any of the Project Approvals, Subsequent Approvals, or any permit, ordinance, entitlement or other action of a governmental agency, including the City, necessary for the development of the Project, or Developers' inability to obtain materials, power or public facilities (such as water or sewer service) to the Project, shall be deemed to create an excusable delay as to Developer. Upon the request of either Party, an extension of time for the performance of any obligation whose performance has been so prevented or delayed shall be memorialized in writing. The City Manager is authorized on behalf of the City to enter such an extension. The term of any such extension shall be equal to the period of the excusable delay, or longer, as shall be mutually agreed upon and the term of the extension shall automatically extend the Term of this Agreement.

Section 24. Good Faith.

The Parties agree to cooperate in good faith in implementing this Agreement.

Section 25. Notices.

All notices required or provided for under this Development Agreement shall be in writing. Notices required to be given to City shall be addressed as follows:

City of San Ramon
City Clerk
7000 Bollinger Canyon Road
San Ramon, CA 94583
Attn: Christina Franco

with copy to:

City of San Ramon
City Attorney
7000 Bollinger Canyon Road
San Ramon, CA 94583
Attn: Martin Lysons

Notices required to be given to Developer shall be addressed as follows:

SBCA LLC
c/o Sunset Development
General Counsel
2600 Camino Ramon, Suite 201
San Ramon CA 94583
Attn: David Fields

with copy to:

Wendel Rosen
1111 Broadway, 24th Floor
Oakland, CA 94607
Attn: Patricia E. Curtin

A Party may change address by giving notice in writing to the other Party and thereafter all notices shall be addressed and transmitted to the new address. Notices shall be deemed given and received upon personal delivery, or if mailed, upon the expiration of 48 hours after being deposited in the United States Mail, Notices may also be given by overnight courier which shall be deemed given the following day or by facsimile transmission which shall be deemed given upon verification of receipt.

Section 26. Agreement is Entire Understanding.

This Development Agreement constitutes the entire understanding and agreement of the parties.

Section 27. Development Agreement Supersedes Original Development Agreement as Amended.

Once this Development Agreement is in full force and effect and is not subject to any legal or other challenge, this Agreement shall automatically supersede the Original Development Agreement as Amended and the Original Development Agreement as Amended will no longer be in effect.

DRAFT
10/15/20~~9/22/20~~

Section 27. Exhibits.

The following documents are referred to in this Agreement and are attached hereto and incorporated herein as though set forth in full:

Exhibit A	Resolution No. 2020-090 denying the appeal, recertifying the EIR and adopting the CEQA Findings and a Mitigation Monitoring and Reporting Program for the Master Plan
Exhibit B	Resolution No. 2020-091 denying the appeal and upholding the Planning Commission Resolution No. 11-20 approving the Master Plan
Exhibit C	Ordinance No. ___ Approving Development Agreement
Exhibit D	Legal Description of Property
Exhibit E	Preliminary Parks and Amenity Improvement Plan (Phasing Plan)
Exhibit F	Municipal Code Section C4-177 (Inclusionary Housing)
Exhibit G	Agreement for Maintenance of Landscaping Within the Public Rights-of-Way in Bishop Ranch between Sunset Development Company and City dated _____
Exhibit H	Planning Services Fees – Development Impact Fees
Exhibit I	Park Fees and Credits

Section 28. Counterparts.

This Development Agreement may be executed in duplicate originals, each of which is deemed to be an original.

Section 29. Recordation.

City shall record a copy of this Development Agreement within ten days following execution by all persons below.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed as of the following dates:

CITY OF SAN RAMON: Date: _____

_____
Bill Clarkson, Mayor

ATTEST: Date: _____

_____
Christina Franco, City Clerk

Approved as to Form: Date: _____

_____
Martin Lysons, City Attorney

DRAFT
10/15/20~~9/22/20~~

DEVELOPER: Date: _____

SBCA LLC

By: _____

By: _____

Approved as to Form: Date: _____

_____
Patricia E. Curtin
Attorney for Developer

Signatures of City and Developer to be Notarized

DRAFT
10/15/20~~9/22/20~~

EXHIBIT A

RESOLUTION NO. 2020-090 DENYING THE APPEAL, RECERTIFYING THE EIR AND ADOPTING THE CEQA FINDINGS AND A MITIGATION MONITORING AND REPORTING PROGRAM FOR THE MASTER PLAN

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10/15/209/22/20

EXHIBIT B

RESOLUTION NO. 2020-091 DENYING THE APPEAL AND UPHOLDING THE PLANNING COMMISSION RESOLUTION NO. 11-20 APPROVING THE MASTER PLAN

DRAFT
10/15/20~~9/22/20~~

EXHIBIT C

ORDINANCE NO. ___ APPROVING DEVELOPMENT AGREEMENT

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10/15/20~~9/22/20~~

EXHIBIT D

LEGAL DESCRIPTION OF PROPERTY

DRAFT
10/15/20~~9/22/20~~

EXHIBIT E

PRELIMINARY PARKS AND AMENITY IMPROVEMENT PLAN (PHASING PLAN)

DRAFT
10/15/20~~9/22/20~~

EXHIBIT F

MUNICIPAL CODE SECTION C4-177 (INCLUSIONARY HOUSING)

DRAFT
10/15/20~~9/22/20~~

EXHIBIT G

AGREEMENT FOR MAINTENANCE OF LANDSCAPING WITHIN THE PUBLIC RIGHTS-OF-WAY IN BISHOP RANCH BETWEEN SUNSET DEVELOPMENT COMPANY AND CITY DATED _____

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10/15/20~~9/22/20~~

EXHIBIT H

~~CITY IMPACT FEES~~ PLANNING SERVICES FEES - DEVELOPMENT IMPACT FEES

Attachment: A: Draft Planning Commission Resolution No. 15-20 for CityWalk Development Agreement Regarding Bishop Ranch Parcel 1A (DA

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EXHIBIT I

PARK FEES AND CREDITS

RESOLUTION NO. 16-20

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF SAN RAMON RECOMMENDING APPROVAL OF A DEVELOPMENT AGREEMENT BETWEEN THE CITY OF SAN RAMON AND BR3A LLC REGARDING BISHOP RANCH PARCEL 3A

WHEREAS, the City of San Ramon ("City") is authorized, pursuant to Article 2.5 of Chapter 4 of Title 7 of the Government Code, Section 65864 through 65869.5 (the "Development Agreement Statute"), to enter into binding development agreements with persons having a legal or equitable interest in real property for the development of such property in order to establish certainty in the development process; and

WHEREAS, in accordance with the Development Agreement Statute the City adopted San Ramon Zoning Ordinance, Division D6, Chapter IV, establishing rules, regulations, procedures and requirements for consideration and adoption of development agreements; and

WHEREAS, the area of the city known as Bishop Ranch consists of approximately 585 acres and has been developed as a private business park community, and more recently approximately 14.57 acres has been developed as a retail shopping center, commonly known as City Center; and

WHEREAS, BR 3A LLC ("Developer") has a legal interest in approximately 10.43 acres of property commonly known as Bishop Ranch Parcel 3A, located within Bishop Ranch in the City ("Parcel 3A"); and

WHEREAS, it is the intent of Developer to develop Parcel 3A in accordance with the CityWalk Masterplan and the City's General Plan 2035; and

WHEREAS, City has determined that the CityWalk Masterplan is a development project for which this Development Agreement is appropriate, and that this Agreement will eliminate uncertainty in planning,provide for the orderly development of Parcel 3A, and otherwise achieve the goals and purposes of the Development Agreement Statute; and

WHEREAS, Developer desires to receive the assurance that upon approval of the Development Agreement it may proceed with development of Parcel 3A as approved under the CityWalk Masterplan in compliance with the City's General Plan 2035, and its policies, objectives, land uses, standards, regulations, and designations; and

WHEREAS, this Development Agreement is consistent with the goals and policies established by the General Plan, as well as applicable provisions of the City's Zoning Ordinance, City's Subdivision Ordinance, and the CityWalk Masterplan; and

WHEREAS, the Development Agreement as an implementation measure of the approved CityWalk Masterplan will not be detrimental to the health, safety and welfare of persons residing or working in the surrounding neighborhood or elsewhere in the City and will not be injurious or

detrimental to property or improvements in the surrounding neighborhood or elsewhere in the City; and

WHEREAS, an Environmental Impact Report (EIR) has been prepared and certified in accordance with the requirements of the California Environmental Quality Act of 1970 (CEQA) as amended for the CityWalk Masterplan and this Development Agreement is within the scope of the EIR since the Development Agreement implements the CityWalk MasterPlan.

WHEREAS, on October 6, 2020 and October 20, 2020, the Planning Commission, after giving notice pursuant to Government Code Sections 65090 and 65091 and San Ramon Zoning Ordinance Section D6-43 held public hearings on Developer's application for this Development Agreement; and

NOW, THEREFORE, BE IT RESOLVED, that the Planning Commission, in the exercise of its independent judgment, and based upon all the evidence in the record (including but not limited to all application materials, related CEQA documents, the written and oral staff reports, oral and written comments received by the City, and all other relevant documents contained in the administrative record) finds and determines as follows:

1. The recitals above are true and correct and are incorporated herein by reference.

2. For the reasons set forth more fully in Resolution 2020-091, the CityWalk Masterplan, and hence Development Agreement, are consistent with the General Plan 2035 Implementation Policy 2.3-I-14, in addition to other economic, land use, and park and recreation policies calling for the implementation of the "approved CityWalk Masterplan."

3. The Development Agreement will further those GP 2035 policies related to City Center and bring to fruition the City Center vision, which has been developed by the City over the last 20 years;

4. The Development Agreement is consistent with all provisions of Division 6, Chapter IV of the San Ramon Zoning Ordinance, and the City Code. The City complied with all provisions in the City Code applicable to development agreements. For the reasons set forth more fully in Resolution 2020-091, the CityWalk Masterplan, and hence the Development Agreement, are consistent with all Zoning Ordinance requirements in that it furthers the goals of the CityWalk Masterplan;

5. The Development Agreement will not be detrimental to the health, safety and general welfare; it will not adversely affect the orderly development of the property or the preservation of property values for the reasons set forth more fully in Resolution 2020-091, because it implements an already approved and analyzed project; and

6. The Planning Commission has considered the effects of the Development Agreement on the housing needs of the region in which the City is situated and has balanced these needs against the public service needs of its residents and available fiscal and environmental resources. This Development Agreement further implements and is consistent with the approvals

for the reasons set forth more fully in Resolution 2020-091. Hence the Development Agreement, is consistent with all Zoning Ordinance requirements.

NOW, THEREFORE, BE IT FURTHER RESOLVED, that the Planning Commission, after considering all information in the administrative record and making the findings set forth above for consistency with the General Plan, does hereby adopt Planning Commission Resolution Number 16-20, recommending City Council adoption of the Development Agreement by and between the City of San Ramon and BR 3A LLC, a copy of which is attached hereto as Exhibit A.

PASSED, APPROVED AND ADOPTED on this 20th day of October, 2020 by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

_____
Eric Wallis,
Planning Commission Chairperson

ATTEST

_____
Jennifer Chavez, Planning Commission Clerk

Exhibit A - Development Agreement by and between the City of San Ramon and BR 3A LLC Regarding Bishop Ranch Parcel 3A

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10/15/20~~9/22/20~~

Recording Requested By:

City of San Ramon

When Recorded Mail To:

City Clerk
City of San Ramon
7000 Bollinger Canyon Road
San Ramon, CA 94583

Space above this line for Recorder's Use

DEVELOPMENT AGREEMENT

BETWEEN THE

CITY OF SAN RAMON

AND

BR3A LLC

REGARDING BISHOP RANCH PARCEL 3A

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10/15/20~~9/22/20~~

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THIS DEVELOPMENT AGREEMENT ("**Development Agreement"** or **"Agreement**") is between the CITY OF SAN RAMON, a Municipal Corporation ("**City**"), and BR3A LLC ("**Developer**") on certain property in the Bishop Ranch area and is entered into under the authority of §65864 et seq. of the California Government Code. The City and Developer are sometimes hereafter referred to collectively as the "**Parties**," or individually as a "**Party**."

RECITALS

A. California Government Code §65864 et seq. authorizes the City to enter into an agreement for the development of real property with any person or entity having a legal or equitable interest in such property in order to establish certain development rights in such property.

B. Pursuant to Government Code section 65865, City has adopted rules and regulations establishing procedures and requirements for consideration of development agreements (Title D6, Division D6 of the City Municipal Code) **("City Development Agreement Rules**"). This Development Agreement has been processed, considered and executed in accordance with the City Development Agreement Rules including, without limitation, Section D6, Chapter IV of the City Municipal Code.

C. Developer has a legal interest in approximately 585 acres of property commonly known as Bishop Ranch located in the City ("**Bishop Ranch Property**"). Developer has developed most of the Bishop Ranch Property as a business park community and more recently developed approximately 14.57 acres of the Bishop Ranch Property as a retail shopping center, commonly known as City Center.

D. On July 18, 2019, Developer filed a development plan application, titled CityWalk Master Plan ("**Master Plan**"), proposing development of Parcels 1A, 3A and 2600 which are part of the approximately 138 acres City Center Mixed Use (CCMU) District of the Bishop Ranch Property (**"Master Plan Property"**). The Master Plan included the following ~~applications for~~:

(i) Vesting Tentative Map (MJ 19-900-001) to create individual parcels that would become smaller neighborhoods, allow for phased implementation of the Master Plan, and assist with financing;

(ii) Development Plan (DP 19-300-002) and Architectural Review (AR 19-200-056) to develop up to 4,500 dwelling units, a 169-key hotel, up to 166,000 square feet of retail uses, several new parking structures, and associated site improvements within Parcel 1A (9.87 acres), Parcel 3A (10.43 acres), and Parcel 2600 (100.1 acres);

(iii) Minor Use Permit (MUP 20-501-002) to allow shared parking reduction for proposed certain office uses, and a blended parking ratio for multi-family development and guest parking;~~ and~~

(iv) Land Use Permit (UP 19-500-004) to allow the community

buildings, privately-owned parks, amphitheater, lodging uses, conference/convention, and similar uses anticipated by the Master Plan; and~~.~~

(v) CityWalk Design Guidelines to guide the design of development within the Master Plan Property.

E. Developer intends to develop Parcel 3A ("**Property**") consistent with the uses in the Master Plan, including approximately 791 dwelling units, 66,000 square feet of retail/commercial and other associated improvements ("**Project"**).

F. Between August 26, 2019 and January 7, 2020, the City held twelve (12) public meetings to solicit input on the Master Plan from interested parties and the public with various City committees and commissions, including a joint study session with the City Council and Planning Commission, and three (3) study sessions with the Planning Commission.

G. On July 21, 2020 the Planning Commission held a public hearing on the Master Plan and its Final Environmental Impact Report ("**EIR**"). Public comments were made at this hearing and the Planning Commission discussed the adequacy of the EIR, Mitigation Monitoring and Reporting Program, Master Plan, and draft Resolutions and Findings recommending certification of the EIR and approval of the Master Plan. This hearing was continued to August 4, 2020 to accept additional public comment and provide further consideration of the draft Resolutions.

H. On August 4, 2020, after a duly noticed hearing, the Planning Commission took the following actions relating to the Master Plan:

(i) Environmental Impact Report for the Master Plan. Pursuant to the California Environmental Quality Act of 1970, Pub. Res. Code §§21000-21178, as amended and the Guidelines for Implementation of the California Environmental Quality Act, Cal. Code Regs. Title 14, §§15000-15387 (collectively, "**CEQA**"), certified the EIR and adopted CEQA Findings and a Mitigation Monitoring and Reporting Program for the Master Plan (SCH No. 2019090586) pursuant to Resolution No. 10-20.

(ii) Master Plan. After certification of the EIR and adoption of the related CEQA documents identified in Recital H~~G~~(i), approved the Master Plan, which included all the applications identified in Recital D~~C~~, pursuant to Resolution No. 11-20.

I. The Planning Commission decisions certifying the EIR and approving the Master Plan were appealed to the City Council by members of the public. On September 8, 2020, after a duly noticed hearing and after considering all testimony, the City Council approved (i) Resolution No. 2020-09 denying the appeal, recertifying the EIR and adopting the CEQA Findings and a Mitigation Monitoring and Reporting Program for the Master Plan (attached as Exhibit A), and (ii) Resolution No. 2020-091 denying the appeal and upholding the Planning Commission Resolution No. 11-20 approving the Master Plan (attached as Exhibit B).

J. The Property is subject to a development agreement between Developer and City, which has been amended seven times since it was originally approved and recorded in 1987. The last amendment, the "Ninth Amendment to Annexation and Development Agreement By and Between the City of San Ramon and BR3A, LLC and Relative to the Development Known as Bishop Ranch and City Center Project" was approved by the San Ramon City Council on February 25, 2020 and recorded on April 28, 2020, in the Official Records of Contra Costa County, California, as document number 20200079879 ("**Original Development Agreement as Amended**"). This Development Agreement supersedes the Original Development Agreement as Amended as it relates to the Property.

K. On September 22, 2020 Developer and the respective landowners filed applications for separate development agreements on Parcels 1A, 3A and 2600. This Development Agreement relates to Parcel 3A only and excludes the hotel site (APN_____). The hotel site is governed by the Ninth Amendment to Annexation and Development Agreement By and Between the City of San Ramon and BR3A, LLC and Relative to the Development Known as Bishop Ranch and City Center Project referred to in Recital I.

L. The City Council has found that, among other things, this Development Agreement is consistent with its General Plan, Zoning Ordinance and implements the Master Plan as explained in the attached City Council Resolution Nos. 2020-090 and 2020-091. ~~.~~ The EIR, Master Plan, and this Development Agreement are referred to as "**Project Approvals**."

M. This Development Agreement vests Developer with the right to develop the Property consistent with the Project Approvals and any other necessary approvals required by the City that are consistent with and necessary to implement the Project Approvals ("**Subsequent Approvals**").

N. This Development Agreement has been properly reviewed and evaluated by the City in accordance with CEQA. The EIR thoroughly analyzed and reviewed all potential significant environmental impacts that could result from approval and implementation of the Project Approvals and thus, implementation of this Agreement.

O. On October 6, 2020 the Planning Commission held its first public hearing on the Development Agreement and on _____, the Planning Commission recommended adoption of this Development Agreement. On _____, the City Council waived the first reading, and introduced an ordinance relating to the approval of this Agreement. On _____, the City Council waived the second reading and adopted Ordinance No. _____ approving this Agreement (attached as Exhibit C).

NOW, THEREFORE, with reference to the foregoing recitals and in consideration of the mutual promises, obligations and covenants herein contained, City and Developer agree as follows:

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10/15/20~~9/22/20~~

AGREEMENT

Section 1. Description of Property.

The Property which is the subject of this Development Agreement consists of 10.43 acres and is depicted and described in the attached Exhibit D.

Section 2. Interest of Developer.

The Developer has a legal interest in the Property in that it desires to develop the Property consistent with the Project Approvals.

Section 3. Relationship of City and Developer.

It is understood that this Development Agreement is a contract that has been negotiated and voluntarily entered into by the City and Developer and that the Developer is not an agent of the City. The City and Developer hereby renounce the existence of any form of joint venture or partnership between them and agree that nothing contained herein or in any document executed in connection herewith shall be construed as making the City and Developer joint venturers or partners.

Section 4. Effective Date and Term.

Section 4.1 Effective Date.

The effective date of this Development Agreement shall be thirty (30) days after adoption of Ordinance No. _____approving this Agreement, as set forth in Recital N ("**Effective Date**").

Section 4.2 Term.

Consistent with City Development Agreement Rules outlined in Chapter IV, Division D-6 of the Municipal Code, ~~Section D6-46.A, t~~~~T~~he initial term of this Development Agreement ("**Initial Term**") shall be twenty-five (25) years commencing on the Effective Date and extending to_____, 2035 as provided in Municipal Code Section D6-46.A. ~~, unless the Term is otherwise terminated, modified or extended by circumstances set forth in this Agreement.~~ Consistent with ~~City Development~~Municipal Code ~~Agreement Rules~~, Section D6-46.B, this Agreement shall automatically extend ten (10) years beyond the Initial Term to _____, 2045 ("**Term**") so long as the Parties are in good faith compliance with the terms and conditions of this Agreement. Written acknowledgement of this extension shall be provided by the City Manager. The Initial Term or Term may be terminated, modified or extended by circumstances set forth in this Agreement.

Section 4.3 Life of Project Approvals and Subsequent Approvals.

The term of any time-limited City approval, including but not limited to the Project Approvals and Subsequent Approvals, if initially shorter than the remaining term of this Development Agreement, shall automatically be extended for the duration of this Agreement (including any extensions). The term of any approval that is longer than the remaining Term of this Agreement shall only be extended as provided by State or City law. Consistent with Section 23 below, Excusable Delay; Extension of Time of Performance and Agreement, the Term of this Agreement and the term of any Project Approvals or Subsequent Approvals shall not include any period of time specified in Section 23 or which a development moratorium (including, but not limited to, a water or sewer moratorium or water and sewer moratorium) or the actions of other public agencies that regulate land use, development or the provision of services to the land, prevents, prohibits or delays the construction of the Property or a lawsuit involving any such development approvals or permits is pending.

Section 5. Use of the Property.

Section 5.1 Right to Develop.

Developer shall have the vested right to develop the Property in accordance with the terms and conditions of the Project Approvals, Subsequent Approvals and this Development Agreement. To the extent the Project Approvals conflict with this Development Agreement, this Agreement shall prevail.

Section 5.2 Permitted Uses.

The permitted uses of the Property, the density and intensity of use, the height, bulk and size of proposed buildings, general provisions for reservation or dedication of land for public purposes and general location and maintenance of on-site and off-site improvements, general location of public utilities, and other terms and conditions of development applicable to the Property, shall be those set forth in the Project Approvals, Subsequent Approvals and this Development Agreement.

Section 5.3 Timing of Project Construction, Phasing and Completion.

Developer intends to build the Project in accordance with the Preliminary Parks and Amenity Improvement Phasing Plan as shown in Exhibit E attached to this Agreement ("**Phasing Plan**"). The Phasing Plan depicts the phasing of the Project that was created at the time this Agreement was negotiated. The purpose of the Phasing Plan is to improve the economic viability of the Project by allowing the phasing of infrastructure improvements to certain milestones. The Parties acknowledge that the ultimate Project phasing will be driven by market conditions and may deviate from the Phasing Plan. Before any changes are made by Developer ~~Any changes~~ to the Phasing Plan, Developer shall ~~will be~~ obtain the written ~~discussed in advance with~~ consent of the ~~the~~ Community Development Director, which shall not be unreasonably withheld. ~~Planning Director~~ The Parties acknowledge that changes to the Phasing Plan will likely occur and have determined that any changes will not require the

Development Agreement or Project Approvals to be amended and shall automatically be incorporated into this Agreement and Project Approvals.

Notwithstanding the Phasing Plan or any provision of this Development Agreement, City and Developer expressly agree that there is no requirement that Developer initiate or complete development of the Property or any particular phase of the Property within any particular period of time, and City shall not impose such a requirement on any Project Approvals or Subsequent Approvals, except to ensure that necessary infrastructure is completed in an orderly fashion. Developer's discretion regarding the timing of construction and completion of the Property shall not affect Developer's obligation to diligently pursue to completion all phases of the development once initiated. The Parties otherwise acknowledge that Developer cannot at this time predict when or the rate at which or the order in which phases will be developed. Such decisions depend upon numerous factors that are not within the control of Developer, such as market orientation and demand, interest rates, competition, excusable delays as defined in Section 23, below), and other similar factors. In light of the foregoing, the Parties agree that Developer shall be able to develop in accordance with Developer's own time schedule as such schedule may exist from time to time, and Developer shall determine which part of the Property to develop first, and at Developer's chosen schedule. In particular, and not in limitation of any of the foregoing, since the California Supreme Court held in *Pardee Construction Co. v. City of Camarillo*, 37 Cal.3d 465 (1984), that the failure of the parties therein to consider and expressly provide for the timing of development resulted in a later-adopted initiative restricting the timing of development to prevail over such parties' agreement, it is the Parties' desire to avoid that result by acknowledging that Developer shall have the right to develop the Property in such order and at such rate and at such times as Developer deems appropriate within the exercise of its subjective business judgment. Nothing in this Agreement shall exempt Developer from completing work required by a subdivision agreement, road improvement agreement or similar agreement in accordance with the terms thereof, nor shall this section of the Agreement affect the term of this Agreement or any related Project Approvals or Subsequent Approvals.

Section 5.4 Project Changes.

The Parties acknowledge that flexibility may be needed at the time of actual construction of the Project to respond to market demands and conditions. By way of example only, market conditions may dictate the timing and phasing of certain Project components. These potential changes are referred to as "**Project Changes**." As long Project Changes are substantially consistent with the Project Approvals and do not cause any new or increased significant environmental impacts, the Project Changes shall be approved administratively by the City without requiring an amendment to the Project Approvals or this Development Agreement; such Project Changes shall automatically be incorporated into the Project Approval and this Agreement.

Section 6. Applicable Law, Regulations and Official Policies

Section 6.1 Rules for Permitted Uses.

Unless otherwise expressly provided in this Section 6 of this Development Agreement, for the Term of this Agreement, the City's ordinances, resolutions, rules, regulations and official policies governing the permitted and conditional permitted uses of the Property; governing density and intensity of uses of the Property; governing design, improvement, and construction standards and specifications; governing the maximum height, bulk and size of proposed buildings; and those in the Project Approvals, shall be those in force and effect on the Effective Date of this Agreement ("**Applicable Law**"). Notwithstanding the foregoing, Developer may elect at its sole discretion to comply with or receive the benefits of changes in Applicable Law by providing written notice to City of said election.

Section 6.2 Uniform Codes Applicable.

Unless expressly provided in Section 5 of this Agreement, development of the Property shall be constructed in accordance with the provisions of the City's adopted Uniform Building, Mechanical, Plumbing, Electrical and Fire Codes and Title 24 of the California Code of Regulations, relating to Building Standards, in effect at the time of approval of the appropriate building, grading, or other construction permits for such development.

Section 6.3 Inclusionary Housing Obligations.

Developer shall comply with the inclusionary housing obligations set forth in Municipal Code Section C4-177, attached as Exhibit F. City agrees that Developer may satisfy a portion or all the affordable requirements through an alternative approach in accordance with the City Municipal Code Sections C4-179 and C4-177. Developer has agreed to provide all inclusionary housing units on the Master Plan Property.

Section 6.4 Point of Sale Determination.

The Parties desire to identify the Project site as the "point of sale" location to allow the remittance of construction sales tax to the City. The Parties shall work together to designate the Property as the point-of-sale location for construction sales tax purposes consistent with all applicable local, state and federal laws. Compliance with this Section 6.4 satisfies Developer's obligations in Condition of Approval no.11 (Construction Sale Tax Sub-Permit) in City Council Resolution 2020-091 approving the Master Plan.

Section 6.5 Allocation and Transfer of Dwelling Units and Building Square Footage.

The Master Plan includes the approval of up to 4,500 dwelling units and 166,000 square feet of commercial uses (in addition to other uses). The allocation of the dwelling units and commercial square footage approved shall be identified in

Subsequent Approvals for each parcel (Parcel 1A, 3A and 2600) within the Master Plan area. The units and commercial square footage can be transferred amongst the parcels so long as the uses in the Master Plan for that parcel are allowed by the City Center Mixed Use (CCMU) zoning district and the maximum approved unit count or commercial square footage in the Master Plan is not otherwise exceeded. Such transfers are contemplated and shall not require an amendment to this Development Agreement or the Project Approvals.

Section 7. Funding of City Services.

The Bishop Ranch Economic and Fiscal Impact Analysis, Summary of Results, (February 7, 2020) prepared by HR&A Advisors, Inc. ("**2020 BR FIA**") concluded that, after full buildout of the Master Plan Properties, the development would generate approximately $600,000 (in 2019 dollars) annually in new net revenue to the City in excess of the projected cost for providing city services. This conclusion is dependent on Contra Costa County agreeing to Amendment #4 to the Bishop Ranch Tax Sharing Agreement, which would allow the City to receive property tax on residential uses in perpetuity. The Parties recognize that material changes to the Project and/or in the assumptions used in the methodology of the 2020 BR FIA (collectively, referred to as "**Material Change**") could create a revenue shortfall up to Project Completion as defined below. If a shortfall occurs, the Parties shall establish an appropriate funding mechanism to fund the shortfall, as described below, in providing certain city services in accordance with this Section 7. "**City Services**" as defined hereafter in this Section 7 means the actual cost of city services directly caused by the Project that are not already financed and provided by Developer to the Project. Compliance with this Section 7 satisfies Developer's obligations in Condition of Approval n~~N~~o. 12 (Funding City Services) in City Council Resolution 2020-091~~(Funding City Services)~~ (**"COA no. 12"**) approving the Master Plan (**"Funding Mechanism"**).

Section 7.1 Determining Need for Funding Mechanism.

(a) Determination of Shortfall During Project Construction.

If during Project Construction and before Project Completion (as both defined below), the Parties determine that a Material Change has occurred, the Parties shall meet and confer to determine if an Updated Fiscal Impact Analysis (**"Updated FIA"**) needs to be prepared for the purpose of assessing whether a Construction Shortfall exists. If an Updated FIA shows that a Construction Shortfall exists or is projected to occur, a Funding Mechanism shall be formed to cover the Construction Shortfall. If at any time the Parties determine a Material Change does not result in a Construction Shortfall, and a Funding Mechanism is in place, the City shall no longer levy the assessment or tax in place unless and until a future Material Change occurs consistent with this Section 7.

"**Construction Shortfall"** is defined in this Section 7 as a shortfall during Project Construction between the General Fund Revenues generated by the Project,

Attachment: B: Draft Planning Commission Resolution No. 16-20 for CityWalk Development Agreement Regarding Bishop Ranch Parcel 3A (DA

exclusive of construction sales tax, and the cost of providing City Services to the Project. "**Project Construction**" is defined in this Section 7 as the time between the issuance of the first building permit and the issuance of the last certificate of occupancy on the Project.

(b) Determination of Shortfall At Project Completion.

If at Project Completion (as defined below), the Parties determine that a Material Change has occurred, the Parties shall meet and confer to determine if an Updated FIA needs to be prepared for purposes of assessing whether a Completion Shortfall exists.

"Completion Shortfall" is defined in this Section 7 as a shortfall at Project Completion between the permanent on-going General Fund Revenues generated from the Project and the cost of providing City Services to the Project. **"Project Completion"** is defined in this Section 7 as the date of the issuance of the last certificate of occupancy on the Project. Developer shall provide written notice of Project Completion to the City Manager.

i. Funding Mechanism Already in Place.

If a Material Change occurs and an Updated FIA substantiates that a Completion Shortfall exists or is projected to occur, the Funding Mechanism shall remain in place and shall be reviewed as part of the Annual Review as set forth in Section 7.2(c). As part of the Annual Review, if the City determines that a Completion Shortfall continues to exist, the Parties shall determine the proper amount of the assessment or tax to levy for that given year.

If, based on an Updated FIA or if one was not required, it is determined that a Completion Shortfall does not exist and is not projected to occur, the City agrees to terminate and remove the Funding Mechanism.

ii. Funding Mechanism Not in Place.

If a Material Change occurs and an Updated FIA substantiates that a Completion Shortfall exists or is projected to occur, and there is no Funding Mechanism in place, a Funding Mechanism shall be created to address this Completion Shortfall. Developer agrees to participate in the formation of the Funding Mechanism and vote in favor of the Funding Mechanism and assessment or tax amount consistent with Section 7.2(d) below.

If, based on an Updated FIA or if one was not required, it is determined that a Completion Shortfall does not exist and is not projected to occur, a Financing Mechanism shall not be created for the Project and Developer shall have no further obligations under this Section 7.

Section 7.2 General Provisions.

(a) Formation of a Funding Mechanism.

The documents related to forming a Funding Mechanism shall calculate and determine the rate and method of apportionment of the Funding Mechanism, including an annual adjustment to account for cost increases. The Parties agree that the maximum annual adjustment shall be the lesser of (i) CPI (Consumer Price Index - All Urban Consumers (San Francisco-Oakland-Hayward, CA) plus two (2) percent or (ii) CPI plus four (4) percent, for any given year.

(b) City Services Does Not Include Services Performed by Developer under Maintenance Agreements.

The services provided by Developer under (i) the City's required standard agreement to be prepared for maintenance of building exteriors, landscaping and parking lot areas between Developer and City that will be finalized and recorded before a certificate of occupancy is issued under the first building permit for the Project, and (ii) the Agreement for Maintenance of Landscaping Within the Public Rights-of-Way in Bishop Ranch between Sunset Development Company and City dated _____ (a copy of this agreement is attached as Exhibit G) shall not be considered in determining if a Construction Shortfall or Completion Shortfall exists since those agreements will include or include their own remedies.

(c) Timing to Determine if Material Change has Occurred.

Beginning in year five after commencement of Project Construction, and with every Annual Review up until Project Completion, Developer shall demonstrate, to the satisfaction of the City Manager, whether a Material Change has occurred. If a Material Change has occurred, the Parties shall determine if an Updated FIA is needed to determine a Construction Shortfall or Completion Shortfall. If no Material Change has occurred, then no further action shall be required by either Party.

(d) Developer Obligations and Methodology of Updated Fiscal Impact Analysis

Developer shall be responsible for funding any Updated FIA, if required, and all administrative costs associated with the creation and imposition of a needed tax or assessment. The Updated FIA shall be prepared using the same methodology used in the 2020 BR FIA. Developer agrees not to create a barrier that would allow a majority protest to prevent a tax or an assessment pursuant to this Section 7 from being approved and levied. If necessary, Developer will cause a Funding Mechanism to be in place and funded before a sale of a portion of the Project is completed, if that sale could prevent the Developer from forming and funding a Funding Mechanism on the Property, and if a Material Change will occur as a result of the sale and an Updated FIA determines a Construction Shortfall or Completion Shortfall exists. In addition,

Developer hereby agrees not to protest the amount of a tax or an assessment limit or levy imposed pursuant to this Section 7 and as substantiated by an Updated FIA.

Section 7.3 Police Services.

Before occupancy of the 1700th residential unit within the Master Plan Property, Developer shall construct one office of no more than approximately 200 sq. ft for a police substation and the City agrees to furnish and provide all necessary equipment for the substation. Developer will assure adequate financing of City Services, including police services, are provided to the Project as discussed in this Section 7. The City acknowledges that these obligations relating to funding police services by Developer are complete and full satisfaction of Condition of Approval nNo. 14 (Police Services) in City Council Resolution No. 2020-091 approving the Master Plan.

Section 8. Applicable Fees.

Section 8.1 Processing Fees.

The Project shall be subject to the processing fees in the amounts in effect at the time of the applicable application filing, so long as the amounts then in effect are applicable Citywide and to similar applications.

Section 8.2 Impact Fees.

The Project shall be subject to only those City Ddevelopment Iimpact Ffees (and the associated cost of inflation adjustments specified in the enabling legislation for that development impact fee) and amounts listed oin pages 4 and 5 in the attached Exhibit H, City Impact Fees. City shall not impose on the Project any new fees categories or increases in any development impact fees not listed on Exhibit H, on the Project, including Subsequent Approvals, provided the Subsequent Approvals are substantially consistent with the terms of this Agreement and the General Plan.

Section 9. Parks and Fee Credits, and Open Space.

Section 9.1 Provision and Maintenance of Parks and Fee Credits

(a) Application of Parkland Dedication Rules.

The Parties acknowledge the City's Parkland Dedication rules and regulations in Title C, Division C5, Chapter X of the City's Municipal Code do not apply to rental units ("Parkland Dedication Rules"). If the Developer builds for-sale units or other products that would invoke the application of the Parkland Dedication Rules, the City may impose the Parkland Dedication Rules on those products.

(b) Obligations and Credit under Park and Recreation Facility Impact Fee.

Developer is subject to the Park and Recreation Facility Impact Fee in Title C, Division C4, Chapter IX of the City's Municipal Code ("Park and Recreation Facility Impact Fee"). Consistent with Condition of Approval no. 13 (Park Fees) in City Council Resolution 2020-091, Developer shall design, ~~and~~ construct and maintain the parks within the Master Plan Property ("Master Plan Parks"). The Master Plan Parks shall be open to the public and operate in accordance with the City's park access rules (open from dawn to dusk). Developer shall work with the Community Development Director in preparing and executing written recordable agreement(s) (i.e., easement, right of access agreement, license) to assure the Master Plan Parks remain accessible to the public in perpetuity. Separate agreements may be prepared for each Master Plan Park to allow recordation of the agreement on each Park property before the Park is built.

Developer shall work with the Parks and Community Services Department on programming (i.e., scheduling of special events and activities) and the design of the Master Plan Parks consistent with the CityWalk Design Guidelines.

In addition, Developer shall design and construct Henry Ranch and Wood Lot parks and install a synthetic turf field at Iron Horse Middle School ("Off-site Parks") in accordance with Exhibits E and I. ~~publicly accessible community and neighborhood parks, and provide landscaped areas as set forth in the Project Approvals~~. Developer shall work with the Parks and Community Services Department the design of the Off-site Parks.

Developer shall receive credit against the ~~City's~~ Park and Recreation Facility Impact Fee for the provision, construction and maintenance of the Master Plan Parks and for the design and construction of the Off-site Parks as shown in Exhibit I. ~~se parks and landscaped areas as detailed in the attached Exhibit I, Park Fees and Credits.~~

(c) Maintenance of and Capital Improvements in Master Plan Parks.

Developer agrees to maintain the Master Plan Parks in accordance with the City's adopted rules and regulations relating to maintenance of public parks and shall be responsible for all future capital improvements in these Parks during the Term of this Agreement. Prior to the expiration of the Term, the Parties shall meet to determine the future maintenance and capital improvement obligations for the Master Plan Parks. Developer may elect to continue with these obligations at its own expense or the City shall assume these obligations. If the City assumes these maintenance and capital improvement obligations and a shortfall exists from the revenues generated by the Project and the cost of providing these services, Developer shall make up that financial shortfall.

(d) Full Satisfaction of Park Obligations.

The City acknowledges that the requirements set forth in this Agreement are complete and full satisfaction of Developer's obligations in Condition of Approval no. 13 and pursuant to the Park and Recreation Facility Impact Fee.

Section 9.2 Open Space Fee.

Developer is subject to the City's Open Space Development Impact Fee in Title C, Division C4, Chapter XI of the City's Municipal Code ("Open Space Fee"). Developer shall pay the Open Space Fee at a maximum of $750 per unit in two payments. Developer shall pay fifty percent (50%) of the total Open Space Fee for the Project upon the issuance of the first building permit for the Project and the remaining fifty percent (50%) upon the issuance of the 600th building permit or the last building permit for the Project, whichever is sooner. ~~The City acknowledges that these obligations relating to parks are complete and full satisfaction of Condition of Approval No. 13 (Park Fees) in City Council Resolution No. 2020-091 approving the Master Plan.~~

Section 10. Moratorium Not Applicable.

Notwithstanding anything to the contrary contained herein, in the event an ordinance, resolution or other measure is enacted, whether by action of City, by initiative, referendum, or otherwise, that imposes a building moratorium, a limit on the rate of development, or a voter-approval requirement which affects the Developer's ability to develop all or any part of the Property, City agrees that such ordinance, resolution or other measure shall not apply to the Property, this Development Agreement, the Project Approvals or the Subsequent Approvals unless lawfully imposed by City as part of a validly adopted declaration of a local emergency.

Section 11. Amendment or Cancellation.

Section 11.1 Modification to Address Conflict with State or Federal Laws.

In the event that state or federal laws or regulations enacted after the Effective Date of this Development Agreement prevent or preclude compliance with one or more provisions of this Agreement or require changes in plans, maps, permits or entitlements approved by the City, the Parties shall meet and confer in good faith in a reasonable attempt to modify this Agreement to comply with such federal or state law or regulation. Any such amendment or suspension of the Agreement shall be approved by the City Council in accordance with California Government Code §65864 et seq. To the extent any State or Federal regulation caused a delay, the Parties may invoke the provisions in Section 22, Excusable Delay; Extension of Time of Performance and Agreement.

Section 11.2 Amendment by Mutual Consent.

This Development Agreement may be amended in writing from time to time by mutual consent of the Parties hereto and in accordance with the procedures of California Government Code §65864 et seq. and this Agreement.

Section 11.3 Insubstantial Amendments.

Notwithstanding the provisions of Section 11.2, any amendments to this Development Agreement which do not relate to (a) the Term as provided in Section 4.2;

(b) the permitted uses of the Property as provided in Section 5.2; (c) the density or intensity of use of the Property; and (d) the maximum height or size of proposed buildings, may be approved by the City Manager without a public hearing before either the Planning Commission or the City Council, except to the extent otherwise required by law. The Parties acknowledge that changes to the Project Approvals shall not require any amendment to the Development Agreement and shall be automatically included within this Agreement.

Section 11.4 Cancellation by Mutual Consent.

Except as otherwise permitted herein, this Agreement may be canceled in whole or in part only by the mutual consent of the Parties or their successors in interest, in accordance with the provisions of California Government Code §65864 et seq. Any fees paid and/or land dedicated pursuant to this Agreement prior to the date of cancellation shall be retained by City.

Section 12. Annual Review.

Section 12.1 Review Date.

This Development Agreement shall be subject to an "**Annual Review**." The annual review date for this Agreement shall be July 1, 2022 and each July 1 thereafter ("**Annual Review Date**"). If the annual review is not conducted in accordance with this Section 12, there shall not be any negative effect on the validity or enforceability of this Agreement, nor shall the City be precluded from reviewing this Agreement at another time if it has not conducted a review as scheduled. In addition, this Annual Review shall take into account any obligations required by Section 7 of this Agreement.

Section 12.2 Initiation of Review.

Developer shall initiate the annual review by providing to City thirty (30) days in advance of the Annual Review Date, a letter demonstrating that Developer is in good faith compliance with the provisions of the Development Agreement as provided in Government Code §65684 et seq.

Section 12.3 Staff Reports.

To the extent practical, City shall deliver a copy of all staff reports and related exhibits concerning the annual review to Developer by mail, email or fax, at least five (5) days prior to any annual review.

Section 13. Default.

Section 13.1 Other Remedies Available.

Upon the occurrence of an event of default, the Parties may pursue all other remedies at law or in equity that are not otherwise provided for in this Development Agreement or in City's regulations governing development agreements, expressly

including the remedy of specific performance of this Agreement. Notwithstanding the foregoing, Developer shall not be compelled by specific performance to construct all or any part of the Project.

Section 13.2 Notice and Cure.

Upon the occurrence of an event of default by either Party, the nondefaulting Party shall serve written notice of such default upon the defaulting Party. If the default is not cured by the defaulting Party within thirty (30) days after service of such notice of default, the nondefaulting Party may then commence any legal or equitable action to enforce its rights under this Agreement; provided, however, that if the default cannot be cured within such thirty (30) day period, the nondefaulting Party shall refrain from any such legal or equitable action so long as the defaulting Party begins to cure such default within such thirty (30) day period and diligently pursues such cure to completion. In any event, the nondefaulting Party shall attempt in writing to meet and confer with the defaulting Party before the nondefaulting Party commences any legal or equitable action to cure the alleged default. Failure to give notice shall not constitute a waiver of any default.

Section 13.3 No Monetary Damages against City or Developer.

In no event shall monetary damages be awarded against City or Developer upon an event of default or upon termination of this Agreement.

Section 14. Estoppel Certificate.

Either Party may, at any time, and from time to time, request written notice from the other Party requesting such Party to certify in writing that, (a) this Agreement is in full force and effect and a binding obligation of the Parties, (b) this Agreement has not been amended or modified either orally or in writing, or if so amended, identifying the amendments, and (c) to the knowledge of the certifying Party the requesting Party is not in default in the performance of its obligations under this Agreement, or if in default, to describe therein the nature and amount of any such defaults. A Party receiving a request hereunder shall execute and return such certificate within ten (10) days following the receipt thereof, or such longer period as may reasonably be agreed to by the Parties. City Manager of City shall be authorized to execute any certificate requested by Developer. Should the Party receiving the request not execute and return such certificate within the applicable period, the request shall be deemed to be granted by the Party receiving the request.

Section 15. Mortgagee Protection; Certain Rights of Cure.

Section 15.1 Mortgagee Protection.

This Development Agreement shall be superior and senior to any lien placed upon the Property, or any portion thereof after the date of recording this Agreement, including the lien for any deed of trust or mortgage ("**Mortgage**"). Notwithstanding the foregoing, no breach hereof shall defeat, render invalid, diminish or impair the lien of

any Mortgage made in good faith and for value, but all the terms and conditions contained in this Agreement shall be binding upon and effective against any person or entity, including without limitation any deed of trust beneficiary or mortgagee ("**Mortgagee**") who acquires title to the Property, or any portion thereof, by foreclosure, trustee's sale, deed in lieu of foreclosure or similar means.

Section 15.2 Mortgagee Not Obligated.

Notwithstanding the provisions of Section 15.1 above, unless the Mortgagee assumes the rights, benefits, interests and obligations under this Development Agreement and this assumption is approved by the City Manager, no Mortgagee shall have any obligation or duty under this Agreement, before or after foreclosure or a deed in lieu of foreclosure, to construct or complete the construction of improvements, or to guarantee such construction of improvements, or to guarantee such construction or completion, or to pay, perform or provide any fee, dedication, improvements or other exaction or imposition. Any entity issuing security for the faithful performance of a subdivision agreement shall not be considered a "Mortgagee" for purposes of this section." (In other words, sureties issuing performance bonds are obligated to construct the improvements, as compared to true mortgagees.)

Section 15.3 Notice of Default to Mortgagee and Extension of Right to Cure.

If City receives notice from a Mortgagee requesting a copy of any notice of default given Developer hereunder and specifying the address for service thereof, then City shall deliver to such Mortgagee, concurrently with service thereon to Developer, any notice given to Developer with respect to any claim by City that Developer has committed an event of default. Each Mortgagee shall have the right during the same period available to Developer to cure or remedy, or to commence to cure or remedy, the event of default claimed set forth in the City's notice. City, through its City Manager, may extend the thirty-day cure period provided in Section 15.2 for not more than an additional sixty (60) days upon request of Developer or a Mortgagee.

Section 16. Severability.

The unenforceability, invalidity or illegality of any provisions, covenant, condition or term of this Agreement shall not render the other provisions unenforceable, invalid or illegal.

Section 17. Attorneys' Fees and Costs.

If City or Developer initiates any action at law or in equity to enforce or interpret the terms and conditions of this Agreement, the prevailing Party shall be entitled to recover reasonable attorneys' fees and costs in addition to any other relief to which it may otherwise be entitled. If any person or entity not a party to this Agreement initiates an action at law or in equity to challenge the validity of any provision of this Agreement, or City's actions pursuant to this Agreement, the Parties shall cooperate in defending such action. Developer shall bear its own costs of defense as a real party in interest in any such action and shall reimburse City for all reasonable court costs and attorneys'

fees expended by City in defense of any such action or other proceeding and for any attorney's fees and costs awarded to a Party to be paid by City.

Section 18. Transfers and Assignments.

Section 18.1 Right to Assign.

Developer has the right to sell or transfer all or a portion of the Property to one or more third parties (each such party is referred to as a "**Transferee**"). In connection with any such sale or transfer to a Transferee, Developer may assign to such Transferee any or all rights, interests and obligations of Developer arising under this Agreement that pertain to the portion of the Property being sold or transferred to such Transferee. No such assignment of Developer's rights, interests and obligations hereunder shall occur without prior written notice to City and approval by the City Manager (which shall be for the purpose of assuring City that the proposed Transferee can perform Developer's obligations hereunder), which approval shall not be unreasonably withheld or delayed. The foregoing notwithstanding, Developer may, without the City or City Manager's approval, but with written notice to the City, in connection with the sale or transfer of all or a portion of the Property to any wholly-owned subsidiary of Developer, assign its interest in this Agreement that pertains to such portion of the Property sold or transferred.

Section 18.2 Approval and Notice of Assignment.

The City Manager shall consider and decide on any assignment of this Agreement within ten (10) business days after Developer's notice, excluding assignments allowed without approval as stated in Section 18.1. Notice of any such approved assignment (which includes a description of all rights, interests and obligations that have been transferred and those which have been retained by Developer) shall be recorded in the official records of Contra Costa County, in a form acceptable to the City Manager, concurrently with such assignment.

Section 18.3 Effect of Sale, Transfer or Assignment.

Developer shall be released from any obligations hereunder assigned to a Transferee, provided that: a) such sale, transfer or assignment has been approved by the City Manager (or is otherwise permitted) pursuant to Sections 18.1 and 18.2 of this Agreement; and b) such obligations are expressly assumed by Transferee; and provided further that Transferee shall be subject to all the provisions hereof and shall provide all necessary documents, certifications and other necessary information prior to City Manager approval (unless permitted without the consent of the City Manager pursuant to Section 18.1).

Section 18.4 Termination of Agreement Upon Sale of Individual Parcels to Public.

Notwithstanding any provisions of this Agreement to the contrary, the burdens of this Agreement shall terminate as to any parcels which has been subdivided and

individually leased or sold to a person or entity intending to construct a building on such parcel; provided, however, that the benefits of this Agreement shall continue to run as to any such parcel until occupancy of the building to be constructed thereon and Developer's obligations hereunder shall continue until satisfied.

Section 19. Agreement Runs with the Land.

The provisions, rights, terms, covenants, and obligations contained in this Agreement shall be binding upon the Parties and any person or entity to whom this Agreement is assigned to pursuant to Section 18 ("**Benefitting Parties").** No person or entity may receive or take advantage of the benefits in this Agreement without assuming the obligations under this Agreement. With respect to Benefitting Parties, the provisions of this Agreement shall be enforceable as equitable servitudes and shall constitute covenants running with the land pursuant to applicable laws, including, but not limited to, Section 1468 of the Civil Code of the State of California. Each covenant to do, or refrain from doing, some act on the Property hereunder, (a) is for the benefit of such properties and is a burden upon such properties, (b) runs with such properties, and (c) is binding upon Benefitting Parties during its ownership of such properties or any portion thereof.

Section 20. Bankruptcy.

The obligations of this Development Agreement shall not be dischargeable in bankruptcy.

Section 21. Indemnification.

Developer agrees to indemnify, defend and hold harmless City, and its elected and appointed councils, boards, commissions, officers, agents, employees, and representatives from any and all claims, costs (including legal fees and costs) and liability for any personal injury or property damage which may arise directly or indirectly as a result of any actions or inactions by the Developer, or any actions or inactions of Developer's contractors, subcontractors, agents, or employees in connection with the construction, improvement, operation, or maintenance of the development of the Property, provided that Developer shall have no indemnification obligation with respect to negligence or wrongful conduct of City, its contractors, subcontractors, agents or employees or with respect to the maintenance, use or condition of any improvement after the time it has been dedicated to and accepted by the City or another public entity (except as provided in an improvement agreement or maintenance bond).

Section 22. Insurance.

Section 22.1 Public Liability and Property Damage Insurance.

At all times that Developer is constructing any improvements that will become public improvements, Developer shall maintain in effect a policy of comprehensive general liability insurance with a per-occurrence combined single limit of not less than one million dollars ($1,000,000.00) and a deductible of not more than ten thousand

dollars ($10,000.00) per claim. The policy so maintained by Developer shall name the City as an additional insured and shall include either a severability of interest clause or cross-liability endorsement.

Section 22.2 Workers Compensation Insurance.

At all times that Developer is constructing any improvements that will become public improvements Developer shall maintain Workers' Compensation insurance for all persons employed by Developer for work at the site or for work performed pursuant to this Agreement. Developer shall require each contractor and subcontractor similarly to provide Workers' Compensation insurance for its respective employees. Developer agrees to indemnify the City for any damage resulting from Developer's failure to maintain any such insurance.

Section 22.3 Evidence of Insurance.

Prior to commencement of construction of any improvements which will become public improvements, Developer shall furnish City satisfactory evidence of the insurance required in Sections 22.1 and 22.2 and evidence that the carrier is required to give the. City at least fifteen days prior written notice of the cancellation or reduction in coverage of a policy. The insurance shall extend to the City, its elective and appointive boards, commissions, officers, agents, employees and representatives and to Developer performing work on the Property and pursuant to this Agreement.

Section 23. Excusable Delay; Extension of Time of Performance and Agreement.

In addition to specific provisions of this Agreement, neither Party shall be deemed to be in default where delays in performance or failures to perform are due to, or are a necessary outcome of war, strikes or other labor disturbances, walk-outs, riots, floods, earthquakes, fires, casualties, pandemics, unforeseen economic or financial conditions that render development infeasible, acts of God, enactment or imposition against the Project of any moratorium, voter approved initiative or referendum, or any time period for legal challenges pertaining to a moratorium or the Project, or similar basis for excused performance which is not within the reasonable control of the Party to be excused. Litigation challenging the validity of this Agreement or any of the Project Approvals, Subsequent Approvals, or any permit, ordinance, entitlement or other action of a governmental agency, including the City, necessary for the development of the Project, or Developers' inability to obtain materials, power or public facilities (such as water or sewer service) to the Project, shall be deemed to create an excusable delay as to Developer. Upon the request of either Party, an extension of time for the performance of any obligation whose performance has been so prevented or delayed shall be memorialized in writing. The City Manager is authorized on behalf of the City to enter such an extension. The term of any such extension shall be equal to the period of the excusable delay, or longer, as shall be mutually agreed upon and the term of the extension shall automatically extend the Term of this Agreement.

Section 24. Good Faith.

The Parties agree to cooperate in good faith in implementing this Agreement.

Section 25. Notices.

All notices required or provided for under this Development Agreement shall be in writing. Notices required to be given to City shall be addressed as follows:

City of San Ramon
City Clerk
7000 Bollinger Canyon Road
San Ramon, CA 94583
Attn: Christina Franco

with copy to:

City of San Ramon
City Attorney
7000 Bollinger Canyon Road
San Ramon, CA 94583
Attn: Martin Lysons

Notices required to be given to Developer shall be addressed as follows:

BR3A LLC
c/o Sunset Development
General Counsel
2600 Camino Ramon, Suite 201
San Ramon CA 94583
Attn: David Fields

with copy to:

Wendel Rosen
1111 Broadway, 24th Floor
Oakland, CA 94607
Attn: Patricia E. Curtin

A Party may change address by giving notice in writing to the other Party and thereafter all notices shall be addressed and transmitted to the new address. Notices shall be deemed given and received upon personal delivery, or if mailed, upon the expiration of 48 hours after being deposited in the United States Mail, Notices may also be given by overnight courier which shall be deemed given the following day or by facsimile transmission which shall be deemed given upon verification of receipt.

Section 26. Agreement is Entire Understanding.

This Development Agreement constitutes the entire understanding and agreement of the parties.

Section 27. Development Agreement Supersedes Original Development Agreement as Amended.

Once this Development Agreement is in full force and effect and is not subject to any legal or other challenge, this Agreement shall automatically supersede the Original Development Agreement as Amended and the Original Development Agreement as Amended will no longer be in effect.

Section 27. Exhibits.

The following documents are referred to in this Agreement and are attached hereto and incorporated herein as though set forth in full:

Exhibit A	Resolution No. 2020-09 denying the appeal, recertifying the EIR and adopting the CEQA Findings and a Mitigation Monitoring and Reporting Program for the Master Plan
Exhibit B	Resolution No. 2020-091 denying the appeal and upholding the Planning Commission Resolution No. 11-20 approving the Master Plan
Exhibit C	Ordinance No. ___ Approving Development Agreement
Exhibit D	Legal Description of Property
Exhibit E	Preliminary Parks and Amenity Improvement Plan (Phasing Plan)
Exhibit F	Municipal Code Section C4-177 (Inclusionary Housing)
Exhibit G	Agreement for Maintenance of Landscaping Within the Public Rights-of-Way in Bishop

	Ranch between Sunset Development Company and City dated _____
Exhibit H	Planning Services Fees – Development Impact Fees
Exhibit I	Park Fees and Credits

Section 28. Counterparts.

This Development Agreement may be executed in duplicate originals, each of which is deemed to be an original.

Section 29. Recordation.

City shall record a copy of this Development Agreement within ten days following execution by all persons below.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed as of the following dates:

CITY OF SAN RAMON: Date: _____

_____
Bill Clarkson, Mayor

ATTEST: Date: _____

_____
Christina Franco, City Clerk

Approved as to Form: Date: _____

_____
Martin Lysons, City Attorney

Attachment: B: Draft Planning Commission Resolution No. 16-20 for CityWalk Development Agreement Regarding Bishop Ranch Parcel 3A (DA

DRAFT
10/15/20~~9/22/20~~

DEVELOPER: Date: _____

BR3A LLC

By: _____

By: _____

Approved as to Form: Date: _____

_____
Patricia E. Curtin
Attorney for Developer

Signatures of City and Developer to be Notarized

DRAFT
10/15/20~~9/22/20~~

EXHIBIT A

RESOLUTION NO. 2020-09 DENYING THE APPEAL, RECERTIFYING THE EIR AND ADOPTING THE CEQA FINDINGS AND A MITIGATION MONITORING AND REPORTING PROGRAM FOR THE MASTER PLAN

DRAFT
10/15/22 ~~9/22/20~~

EXHIBIT B

RESOLUTION NO. 2020-091 DENYING THE APPEAL AND UPHOLDING THE PLANNING COMMISSION RESOLUTION NO. 11-20 APPROVING THE MASTER PLAN

DRAFT

10/15/22 ~~9/22/20~~

EXHIBIT C

ORDINANCE NO. ___ APPROVING DEVELOPMENT AGREEMENT

DRAFT
10/15/22 ~~9/22/20~~

EXHIBIT D

LEGAL DESCRIPTION OF PROPERTY

DRAFT
10/15/22 ~~9/22/20~~

EXHIBIT E

PRELIMINARY PARKS AND AMENITY IMPROVEMENT PLAN (PHASING PLAN)

DRAFT
10/15/22~~9/22/20~~

EXHIBIT F

MUNICIPAL CODE SECTION C4-177 (INCLUSIONARY HOUSING)

DRAFT
10/15/20~~9/22/20~~

EXHIBIT G

AGREEMENT FOR MAINTENANCE OF LANDSCAPING WITHIN THE PUBLIC RIGHTS-OF-WAY IN BISHOP RANCH BETWEEN SUNSET DEVELOPMENT COMPANY AND CITY DATED _____

DRAFT
10/15/20 ~~9/22/20~~

EXHIBIT H

~~CITY IMPACT FEES~~ PLANNING SERVICES FEES - DEVELOPMENT IMPACT FEES

Attachment: B: Draft Planning Commission Resolution No. 16-20 for CityWalk Development Agreement Regarding Bishop Ranch Parcel 3A (DA

DRAFT
10/15/209/22/20

EXHIBIT I

PARK FEES AND CREDITS

Attachment: B: Draft Planning Commission Resolution No. 16-20 for CityWalk Development Agreement Regarding Bishop Ranch Parcel 3A (DA

RESOLUTION NO. 17-20

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF SAN RAMON RECOMMENDING APPROVAL OF A DEVELOPMENT AGREEMENT BETWEEN THE CITY OF SAN RAMON AND BR 2600 CR, LLC REGARDING BISHOP RANCH PARCEL BR 2600

WHEREAS, the City of San Ramon ("City") is authorized, pursuant to Article 2.5 of Chapter 4 of Title 7 of the Government Code, Section 65864 through 65869.5 (the "Development Agreement Statute"), to enter into binding development agreements with persons having a legal or equitable interest in real property for the development of such property in order to establish certainty in the development process; and

WHEREAS, in accordance with the Development Agreement Statute the City adopted San Ramon Zoning Ordinance, Division D6, Chapter IV, establishing rules, regulations, procedures and requirements for consideration and adoption of development agreements; and

WHEREAS, the area of the city known as Bishop Ranch consists of approximately 585 acres and has been developed as a private business park community, and more recently approximately 14.57 acres has been developed as a retail shopping center, commonly known as City Center; and

WHEREAS, BR 2600 CR, LLC ("Developer") has a legal interest in approximately 100.1 acres of property commonly known as Bishop Ranch located in the City ("Parcel BR 2600 "). and

WHEREAS, it is the intent of Developer to develop Parcel BR 2600 in accordance with the CityWalk Masterplan and the City's General Plan 2035; and

WHEREAS, City has determined that the CityWalk Masterplan is a development project for which this Development Agreement is appropriate, and that this Agreement will eliminate uncertainty in planning, provide for the orderly development of Parcel BR 2600 and otherwise achieve the goals and purposes of the Development Agreement Statute; and

WHEREAS, Developer desires to receive the assurance that upon approval of the Development Agreement it may proceed with development of Parcel BR 2600 as approved under the CityWalk Masterplan in compliance with the City's General Plan 2035, and its policies, objectives, land uses, standards, regulations, and designations; and

WHEREAS, this Development Agreement is consistent with the goals and policies established by the General Plan, as well as applicable provisions of the City's Zoning Ordinance, City Subdivision Ordinance, and the CityWalk Masterplan; and

WHEREAS, the Development Agreement as an implementation measure of the approved CityWalk Masterplan will not be detrimental to the health, safety and welfare of persons residing or working in the surrounding neighborhood or elsewhere in the City and will not be injurious or

detrimental to property or improvements in the surrounding neighborhood or elsewhere in the City; and

WHEREAS, an Environmental Impact Report (EIR) has been prepared and certified in accordance with the requirements of the California Environmental Quality Act of 1970 (CEQA) as amended for the CityWalk Masterplan and this Development Agreement is within the scope of the EIR since the Development Agreement implements the CityWalk MasterPlan.

WHEREAS, on October 6, 2020 and October 20, 2020, the Planning Commission, after giving notice pursuant to Government Code Sections 65090 and 65091 and San Ramon Zoning Ordinance Section D6-43 held public hearings on Developer's application for this Development Agreement; and

NOW, THEREFORE, BE IT RESOLVED, that the Planning Commission, in the exercise of its independent judgment, and based upon all the evidence in the record (including but not limited to all application materials, related CEQA documents, the written and oral staff reports, oral and written comments received by the City, and all other relevant documents contained in the administrative record) finds and determines as follows:

1. The recitals above are true and correct and are incorporated herein by reference.

2. For the reasons set forth more fully in Resolution 2020-091, the CityWalk Masterplan, and hence Development Agreement, are consistent with the General Plan 2035 Implementation Policy 2.3-I-14 in addition to other economic, land use, and park and recreation policies calling for the implementation of the "approved CityWalk Masterplan;

3. The Development Agreement will further those GP 2035 policies related to City Center and bring to fruition the City Center vision, which has been developed by the City over the last 20 years;

4. The Development Agreement is consistent with all provisions of Division 6, Chapter IV of the San Ramon Zoning Ordinance, and the City Code. The City complied with all provisions in the City Code applicable to development agreements. For the reasons set forth more fully in Resolution 2020-091, the CityWalk Masterplan, and hence the Development Agreement, are consistent with all Zoning Ordinance requirements in that it furthers the goals of the CityWalk Masterplan;

5. The Development Agreement will not be detrimental to the health, safety and general welfare; it will not adversely affect the orderly development of the property or the preservation of property values for the reasons set forth more fully in Resolution 2020-091 because it implements an already approved and analyzed project; and

6. The Planning Commission has considered the effects of the Development Agreement on the housing needs of the region in which the City is situated and has balanced these needs against the public service needs of its residents and available fiscal and environmental resources. This Development Agreement further implements and is consistent with the approvals

for the reasons set forth more fully in Resolution 2020-091. Hence the Development Agreement, is consistent with all Zoning Ordinance requirements.

NOW, THEREFORE, BE IT FURTHE RESOLVED, that the Planning Commission, after considering all information in the administrative record and making the findings set forth above for consistency with the General Plan, does hereby adopt Planning Commission Resolution Number 17-20 recommending City Council adoption of the Development Agreement by and between the City of San Ramon and BR 2600 CR, LLC, a copy of which is attached hereto as Exhibit A.

PASSED, APPROVED AND ADOPTED on this 20th day of October, 2020 by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

_____
Eric Wallis,
Planning Commission Chairperson

ATTEST

_____
Jennifer Chavez, Planning Commission Clerk

Exhibit A - Development Agreement by and between the City of San Ramon and BR 2600 CR, LLC Regarding Bishop Ranch Parcel BR 2600

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~~9/22/20~~ 10/15/20

Recording Requested By:

City of San Ramon

When Recorded Mail To:

City Clerk
City of San Ramon
7000 Bollinger Canyon Road
San Ramon, CA 94583

Space above this line for Recorder's Use

DEVELOPMENT AGREEMENT

BETWEEN THE

CITY OF SAN RAMON

AND

2600 CR, LLC

REGARDING BISHOP RANCH PARCEL 2600

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~~9/22/20~~ 10/15/20

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THIS DEVELOPMENT AGREEMENT ("**Development Agreement"** or **"Agreement**") is between the CITY OF SAN RAMON, a Municipal Corporation ("**City**"), and 2600 CR, LLC ("**Developer**") on certain property in the Bishop Ranch area and is entered into under the authority of §65864 et seq. of the California Government Code. The City and Developer are sometimes hereafter referred to collectively as the "**Parties**," or individually as a "**Party**."

RECITALS

A. California Government Code §65864 et seq. authorizes the City to enter into an agreement for the development of real property with any person or entity having a legal or equitable interest in such property in order to establish certain development rights in such property.

B. Pursuant to Government Code section 65865, City has adopted rules and regulations establishing procedures and requirements for consideration of development agreements (Title D6, Division D6 of the City Municipal Code) **("City Development Agreement Rules**"). This Development Agreement has been processed, considered and executed in accordance with the City Development Agreement Rules including, without limitation, Section D6, Chapter IV of the City Municipal Code.

C. Developer has a legal interest in approximately 585 acres of property commonly known as Bishop Ranch located in the City ("**Bishop Ranch Property**"). Developer has developed most of the Bishop Ranch Property as a business park community and more recently developed approximately 14.57 acres of the Bishop Ranch Property as a retail shopping center, commonly known as City Center.

D. On July 18, 2019, Developer filed a development plan application, titled CityWalk Master Plan ("**Master Plan**"), proposing development of Parcels 1A, 3A and 2600 which are part of the approximately 138 acres City Center Mixed Use (CCMU) District of the Bishop Ranch Property (**"Master Plan Property"**). The Master Plan included the following~~applications for~~:

(i) Vesting Tentative Map (MJ 19-900-001) to create individual parcels that would become smaller neighborhoods, allow for phased implementation of the Master Plan, and assist with financing;

(ii) Development Plan (DP 19-300-002) and Architectural Review (AR 19-200-056) to develop up to 4,500 dwelling units, a 169-key hotel, up to 166,000 square feet of retail uses, several new parking structures, and associated site improvements within Parcel 1A (9.87 acres), Parcel 3A (10.43 acres), and Parcel 2600 (100.1 acres);

(iii) Minor Use Permit (MUP 20-501-002) to allow shared parking reduction for proposed certain office uses, and a blended parking ratio for multi-family development and guest parking; ~~and~~

(iv) Land Use Permit (UP 19-500-004) to allow the community

buildings, privately-owned parks, amphitheater, lodging uses, conference/convention, and similar uses anticipated by the Master Plan; and

(v) CityWalk Design Guidelines to guide the design of development within the Master Plan Property.

E. Developer intends to develop Parcel 2600 ("**Property**") consistent with the uses in the Master Plan, including approximately 3,058 dwelling units, 100,000 square feet of commercial space, 15,000 square foot 2-story community center and private lodging rooms, and other associated uses ("**Project**").

F. Between August 26, 2019 and January 7, 2020, the City held twelve (12) public meetings to solicit input on the Master Plan from interested parties and the public with various City committees and commissions, including a joint study session with the City Council and Planning Commission, and three (3) study sessions with the Planning Commission.

G. On July 21, 2020 the Planning Commission held a public hearing on the Master Plan and its Final Environmental Impact Report ("**EIR**"). Public comments were made at this hearing and the Planning Commission discussed the adequacy of the EIR, Mitigation Monitoring and Reporting Program, Master Plan, and draft Resolutions and Findings recommending certification of the EIR and approval of the Master Plan. This hearing was continued to August 4, 2020 to accept additional public comment and provide further consideration of the draft Resolutions.

H. On August 4, 2020, after a duly noticed hearing, the Planning Commission took the following actions relating to the Master Plan:

(i) Environmental Impact Report for the Master Plan. Pursuant to the California Environmental Quality Act of 1970, Pub. Res. Code §§21000-21178, as amended and the Guidelines for Implementation of the California Environmental Quality Act, Cal. Code Regs. Title 14, §§15000-15387 (collectively, "**CEQA**"), certified the EIR and adopted CEQA Findings and a Mitigation Monitoring and Reporting Program for the Master Plan (SCH No. 2019090586) pursuant to Resolution No. 10-20.

(ii) Master Plan. After certification of the EIR and adoption of the related CEQA documents identified in Recital H~~G~~(i), approved the Master Plan, which included all the applications identified in Recital D~~C~~, pursuant to Resolution No. 11-20.

I. The Planning Commission decisions certifying the EIR and approving the Master Plan were appealed to the City Council by members of the public. On September 8, 2020, after a duly noticed hearing and after considering all testimony, the City Council approved (i) Resolution No. 2020-09 denying the appeal, recertifying the EIR and adopting the CEQA Findings and a Mitigation Monitoring and Reporting Program for the Master Plan (attached as Exhibit A), and (ii) Resolution No. 2020-091 denying the appeal and upholding the Planning Commission Resolution No. 11-20 approving the Master Plan (attached as Exhibit B).

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J. On September 22, 2020, Developer and the respective landowners filed applications for separate development agreements on Parcels 1A, 3A and 2600. This Development Agreement relates to Parcel 2600 only.

K. The City Council has found that, among other things, this Development Agreement is consistent with its General Plan, Zoning Ordinance and implements the Master Plan as explained in the attached City Council Resolution Nos. 2020-090 and 2020-091. ~~.~~ The EIR, Master Plan, and this Development Agreement are referred to as "**Project Approvals**."

L. This Development Agreement vests Developer with the right to develop the Property consistent with the Project Approvals and any other necessary approvals required by the City that are consistent with and necessary to implement the Project Approvals ("**Subsequent Approvals**").

M. This Development Agreement has been properly reviewed and evaluated by the City in accordance with CEQA. The EIR thoroughly analyzed and reviewed all potential significant environmental impacts that could result from approval and implementation of the Project Approvals and thus, implementation of this Agreement.

N. On October 6, 2020 the Planning Commission held its first public hearing on the Development Agreement and on _____, the Planning Commission recommended adoption of this Development Agreement. On _____, the City Council waived the first reading, and introduced an ordinance relating to the approval of this Agreement. On _____, the City Council waived the second reading and adopted Ordinance No. _____ approving this Agreement (attached as Exhibit C

NOW, THEREFORE, with reference to the foregoing recitals and in consideration of the mutual promises, obligations and covenants herein contained, City and Developer agree as follows:

AGREEMENT

Section 1. Description of Property.

The Property which is the subject of this Development Agreement consists of 100.1 acres and is depicted and described in the attached Exhibit D.

Section 2. Interest of Developer.

The Developer has a legal interest in the Property in that it desires to develop the Property consistent with the Project Approvals.

Section 3. Relationship of City and Developer.

It is understood that this Development Agreement is a contract that has been negotiated and voluntarily entered into by the City and Developer and that the Developer is not an agent of the City. The City and Developer hereby renounce the

existence of any form of joint venture or partnership between them and agree that nothing contained herein or in any document executed in connection herewith shall be construed as making the City and Developer joint venturers or partners.

Section 4. Effective Date and Term.

Section 4.1 Effective Date.

The effective date of this Development Agreement shall be thirty (30) days after adoption of Ordinance No. _____approving this Agreement, as set forth in Recital N ("**Effective Date**").

Section 4.2 Term.

Consistent with City Development Agreement Rules outlined in Chapter IV, Division D-6 of the Municipal Code, Section D6-46.A, tThe initial term of this Development Agreement ("**Initial Term**") shall be twenty-five (25) years commencing on the Effective Date and extending to_____, 2035 as provided in Municipal Code Section D6-46.A. , unless the Term is otherwise terminated, modified or extended by circumstances set forth in this Agreement. Consistent with City DevelopmentMunicipal Code Agreement Rules, Section D6-46.B, this Agreement shall automatically extend ten (10) years beyond the Initial Term to _____, 2045 ("**Term**") so long as the Parties are in good faith compliance with the terms and conditions of this Agreement. Written acknowledgement of this extension shall be provided by the City Manager. The Initial Term or Term may be terminated, modified or extended by circumstances set forth in this Agreement.

Section 4.3 Life of Project Approvals and Subsequent Approvals.

The term of any time-limited City approval, including but not limited to the Project Approvals and Subsequent Approvals, if initially shorter than the remaining term of this Development Agreement, shall automatically be extended for the duration of this Agreement (including any extensions). The term of any approval that is longer than the remaining Term of this Agreement shall only be extended as provided by State or City law. Consistent with Section 23 below, Excusable Delay; Extension of Time of Performance and Agreement, the Term of this Agreement and the term of any Project Approvals or Subsequent Approvals shall not include any period of time specified in Section 23 or which a development moratorium (including, but not limited to, a water or sewer moratorium or water and sewer moratorium) or the actions of other public agencies that regulate land use, development or the provision of services to the land, prevents, prohibits or delays the construction of the Property or a lawsuit involving any such development approvals or permits is pending.

Section 5. Use of the Property.

Section 5.1 Right to Develop.

Developer shall have the vested right to develop the Property in accordance with the terms and conditions of the Project Approvals, Subsequent Approvals and this Development Agreement. To the extent the Project Approvals conflict with this Development Agreement, this Agreement shall prevail.

Section 5.2 Permitted Uses.

The permitted uses of the Property, the density and intensity of use, the height, bulk and size of proposed buildings, general provisions for reservation or dedication of land for public purposes and general location and maintenance of on-site and off-site improvements, general location of public utilities, and other terms and conditions of development applicable to the Property, shall be those set forth in the Project Approvals, Subsequent Approvals and this Development Agreement.

Section 5.3 Timing of Project Construction, Phasing and Completion.

Developer intends to build the Project in accordance with the Preliminary Parks and Amenity Improvement Phasing Plan as shown in Exhibit E attached to this Agreement ("**Phasing Plan**"). The Phasing Plan depicts the phasing of the Project that was created at the time this Agreement was negotiated. The purpose of the Phasing Plan is to improve the economic viability of the Project by allowing the phasing of infrastructure improvements to certain milestones. The Parties acknowledge that the ultimate Project phasing will be driven by market conditions and may deviate from the Phasing Plan. Before any changes are made by Developer ~~Any changes~~ to the Phasing Plan, Developer shall ~~will be~~ obtain the written ~~discussed in advance with~~ consent of the ~~the~~ Community Development Director, which shall not be unreasonably withheld. ~~Planning Director~~ The Parties acknowledge that changes to the Phasing Plan will likely occur and have determined that any changes will not require the Development Agreement or Project Approvals to be amended and shall automatically be incorporated into this Agreement and Project Approvals.

Notwithstanding the Phasing Plan or any provision of this Development Agreement, City and Developer expressly agree that there is no requirement that Developer initiate or complete development of the Property or any particular phase of the Property within any particular period of time, and City shall not impose such a requirement on any Project Approvals or Subsequent Approvals, except to ensure that necessary infrastructure is completed in an orderly fashion. Developer's discretion regarding the timing of construction and completion of the Property shall not affect Developer's obligation to diligently pursue to completion all phases of the development once initiated. The Parties otherwise acknowledge that Developer cannot at this time predict when or the rate at which or the order in which phases will be developed. Such decisions depend upon numerous factors that are not within the control of Developer, such as market orientation and demand, interest rates, competition, excusable delays

as defined in Section 23, below), and other similar factors. In light of the foregoing, the Parties agree that Developer shall be able to develop in accordance with Developer's own time schedule as such schedule may exist from time to time, and Developer shall determine which part of the Property to develop first, and at Developer's chosen schedule. In particular, and not in limitation of any of the foregoing, since the California Supreme Court held in *Pardee Construction Co. v. City of Camarillo*, 37 Cal.3d 465 (1984), that the failure of the parties therein to consider and expressly provide for the timing of development resulted in a later-adopted initiative restricting the timing of development to prevail over such parties' agreement, it is the Parties' desire to avoid that result by acknowledging that Developer shall have the right to develop the Property in such order and at such rate and at such times as Developer deems appropriate within the exercise of its subjective business judgment. Nothing in this Agreement shall exempt Developer from completing work required by a subdivision agreement, road improvement agreement or similar agreement in accordance with the terms thereof, nor shall this section of the Agreement affect the term of this Agreement or any related Project Approvals or Subsequent Approvals.

Section 5.4 Project Changes.

The Parties acknowledge that flexibility may be needed at the time of actual construction of the Project to respond to market demands and conditions. By way of example only, market conditions may dictate the timing and phasing of certain Project components. These potential changes are referred to as "**Project Changes**." As long Project Changes are substantially consistent with the Project Approvals and do not cause any new or increased significant environmental impacts, the Project Changes shall be approved administratively by the City without requiring an amendment to the Project Approvals or this Development Agreement; such Project Changes shall automatically be incorporated into the Project Approval and this Agreement.

Section 6. Applicable Law, Regulations and Official Policies

Section 6.1 Rules for Permitted Uses.

Unless otherwise expressly provided in this Section 6 of this Development Agreement, for the Term of this Agreement, the City's ordinances, resolutions, rules, regulations and official policies governing the permitted and conditional permitted uses of the Property; governing density and intensity of uses of the Property; governing design, improvement, and construction standards and specifications; governing the maximum height, bulk and size of proposed buildings; and those in the Project Approvals, shall be those in force and effect on the Effective Date of this Agreement ("**Applicable Law**"). Notwithstanding the foregoing, Developer may elect at its sole discretion to comply with or receive the benefits of changes in Applicable Law by providing written notice to City of said election.

Section 6.2 Uniform Codes Applicable.

Unless expressly provided in Section 5 of this Agreement, development of the Property shall be constructed in accordance with the provisions of the City's adopted Uniform Building, Mechanical, Plumbing, Electrical and Fire Codes and Title 24 of the California Code of Regulations, relating to Building Standards, in effect at the time of approval of the appropriate building, grading, or other construction permits for such development.

Section 6.3 Inclusionary Housing Obligations.

Developer shall comply with the inclusionary housing obligations set forth in Municipal Code Section C4-177, attached as Exhibit F. City agrees that Developer may satisfy a portion or all the affordable requirements through an alternative approach in accordance with the City Municipal Code Sections C4-179 and C4-177. Developer has agreed to provide all inclusionary housing units on the Master Plan Property.

Section 6.4 Point of Sale Determination.

The Parties desire to identify the Project site as the "point of sale" location to allow the remittance of construction sales tax to the City. The Parties shall work together to designate the Property as the point-of-sale location for construction sales tax purposes consistent with all applicable local, state and federal laws. Compliance with this Section 6.4 satisfies Developer's obligations in Condition of Approval no.11 (Construction Sale Tax Sub-Permit) in City Council Resolution 2020-091 approving the Master Plan.

Section 6.5 Allocation and Transfer of Dwelling Units and Building Square Footage.

The Master Plan includes the approval of up to 4,500 dwelling units and 166,000 square feet of commercial uses (in addition to other uses). The allocation of the dwelling units and commercial square footage approved shall be identified in Subsequent Approvals for each parcel (Parcel 1A, 3A and 2600) within the Master Plan area. The units and commercial square footage can be transferred amongst the parcels so long as the uses in the Master Plan for that parcel are allowed by the City Center Mixed Use (CCMU) zoning district and the maximum approved unit count or commercial square footage in the Master Plan is not otherwise exceeded. Such transfers are contemplated and shall not require an amendment to this Development Agreement or the Project Approvals.

Section 7. Funding of City Services.

The Bishop Ranch Economic and Fiscal Impact Analysis, Summary of Results, (February 7, 2020) prepared by HR&A Advisors, Inc. ("**2020 BR FIA**") concluded that, after full buildout of the Master Plan Properties, the development would generate approximately $600,000 (in 2019 dollars) annually in new net revenue to the City in excess of the projected cost for providing city services. This conclusion is dependent

on Contra Costa County agreeing to Amendment #4 to the Bishop Ranch Tax Sharing Agreement, which would allow the City to receive property tax on residential uses in perpetuity. The Parties recognize that material changes to the Project and/or in the assumptions used in the methodology of the 2020 BR FIA (collectively, referred to as "**Material Change**") could create a revenue shortfall up to Project Completion as defined below. If a shortfall occurs, the Parties shall establish an appropriate funding mechanism to fund the shortfall, as described below, in providing certain city services in accordance with this Section 7. "**City Services**" as defined hereafter in this Section 7 means the actual cost of city services directly caused by the Project that are not already financed and provided by Developer to the Project. Compliance with this Section 7 satisfies Developer's obligations in Condition of Approval n~~N~~o. 12 (Funding City Services) in City Council Resolution 2020-091~~(Funding City Services)~~ (**"COA no. 12"**) approving the Master Plan (**"Funding Mechanism"**).

Section 7.1 Determining Need for Funding Mechanism.

(a) Determination of Shortfall During Project Construction.

If during Project Construction and before Project Completion (as both defined below), the Parties determine that a Material Change has occurred, the Parties shall meet and confer to determine if an Updated Fiscal Impact Analysis (**"Updated FIA"**) needs to be prepared for the purpose of assessing whether a Construction Shortfall exists. If an Updated FIA shows that a Construction Shortfall exists or is projected to occur, a Funding Mechanism shall be formed to cover the Construction Shortfall. If at any time the Parties determine a Material Change does not result in a Construction Shortfall, and a Funding Mechanism is in place, the City shall no longer levy the assessment or tax in place unless and until a future Material Change occurs consistent with this Section 7.

"**Construction Shortfall"** is defined in this Section 7 as a shortfall during Project Construction between the General Fund Revenues generated by the Project, exclusive of construction sales tax, and the cost of providing City Services to the Project. "**Project Construction**" is defined in this Section 7 as the time between the issuance of the first building permit and the issuance of the last certificate of occupancy on the Project.

(b) Determination of Shortfall At Project Completion.

If at Project Completion (as defined below), the Parties determine that a Material Change has occurred, the Parties shall meet and confer to determine if an Updated FIA needs to be prepared for purposes of assessing whether a Completion Shortfall exists.

"Completion Shortfall" is defined in this Section 7 as a shortfall at Project Completion between the permanent on-going General Fund Revenues generated from the Project and the cost of providing City Services to the Project. **"Project Completion"**

Attachment: C: Draft Planning Commission Resolution No. 17-20 for CityWalk Development Agreement Regarding Bishop Ranch Parcel 2600

is defined in this Section 7 as the date of the issuance of the last certificate of occupancy on the Project. Developer shall provide written notice of Project Completion to the City Manager.

i. Funding Mechanism Already in Place.

If a Material Change occurs and an Updated FIA substantiates that a Completion Shortfall exists or is projected to occur, the Funding Mechanism shall remain in place and shall be reviewed as part of the Annual Review as set forth in Section 7.2(c). As part of the Annual Review, if the City determines that a Completion Shortfall continues to exist, the Parties shall determine the proper amount of the assessment or tax to levy for that given year.

If, based on an Updated FIA or if one was not required, it is determined that a Completion Shortfall does not exist and is not projected to occur, the City agrees to terminate and remove the Funding Mechanism.

ii. Funding Mechanism Not in Place.

If a Material Change occurs and an Updated FIA substantiates that a Completion Shortfall exists or is projected to occur, and there is no Funding Mechanism in place, a Funding Mechanism shall be created to address this Completion Shortfall. Developer agrees to participate in the formation of the Funding Mechanism and vote in favor of the Funding Mechanism and assessment or tax amount consistent with Section 7.2(d) below.

If, based on an Updated FIA or if one was not required, it is determined that a Completion Shortfall does not exist and is not projected to occur, a Financing Mechanism shall not be created for the Project and Developer shall have no further obligations under this Section 7.

Section 7.2 General Provisions.

(a) Formation of a Funding Mechanism.

The documents related to forming a Funding Mechanism shall calculate and determine the rate and method of apportionment of the Funding Mechanism, including an annual adjustment to account for cost increases. The Parties agree that the maximum annual adjustment shall be the lesser of (i) CPI (Consumer Price Index - All Urban Consumers (San Francisco-Oakland-Hayward, CA) plus two (2) percent or (ii) CPI plus four (4) percent, for any given year.

(b) City Services Does Not Include Services Performed by Developer under Maintenance Agreements.

The services provided by Developer under (i) the City's required standard agreement to be prepared for maintenance of building exteriors, landscaping and parking lot areas between Developer and City that will be finalized and recorded before a

certificate of occupancy is issued under the first building permit for the Project, and (ii) the Agreement for Maintenance of Landscaping Within the Public Rights-of-Way in Bishop Ranch between Sunset Development Company and City dated _____ (a copy of this agreement is attached as Exhibit G) shall not be considered in determining if a Construction Shortfall or Completion Shortfall exists since those agreements will include or include their own remedies.

(c) Timing to Determine if Material Change has Occurred.

Beginning in year five after commencement of Project Construction, and with every Annual Review up until Project Completion, Developer shall demonstrate, to the satisfaction of the City Manager, whether a Material Change has occurred. If a Material Change has occurred, the Parties shall determine if an Updated FIA is needed to determine a Construction Shortfall or Completion Shortfall. If no Material Change has occurred, then no further action shall be required by either Party.

(d) Developer Obligations and Methodology of Updated Fiscal Impact Analysis

Developer shall be responsible for funding any Updated FIA, if required, and all administrative costs associated with the creation and imposition of a needed tax or assessment. The Updated FIA shall be prepared using the same methodology used in the 2020 BR FIA. Developer agrees not to create a barrier that would allow a majority protest to prevent a tax or an assessment pursuant to this Section 7 from being approved and levied. If necessary, Developer will cause a Funding Mechanism to be in place and funded before a sale of a portion of the Project is completed, if that sale could prevent the Developer from forming and funding a Funding Mechanism on the Property, and if a Material Change will occur as a result of the sale and an Updated FIA determines a Construction Shortfall or Completion Shortfall exists. In addition, Developer hereby agrees not to protest the amount of a tax or an assessment limit or levy imposed pursuant to this Section 7 and as substantiated by an Updated FIA.

Section 7.3 Police Services.

Before occupancy of the 1700th residential unit within the Master Plan Property, developer of Parcel 3A shall construct one office of no more than approximately 200 sq. ft for a police substation and the City agrees to furnish and provide all necessary equipment for the substation. This agreement is set forth in the development agreement between BR3 LLC, developer of Parcel 3A, and the City that is being processed by the City at the same time as this Agreement. Developer will assure adequate financing of City Services, including police services, are provided to the Project as discussed in this Section 7. The City acknowledges that these obligations relating to funding police services by Developer are complete and full satisfaction of Condition of Approval n~~N~~o. 14 (Police Services) in City Council Resolution No. 2020-091 approving the Master Plan.

Section 8. Applicable Fees.

Section 8.1 Processing Fees.

The Project shall be subject to the processing fees in the amounts in effect at the time of the applicable application filing, so long as the amounts then in effect are applicable Citywide and to similar applications.

Section 8.2 Impact Fees.

The Project shall be subject to only those City Ddevelopment Iimpact Ffees (and the associated cost of inflation adjustments specified in the enabling legislation for that development impact fee) and amounts listed oin pages 4 and 5 in the attached Exhibit H, City Impact Fees. City shall not impose on the Project any new fees categories or increases in any development impact fees not listed on Exhibit H, on the Project, including Subsequent Approvals, provided the Subsequent Approvals are substantially consistent with the terms of this Agreement and the General Plan.

Section 9. Parks and Fee Credits, and Open Space.

Section 9.1 Provision and Maintenance of Parks and Fee Credits

(a) Application of Parkland Dedication Rules.

The Parties acknowledge the City's Parkland Dedication rules and regulations in Title C, Division C5, Chapter X of the City's Municipal Code do not apply to rental units ("Parkland Dedication Rules"). If the Developer builds for-sale units or other products that would invoke the application of the Parkland Dedication Rules, the City may impose the Parkland Dedication Rules on those products.

(b) Obligations and Credit under Park and Recreation Facility Impact Fee.

Developer is subject to the Park and Recreation Facility Impact Fee in Title C, Division C4, Chapter IX of the City's Municipal Code ("Park and Recreation Facility Impact Fee"). Consistent with Condition of Approval no. 13 (Park Fees) in City Council Resolution 2020-091, Developer shall design, and construct and maintain the parks within the Master Plan Property ("Master Plan Parks"). The Master Plan Parks shall be open to the public and operate in accordance with the City's park access rules (open from dawn to dusk). Developer shall work with the Community Development Director in preparing and executing written recordable agreement(s) (i.e., easement, right of access agreement, license) to assure the Master Plan Parks remain accessible to the public in perpetuity. Separate agreements may be prepared for each Master Plan Park to allow recordation of the agreement on each Park property before the Park is built. Developer shall work with the Parks and Community Services Department on programming (i.e., scheduling of special events and activities) and the design of the Master Plan Parks consistent with the CityWalk Design Guidelines.

In addition, Developer shall design and construct Henry Ranch and Wood Lot parks and install a synthetic turf field at Iron Horse Middle School ("Off-site Parks") in accordance with Exhibits E and I. ~~publicly accessible community and neighborhood parks, and provide landscaped areas as set forth in the Project Approvals~~. Developer shall work with the Parks and Community Services Department the design of the Off-site Parks.

Developer shall receive credit against the ~~City's~~ Park and Recreation Facility Impact Fee for the provision, construction and maintenance of the Master Plan Parks and for the design and construction of the Off-site Parks as shown in Exhibit I. ~~se parks and landscaped areas as detailed in the attached Exhibit I, Park Fees and Credits.~~

(c) Maintenance of and Capital Improvements in Master Plan Parks.

Developer agrees to maintain the Master Plan Parks in accordance with the City's adopted rules and regulations relating to maintenance of public parks and shall be responsible for all future capital improvements in these Parks during the Term of this Agreement. Prior to the expiration of the Term, the Parties shall meet to determine the future maintenance and capital improvement obligations for the Master Plan Parks. Developer may elect to continue with these obligations at its own expense or the City shall assume these obligations. If the City assumes these maintenance and capital improvement obligations and a shortfall exists from the revenues generated by the Project and the cost of providing these services, Developer shall make up that financial shortfall.

(d) Full Satisfaction of Park Obligations.

The City acknowledges that the requirements set forth in this Agreement are complete and full satisfaction of Developer's obligations in Condition of Approval no. 13 and pursuant to the Park and Recreation Facility Impact Fee.

Section 9.2 Open Space Fee.

Developer is subject to the City's Open Space Development Impact Fee in Title C, Division C4, Chapter XI of the City's Municipal Code ("Open Space Fee"). Developer shall pay the Open Space Fee at a maximum of $750 per unit in two payments. Developer shall pay fifty percent (50%) of the total Open Space Fee for the Project upon the issuance of the first building permit for the Project and the remaining fifty percent (50%) upon the issuance of the 600th building permit or the last building permit for the Project, whichever is sooner. ~~The City acknowledges that these obligations relating to parks are complete and full satisfaction of Condition of Approval No. 13 (Park Fees) in City Council Resolution No. 2020-091 approving the Master Plan.~~

Section 10. Moratorium Not Applicable.

Notwithstanding anything to the contrary contained herein, in the event an ordinance, resolution or other measure is enacted, whether by action of City, by initiative, referendum, or otherwise, that imposes a building moratorium, a limit on the rate of development, or a voter-approval requirement which affects the Developer's ability to develop all or any part of the Property, City agrees that such ordinance, resolution or other measure shall not apply to the Property, this Development Agreement, the Project Approvals or the Subsequent Approvals unless lawfully imposed by City as part of a validly adopted declaration of a local emergency.

Section 11. Amendment or Cancellation.

Section 11.1 Modification to Address Conflict with State or Federal Laws.

In the event that state or federal laws or regulations enacted after the Effective Date of this Development Agreement prevent or preclude compliance with one or more provisions of this Agreement or require changes in plans, maps, permits or entitlements approved by the City, the Parties shall meet and confer in good faith in a reasonable attempt to modify this Agreement to comply with such federal or state law or regulation. Any such amendment or suspension of the Agreement shall be approved by the City Council in accordance with California Government Code §65864 et seq. To the extent any State or Federal regulation caused a delay, the Parties may invoke the provisions in Section 22, Excusable Delay; Extension of Time of Performance and Agreement.

Section 11.2 Amendment by Mutual Consent.

This Development Agreement may be amended in writing from time to time by mutual consent of the Parties hereto and in accordance with the procedures of California Government Code §65864 et seq. and this Agreement.

Section 11.3 Insubstantial Amendments.

Notwithstanding the provisions of Section 11.2, any amendments to this Development Agreement which do not relate to (a) the Term as provided in Section 4.2; (b) the permitted uses of the Property as provided in Section 5.2; (c) the density or intensity of use of the Property; and (d) the maximum height or size of proposed buildings, may be approved by the City Manager without a public hearing before either the Planning Commission or the City Council, except to the extent otherwise required by law. The Parties acknowledge that changes to the Project Approvals shall not require any amendment to the Development Agreement and shall be automatically included within this Agreement.

Section 11.4 Cancellation by Mutual Consent.

Except as otherwise permitted herein, this Agreement may be canceled in whole or in part only by the mutual consent of the Parties or their successors in interest, in accordance with the provisions of California Government Code §65864 et seq. Any fees

paid and/or land dedicated pursuant to this Agreement prior to the date of cancellation shall be retained by City.

Section 12. Annual Review.

Section 12.1 Review Date.

This Development Agreement shall be subject to an "**Annual Review**." The annual review date for this Agreement shall be July 1, 2022 and each July 1 thereafter ("**Annual Review Date**"). If the annual review is not conducted in accordance with this Section 12, there shall not be any negative effect on the validity or enforceability of this Agreement, nor shall the City be precluded from reviewing this Agreement at another time if it has not conducted a review as scheduled. In addition, this Annual Review shall take into account any obligations required by Section 7 of this Agreement.

Section 12.2 Initiation of Review.

Developer shall initiate the annual review by providing to City thirty (30) days in advance of the Annual Review Date, a letter demonstrating that Developer is in good faith compliance with the provisions of the Development Agreement as provided in Government Code §65684 et seq.

Section 12.3 Staff Reports.

To the extent practical, City shall deliver a copy of all staff reports and related exhibits concerning the annual review to Developer by mail, email or fax, at least five (5) days prior to any annual review.

Section 13. Default.

Section 13.1 Other Remedies Available.

Upon the occurrence of an event of default, the Parties may pursue all other remedies at law or in equity that are not otherwise provided for in this Development Agreement or in City's regulations governing development agreements, expressly including the remedy of specific performance of this Agreement. Notwithstanding the foregoing, Developer shall not be compelled by specific performance to construct all or any part of the Project.

Section 13.2 Notice and Cure.

Upon the occurrence of an event of default by either Party, the nondefaulting Party shall serve written notice of such default upon the defaulting Party. If the default is not cured by the defaulting Party within thirty (30) days after service of such notice of default, the nondefaulting Party may then commence any legal or equitable action to enforce its rights under this Agreement; provided, however, that if the default cannot be cured within such thirty (30) day period, the nondefaulting Party shall refrain from any such legal or equitable action so long as the defaulting Party begins to cure such default

within such thirty (30) day period and diligently pursues such cure to completion. In any event, the nondefaulting Party shall attempt in writing to meet and confer with the defaulting Party before the nondefaulting Party commences any legal or equitable action to cure the alleged default. Failure to give notice shall not constitute a waiver of any default.

Section 13.3 No Monetary Damages against City or Developer.

In no event shall monetary damages be awarded against City or Developer upon an event of default or upon termination of this Agreement.

Section 14. Estoppel Certificate.

Either Party may, at any time, and from time to time, request written notice from the other Party requesting such Party to certify in writing that, (a) this Agreement is in full force and effect and a binding obligation of the Parties, (b) this Agreement has not been amended or modified either orally or in writing, or if so amended, identifying the amendments, and (c) to the knowledge of the certifying Party the requesting Party is not in default in the performance of its obligations under this Agreement, or if in default, to describe therein the nature and amount of any such defaults. A Party receiving a request hereunder shall execute and return such certificate within ten (10) days following the receipt thereof, or such longer period as may reasonably be agreed to by the Parties. City Manager of City shall be authorized to execute any certificate requested by Developer. Should the Party receiving the request not execute and return such certificate within the applicable period, the request shall be deemed to be granted by the Party receiving the request.

Section 15. Mortgagee Protection; Certain Rights of Cure.

Section 15.1 Mortgagee Protection.

This Development Agreement shall be superior and senior to any lien placed upon the Property, or any portion thereof after the date of recording this Agreement, including the lien for any deed of trust or mortgage ("**Mortgage**"). Notwithstanding the foregoing, no breach hereof shall defeat, render invalid, diminish or impair the lien of any Mortgage made in good faith and for value, but all the terms and conditions contained in this Agreement shall be binding upon and effective against any person or entity, including without limitation any deed of trust beneficiary or mortgagee ("**Mortgagee**") who acquires title to the Property, or any portion thereof, by foreclosure, trustee's sale, deed in lieu of foreclosure or similar means.

Section 15.2 Mortgagee Not Obligated.

Notwithstanding the provisions of Section 15.1 above, unless the Mortgagee assumes the rights, benefits, interests and obligations under this Development Agreement and this assumption is approved by the City Manager, no Mortgagee shall have any obligation or duty under this Agreement, before or after foreclosure or a deed in lieu of foreclosure, to construct or complete the construction of improvements, or to

Attachment: C: Draft Planning Commission Resolution No. 17-20 for CityWalk Development Agreement Regarding Bishop Ranch Parcel 2600

guarantee such construction of improvements, or to guarantee such construction or completion, or to pay, perform or provide any fee, dedication, improvements or other exaction or imposition. Any entity issuing security for the faithful performance of a subdivision agreement shall not be considered a "Mortgagee" for purposes of this section." (In other words, sureties issuing performance bonds are obligated to construct the improvements, as compared to true mortgagees.)

Section 15.3 Notice of Default to Mortgagee and Extension of Right to Cure.

If City receives notice from a Mortgagee requesting a copy of any notice of default given Developer hereunder and specifying the address for service thereof, then City shall deliver to such Mortgagee, concurrently with service thereon to Developer, any notice given to Developer with respect to any claim by City that Developer has committed an event of default. Each Mortgagee shall have the right during the same period available to Developer to cure or remedy, or to commence to cure or remedy, the event of default claimed set forth in the City's notice. City, through its City Manager, may extend the thirty-day cure period provided in Section 15.2 for not more than an additional sixty (60) days upon request of Developer or a Mortgagee.

Section 16. Severability.

The unenforceability, invalidity or illegality of any provisions, covenant, condition or term of this Agreement shall not render the other provisions unenforceable, invalid or illegal.

Section 17. Attorneys' Fees and Costs.

If City or Developer initiates any action at law or in equity to enforce or interpret the terms and conditions of this Agreement, the prevailing Party shall be entitled to recover reasonable attorneys' fees and costs in addition to any other relief to which it may otherwise be entitled. If any person or entity not a party to this Agreement initiates an action at law or in equity to challenge the validity of any provision of this Agreement, or City's actions pursuant to this Agreement, the Parties shall cooperate in defending such action. Developer shall bear its own costs of defense as a real party in interest in any such action and shall reimburse City for all reasonable court costs and attorneys' fees expended by City in defense of any such action or other proceeding and for any attorney's fees and costs awarded to a Party to be paid by City.

Section 18. Transfers and Assignments.

Section 18.1 Right to Assign.

Developer has the right to sell or transfer all or a portion of the Property to one or more third parties (each such party is referred to as a "**Transferee**"). In connection with any such sale or transfer to a Transferee, Developer may assign to such Transferee any or all rights, interests and obligations of Developer arising under this Agreement that pertain to the portion of the Property being sold or transferred to such Transferee. No such assignment of Developer's rights, interests and obligations hereunder shall occur

without prior written notice to City and approval by the City Manager (which shall be for the purpose of assuring City that the proposed Transferee can perform Developer's obligations hereunder), which approval shall not be unreasonably withheld or delayed. The foregoing notwithstanding, Developer may, without the City or City Manager's approval, but with written notice to the City, in connection with the sale or transfer of all or a portion of the Property to any wholly-owned subsidiary of Developer, assign its interest in this Agreement that pertains to such portion of the Property sold or transferred.

Section 18.2 Approval and Notice of Assignment.

The City Manager shall consider and decide on any assignment of this Agreement within ten (10) business days after Developer's notice, excluding assignments allowed without approval as stated in Section 18.1. Notice of any such approved assignment (which includes a description of all rights, interests and obligations that have been transferred and those which have been retained by Developer) shall be recorded in the official records of Contra Costa County, in a form acceptable to the City Manager, concurrently with such assignment.

Section 18.3 Effect of Sale, Transfer or Assignment.

Developer shall be released from any obligations hereunder assigned to a Transferee, provided that: a) such sale, transfer or assignment has been approved by the City Manager (or is otherwise permitted) pursuant to Sections 18.1 and 18.2 of this Agreement; and b) such obligations are expressly assumed by Transferee; and provided further that Transferee shall be subject to all the provisions hereof and shall provide all necessary documents, certifications and other necessary information prior to City Manager approval (unless permitted without the consent of the City Manager pursuant to Section 18.1).

Section 18.4 Termination of Agreement Upon Sale of Individual Parcels to Public.

Notwithstanding any provisions of this Agreement to the contrary, the burdens of this Agreement shall terminate as to any parcels which has been subdivided and individually leased or sold to a person or entity intending to construct a building on such parcel; provided, however, that the benefits of this Agreement shall continue to run as to any such parcel until occupancy of the building to be constructed thereon and Developer's obligations hereunder shall continue until satisfied.

Section 19. Agreement Runs with the Land.

The provisions, rights, terms, covenants, and obligations contained in this Agreement shall be binding upon the Parties and any person or entity to whom this Agreement is assigned to pursuant to Section 18 ("**Benefitting Parties").** No person or entity may receive or take advantage of the benefits in this Agreement without assuming the obligations under this Agreement. With respect to Benefitting Parties, the provisions of this Agreement shall be enforceable as equitable servitudes and shall constitute

Attachment: C: Draft Planning Commission Resolution No. 17-20 for CityWalk Development Agreement Regarding Bishop Ranch Parcel 2600

covenants running with the land pursuant to applicable laws, including, but not limited to, Section 1468 of the Civil Code of the State of California. Each covenant to do, or refrain from doing, some act on the Property hereunder, (a) is for the benefit of such properties and is a burden upon such properties, (b) runs with such properties, and (c) is binding upon Benefitting Parties during its ownership of such properties or any portion thereof.

Section 20. Bankruptcy.

The obligations of this Development Agreement shall not be dischargeable in bankruptcy.

Section 21. Indemnification.

Developer agrees to indemnify, defend and hold harmless City, and its elected and appointed councils, boards, commissions, officers, agents, employees, and representatives from any and all claims, costs (including legal fees and costs) and liability for any personal injury or property damage which may arise directly or indirectly as a result of any actions or inactions by the Developer, or any actions or inactions of Developer's contractors, subcontractors, agents, or employees in connection with the construction, improvement, operation, or maintenance of the development of the Property, provided that Developer shall have no indemnification obligation with respect to negligence or wrongful conduct of City, its contractors, subcontractors, agents or employees or with respect to the maintenance, use or condition of any improvement after the time it has been dedicated to and accepted by the City or another public entity (except as provided in an improvement agreement or maintenance bond).

Section 22. Insurance.

Section 22.1 Public Liability and Property Damage Insurance.

At all times that Developer is constructing any improvements that will become public improvements, Developer shall maintain in effect a policy of comprehensive general liability insurance with a per-occurrence combined single limit of not less than one million dollars ($1,000,000.00) and a deductible of not more than ten thousand dollars ($10,000.00) per claim. The policy so maintained by Developer shall name the City as an additional insured and shall include either a severability of interest clause or cross-liability endorsement.

Section 22.2 Workers Compensation Insurance.

At all times that Developer is constructing any improvements that will become public improvements Developer shall maintain Workers' Compensation insurance for all persons employed by Developer for work at the site or for work performed pursuant to this Agreement. Developer shall require each contractor and subcontractor similarly to provide Workers' Compensation insurance for its respective employees. Developer agrees to indemnify the City for any damage resulting from Developer's failure to maintain any such insurance.

Attachment: C: Draft Planning Commission Resolution No. 17-20 for CityWalk Development Agreement Regarding Bishop Ranch Parcel 2600

Section 22.3 Evidence of Insurance.

Prior to commencement of construction of any improvements which will become public improvements, Developer shall furnish City satisfactory evidence of the insurance required in Sections 22.1 and 22.2 and evidence that the carrier is required to give the. City at least fifteen days prior written notice of the cancellation or reduction in coverage of a policy. The insurance shall extend to the City, its elective and appointive boards, commissions, officers, agents, employees and representatives and to Developer performing work on the Property and pursuant to this Agreement.

Section 23. Excusable Delay; Extension of Time of Performance and Agreement.

In addition to specific provisions of this Agreement, neither Party shall be deemed to be in default where delays in performance or failures to perform are due to, or are a necessary outcome of war, strikes or other labor disturbances, walk-outs, riots, floods, earthquakes, fires, casualties, pandemics, unforeseen economic or financial conditions that render development infeasible, acts of God, enactment or imposition against the Project of any moratorium, voter approved initiative or referendum, or any time period for legal challenges pertaining to a moratorium or the Project, or similar basis for excused performance which is not within the reasonable control of the Party to be excused. Litigation challenging the validity of this Agreement or any of the Project Approvals, Subsequent Approvals, or any permit, ordinance, entitlement or other action of a governmental agency, including the City, necessary for the development of the Project, or Developers' inability to obtain materials, power or public facilities (such as water or sewer service) to the Project, shall be deemed to create an excusable delay as to Developer. Upon the request of either Party, an extension of time for the performance of any obligation whose performance has been so prevented or delayed shall be memorialized in writing. The City Manager is authorized on behalf of the City to enter such an extension. The term of any such extension shall be equal to the period of the excusable delay, or longer, as shall be mutually agreed upon and the term of the extension shall automatically extend the Term of this Agreement.

Section 24. Good Faith.

The Parties agree to cooperate in good faith in implementing this Agreement.

Section 25. Notices.

All notices required or provided for under this Development Agreement shall be in writing. Notices required to be given to City shall be addressed as follows:

City of San Ramon
City Clerk
7000 Bollinger Canyon Road
San Ramon, CA 94583
Attn: Christina Franco

with copy to:

City of San Ramon
City Attorney
7000 Bollinger Canyon Road
San Ramon, CA 94583
Attn: Martin Lysons

Notices required to be given to Developer shall be addressed as follows:

2600 CR, LLC
c/o Sunset Development
General Counsel
2600 Camino Ramon, Suite 201
San Ramon CA 94583
Attn: David Fields

with copy to:

Wendel Rosen
1111 Broadway, 24th Floor
Oakland, CA 94607
Attn: Patricia E. Curtin

A Party may change address by giving notice in writing to the other Party and thereafter all notices shall be addressed and transmitted to the new address. Notices shall be deemed given and received upon personal delivery, or if mailed, upon the expiration of 48 hours after being deposited in the United States Mail, Notices may also be given by overnight courier which shall be deemed given the following day or by facsimile transmission which shall be deemed given upon verification of receipt.

Section 26. Agreement is Entire Understanding.

This Development Agreement constitutes the entire understanding and agreement of the parties.

~~Section 27. Development Agreement Supersedes Original Development Agreement as Amended.~~

~~Once this Development Agreement is in full force and effect and is not subject to any legal or other challenge, this Agreement shall automatically supersede the Original Development Agreement as Amended and the Original Development Agreement as Amended will no longer be in effect.~~

Section 27. Exhibits.

The following documents are referred to in this Agreement and are attached hereto and incorporated herein as though set forth in full:

Exhibit A	Resolution No. 2020-09 denying the appeal, recertifying the EIR and adopting the CEQA Findings and a Mitigation Monitoring and Reporting Program for the Master Plan
Exhibit B	Resolution No. 2020-091 denying the appeal and upholding the Planning Commission Resolution No. 11-20 approving the Master Plan
Exhibit C	Ordinance No. ___ Approving Development Agreement
Exhibit D	Legal Description of Property
Exhibit E	Preliminary Parks and Amenity Improvement Plan (Phasing Plan)
Exhibit F	Municipal Code Section C4-177 (Inclusionary Housing)
Exhibit G	Agreement for Maintenance of Landscaping Within the Public Rights-of-Way in Bishop Ranch between Sunset Development Company and City dated _____
Exhibit H	Planning Services Fees – Development Impact Fees
Exhibit I	Park Fees and Credits

Section 28. Counterparts.

This Development Agreement may be executed in duplicate originals, each of which is deemed to be an original.

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10/15/20~~9/22/20~~

Section 29. Recordation.

City shall record a copy of this Development Agreement within ten days following execution by all persons below.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed as of the following dates:

CITY OF SAN RAMON: Date: _____

_____
Bill Clarkson, Mayor

ATTEST: Date: _____

_____
Christina Franco, City Clerk

Approved as to Form: Date: _____

_____
Martin Lysons, City Attorney

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10/15/20~~9/22/20~~

DEVELOPER: Date: _____

2600 CR, LLC

By: _____

By: _____

Approved as to Form: Date: _____

_____
Patricia E. Curtin
Attorney for Developer

Signatures of City and Developer to be Notarized

DRAFT
10/15/20~~9/22/20~~

EXHIBIT A

RESOLUTION NO. 2020-09 DENYING THE APPEAL, RECERTIFYING THE EIR AND ADOPTING THE CEQA FINDINGS AND A MITIGATION MONITORING AND REPORTING PROGRAM FOR THE MASTER PLAN

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EXHIBIT B

RESOLUTION NO. 2020-091 DENYING THE APPEAL AND UPHOLDING THE PLANNING COMMISSION RESOLUTION NO. 11-20 APPROVING THE MASTER PLAN

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10/15/20~~9/22/20~~

EXHIBIT C

ORDINANCE NO. ___ APPROVING DEVELOPMENT AGREEMENT

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10/15/209/22/20

EXHIBIT D

LEGAL DESCRIPTION OF PROPERTY

DRAFT
10/15/209/22/20

EXHIBIT E

PRELIMINARY PARKS AND AMENITY IMPROVEMENT PLAN (PHASING PLAN)

DRAFT
10/15/20~~9/22/20~~

EXHIBIT F

MUNICIPAL CODE SECTION C4-177 (INCLUSIONARY HOUSING)

Attachment: C: Draft Planning Commission Resolution No. 17-20 for CityWalk Development Agreement Regarding Bishop Ranch Parcel 2600

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10/15/20~~9/22/20~~

EXHIBIT G

AGREEMENT FOR MAINTENANCE OF LANDSCAPING WITHIN THE PUBLIC RIGHTS-OF-WAY IN BISHOP RANCH BETWEEN SUNSET DEVELOPMENT COMPANY AND CITY DATED _____

DRAFT
10/15/20~~9/22/20~~

EXHIBIT H

~~CITY IMPACT FEES~~ PLANNING SERVICES FEES - DEVELOPMENT IMPACT FEES

Attachment: C: Draft Planning Commission Resolution No. 17-20 for CityWalk Development Agreement Regarding Bishop Ranch Parcel 2600

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10/15/20~~9/22/20~~

EXHIBIT I

PARK FEES AND CREDITS

Exhibit E
CityWalk Master Plan
Preliminary Parks and Amenity Improvement Plan

Location	Anticipated Construction Start	Anticipated Completion	Anticipated Lease Up	Units	Other Uses & Buildings	Amenities - Phasing	Notes
BR2600 SE-2	Jan-2021	Dec-2022	Dec-2023	283	Includes 61K retail/Office/169 room hotel	2.35 Acre City Green	
BR1A 1A-1	Jan-2023	Dec-2024	Dec-2025	468		Transit Hub @ BR1A	
BR1A 1A-2	Jan-2025	Dec-2026	Dec-2027	184		Wood Lot Park (Start const. when permits pulled for the 450th unit)*	
				935			
BR3A 3A-1	Jan-2027	Dec-2028	Dec-2029	271	Includes 35K Retail	IHT improvements x2	
BR3A 3A-2	Jan-2029	Dec-2030	Dec-2031	258	Includes 35K Retail	Transit Hub @ BR3	
BR3A 3A-3	Jan-2031	Dec-2032	Dec-2033	269	Includes P-3	IHT MS Turf Field (Start const. when permits pulled for the 1,250th unit)*	
				798			
BR2600 SE-1	Jan-2033	Dec-2034	Dec-2035	240	Includes 25K retail/Office	Annabel Lake Community Center	
BR2600 NE-1 & 4	Jan-2035	Dec-2036	Dec-2037	295	Includes P-4/14K Retail/Office		
BR2600 NE-2	Jan-2037	Dec-2038	Dec-2039	526			
				1061			
BR2600 NE-3	Jan-2039	Dec-2040	Dec-2041	307	Includes P-1 & P-2	Relocate Road & Lake Cecilia Park Improvements	
BR2600 NW-1	Jan-2041	Dec-2042	Dec-2043	515		Transit Hub BR2600	
BR2600 NW-2	Jan-2043	Dec-2044	Dec-2045	311		Median in Executive Parkway	
				1133		Henry Ranch Park (Start const. when permits pulled for the 1,600th unit pulled)*	
BR2600 NW-3	Jan-2045	Dec-2046	Dec-2047	277			
BR2600 NW-4	Jan-2047	Dec-2048	Dec-2049	296		Annabel Lake access enhancements	
				573		Ampthitheater	
				4500			

3765

EXHIBIT H

CITY OF SAN RAMON
PLANNING SERVICES DIVISION
2401 Crow Canyon Road
San Ramon, CA 94583
Phone: (925) 973-2560 Fax: (925) 838-3231

Planning Services Fees

Resolution No. 2020-033
Effective July 1, 2020

Address / Street Assignment
- Single address $350.00
- Multiple addresses ..... T&M plus $600.00 deposit

Appeal
- Appeal from Zoning Administrator's Decision for Residential Property under SRMC §D7-8 ..... T&M plus $1,500.00 deposit (deposit paid by Appellant while the T&M fee paid by Applicant)
- Appeal from Zoning Administrator's Decision for Non-Residential Property under SRMC §D7-8 ..... T&M plus $2,500.00 deposit (deposit paid by Appellant while the T&M fee paid by Applicant)
- Appeal from Planning Commission Decision for Residential Property under SRMC §D7-8 ..... T&M plus $2,500.00 deposit (deposit paid by Appellant while the T&M fee paid by Applicant)
- Appeal from Planning Commission Decision for Non-Residential Property under SRMC §D7-8 ..... T&M plus $2,500.00 deposit (deposit paid by Appellant while the T&M fee paid by Applicant)

Annexation ..... T&M plus $3,000.00 deposit

Architectural Review
- Administrative Review (All Districts) ..... T&M plus the deposit fee below
- Conceptual (Maximum of one ARB meeting) $1,000.00
- Minor Alteration $500.00
- **Office / Commercial / Industrial (New Construction, Additions, and/or Alterations)**
  - Small (up to 10,000 sq. ft.) ..... T&M plus $1,000.00 deposit
  - Large (greater than 10,000 sq. ft.) ..... T&M plus $2,000.00 deposit
  - Alterations ..... T&M plus $1,000.00 deposit
- **Residential**
  - Single-Family - Second Story Addition $400.00
  - New Construction
    - 1 dwelling unit ..... T&M plus $1,000.00 deposit
    - 2 to 10 dwelling units ..... T&M plus $1,000.00 deposit
    - 10 dwelling units or more ..... T&M plus $2,000.00 deposit

Business License
- Business License Document Reprint $15.00
- Business License Late Payment Fee $25.00
- Other Fees (Business License Fees – AB 1379) $4.00
- **General Businesses**
  - 0 – 5 Employees ..... $50.00 plus $4.00 (AB 1379)
  - 6 – 50 Employees ..... $100.00 plus $4.00 (AB 1379)
  - More than 50 Employees ..... $200.00 plus $4.00 (AB 1379)
- **Lessors of Commercial Property**
  - Less than 5,000 square feet ..... $50.00 plus $4.00 (AB 1379)
  - 5,0001 to 10,000 square feet ..... $100.00 plus $4.00 (AB 1379)
  - More than 10,000 square feet ..... $200.00 plus $4.00 (AB 1379)
- **Lessors of Dwelling Units**
  - One unit only ..... $50.00 plus $4.00 (AB 1379)
  - 2 to 5 units ..... $100.00 plus $4.00 (AB 1379)
  - More than 5 units ..... $200.00 plus $4.00 (AB 1379)

T&M = Time and Materials charge
DU = Dwelling Unit

Attachment: E: Exhibit H - Excerpt from Adopted City Council Resolution No. 2020-033, Planning Services Fees to Proposed Development

Amusements & Itinerant Businesses, Circuses, Carnivals, and Exhibitions ..... $200.00 plus $4.00 (AB 1379)
Temporary Places of Sale
1 day ..... $50.00 plus $4.00 (AB 1379)
2 to 5 days ..... $70.00 plus $4.00 (AB 1379)
6 to 30 days ..... $200.00 plus $4.00 (AB 1379)
Vending Machines
1 to 5 Machines ..... $70.00 plus $4.00 (AB 1379)
More than 5 Machines ..... $130.00 plus $4.00 (AB 1379)

Development Agreement and Amendment ..... T&M plus $3,000.00 deposit

Development Plan
Amendment (changes to site plan and/or square footage)
Administrative Review $1,500.00
Public Hearing Required ..... T&M plus $2,500.00 deposit
Conceptual Development Plan Review – ARB Review $1,000.00
Conceptual Development Plan Review – PC Review $1,500.00
Preliminary Housing Development Application $1,500.00
Non-residential ..... T&M plus $3,000.00 deposit
Residential ..... T&M plus $3,000.00 deposit

Engineering Review
Permit Review ..... $150.00/hour with a 2 hour minimum charge for each permit
Permit Review (Telecom. Projects) ..... $150.00/hour with a 3 hour minimum charge for each permit
Permit Review (Day Care Center) ..... $1,000.00 deposit plus $150.00/hour in excess of $1,000.00
Preliminary Development Review Fee (non-mixed use projects) ..... $2,000.00 plus $150.00/hour in excess of $2,000.00
Preliminary Development Review Fee (mixed use projects) ..... $3,000.00 plus $150.00/hour in excess of $3,000.00
Minor Subdivision ..... $2,000.00 and Consultant Cost plus Administrative Fee
Major Subdivision ..... $2,000.00 plus $150.00/lot and Consultant Cost plus Administrative Fee

Environmental Review
Categorical Exemption $100.00
Environmental Impact Report ..... Consultant's Cost plus T&M and $8,000.00 deposit
Negative Declaration
Administratively Prepared ..... T&M plus $4,500.00 deposit
Consultant Prepared ..... Consultant's Cost plus T&M and $5,500.00 deposit

Mitigation Monitoring Administration
Contra Costa County Clerk Filling Fee[4] (fee payable to County Clerk) $50.00
Dept. of Fish and Game User Fee[4]
Negative Declaration ..... Per Dept. of Fish & Game Code Section 711.4
Mitigated Negative Declaration ..... Per Dept. of Fish & Game Code Section 711.4
Environmental Impact Report ..... Per Dept. of Fish & Game Code Section 711.4
Certified Regulatory Program ..... Per Dept. of Fish & Game Code Section 711.4

Mitigation Monitoring Program
Implementation / Special Peer / Consultant Review ..... Consultant's Cost plus T&M and $3,000.00 deposit
Mitigation Monitoring Staff Time ..... T&M plus $2,000.00 deposit

General Plan Amendment ..... T&M plus $8,000.00 deposit

Home Occupation Permit $100.00

Minor Exception $1,000.00

Minor Modification to Conditions of Approval
Zoning Administrator Review ..... T&M plus $500.00 deposit
Planning Commission Review ..... T&M plus $1,500.00 deposit

Rezoning (all districts) ..... T&M plus $5,500.00 deposit

T&M = Time and Materials charge
DU = Dwelling Unit

Short-Term Rental Registration $100.00

Sign Review

Sign Permit/Administrative Sign Review (each face copy change) $300.00
Sign Permit approved by Master Sign Program $300.00
Sign Permit (each new sign requiring ARB review) $2,500.00
Master Sign Program ..... T&M plus $3,000.00 deposit
Master Sign Program Amendment ..... T&M plus $3,000.00 deposit
Temporary Sign Permit
21 consecutive days (maximum one per quarter) (Banner for Special Event) $300.00
90 consecutive days $300.00

Special Review

Special Peer / Consultant Review ..... Consultant's Cost plus T&M and $2,000.00 deposit

Specific Plan (Consultant Prepared) ..... Consultant's Cost plus T&M and $8,000.00 deposit

Subdivision

Major Subdivision ..... T&M plus $3,500.00 deposit
Minor Subdivision ..... T&M plus $3,500.00 deposit
Lot Line Adjustment / Technical Review (see Engineering Division Fee Schedule) ..... $250.00 per parcel

Text Amendment

General Plan Text Amendment ..... T&M plus $8,000.00 deposit
Specific Plan Text Amendment ..... T&M plus $8,000.00 deposit
Zoning Text Amendment ..... T&M plus $5,500.00 deposit

Time Extension

Time Extension Approved Administratively
(Architectural Review, Development Plan, Use Permit, Major/Minor Subdivision, Variance, etc.) $200.00
Time Extension Requiring Public Hearing(s)
(Development Plan, Use Permit, Major/Minor, Subdivision, Variance, etc.) ..... T&M plus $1,000.00 deposit

Tree Removal Permit

Residential $200.00
Non-Residential, Administrative $350.00
Non-Residential, Requiring an Architectural Review Meeting $1,500.00

Use Permit

Major Use Permit and Amendments requiring Public Hearing(s) (All Districts) ..... T&M plus $3,500.00 deposit
Minor Use Permit and Amendments (All Districts) ..... T&M plus $2,000.00 deposit
Temporary Land Use Permit (e.g. Christmas Tree and Halloween lots) ..... $500.00 plus $500.00 cleaning deposit, as
(all other special events see Parks & Comm. Services Fee Schedule) determined by the Zoning Administrator
Temporary Land Use Permit - Portable Outdoor Storage Unit (POSU) – Residential $100.00
Temporary Land Use Permit - Portable Outdoor Storage Unit (POSU) – Non-Residential $200.00

Telecommunications Land Use Permit

Administratively Processed ..... T&M plus $2,000.00 deposit
Engineering Permit Review (Telecom.) ..... $150.00/hour with a 3 hour minimum charge for each permit
Requiring ARB Review ..... T&M plus $3,500.00 deposit
Engineering Permit Review (Telecom.) ..... $150.00/hour with a 3 hour minimum charge for each permit
Requiring Planning Commission Review ..... T&M plus $3,500.00 deposit
Engineering Permit Review (Telecom.) ..... $150.00/hour with a 3 hour minimum charge for each permit
Right-of-way Use Permit ..... T&M plus $2,000.00 deposit

Variance

Administrative Variance $1,500.00
Public Hearing Required (each application) ..... T&M plus $3,000.00 deposit
Single Family Residence $1,500.00

T&M = Time and Materials charge
DU = Dwelling Unit

Zoning Certification Letter ..... T&M plus $350.00 deposit

Zoning Clearance $600.00

Zoning Review / Building Permit

Single Family – Remodel $180.00
Single Family – New/Addition/Substantial Alteration $365.00
Multi-Family/Mixed Use – Minor Improvement $200.00
Multi-Family/Mixed Use – New/Addition/Substantial Alteration $1,200.00
Commercial/Industrial – New Build $1,200.00
Commercial/Industrial – Tenant Improvement $200.00
Additional Plan Check Fee (each review) $200.00

Miscellaneous Fees

Document / File Research ..... $200.00 per hour (min. $400.00 deposit)
General Plan Recovery Costs ..... 0.53 percent (0.0053) of building code valuation
Microfilm and/or Laser fiche Fee
- Administrative Application(s) (each application) $100.00
- Application(s) Requiring Public Hearing (excluding residential subdivisions) $200.00
- Residential Subdivisions $700.00

Newspaper Advertisement ..... Actual Cost charged by the Newspaper
Mailing Fee (under 100 notices) ..... $600 plus Postage Fee
Mailing Fee (100+ notices) ..... $900 plus Postage Fee
Postage Fee ..... Current Postage Rate
Zoning Ordinance Recovery Costs ..... 0.16 percent (0.0016) of building code valuation

Development Impact Fees

School Age Child Care Fee [5]
- Commercial - Office ..... $0.61 per gross square feet
- Commercial - Retail ..... $0.27 per gross square feet
- Commercial - Hotel ..... $0.17 per gross square feet
- Commercial - Industrial ..... $0.19 per gross square feet
- Residential - Single Family ..... $937.61 per unit
- Residential - Multi-Family ..... $505.20 per unit

Park and Recreation Facility Impact Fee [5]
- Subdivision Projects – Single Family ..... $4,968.83 per unit
- Subdivision Projects – Multi-Family ..... $2,757.68 per unit
- Non-Subdivision Projects – Single Family ..... $19,303.81 per unit
- Non-Subdivision Projects – Multi-Family ..... $11,582.29 per unit

Parkland Dedication Fee (Quimby Act)
- Single Family ..... Appraised value of 687 square feet of land x 1.02
- Multi-Family ..... Appraised value of 451 square feet of land x 1.02

Open Space Development Impact Fee [5]
- Single Family ..... $1,141 per unit [Max. allowed]
- Multi-Family ..... $750 per unit [Max. allowed]

Private Sector Art and Beautification Contribution Fee
- New Residential and Commercial Development ..... 0.01 of the building code valuation
- Additions/Alterations to Existing Residential & Commercial Development ..... 0.005 of the building code valuation

Affordable Housing Impact Fee [6]
- Commercial – Office, Retail, Hotel [greater than 5,000 sq. ft.] ..... $4.00 per gross square feet
- Commercial – Industrial [greater than 5,000 sq. ft.] ..... $3.00 per gross square feet
- Residential – Single-Family or Multi-Family, under 10 units ..... $12.50 per gross livable square feet
- Residential – Single-Family detached, 10+ units ..... On-site construction of units or option of $15.00 per gross livable square feet
- Residential – Multi-Family, 10+ units ..... On-site construction of units

Westside Specific Plan Recovery Costs
- Residential ..... $603.90 per unit
- Non-residential ..... $0.47 per gross sq. ft. floor area

T&M = Time and Materials charge
DU = Dwelling Unit

Crow Canyon Specific Plan Recovery Fee
Commercial ..... $0.44 per square gross floor area
Residential ..... $598.11 per unit
North Camino Ramon Specific Plan Recovery Fee
(Adjusted annually according to the Engineering News Record – SF Bay Area Construction Cost Index from the base year of 2009)
Non-residential .....0.009 of the building code valuation
Residential ..... $522.57 per unit
Tenant Improvement.....0.001 of the building code valuation

Improvement Bonds and Deposits
(including, but not limited to Landscaping, Public Art, etc.)..... Bond in the amount of 100% of the ..... improvement costs or 20% Cash Bond plus T&M and $2,000 deposit

NOTES:

1) Time and Materials charge calculated using an hourly rate of $200.00 for each employee working on the application.
2) Deposit amounts are set at assumed average cost of time and materials to provide the service. When the deposit has been drawn down by 80%, an additional deposit of 25% to 50% of the original deposit will be required to continue processing the application(s) as determined by the Planning Services Division. Applications may be deemed withdrawn if account deficits exist.
3) Project applicants shall pay a cumulative total fee and/or deposits for each application type required.
4) The State Department of Fish and Game and Contra Costa County require filling fees (AB 3158) at the time of project approval.
5) School Age Child Care Fees, Park and Recreation Facility Impact Fee, and the Open Space Development Impact Fee will be adjusted annually using the Engineering News Record – San Francisco Bay Area Construction Cost Index, not to exceed the cap in the Keyser Marston Associates Development Fee Study, March 2017.
6) Refer to the Inclusionary Housing Ordinance and Commercial Linkage Fee Ordinance (Ordinance 487) for on-site construction requirements and alternative means of compliance.

T&M = Time and Materials charge
DU = Dwelling Unit

Exhibit I

Park Fees and Credits

Based on the City adopted March 20, 2017, Keyser Martsen Impact Fee Study (~~"Study"~~updated by consultant and City staff for 2020 dollars), the current Park and Recreation Facility Impact Fee for the Master Plan area is $10,957.70 per unit, or a $49,309,605 payment. Based upon the cost estimates in the Study, 38.65 acres of parkland would cost $81,365,903~~73,319,050~~ to acquire and construct. If the City accepts 100% payment of the Park and Recreational Facilities Impact Fee, the City would be left with a shortfall of $32,056,298/~~24,009,400~~/, or 39~~3~~%, to acquire and construct the required 38.65 acres of parkland, in addition to ongoing maintenance costs. In order to address this shortfall, the Parties agree to the following park fees and credits for development under the Master Plan:

- Developer shall construct 40.35 acres of privately owned and maintained, and publicly accessible, parks ~~in~~ on the Master Plan Property~~area~~.
- Developer shall receive a park credit of 43~~8~~%. Using the Study's park development cost, this equates to $33,150,075~~36,718,133~~.
- Developer shall construct and design the following off-site parks and construction shall commence as follows: Wood Lot (when permit is issued for the ~~935~~450th unit), Henry Ranch (when permit is issued for the 1,~~9~~600th unit), and Iron Horse Middle School synthetic turf field replacement (when permit is issued for the 1,250~~460~~th unit) ("Off-site Parks"). These improvements are valued at $10,393,459~~8,816,800~~ ~~(~~T~~t~~hese costs include construction costs with escalation at 3% every five years commencing with construction of the Project ~~master plan~~~~are capped as the total contribution for construction of all three parks,~~ and design costs~~is for construction costs only). Design,~~ . P~~p~~ermits and maintenance of these O~~o~~ff-site P~~p~~arks are the responsibility of the City. The O~~o~~ff-site P~~p~~arks will be completed within six months after the respective building permits are issued and subject to Section 23 of the Development Agreement.
- Developer shall pay a Park and Recreational Facilities Impact Fee of $8,157,529~~6,135,000~~, paid on a pro-rata basis for each residential building permit, escalated for inflation at 3% every five years from the Effective Date of this Agreement.
- Should the Developer elect not to construct the Amphitheater in the Master Plan, the Developer will contribute $750,000 to the City's Park Development Department.
- The Parties agree that Developer shall not construct the Community Center as shown on BR1A in the Master Plan and as a result, this facility is hereby eliminated from the Master Plan. The Community Center on BR2600 remains in the Master Plan.

~~Developer's total monetary contribution towards parkland is $51,686,923~~.

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MEMORANDUM

Date: October 15, 2020

To: Planning Commission
City of San Ramon

CC: Debbie Chamberlain – Community Development Director

From: Sunset Development Company

Re: CityWalk – Development Agreement – Response to Comments from 10/6/20 hearing

---

Chair Wallis and Members of the Planning Commission,

We spent several months negotiating with the City's appointed executive staff as we have many times during the last 40 years that we have been doing business together. We recognize the importance of your voice, as well as that of the Parks Commission, but we would be remiss if we did not point out that we have already made significant concessions during those discussions, beyond what most out-of-town third parties would agree to.

We would like to accomplish a few things with this memo. First, there were some factual inaccuracies in the discussion topics at last week's Planning Commission meeting and we have suggested some corrections to those. Second, we would like to address some of the other points made and suggest corrections to the agreements to ensure clarity on those points. Lastly, we would like to discuss the substantial issue of park fee credits and offer additional concessions.

As always, we appreciate your time and commitment to making this project the best it can be for San Ramon and we hope that you feel we are being fair in our approach to solving the issues you presented.

Topics:

1. Parks must be a minimum of 2 acres to comply with the General Plan:

    a. This is not accurate. GP Policy 6.5-I-3 states that this applies only to "City-Maintained" parks.

    b. GP Policy 6.5-I 19 – encourages parks of varying sizes including tot-lots and pocket-parks. It also encourages <u>passive</u> and active parks. Not all parks need to contain active elements.

Attachment: G: Letter from Sunset Development to the Planning Commission, dated October 15, 2020 (2930 : CityWalk Development

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2. Granting Park Impact Fee credit for parks less than two acres is inconsistent with City policy:

    a. GP Policy 6.5-I-19 is that the "City may allow for partial or full Parkland Dedication Credit" which is the basis for calculating park fee credits including land value for all the parks proposed to be open to the public, not just parks of 2 acres or more.

3. The attribution of value to the developer's proposed contribution of the ongoing park maintenance is inappropriate given a CFD assessment would be made if the cost of City maintenance caused a shortfall:

    a. A CFD is required only to the extent that project revenues do not cover the cost of City services required by the project (including landscape maintenance). In our case, the Fiscal Impact Study indicates a large surplus above projected service costs will be generated. The project is therefore projected to provide surplus funding to the City. Sunset's provision of the landscape maintenance is a material part of ensuring that surplus is not eroded. The value of the current surplus at full buildout is $1.7 million. If the cost to maintain the parks were imposed upon the City, this would reduce the amount of dollars otherwise contributed to the General Fund.

    b. The value of maintenance over the life of this development agreement (25 years) is $18,229,623 including 3% inflation. This does not account for future capital improvements, or insurance for liability.

Below are our responses to the other comments from the hearing:

1. Will all affordable units be built on-site?

    Yes, the development agreement has been updated to make it clear that all units will be built within the master plan area.

2. While the start dates were understood for the off-site parks, there were no end dates. Could that be clarified?

    Yes, the development agreement has been updated to require parks be completed within 6 months after commencement, subject to force majeure.

3. Please add clarity to the phasing language.

    The development agreement has been updated maintaining the need for flexibility to change the phasing of various buildings and locations while specifically tying the parks requirement to the number of unit permits. The request to make changes will be submitted to the Community Development Director for approval not to be unreasonably withheld.

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4. Can a finding be made that the parks comply with all aspects of the General Plan?

   Yes, as outlined above, the parks do comply with all applicable General Plan Policies.

5. Please define "publicly accessible."

   The development agreement has been updated to include language tying the public access to the city's park access standards (dawn to dusk).

6. Provide design elements that will be anticipated in the all of the parks.

   There is a robust set of Design Guidelines that was approved by ARB, this Commission and the City Council. The development agreement has been updated to tie the parks' design to the approved and adopted Design Guidelines. The relevant pages from those guidelines are attached to this memo. Additionally, it is extremely important when designing the parks to view them as part of a larger network of parks within the ½ mile radius of the core of the city and the CityWalk Master Plan. When designing parks in suburban areas like Dougherty Valley, the parks are spaced much further apart and therefore you find parks in the various neighborhoods having the same level and type of amenities. In the case of CityWalk, we believe it would be smart to balance the design and amenities for the "public" parks within CityWalk with the amenities contained in the network of parks within the ½ mile radius of the core.

   While not discussed or counted in the park acreage, it is also important to note that we are providing significant private open spaces associated with each building that will contain amenities like barbeque areas, pools and play structures, activity areas, etc. to satisfy the needs of the residents. This frees up the design of the at-grade "public" parks to have a beautiful and elegant design that can be enjoyed by all residents of San Ramon as a part of the overall walking district. This is quite unique as most projects of this height locally do not have adjacent at grade parks and have only their private open spaces within the walls of the building. They should provide something distinct from the parks those residents can find closer to their homes.

7. Who decides and pays for future capital improvements?

   The development agreement has been updated to state the future capital improvements will be funded by developer and the future changes will be reviewed with the Parks Department to ensure compliance with the Design Guidelines and with the changing needs of the community.

8. Inflation and design costs should be included in cost for the off-site parks.

   The development agreement and revised park credit proposal below have been updated to include inflation and design costs.

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Discussion of Proposed Park Impact Fee Credits:

As you know, we feel strongly that the permanent dedication of our private property for use by the general public constitutes a significant transfer of value between us and the City. The underlying reasons are set forth below:

1. CityWalk parks are in compliance with all applicable San Ramon General Plan policies.

2. Public parks dedicated in perpetuity make them more of a liability to the developer than an asset. We can no longer build on this land or generate any value from this land while retaining a long-term obligation to maintain, irrigate, insure and pay property taxes.

3. There is no nexus for discounting the value of land due to it being owned previously or based on the developer's cost basis in the land. The developer cannot be required to both build the parks and pay impact fees on those parks because this would require the developer to mitigate twice for the same impact.

4. The General Plan policies allow for a "parkland dedication credit." As the parks are proposed to be publicly accessable, this provides the basis for calculating the Park Impact Fee credit.

5. The parkway fully resides on private property and is the largest part of the Walking District plans. There are no City code requirements for providing sidewalks or setbacks in this zone. Without this development agreement and the cooperation of the developer, the City would be required to condemn this land for it to be included in the Walking District. The majority of the City's desired Walking District resides on the developer's private property as well.

6. The lake was not originally required for the entitlements of the Pacific Bell corporate campus. No previous credit was given. In fact, this lake was originally designed for industrial purposes to provide cooling to the building. It was not open for public use for the first thirty years it existed. The building and lakes were purchased by Sunset in 2013 as a part of their $275 million acquisition of the campus. Since then, substantial capital has been invested to improve the landscape and path around the lake. To say that we have owned them forever and purchased them at a small cost is false. While not required, Sunset voluntarily opened the lakes in 2014 for public use as part of its overall effort to invest in the betterment of the community as a whole. Its value is evidenced by its widespread use by the public including those on this Commission and Council who frequent these amenities as part of their daily routine. There is no requirement to keep these lakes open to the public today.

   This development agreement provides for and locks in:

   a. The lake parks to remain open to the public in perpetuity.

Attachment: G: Letter from Sunset Development to the Planning Commission, dated October 15, 2020 (2930 : CityWalk Development

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b. Additional substantial investment to build the Annabel Lake community center, new docks and to provide boats to make the lake an interactive and a valuable amenity to the community.

c. The obligation to build publicly accessable and privately maintained parks and amenities. Locks in timing of construction of the parks and amenities with each phase. The conditions of approval do not require the parks be built, only that we comply with the fee ordinance.

Revised Park Credit Proposal:

In an effort to compromise and based on the facts and arguments outlined above, below is a table that shows the proposed changes to the park credit.

Summary of revised Park Credit Proposal

	Original Proposal		Revised Proposal			
Description	**%**	**Original Proposal**	**%**	**Revised Proposal**	**Variance**	**Notes**
City Green Credit	48%	$ 2,139,816	100%	$ 4,457,950	$ 2,318,134	
Parkway Credit	48%	$ 9,560,880	100%	$ 19,918,500	$ 10,357,620	
Lakes Credit	48%	$ 20,487,600	15%	$ 6,402,375	$ (14,085,225)	
Neighborhood Credit	48%	$ 4,552,800	25%	$ 2,371,250	$ (2,181,550)	
Total Credit	**48%**	**$ 36,741,096**	**43%**	**$ 33,150,075**	**$ (3,591,021)**	
Offsite Parks		$ 8,816,800		$ 10,393,459	$ 1,576,659	Includes Design and inflation @ 3% every 5-years
Park Impact Fee		$ 6,151,990		$ 8,157,529	$ 2,005,539	
Total Fees to City						
Open Space Fee		$ 3,375,000		$ 3,375,000	$ -	
Park Impact Fee		$ 6,151,990		$ 8,157,529	$ 2,005,539	
Total		**$ 9,526,990**		**$ 11,532,529**	**$ 2,005,539**	
	Years	**Annual Costs**		**Value**		
Landscape Maintenance	**25**	**$ 500,000**		**$ 18,229,632**		**3% per year inflation**

Notwithstanding the differences of opinion regarding land value, there was consensus that the City Green and Parkway were considered to be a highly valuable "public" benefit. Therefore, we propose 100% credit for those parks. We also realize that the lake parks, while being a highly valuable public benefit, is shared by the office building tenants. While the value should not be zero, we did reduce the credit dramatically from 48% to 15%. Also, despite the General Plan policies that encourage the type of neighborhood parks we proposed, we also reduced the credit for those from 48% to 25%. These revisions result in a reduced credit of $3,591,021.

As requested, we increased the cost of the off-site parks to <u>include inflation and design costs</u>. This is a $1,576, 656 increase from the last proposal.

Lastly, we increased the Park Impact Fee by $2,005,539.

Other than the differences of opinion regarding land value and the value of total park credit, we believe we captured <u>and accepted</u> all of the other comments requested.

Attachment: G: Letter from Sunset Development to the Planning Commission, dated October 15, 2020 (2930 : CityWalk Development

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We respectfully request that you to consider the proposed park credit based upon the following:

1. We are satisfying the park demand generated by this project which relieves the City from the need to acquire and build parks for this project to satisfy the goals of the Parks Master Plan. The Park Fund will receive $11,532,529 to satisfy the Parks Master Plan goals unrelated to this project.

2. This is a net positive for the Park Fund. If all we were to do is pay fees and not build parks, the City would have to acquire and build $85 million (based on updatedinformation from Keiser Marston on land values and 2020 cost for park construction provided by City staff) of parks just to satisfy this project's demand for which it would receive only $49 million in fees, resulting in a $36 million shortfall. We are satisfying the demand and providing $11.5 million in net positive dollars to the Park Fund.

3. These parks are providing considerably more value in "public benefit" than just the construction costs. We believe it should not be viewed that the City is giving us $33 million but, rather, the developer is providing the City with 40 acres of public parks for $33 million that would cost the City $85 million to acquire and build.

4. Additionally, this development agreement is requiring the developer to construct two off-site parks and provide synthetic turf to the Iron Horse Trail Middle School fields (to reduce pressure on sports fields) worth $10 million. These off-site parks have been identified in the Parks Master Plan for many years with no funds to pay for their construction.

5. In total, the park credit proposed in this development agreement is providing the Master Plan Parks fund with $95 million dollars of value (40.35 acres in parks, two off-site parks & new synthetic turf fields for IHT Middle School) in return for $33 million in park fees credit. With fees alone, the City gets no park acreage to satisfy its General Plan Parks goals and puts the Park Fund at a $46 million shortfall.

6. In addition, and as shown in the table above, there is more than $18 million in value for the on-going maintenance over the life of the development agreement.

7. This development agreement also provides for the developer to fund future capital improvements of our public parks.

The table below summarizes the total value of entering into a fair and balanced development agreement.

Attachment: G: Letter from Sunset Development to the Planning Commission, dated October 15, 2020 (2930 : CityWalk Development

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Summary of Value of Development Agreement

Without Development Agreement			Developer contribution with DA		
City Receives:	**Cost for City to Provide**		**City Receives:**	**Cost for City to Provide**	
No park acerage (40.35 ac)	$	(84,944,739)	CityWalk Parks - 40.35 acres	$	-
No Offsite Parks (18.6 ac)	$	(7,641,209)	Two Offsite Parks - 18.6 ac	$	-
No Synthetic Turf Replacement	$	(2,752,250)	Synthetic Turf Replacement	$	-
No Maintenance costs - 25 years	$	(18,229,632)	Maintenance Costs - 25 years	$	-
Total Costs	**$**	**(113,567,831)**		$	-
Park Impact Fees Received	$	49,309,650	Park Impact Fees Received	$	8,157,529
			Value for parks built	$	113,567,831
			Proposed Fee Credit	$	(33,150,075)
Total (Deficit)/Surplus	**$**	**(64,258,181)**	**Total (Deficit)/Surplus**	**$**	**88,575,285**

We respectfully ask that you consider the merits of our revised proposal.

We have been a partner with this city for over 40 years and have always done our best to provide mutual benefits for our shared future. We have invested and contributed greatly to the success of the community and created a location for over 30,000 high quality jobs at its core. We are looking forward to adding many new residents to this thriving model for what a suburban downtown should exemplify to all.

We will continue to dedicate ourselves to this community and to contribute to its ongoing success for the long-term.

Thank you for your consideration.

Respectfully,

Alexander Mehran, Jr
President and Chief Executive Officer

Attachment: G: Letter from Sunset Development to the Planning Commission, dated October 15, 2020 (2930 : CityWalk Development

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October 15, 2020

Chair Eric Wallis and Planning Commissioners
City of San Ramon
City Hall
7000 Bollinger Canyon Road
San Ramon, CA 94583

Re: CityWalk Project - Proposed Development Agreement
Planning Commission Meeting on October 20, 2020

Dear Chair Wallis and Planning Commissioners:

This letter responds to Commissioner Mark's question below asked at the Planning Commission meeting on October 6, 2020. The question was asked in the context of whether CityWalk can receive credit against the Park Facility Fee for the parks it is proposing.

Question - Do the parks proposed by CityWalk that are less than two acres qualify as "Neighborhood Parks" as defined in the General Plan?

Answer - No. CityWalk is not proposing neighborhood parks as defined in the General Plan. Nevertheless, CityWalk should receive credit for the parks they are providing since they are proposed to be open to the public and maintained by CityWalk.

A Neighborhood Park as defined in the General Plan is a *city maintained park* with a minimum size of two acres. (General Plan, Section 6.2.) Some of the parks proposed by CityWalk are less than two acres, but they are proposed to be open to the public and maintained by CityWalk.

The City allows "full or partial credit" for "Public Spaces" which are defined as "publicly owned" spaces in a mixed-use or multi-family development that can be less than two acres (General Plan, Section 6.2 defines Public Space and Implementing Policy 6.5-1-19). Even though the proposed parks would not be publicly owned, as a benefit under the Development Agreement, these parks would be publicly accessible in perpetuity and maintained by CityWalk which provides an even greater benefit than Public Spaces that are required to be maintained by the City.

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Attachment: H: Letter from Patricia Curtin, Wendel Rosen, LLP to Chair Wallis and Planning Commissioners, dated October 15, 2020 (2930 :

A credit towards the Park Fee should be provided to CityWalk even though the proposed parks are not "Neighborhood Parks" as defined in the General Plan. If credit is not provided through the Development Agreement, there is no incentive or requirement for CityWalk to build and/or make the parks open to the public.

A developer is only required by law to mitigate impacts caused by its proposed development. Here, for parks, this mitigation is either 1) payment of the Park Fee, or 2) providing the parks (or a combination). The City cannot require CityWalk to do both - pay the Park Fee and provide and maintain parks without a credit. If a credit is not provided, then only the Park Fee can be imposed. If the Park Fee is imposed and the parks are required to be open to the public and maintained by CityWalk, the developer would be mitigating "twice" for the same impact which exceeds the legal requirements.

Condition of approval no. 13 states that CityWalk is only required to pay the Park Fee because it is a multifamily project. This Condition allows an alternative method of providing parks that can be negotiated through a development agreement. The proposed Development Agreement provides an alternative method that allows credit for the publicly accessible parks maintained by CityWalk.

If adequate credit cannot be negotiated through the Development Agreement, consistent with Condition no. 13, CityWalk will pay the Park Fee and would not be required to build the parks shown in the Master Plan. If the City desires to have those public parks in the project area, the City will need to use the Park Fees paid by CityWalk to build and maintain those parks.

Thank you for allowing me this opportunity to respond.

Very truly yours,

WENDEL ROSEN LLP

Patricia E. Curtin

PEC/slk

cc: Debbie Chamberlain, Community Development Director
Lauren Barr, Planning Manager
Alexander Mehran, Jr, President and Chief Executive Officer, Sunset
Jerry Engen, Senior Vice President, Development, Sunset

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Attachment: H: Letter from Patricia Curtin, Wendel Rosen, LLP to Chair Wallis and Planning Commissioners, dated October 15, 2020 (2930 :

PLANNING COMMISSION
Staff Report

DATE: **October 20, 2020**

TO: **Planning Commission**

FROM: **Debbie Chamberlain, Community Development Director**
By: Shinei Tsukamoto, Associate Planner

SUBJECT: **Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001)**

EXECUTIVE SUMMARY

The Applicant is requesting approval of Architectural Review (AR 20-200-015), Development Plan (DP 20-300-002), Minor Use Permit (MUP 20-501-003), and Master Sign Program (MSP 20-700-001) applications to construct and operate a 32-pump self-serve and attended service station on an existing 2.88-acre lot by demolishing the existing approximately 30,000 sq. ft. commercial building. The proposed service station consists of a 12,663 sq. ft. canopy with a canopy sign on all sides, an approximately 200 sq. ft. control facility, and associated site improvements and landscape enhancement. The proposed hours of operation is between 5:30 A.M. and 10:00 P.M. Monday through Sunday.

RECOMMENDED ACTION

Staff recommends the Planning Commission receive the staff report, a presentation by the Applicant, open the public hearing, take public testimony, close the public hearing, consider the Project, and if appropriate, adopt Resolution No. 18-20 approving the proposed Project.

INTRODUCTION

Location:
3111 Fostoria Way APN: 218-112-014 (2.88-acre lot)

Applicant:
Barghausen Consulting Engineers, Inc.
c/o/ Sean Anderson
18215 72nd Avenue South
Kent, WA 98032

Owner:
Fostoria Way LLC
c/o Elena Gugliemi
8315 Louise Ave.
Northridge, CA 91325-4012

General Plan Designation:
Mixed Use - Commericail

North Camino Ramon Specific Plan:
CMU (Commerical Mixed Use) Block B

Use Classification:
Vehicle Services - Service Station

Site Description:
The General Plan Mixed Use - Commercial land use designation is intended for integrated mix of non-residential uses, such as retail, service, and office. The proposed service station is allowed with a Minor Use Permit within the CMU district of the North Camino Ramon Specific Plan (NCRSP).

The subject property is located between the Extended Stay Hotel to the east, CMG Plaza to the southeast, and Magnolia Square Shopping Center to the west. The primary access to the subject property is on Fostoria Way, across from the main entrance to the Costco Warehouse located in Danville. There are two other access points from the abutting properties to the east and west. There is a recorded reciprocal access easement to provide free flowing circulation between the subject property, Magnolia Square and Extended Stay properties.

The nearest residential development is the Fostoria Terrace townhome development approximately 520 feet to the east of the subject property in the Town of Danville. There are no non-residential sensitive receptors, such as child care facilities or schools, within the Project vicinity.

Project Description:

Service Station:
The proposed attended self-serve service station consists of 16 double-faced fuel dispensers, a total of 32 motor vehicle fueling pumps under a 12,663 sq. ft. canopy with a cueing area at the south of the canopy. The service station will be equipped with three (3) 40,000-gallon underground storage tanks (USTs), one (1) 1,500-gallon UST, an approximately 200 sq. ft. controller enclosure, and vapor processor units.

Site Layout and Improvements:
The existing three access points to the subject property will remain unchanged. The proposed site improvements include minor alterations to the existing parking lot and the main driveway. The main driveway will be adjusted to achieve more efficient internal vehicular circulation. Majority of the existing parking lot will remain and be available for Costco Warehouse employees, and possibly for customer overflow parking if needed. A walkway is provided from the control facility, on the west of the proposed canopy, to the main driveway entry point on Fostoria Way. The existing site perimeter and parking lot landscape will be enhanced with new shade trees in addition to the new landscaping around the proposed service station.

California Environmental Quality Act (CEQA):
Based on the Project application materials, including Air Quality Impact Analysis, Biological Assessment, Noise Technical Memorandum and Traffic Impact Analysis, the proposed Project

qualifies for a Categorical Exemption pursuant to Section 15332 (In-Fill Development Project) of the Guidelines for the California Environmental Quality Act of 1970, as amended (CEQA Guidelines). The Project site is an urbanized lot of less than 5 acres with all necessary utilities within the City limit that has no habitat value for endangered, rare or threatened species; further, the proposed Project is consistent with applicable General Plan and NCRSP policies and zoning regulations, and would not result in any significant effects to traffic, noise, air quality, or water quality. A summary of CEQA analysis is provided in Attachment G.

Public Outreach/Notification:
On October 9, 2020, a 10-day notice of a Planning Commission public hearing for October 20, 2020, was mailed pursuant to Section D6-23 Development Plan Review to property owners within the required 300-ft. radius of the subject property and residential properties in the Project vicinity.

BACKGROUND

On September 19, 1995, the Planning Commission adopted Resolution No. 19-95 approving the development of an approximately 30,000 sq. ft. commercial building with conditions. The conditions of approval authorized the installation of 8'-6" x 16'-0" compact parking in addition to 9'-0" x 19'-0" standard parking and required the installation of a public art feature and protection of the Valley Oak tree located by the main driveway on Fostoria Way. The existing commercial building and associated site improvements and landscaping were developed in 1996.

On April 14, 2020, the subject applications were filed by Barghausen Consulting Engineers, Inc., and on May 14, 2020, the Architectural Review Board (ARB) reviewed the proposed Project and provided comments to the Applicant and staff. Among other comments, the ARB suggested a better pedestrian connection between the proposed Project site and the Costco Warehouse including Fostoria Way crossing and enhanced canopy supporting columns in achieving architectural design envisioned in the North Camino Ramon Specific Plan.

On July 28, 2020, the Applicant submitted revised Project plans that incorporated the ARB comments and submitted technical reports supporting the CEQA categorical in-fill exemption determination in September and October 2020. The subject applications were deemed complete on October 5, 2020.

DISCUSSION AND ANALYSIS

Development Standards:
The applicable development standards of the NCRSP and Zoning Ordinance for this Project are summarized below:

Applicable Development Standards

		Standards	Proposed
Setbacks	Front	6 ft. (Fostoria Way)	236 ft.
	Side	n/a	27.3 ft. & 118.7 ft.
	Rear	n/a	125 ft.

Height	85 ft.	17.5 ft.
FAR	0.70	0.10 (12,663 sq. ft. canopy)
Landscape Coverage	15%	18.1%
Parking	n/a	127 total to remain
Canopy Sign Size	75 sq. ft. / facade	20.85 sq. ft.
Canopy Sign Locations	One sing on street front	One sign on all four sides

The side and rear setbacks do not apply for this Project because the NCRSP development standards reference Zoning Ordinance Section D2-15 A. Daylight Plane, which is specific to a mixed use development that includes residential components. The proposed Project lacks a residential component and it is not a mixed use development by itself.

With respect to the parking standards, neither the NCRSP nor Zoning Ordinance requires specific parking for a service station without an ancillary facility such as a convenience store a minor repair shop.

Site Layout and Improvements:
The fuel delivery trucks will enter and exit the site from the main driveway on Fostoria Way. Customers can approach the proposed service station from all three access points. The proposed vehicular circulation is in a counterclockwise direction, and the exit point is at the driveway shared with the Extended Stay property. The cueing area is designed for three vehicles per pumping aisle based on the traffic analysis. The existing parking lot to the west of the proposed service station is available for additional queuing to assure no overflow cueing onto public streets.

The traffic report identified that the P.M. level-of-service (LOS) at the intersection on Fostoria Way and the main driveways to the existing Costco Warehouse is below the acceptable level and recommended signalization. The Project has been conditioned to provide a new signal to improve the LOS to achieve the consistency with the General Plan Growth Management Element and Traffic and Circulation Element Implementing Policies 3.3-I-1 and 5.1-I-1, respectively. Furthermore, the A pedestrian connection will be enhanced as part of the intersection improvements, as the ARB recommended.

Canopy Design, Signs, and Site Lighting:
The proposed canopy is 126’-0” in width, 100’-6” in length, and 3’-0” in thickness with a minimum clearance of 14’-6” above pavement. The proposed canopy will be painted light brown, and the supporting columns will be painted gray; and blue and red paints will be used as accent colors near each fuel dispensary.

A 20.85 sq. ft. (2’-5 1/4” x 8’-6 5/8”) sign on all four sides of the canopy along with small incidental signs at each pump and the control facility are proposed with a Master Sign Program application. The proposed canopy signs are considered as wall signs. Zoning Ordinance Section D3-47 A. 4 limits the maximum sign area to 0.75 square feet for each one linear foot of building frontage up to 75 sq. ft., and Zoning Ordinance Section D3-47 A. 4. e. limits the installation of a wall sign to one sign for each structure street frontage. While the proposed sign size meeting the required standard, the Commission may allow the proposed canopy sign on all four sides as well

as the incidental signs at each pump and the control facility with Master Sign Program approval pursuant to Zoning Ordinance Section D3-47 A. 3.

The canopy signs will be illuminated with down-facing LED lights affixed above the signs. The under-canopy lighting will be LED fixtures. The existing site lighting within the unaltered parking area will be replaced with new LED light fixtures, and two new light poles with LED fixtures will be installed for the queuing area. Based on the proposed lighting plan (Attachment D. Sheet SE-1), the illumination level directly below the canopy would be no more than 34.5 foot-candles and the illumination level would drop to below 10 foot-candles outside the canopy. Overall site illumination level maintains above 2.0 foot-candles except the edge of the parking lot along Fostoria Way, where the illumination level drops to as low as 1.1 foot-candles. In general, the proposed lighting plan appears to be consistent with Zoning Ordinance Section D3-7 and Municipal Code Section C2-10 with respect to the use of energy efficient LED light fixtures and overall site illumination levels. In order to assure the consistency with the aforementioned Zoning and Municipal Code Sections a photomentric plan is required prior to issuance of a building permit,

Proposed Canopy Design

Landscape and Tree Removal:
The Applicant is proposing to plant shade trees on the east and west sides of the proposed canopy and enhance the existing landscape area abutting Magnolia Square and the Fostoria Way frontage with complementary and matching trees to the existing Cost Live Oak, Bradford Pear, and Sycamore trees. In addition, new shade trees will be planted within the north parking lot, and small ornamental trees will be planted along the main driveway. The proposed landscape improvements also includes the Stormwater Control C.3 provisions.

The arborist report prepared by Arborwell dated August 2020, (Attachment F.) analyzed all trees on the Project site. While the existing Valley Oak by the main driveway on Fostoria Way will remain undisturbed, the proposed Project will remove four Coast Live Oak trees, which were planted for the existing commercial development in 1996. They are identified with Nos. 11, 12, 48, and 49 in the report and their removal is subject to the provisions of Zoning Ordinance D5 Chapter II Tree Preservation and Protection, and a tree removal permit is required pursuant to Section D5-8 B.

The proposed landscape plan was revised based on the comments given by the ARB and the same three non-native oak tree species reviewed by the ARB are still proposed as shade and screen trees.

Public Art:
The existing public art titled "The Iron Horse", which was installed in 1998, will be removed for the proposed site improvements and reinstalled at the same location prior to finalizing the construction to achieve consistency with General Plan Land Use Implementing Policy 4.8-I-11, which requires a new commercial development to provide outdoor art that is clearly visible to the public.

"The Iron Horse"

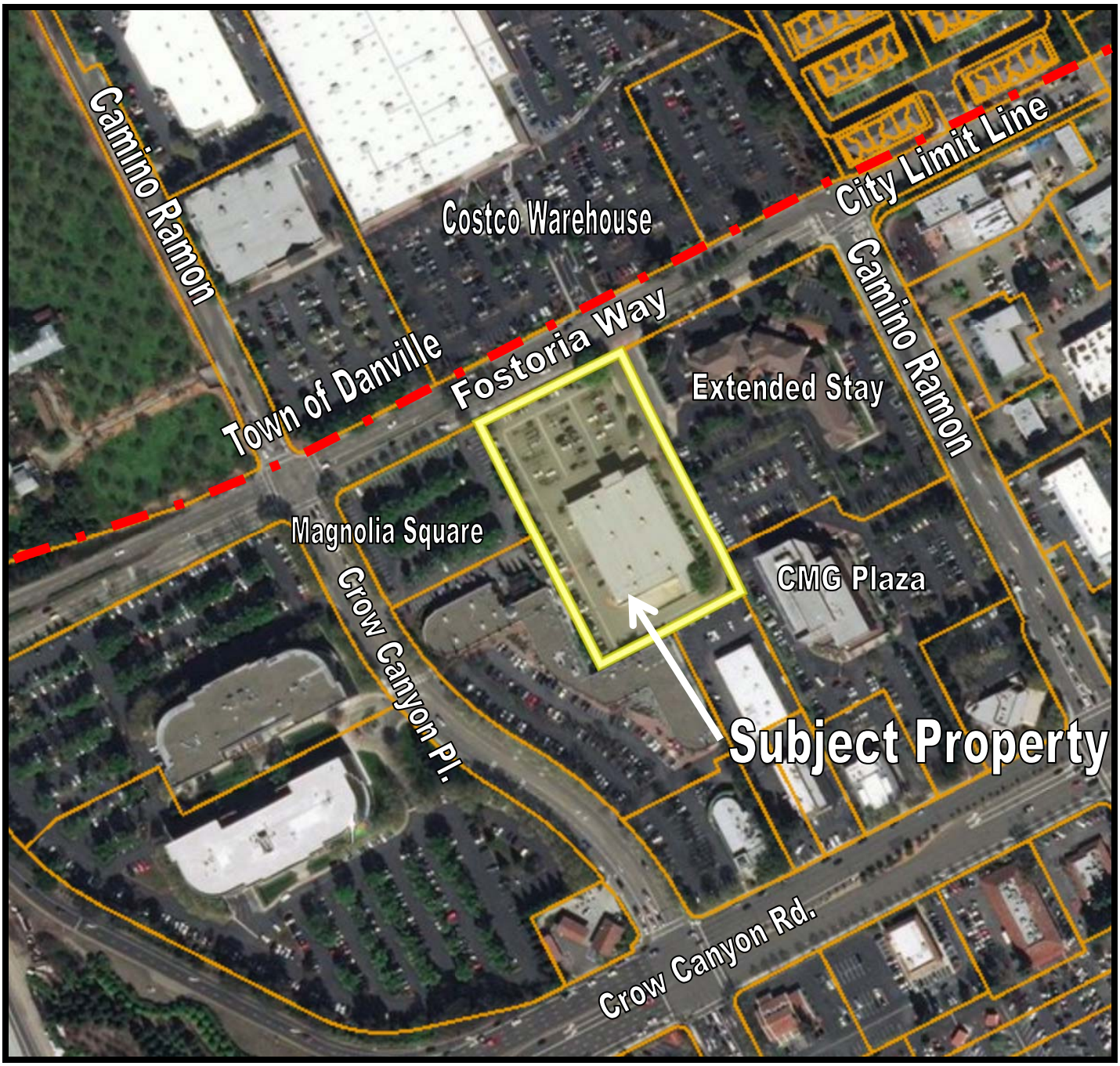
NEXT STEPS

1. Adopt Resolution No. 18-20 approving Architectural Review (AR 20-200-015), Development Plan (DP 20-300-002), Minor Use Permit (MUP 20-501-003), and Master Sign Program (MSP 20-700-001).

2. Pursuant to Section 15062 of the Guidelines for the California Environmental Quality Act of 1970, as amended, a Notice of Exemption will be filed with the County.

ATTACHMENT:

A. Vicinity Map
B. DRAFT PC Resolution No. 18-20
C. Project Description
D. Project Plans
E. ARB Summary of Action - May 14, 2020 Item 9.2
F. Arborist Report
G. CEQA Analysis Memo with Technical Reports
H. PowerPoint Presentation



CITY OF SAN RAMON PLANNING SERVICES
Vicinity Location Map

San Ramon CALIFORNIA	**DP 20-300-002, AR 20-200-015, MUP 20-501-003, & MSP 20-700-001** Warehouse **Costco Service Station** **3111 Fostoria Way** **(APN: 218-112-014)**	N (Not to Scale)

Attachment: A. Vicinity Map (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

RESOLUTION NO. 18-20

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF SAN RAMON APPROVING ARCHITECTURAL REVIEW (AR 20-200-015), DEVELOPMENT PLAN (DP 20-300-002), MINOR USE PERMIT (MUP 20-501-003), AND MASTER SIGN PROGRAM (MUP20-700-001) FOR COSTCO SERVICE STATION 3111 FOSTORIA WAY (APN: 218-112-014)

FILED BY:
BARGHAUSEN CONSULTING ENGINEERS, INC
c/o Sean Anderson (APPLICANT) AND
FOSTORIA WAY LLC (PROPERTY OWNER)

WHEREAS, on April 14, the subject applications were filed to construct and operate a 32-pump service self-serve station (attended) on an existing 2.88-acre lot by demolishing the existing approximately 30,000 sq. ft. commercial building; and

WHEREAS, the subject property is within the General Plan Mixed Use – Commercial land use designation and the CMU (Commercial Mixed Use) zone of the North Camino Ramon Specific Plan (NCRSP) and the operation of a service station is allowed with a Minor Use Permit approval; and

WHEREAS, on May 14, 2020, the Architectural Review Board (ARB) reviewed the proposed Project and provided comments and direction to the Applicant and staff and subsequently recommended granting the Final Architectural Review to the Planning Commission for consideration; and

WHEREAS, on July 28, 2020, the Applicant submitted revised project plans that incorporated the ARB comments and subsequently submitted technical reports supporting the CEQA Class 32 In-Fill Categorical Exemption determination in September and October 2020; and

WHEREAS, on October 5, 2020, the subject applications were deemed to be complete; and

WHEREAS, the Project is categorically exempt from the California Environmental Quality Act Guidelines (CEQA) of 1970, as amended, pursuant to the CEQA Guidelines Class 32, Section 15332 pertaining to In-Fill Project base on all information provided to the City; and

WHEREAS, pursuant to Sections D6-28. E and D7-24 of the Municipal Code of the City of San Ramon, a Public Hearing was duly noticed on October 9, 2020, and scheduled for the Planning Commission meeting on October 20, 2020 to consider the subject applications; and

WHEREAS, on October 20, 2020, the Planning Commission held a duly noticed public hearing on the subject applications where the staff report, plans, and other pertinent documents, and public testimony relating to the proposed Project were heard and considered; and

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NOW, THEREFORE, BE IT RESOLVED, that the Planning Commission in the exercise of its independent judgment, and based upon all the evidence in the record (including but not limited to all application materials, the written and oral staff reports, and oral and written comments received by the City) does hereby make the following findings:

1. **Regarding the Architectural Review:**

   a. The recitals above are true and correct and are incorporated herein by reference; and

   b. The proposed Project design is consistent with the goals and objectives of the General Plan, because the design comments given by the ARB are incorporated in the Project design, and the proposed service station canopy design, site improvements, and landscape design relate to and are compatible with the existing buildings and site improvements in the project vicinity; and

   c. The proposed Project design is consistent with the purpose of the Zoning Ordinance and the vision of the NCRSP, because the proposed use is anticipated by the land use tables as a way of supporting commercial service activities in the area, allowed with a Minor Use Permit, and the proposed improvements meet applicable development standards such as the building height, setback, and development intensity as well as the landscape coverage; and

   d. The proposed Project design, as reviewed and recommended for approval by the ARB, complies with Subparagraph D6-22 G. 2. of the Zoning Ordinance, because:

      i. Area, bulk, and height of the canopy are compatible with the existing commercial buildings in the project vicinity; and
      ii. Colors used on the canopy and the control facility are compatible with the colors of the existing commercial buildings in the project vicinity; and
      iii. The architectural and physical relationship with existing and proposed structures in the area and to the site location within the City are enhanced by additional landscape within the existing perimeter landscape area as well as the parking lot tree planting; and
      iv. Location, orientation, and site layout of the structures, and their relationship with open space areas, topography, and solar/energy efficiency have been considered and found to be appropriate given the canopy location has left sufficient setback for efficient on-site circulation and landscape buffers; and
      v. Colors, height, materials, and variations in boundary fences, walls, or screen plantings have been considered and found to be appropriate with the adjacent properties and the landscaping; and
      vi. Location and type of landscaping, including setback areas, have been considered and found to be appropriate with the adjacent properties; and

   e. The proposed Project design, which is generally consistent with the Project plans reviewed by the ARB, is in the best interest of the public health, safety and general welfare of the community, because the proposed Project is consistent with the applicable development standards in the Zoning Ordinance and the NCRSP which are adopted to protect and promote

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Attachment: B. DRAFT PC Resolution No. 18-20 (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-

the public health, safety, comfort, convenience, and general welfare of residents, and businesses in the City; and

f. General site considerations, including site layout, orientation and location of structures, circulation and parking, height, public safety, setbacks, vehicular access, and similar elements have been designed to provide a desirable environment for the subject development, because the proposed Project design is responsive to the site conditions, and the Project meets the development standards for the subject property; and

g. General architectural considerations, including the character, scale and quality of the design, the architectural relationship with the site and other structures, building materials, colors, exterior lighting and signs, screening of exterior appurtenances, and similar elements have been incorporated into the design of the subject development to the extent practical as recommend by the ARB in order to ensure the compatibility of the development with its design and the character of adjacent structures and the other developments in the vicinity as well as the vision of the NCRSP; and

h. General landscape considerations, including the location, color, coverage, size, texture, and type of plant materials, provisions for irrigation, maintenance, and protection of landscaped areas and similar elements have been considered to ensure visual relief, to complement structures, and to provide an attractive environment for the enjoyment of the public as recommended by the ARB.

2. **Regarding the Development Plan:**

a. The recitals above are true and correct and are incorporated herein by reference; and

b. The proposed Project will not be detrimental to the health, safety, and general welfare of persons residing or working in the neighborhood of the proposed development, because the subject property is zoned CMU of the NCRSP where a service station is allowed with a Minor Use Permit and surrounded by commercial developments on all sides, and the Project is consistent with the required development standards of the Zoning Ordinance and the NCRSP with certain conditions of approval; and

c. The proposed Project will not be injurious or detrimental to property or improvements in the neighborhood, because the Project consists of 32 motor vehicle fueling pumps under a 12,663 sq. ft. canopy with three (3) 40,000-gallon underground storage tanks (USTs), one (1) 1,500-gallon UST, an approximately 200 sq. ft. controller enclosure, and vapor processor units by removing an existing 30,000 sq. ft. commercial building on a 2.88-acre lot is designed to retain the existing parking lots while maintaining the existing three access points, enhance the existing perimeter and parking lot landscape to further screen the Project site from the surrounding area and public road, and improve vehicular and pedestrian circulation on Fostoria Way by signalizing the intersection at the primary entry drives; and

d. The proposed Project will not be injurious or detrimental to the general welfare of the City, because the Project utilizes the property that was originally developed in 1996, all necessary

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utilities are readily available, and the Project is subject to certain Bay Area Air Quality Management District (BAAQMD) permits and standards to minimize air pollution during construction activities as well as the operation of the subject service station; and

e. The proposed Project is consistent with the policies and goals of the General Plan, because the Applicant has agreed to install a new signal to alleviate the current Level-of-Service F during the P.M. peak hour on Fostoria Way at the primary entry drives to the proposed service station and Costco Warehouse as a condition of approval pursuant to Implementing Policies 3.3-I-1 and 5.1-I-1 of General Plan Growth Management Element and Traffic and Circulation Element, respectively; and

f. The proposed Project is compatible with other developments in the vicinity, both inside and outside of the subject zone, because the Project site is surrounded by commercial developments, and the General Plan Mixed Use – Commercial land use designation excludes residential components of mixed-use developments in the Project vicinity.

3. <u>Regarding Minor Use Permit</u>

a. The proposed service station is allowed with a Minor Use Permit within the CMU zone of the NCRSP and there is no residential development within 100 ft. of the subject property so that the proposed hours of operation between 5:30 A.M. and 10:00 P.M. is allowed pursuant to Zoning Ordinance Sections D4-40 E. and D3-8 H.; and

b. The proposed service station use is one of the uses allowed with a Minor Use Permit within the General Plan Mixed Use – Commercial land use designation and the CMU zone of the NCRSP; and

c. The design, location, size, and operating characteristics of the proposed activity are compatible with the existing and future land uses in the vicinity, because the Project site is currently surrounded by commercial developments on all sides and the General Plan Mixed Use – Commercial land use designation excludes residential uses in the project vicinity; and

d. The site is physically suitable for the type, density, and intensity of use being proposed, including access, utilities, and the absence of physical constraints, because the Project site has been utilized for a commercial uses since 1996 and all necessary utilities are readily available as well as the existing three access points to the Project site will remain unchanged, and the Applicant has agreed to install a new signal at the currently congested intersection on Fostoria Way to improve the Level-of-Serve to an acceptable level; and

e. Granting the permit would not be detrimental to the public health, safety, or welfare of the persons residing or working in the subject neighborhood, or materially detrimental or injurious to property or improvements in the vicinity and zone in which the property is located, because the operation of service station is subject to certain BAAQMD permits and standards in order to improve air quality and reduce greenhouse gas emission.

4. <u>Regarding Master Sign Program</u>

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a. The plan's contribution to the design quality of the site and surrounding area will be superior to the quality that would result under the regulations and standards identified in Sections Section D3-45 and D3-47, because the proposed canopy sign on all four sides and incidental signs for each fuel pump as well as the control facility will provide clear and concise message and direction to the customers of the proposed service station; and

b. The plan is generally consistent with the criteria identified in Section D3-43 (Criteria and Guidelines) and achieves the purposes identified in Section D3-52 A.

5. <u>Regarding Growth Management Plan—Measure "J" Compliance:</u>

In accordance with the City's General Plan Growth Management Program, the Planning Commission has reviewed the Project design and finds that the Project can meet each of the identified performance standards listed below for full urban services as outlined in the General Plan Growth Management Element based on certain Conditions of Approval and CEQA Findings, which are incorporated herein by reference:

a. <u>Community Centers</u>
Performance Standard: At General Plan buildout, provide a minimum ratio of 1.2 square feet of community center space per 1,000 residents.

Project Compliance: The proposed Project does not increase the number of San Ramon residents. As such, the proposed Project does not result in increased need for Community Centers.

b. <u>Fire</u>
Performance Standard: Prior to Project approval, require written verification from the San Ramon Valley Fire Protection District that a 5-minute response time (travel time) can be maintained for 90 percent of emergency calls in urban and suburban areas and/or that there will be a fire station within 1.5 miles of all development.

Project Compliance: On April 15, 2020, the San Ramon Valley Fire Protection District confirmed that the proposed Project meets the above standard. The nearest station to the proposed Project site is Station 38 located at 1600 Bollinger Canyon Road, which is approximately 1.4 miles from the Project site.

c. <u>Flood Control</u>
Performance Standard: Prior to Project approval, the Applicant shall obtain written verification from the San Ramon Engineering Services Department stating that the new development will provide adequate storm drain facilities. Runoff from the development shall not increase the 100-year peak flow in the City's flood control channels and shall be typically equal to pre-development conditions.

Project Compliance: On May 8, 2020, the San Ramon Engineering Services Department confirmed that the above performance standard would be met through the development review process.

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Attachment: B. DRAFT PC Resolution No. 18-20 (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-

d. Parks

Performance Standard: At General Plan buildout, provide a ratio of 6.5 acres of public parks per 1,000 residents, with goal to have park and recreation facilities within one-half mile of all residences.

Project Compliance: The proposed Project does not increase the number of San Ramon residents. As such, the proposed Project does not result in increased need for parks.

e. Police

Performance Standard: Prior to Project approval, require written verification from the San Ramon Police Department that a 3-5-minute response time (travel time) for emergency calls and a 20-minute response for all other calls can be maintained 95 percent of the time.

Project Compliance: On April 29, 2020, the Police Department confirmed that the Project is in compliance with the above performance standard.

f. Sanitation Facilities

Performance Standard: Prior to Project approval, require written verification from the approved service provider that adequate sanitation facilities and services will be available to serve the Project

Project Compliance: The proposed commercial development is within the existing Central Contra Costa Sanitary District (CCCSD) boundary, and on April 17, 2020, the CCCSD confirmed that there is sufficient sanitary sewer capacity to accommodate the proposed development.

g. Schools

Performance Standard: Require new development to provide necessary land, funding, and/or capital facilities for the school system, as determined by the San Ramon Valley Unified School District and applicable State law.

Project Compliance: on October 2, 2020, the San Ramon Valley Unified School District indicated that the Project is subject to a commercial rate developer fee.

h. Water

Performance Standard: Prior to Project approval, require written verification from the approved service provider that adequate water quality, quantity, and distribution will be available to serve the Project.

Project Compliance: East Bay Municipal Utility District reviewed the Project and on May 19, 2020, confirmed that the Project will be served from the existing main line and that the Project is in compliance with the above performance standard

As indicated above, the proposed Project can meet each of the identified performance standards for full urban services as outlined in the General Plan Growth Management Element.

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NOW, THEREFORE, BE IT FURTHER RESOLVED, that pursuant to Government Code Section 66020(d)(1), the Applicant is hereby given notice that the 90-day period in which the Applicant may protest any fees, dedications, reservations or other exactions imposed on the development project and stated in the Conditions of Approval attached hereto shall commence upon passage of this Resolution; and

NOW, THEREFORE BE IT FURTHER RESOLVED, that the Planning Commission, in the exercise of its independent judgment, and based upon all the evidence in the record (including but not limited to all application materials, the written and oral staff reports, and oral and written comments received by the City), does hereby approves the proposed Architectural Review (**AR 20-200-015**), Development Plan (**DP 20-300-002**), Minor Use Permit (**MUP 20-501-003**), and Master Sign Program (**MSP 20-700-001**) based on the required findings and subject to the Conditions of Approval attached as Exhibit "A".

PASSED, APPROVED AND ADOPTED on this 20th day of October 2020, by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

_____
Eric Wallis
Planning Commission Chairperson

ATTEST:

_____
Jennifer Chavez, Planning Commission Clerk

ATTACHED:
Exhibit A: Conditions of Approval

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Attachment: B. DRAFT PC Resolution No. 18-20 (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-

EXHIBIT A

CONDITIONS OF APPROVAL

ARCHITECTURAL REVIEW (AR 20-200-015),
DEVELOPMENT PLAN (DP 20-300-002),
MINOR USE PERMIT (MUP 20-501-003), AND
MASTER SIGN PROGRAM (MUP20-700-001)

FILED BY:
BARGHAUSEN CONSULTING ENGINEERS, INC
c/o Sean Anderson (APPLICANT) AND
FOSTORIA WAY LLC (PROPERTY OWNER)

COSTCO SERVICE STATION AT
3111 FOSTORIA WAY (APN: 218-112-014)

Special Conditions

Planning Services Division:

1. The Project authorized with this action shall be in substantial conformance with the Project plans, dated July 28, 2020, unless required to be modified by the conditions herein. The authorized Project is an attended and self-serve service station consists of 16 double-faced fuel dispensers, a total of 32 motor vehicle fueling pumps under a 12,663 sq. ft. canopy with three (3) 40,000-gallon underground storage tanks (USTs), one (1) 1,500-gallon UST, an approximately 200 sq. ft. controller enclosure, vapor processer units, and associate landscape, site improvements, and signs.

2. The Project authorized with this action is subject to applicable federal and state regulations and permits administered by various public agencies and programs, such as but not limited to, Bay Area Air Quality Management District, Contra Costa County Clean Water Program, and San Ramon Valley Fire Protection District.

3. Prior to the issuance of the Certificate of Occupancy, the Applicant (Costco) shall provide the City proof of the California Department of Tax and Fee Administration (CDTFA) seller's permit for San Ramon fueling station facility, in a manner deemed acceptable by the City, demonstrating the City as a "point of sale" for all Taxable San Ramon Sales. The Applicant (Costco) shall identify the City as such in its reports to the CDTFA in accordance with the Bradley-Burns Uniform Local Sales and Use Tax Law (Revenue and Taxation Code 7200, et seq.), as it may be amended or substituted. The Applicant (Costco) shall maintain all licenses and permits as may be required by any governmental agency to conduct Costco's sales activities related to the Costco fueling station facility in the City of San Ramon.

4. As applicable, prior to the construction of any portion of the subject project, the project proponent shall require that all qualifying contractors and subcontractors exercise their

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option to obtain a Board of Equalization sub-permit for the jobsite and allocate all eligible use tax payments to the City of San Ramon. The project proponent will require that the contractor or subcontractor provide San Ramon with either a copy of their Board of Equalization account number and sub-permit, or a statement that use tax does not apply to their portion of the project.

5. The Applicant (including any assignee or successor-in-interest) shall defend, indemnify, and hold harmless the City of San Ramon (City) and its agents, elected officials, officers, and employees from any claim, action or proceeding against the City or its agents, elected officials, officers, and employees to attack, set aside, void or annul any part of the City's approval of the Applicant's project. The City will promptly notify the Applicant of any such claim, action or proceeding, and cooperate in the defense.

6. The Applicant shall only use recycled or reclaimed water for construction-related activities, including but not limited to dust control, washing equipment, and street cleaning, in compliance with all applicable regulations and permits, including the City's Storm Water Permit. The use of potable water could be allowed if the Applicant demonstrated that there would not be a feasible way to secure recycled or reclaimed water and approved by the Zoning Administrator.

7. Prior to issuance of any earth moving or site preparation work or other construction activities, the Applicant or their representative(s) shall submit a Construction Period Safety, Maintenance, and Truck Traffic Control Plan demonstrating to the satisfaction of City staff how the site, public streets, and sidewalks will be maintained in a clean and safe manner during the entire construction period; how equipment will be secured in a safe manner; and how truck traffic to and from the site will be regulated. The Plan shall be amended as needed throughout the Construction Period depending upon the type of work to be conducted. Such Plan shall include but not be limited to information regarding:

   i. The timing for the placement, type, and location of temporary fencing designed to secure the site and prevent public access to all construction and other materials and behind which all equipment and portable toilets shall be kept.

   ii. The type and frequency of all measures that shall be taken to ensure that all public streets and sidewalks affected by construction activities will be cleaned and the level of cleanliness expected.

8. Prior to the issuance of the necessary site development permit, the Applicant shall file a Tree Removal application in accordance with Zoning Ordinance Section D5-8 B. with Planning Services and pay the required protected tree removal in-lieu-fee. If additional protected trees are removed during the construction, additional in-lieu-fee shall be paid prior to finalizing the site development permit.

Engineering Services Division:

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9. The Applicant shall install full trash capture devices (make and model to be approved by the City Engineer) on all new storm drain inlets.

10. The Project shall incorporate Green Infrastructure (GI) facilities along the frontages of Fostoria Way to the maximum extent practicable. The design of the GI facilities shall be approved by the City Engineer.

General Conditions

Planning Services Division:

11. The approval(s) authorized by this action shall expire if the required building permit is not issued within a one-year period from the date the Resolution becomes effective. A time extension may be granted in accordance with Section D3-34 of the Zoning Ordinance.

12. Any changes to the approved plans, other than those required by these conditions, may require further review and approval by the appropriate body as deemed necessary by the Zoning Administrator.

13. Failure of the Applicant to implement, follow, and adhere to these conditions may result in revocation hearing proceedings before the Planning Commission and/or City Council.

14. The Applicant shall submit a set of annotated conditions elaborating on the compliance status of each condition and mitigation measure for the Project and noting how each condition has been satisfied for the following benchmarks:
    - Prior to site development permit issuance
    - Prior to building permit issuance
    - 72 hours prior to finalizing the building permit

Prior to Site Development Permit Issuance

Planning Services Division:

15. The final landscape/irrigation plan shall be reviewed and approved by Planning Services Division, Public Services, and Engineering Services for consistency with the approved plans and the City standards.

16. A final plan for all utility meters, transformers, irrigation control boxes, backflow devices, valves, or other utility structures shall be submitted to Planning, Engineering Services, and Public Services Divisions for review and approval. Said utilities shall be located outside the required front and corner side setbacks and placed in underground vaults or screened by landscaping, buildings, or fencing, or painted in a manner which

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reflects the building and landscaping design.

17. Prior to issuance of a site development permit, a preliminary plan for the Fostoria Way intersection and signal site improvement, consistent with condition number 33 and as suggested by the ARB shall be submitted to and approved by the Planning Services.

Engineering Services Division:

18. The Project shall comply with the current San Ramon Public Works Standards.

19. The Applicant shall pay all outstanding review fees associated with processing the development applications in accordance with the current Fee Resolution for City services incurred prior to project approval by the Planning Commission.

20. The Applicant shall submit a Site Development Permit application and plan check fee for on-site improvements, including grading and drainage.

21. The Applicant shall provide evidence of approvals from utility providers, including but not limited to, East Bay Municipal Utility District, Central Contra Costa Sanitary District, Dublin San Ramon Services District, AT&T, and PG&E.

22. The Applicant shall pay applicable Drainage Mitigation and Creek Study Fees as established by City Council Resolution and Ordinance.

23. The Applicant shall provide surety in the amount and form approved by the City Engineer with the surety company licensed to do business in the State of California and acceptable to the City of San Ramon.

24. The Project shall comply with the latest requirements of the Americans with Disabilities Act (ADA). In addition to on-site improvements, these standards shall be required for off-site improvements for any public facilities such as sidewalks and ramps that exist in the public right-of-way that surround the property or directly benefit the Project.

25. The Applicant shall obtain an encroachment permit for all work conducted within the City right-of-way or easement.

26. The Applicant shall furnish proof to the City Engineer of the acquisition of all necessary rights-of-entry, permits and/or easements for construction of off-site and/or temporary improvements.

27. The Applicant shall submit to the City Engineer for review and approval a final Stormwater Control Plan, showing installation of appropriately sized water quality treatment devices consistent with the requirements of the latest edition of the Contra Costa Clean Water Program Stormwater C.3 Guidebook.

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28. The Applicant shall obtain a General Construction Permit from the Regional Water Quality Control Board if the Project will disturb one acre or more of land.

29. The Applicant shall install drainage markers on all on-site and off-site drainage inlets in accordance with City standards. These markers, if located on private property, shall be maintained by the Applicant or owner in a manner acceptable to the City, pursuant to City Ordinance.

30. The Applicant shall submit to the City Engineer for review and approval a final hydrology study, consistent with the requirements of the current Public Works Standards.

31. The Applicant shall install drainage improvements to mitigate new development related run-off consistent with the requirements of the hydrology study. All storm water facilities shall accommodate a 25-year storm event, substantially equal to pre-development conditions. Runoff from the development shall not increase the 100-year peak flow in the City's flood control channels.

32. The Applicant shall submit Operation and Maintenance (O&M) Plan for storm water control and water quality devices and features.

33. The Applicant shall install a traffic signal at the intersection of Fostoria Way and Costco All-Access Driveway, as recommended in the Traffic Impact Analysis by Kittelson & Associates, Inc. dated October 2020. Conduit and fiber for signal interconnect shall be installed and connect to the closest traffic signal at Fostoria and Crow Canyon Place.

34. The Applicant shall upgrade all curb ramps and paths of travel to be ADA compliant, including, but not limited to, the intersection of Fostoria Way and Costco All-Access Driveway.

Prior to Building Permit Issuance

Building & Safety Services Division:

The following information is required for the permit application process for individual projects based on the current State and Local adopted California Building Code, California Mechanical Code, California Plumbing Code, California Electrical Code, California Energy Code and other applicable State laws and related codes as referenced in the City of San Ramon's Municipal Code Building Ordinances.

35. Plans must be submitted to the special service districts list below prior to building permit issuance:
    a) Fire District
    b) Sanitary District

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Attachment: B. DRAFT PC Resolution No. 18-20 (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-

Provide written confirmation to Building & Safety Services Division that each submittal was accepted by the respective agency.

36. Electronic submittal for this Project is required. The following listed information is required to begin and complete plan check submittal.

    a) Provide civil (including plot plan), architectural, landscape, structural, electrical, mechanical and plumbing plans.

    b) Provide structural and energy calculations with require signatures from the preparer.

    c) Provide a geological report.

    d) Provide a preliminary soils investigation report and a final soils report for the proposed Project site. The report must include the recommendations on the foundation, retaining wall design if part of the Project and ground preparations for expansive soil if any of the condition exists.

    See the following link for electronic plan submittal instructions and procedures.
    http://www.sanramon.ca.gov/our_city/departments_and_divisions/community_development/building_and_safety_services/_electronic_commercial_plan_submittal

37. Provide information in detail format, on the plans, to verify compliance with California Building Code Accessibility requirements.

38. Separate permits are required for retaining walls, signs, low voltage wiring, site lighting (with photometric), racks, and any other accessory structures.

39. A Certificate of Occupancy will be issued upon final inspection and approval by the following Agencies:
    a) San Ramon Valley Fire Protection District
    b) Planning Services Division
    c) Engineering Services Division
    d) Contra Costa County Health Services
    e) Building & Safety Services Division

Planning Services Division:

40. Final conditions of approval shall be printed on the cover page of the building permit plan submittal.

41. Landscaping shall meet the San Ramon Zoning Ordinance Landscape Design Standards, and the State Model Water Efficient Landscape Ordinance (MWELO).

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42. The Applicant shall submit a Soil Management Report as required by the State MWELO for the Project Landscape Documentation Package.

43. Prior to issuance of a building permit, a site photometric plan shall be submitted to Planning Services demonstrating that the site lighting is consistent with the San Ramon Municipal Code Section C3-10 and Zoning Ordinance Section D3-7 standards.

Engineering Services Division:

44. The Applicant shall pay all applicable traffic impact fees as established by City Council Resolutions and Ordinances, including the following:

    a. San Ramon Traffic Impact Fee
    b. Southern Contra Costa Sub-Regional Fee
    c. Southern Contra Costa Regional Fee
    d. Tri-Valley Transportation Development Fee.

The fee shall be calculated at the effective rate at issuance of the Building Permit.

During Site Development and/or General

Planning Services Division:

45. The Applicant shall implement the latest Bay Area Air Quality Management District recommended Best Management Practices for fugitive dust and exhaust control during all construction activities.

46. The Applicant shall be responsible to contain all trash, construction debris and materials on-site until disposal off-site can be arranged.

47. No use, process or activity shall produce objectionable odors that are perceptible without instruments by reasonable persons at the property lines of a site.

48. The use, storage, handling, and transportation of combustibles, explosives, radioactive and hazardous materials shall comply with the applicable provisions of the Fire, Building and Zoning Code, and any applicable laws.

49. Uses, activities, and processes shall not produce unreasonable, disturbing, or unnecessary emissions of heat or humidity, at the property line of the site on which they are situated, that cause discomfort or injury to general public and material distress.

Prior to Building Permit Final Approval

Planning Services Division:

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50. All required landscaping and irrigation shall be installed in accordance with the approved plans.

51. After written verification by a landscape architect registered in the State of California has been provided to Planning Services Division, the Applicant shall request inspection of the final Landscape and Irrigation Plan from Planning Services Division, Public Services, and Engineering Services at least 72 hours prior to the final building permit inspection.

52. Prior to final inspection of the Landscape and Irrigation Plan, the Applicant shall submit to the Planning Services Division for review a Certificate of Completion as required by the State Model Water Efficient Landscape Ordinance.

53. The Applicant shall submit to the Planning Services Division three executed and notarized copies each of a Landscape Maintenance Agreement and/or Building Exteriors and Parking Lot Maintenance Agreement.

Engineering Services Division:

54. The Applicant shall provide as-built documentation verifying that the completed project complies with stormwater treatment requirements. Should the project exceed the 50% threshold, then the Applicant shall revise the Stormwater Control Plan and install additional stormwater facilities that treat the entire project site.

55. The Applicant shall enter into an O&M Agreement with the City for the operation and maintenance of the private stormwater treatment facilities. The agreement shall require the Applicant to operate and maintain these facilities per the approved O&M plan, and submit an annual report to the City.

56. The Applicant shall provide a letter from the project geotechnical engineer attesting that grading and foundations were constructed in accordance with their recommendations for the project.

57. The Applicant shall submit record as-built drawings to the City with each page stamped as such in an electronic format acceptable to City staff.

58. The Applicant shall provide a supplemental cash bond reflecting 150% of the full value of any on-site or off-site improvements not completed at issuance of the Certificate of Occupancy.

59. The Applicant shall provide a letter from the project traffic engineer verifying any approved changes that were made affecting the sight distance triangles within the project development.

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Attachment: B. DRAFT PC Resolution No. 18-20 (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-

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LAND USE NARRATIVE

MINOR USE PERMIT, DEVELOPMENT PLAN, AND ARCHITECTURAL REVIEW

Costco Wholesale
Retail Fueling Facility

3111 Fostoria Way
San Ramon, California 94583

Costco Loc. No. 21
APN No. 218-112-014

Prepared for:
Costco Wholesale
999 Lake Drive
Issaquah, Washington 98027

October 6, 2020
Our Job No. 6224

BARGHAUSEN CONSULTING ENGINEERS, INC.
18215 72ND AVENUE SOUTH KENT, WA 98032 P) 425-251-6222 F) 425-251-8782
BRANCH OFFICES: TUMWATER, WA KLAMATH FALLS, OR LONG BEACH, CA ROSEVILLE, CA SAN DIEGO, CA
barghausen.com

Attachment: C. Project Description (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

Project Location:

The project site is located on Fostoria Way, south of the existing Danville Costco Warehouse. The project site area is approximately 125,667 square feet (2.88 acres) located within the North Camino Ramon Specific Plan (NCRSP) zone, in which a fueling facility is an allowed use subject for a Minor Use Permit, Development Plan, and Architectural Review.

Project Description:

Overview

Costco Wholesale is seeking a Minor Use Permit, Development Plan, and Architectural Review to allow for the development of a new Costco Gasoline fueling facility in association with the existing Costco Warehouse in Danville. The project includes a 12,663-square-foot fuel canopy, the installation of sixteen (16) new multi-product dispensers (MPDs), three (3) 40,000-gallon underground storage tanks (USTs), one (1) 1,500-gallon UST, a controller enclosure, vapor processer unit, and associated site improvements. The fueling facility will operate between the hours of 5:30 a.m. and 10:00 p.m. The intent of the fueling facility is to provide an additional service to Costco members visiting the existing Danville warehouse.

Grading

Site grading is limited to the installation of canopy footings, USTs and product piping, stormwater improvements, and utility installation associated with the fueling facility. Quantities and grades are provided in the enclosed Civil Plan set prepared by Kier & Wright.

Parking and Circulation

The project will provide 127 on-site parking stalls, which will primarily serve as parking for Costco employees. The fueling facility project is subject to the NCRSP, which does not include specific minimum parking count requirements for fuel facilities.

The fueling facility will provide single-direction circulation with a full-length bypass lane between each dispenser island.

Transportation

The fueling facility is not anticipated to generate a significant number of new trips, as discussed in the Trip Generation and Queueing Summary prepared by Kittelson & Associates, dated April 1, 2020. The fueling facility is only available to members, and trips will primarily include internal trips associated with the existing warehouse, pass-by, and diverted trips.

The project includes the signalization of the intersections of Fostoria Way and the two (2) Costco property entrances, and the pedestrian crossings on all four (4) legs.

Architectural Design

The fuel canopy is designed to be consistent with the architecture of the Costco Warehouse, and includes a flat roof, metal-wrapped canopy fascia, and painted metal canopy columns. In an effort to provide a harmonious relationship between the two structures, the materials and earth-tone color palette selected, along with its linear design, will closely resemble the newly constructed warehouse entrance canopy.

Lighting and Signage

The under-canopy lighting will be Costco's standard CREE LED lighting fixtures and the Canopy Sign lighting will include a down-facing LED fixture. The San Ramon Zoning Ordinance requires lighting to be

Attachment: C. Project Description (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

recessed and/or shielded and directed downward to reduce impact on adjacent properties. Additionally, lighting must be designed to utilize energy efficient fixtures. Costco's CREE LED lighting meets these requirements.

The fuel dispensing canopy includes one (1) 20-square-foot "Costco Wholesale" sign located and centered on each façade of the canopy (four [4] signs total). The San Ramon Zoning Ordinance allows a maximum sign area of .75 square feet for each one (1) linear foot of building frontage, up to a maximum of 75 square feet total sign face area. Conversations with City staff indicated that a Master Sign Program is required to allow for signs on all four (4) facades of the canopy. Additionally, the NCRSP sign standards for wall signs allow letters painted, gilded, or screen printed onto a sign panel that is attached to the building facade. Costco's vinyl lettered, metal signage is consistent with this design as described in the NCRSP.

Landscaping

The project will provide approximately 22,753 square feet of total landscape coverage (18 percent) for the Costco fueling facility development. Additionally, 63 shade trees are provided for the interior parking area. The NCRSP requires a minimum of 25 square feet of interior landscaped area per parking space (4,414 square feet total) and an overall total of 15 percent landscape coverage for the entire site. One (1) shade tree must be provided for every four (4) parking spaces. Based on this ratio, approximately 32 shade trees are required for the parking area.

Additionally, a 5-foot landscaped buffer must be provided along the Fostoria Way frontage. The parking area and all exterior mechanical equipment must be screened from view on all sides by use of plant materials, earth berms, or solid masonry walls with plant cover. The frontage landscape area has a variable width of 9 to 11 feet and includes a combination of trees, shrubs, and ground cover to provide screening of the parking lot area. Landscaping for the Costco fueling facility development is consistent with the City's minimum landscape requirements as outlined in the NCRSP.

The project proposes to retain the existing public art piece within its current location.

Construction

Project construction will occur through two phases and will commence upon approval of all required permits. The initial phase includes the demolition of the existing Office Depot. The second phase will be the construction of the fueling facility.

Purpose of Request – Minor Use Permit

In accordance with San Ramon Zoning Ordinance Division D6-28(F), the review authority may approve a Use Permit or Minor Use Permit application only after first making all of the following findings:

1. *The proposed use is allowed within the applicable zone and complies with all other applicable provisions of this Zoning Ordinance and the Municipal Code;*

   Response: The NCRSP states that the fueling facility is an allowed use subject to the issuance of a Minor Use Permit. The facility will comply with all applicable provisions of the NCRSP and San Ramon Zoning Ordinance, as outlined in the following table:

Attachment: C. Project Description (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

Development Standard	Requirement	Response
Building Setback	Front: 10-feet Side/Rear: Daylight Plane (Measured at a 30-degree angle from the structure to a height of 8-feet above grade at the property boundary)	The fuel canopy location does not encroach within the front yard setback, and does not exceed the daylight plan threshold for rear and side setbacks.
Maximum Height	85 feet	The fuel canopy height is 17 feet 6 inches and is consistent with the NCRSP maximum height allowance.
Landscaping	Minimum of 25 square feet of interior landscaped area per parking space Minimum of 15 percent of landscape coverage for the overall site Minimum 5-foot landscaped buffers must be provided along all property lines	The project will provide approximately 9,965 square feet of interior landscaped area and 20 percent (24,509 square feet) of total landscape area for the Costco fuel facility development. Additionally, the frontage landscape area has a variable width of 9 to 11-feet, and is planted with a combination of shrubs, ground cover, and trees to provide screening of the parking area.
Signs	The San Ramon Zoning Ordinance allows a maximum sign area of .75 square feet for each one (1) linear foot of building frontage, up to a maximum of 75 square feet total sign face area. Additionally, the NCRSP sign standards for wall signs allow letters painted, gilded or screen printed onto a sign panel that is attached to the building facade.	The canopy signs will be one 20-square-foot "Costco Wholesale" sign located and centered on each façade of the canopy. This submittal includes a request for a Master Sign Program to allow for the additional façade signage. The signs include vinyl lettering on metal panels, fixed to the canopy fascia. Costco's vinyl lettered, metal signage is consistent with this design as described in the NCRSP.
Lighting	The San Ramon Zoning Ordinance requires lighting to be recessed and/or shielded, and directed downward to reduce impact on adjacent properties. Additionally, lighting must be designed to utilize energy efficient fixtures.	The under-canopy lighting will be Costco's standard CREE LED lighting fixtures. Sign lighting will also be LED. Costco's CREE LED lighting meets these requirements.

Attachment: C. Project Description (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

Development Standard	Requirement	Response
Design Criteria	The architectural design of the fueling facility must be harmonious with the existing Costco development in terms of colors, materials, and architectural features.	The fuel canopy will be designed to match the existing Costco Warehouse and includes a flat roof, a metal-wrapped canopy fascia, and metal canopy columns. The fuel canopy primary color will be tan to match the existing warehouse.

2. *The proposed use is consistent with the General Plan and any applicable specific plan;*

   Response: The General Plan Land Use Map designates the project site as Mixed Use Commercial and uses include commercial areas with off-street parking and service establishments. The uses included in the Mixed Use Commercial designation are consistent with the fueling facility, which will operate as an associated service with the Danville Costco Warehouse. The NCRSP Land Use Map designates the project site as Commercial Mixed Use and uses include retail fuel facilities with off-street parking subject to approval of a Minor Use Permit.

3. *The design, location, size, and operating characteristics of the proposed activity are compatiblewith the existing and future land uses in the vicinity;*

   Response: A fueling facility is an allowed use within the NCRSP zone, meets all the design standard criteria for the subject property, and will serve as an associated use with the existing Costco Warehouse across the street in Danville. As a result, the project does not introduce a prohibited use, is not anticipated to impact existing or future improvements on neighboring properties, and is consistent with the land use activity within the surrounding vicinity.

4. *The site is physically suitable for the type, density, and intensity of use being proposed, including access, utilities, and the absence of physical constraints;*

   Response: As described in the project description and table above, the fueling facility and associated parking meets all site specific standards for height, setbacks, landscaping, parking, and lighting. All utilities required to serve the project are also available from the adjacent right-of-way and surrounding properties. Additionally, the project is designed to ensure that fueling facility operational impacts are minimized. Specifically, the dispenser layout and queuing area are designed to ensure an orderly flow of vehicles through the site. And, the project is not anticipated to result in a significant number of new trips to the site, as described in the traffic description above. Also, the fuel system is designed to meet all state, local, and federal requirements for emission and fuel containment.

5. *Granting the permit would not be detrimental to the public health, safety, or welfare of the persons residing or working in the subject neighborhood, or materially detrimental or injurious to property or improvements in the vicinity and zone in which the property is located.*

   Response: The fueling facility is designed to meet all permitting and operational requirements of all local, state, and federal regulating agencies. In particular, the facility is designed with state-of-the-art equipment for fuel containment and vapor recovery. A trained employee will be present during all operating hours to assist members, monitor fuel deliveries, and implement safety and emergency procedures as necessary.

Attachment: C. Project Description (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

Development Plan

In accordance with San Ramon Zoning Ordinance Division D6-23(H), the Zoning Administrator shall approve an application for a Development Plan. On the basis of the application, materials and plans, and testimony submitted, the Zoning Administrator first finds that the proposed development:

1. *Will not be detrimental to the health, safety, and general welfare of persons residing or working in the neighborhood of the proposed development;*

   Response: The project will not be detrimental to the health, safety, and general welfare of the surrounding community. The fueling facility is a compatible use with the surrounding neighborhood, which is consistent with the allowed uses within the NCRSP zone. Additionally, the fueling facility is designed to meet all permitting and operational requirements of all local, state, and federal regulating agencies as described in the enclosed General Information Sheet prepared by Barghausen Consulting Engineers, Inc. dated April 10, 2020. Specifically, the fuel system includes double-walled piping with leak detection monitoring and a number of redundant features designed to ensure that fuel containment meets all local CUPA and State Water Board requirements. The fueling facility is also equipped with a number of vapor control technologies designed to efficiently limit emissions in accordance with the local air district and State CARB requirements. And, as described above, a trained assistant will be present during all operational hours to assist members, fuel deliveries, and implement safety and emergency procedures if necessary.

2. *Will not be injurious or detrimental to property or improvements in the neighborhood;*

   Response: The project will not be detrimental to property or improvements in the surrounding neighborhood, as the fueling facility and associated parking is designed to meet all the site-specific design standards for the subject property and is a compatible use within the subject zone. Specifically, the fuel canopy design uses similar high-quality finishes and design as the associated Costco warehouse to ensure a compatible architectural character. The landscaping design provides screening of the parking area along the street frontage, using a combination of trees and shrubs that are selected to appropriately integrate with the surrounding landscaping. Additionally, a trained Costco attendant will be present at the fueling facility during operational hours and their role will include inspecting fuel equipment daily and generally maintaining the property.

3. *Will not be injurious or detrimental to the general welfare of the City;*

   Response: The project will not be detrimental to the general welfare of the City as it is an allowed use within the NCRSP zone and is designed to meet all site-specific and general standards outlined within the Specific Plan. Also, the fueling facility is an associated service with an established business being the Costco Warehouse located across the street in Danville and will serve an existing membership base from the surrounding community. Additionally, the fueling facility is equipped with state-of-the-art technology for fuel containment and air quality and designed to meet all local, state, and federal standards for health and safety as described in the enclosed General Information Sheet prepared by Barghausen Consulting Engineers, Inc. dated April 10, 2020.

4. *Will not be inconsistent with the policies and goals of the General Plan or any applicable specific plan*

   Response: The General Plan Land Use Map designates the project site as Mixed Use Commercial and uses include commercial areas with off-street parking and service establishments. The uses included in the Mixed Use Commercial designation are consistent with the fueling facility, which will operate as a service establishment. The NCRSP Land Use Map designates the project site as Commercial Mixed Use and uses include retail fuel facilities with off-street parking subject to approval of a Minor Use Permit.

Attachment: C. Project Description (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

5. *Is architecturally compatible with other developments in the same vicinity, both inside and outside of the subject zone.*

   Response: The fueling facility is designed to be harmonious with the Costco Wholesale development, and is consistent with the architectural requirements of the General Plan and NCRSP. Specifically, the fuel canopy incorporates metal finishes with earth-tone colors and a flat roof architectural style that is consistent with recent façade updates to the Costco Warehouse. Additionally, the fuel canopy design is compatible with existing fuel facilities and commercial properties within the surrounding area that use a contemporary architectural design, utilizing flat roofs, and high-quality metal finishes.

Architectural Review

In accordance with San Ramon Zoning Ordinance Division D6-22(G)(2), the Architectural Review Board shall provide an advisory role to the Zoning Administrator or Commission and factors that should be considered by the review authority are the design of all improvements subject to the requirements of this section in relation to the following factors:

1. *Area, bulk, and height of structures;*

   Response: The fuel canopy has an area of 11,486 square feet, stands 17 feet 6 inches tall, and is designed to include a flat roof with metal wrapped fascia and galvanized steel columns. The fuel canopy will be open on all sides and provide shelter to the dispenser positions below. The architectural design is lean and contemporary and uses high-quality finishes and earth-tone colors to provide an attractive canopy structure.

2. *Colors and types of structures and installations;*

   Response: The project includes a fuel canopy and pre-fabricated enclosure for the storage of required equipment to operate the facility. The fuel canopy metal wrapped fascia will be power-coated with a tan finish, which references the color scheme of the associated warehouse and is general harmonious with the surrounding development. The controller enclosure is also finished with a powder coated metal wrap using a similar color scheme.

3. *The architectural and physical relationship with existing and proposed structures in the area and to the site's location within the City;*

   Response: The fueling facility is designed to meet all site specific standards of the NCRSP including setback height and site coverage requirements. Additionally, the fueling facility is consistent with the visual character of the Commercial Mixed Use designation described in the Specific Plan. The project is located within an area that is already developed and does not interfere with the existing use or future improvements of neighboring properties.

4. *Location, orientation, and site layout of the structures, and their relationship with open space areas, topography, and solar/energy efficiency;*

   Response: The site does not include any open space areas and does not include any unusual topographical features that will affect site design. As a result, the project will be able to meet the grading requirements for the facility design and any other jurisdictional requirements. Additionally, the project does not include any solar panels, energy producing equipment, or internal spaces that result in solar access requirements.

Attachment: C. Project Description (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

5. *Colors, height, materials, and variations in boundary fences, walls, or screen planting;*

   Response: The enclosed Landscape Plan, prepared by David Babcock & Associates is designed to meet all landscape screening requirements for parking areas within the NCRSP zone. Specifically, landscape along the site frontage includes a combination of trees and shrubs that provide screening of the parking area from Fostoria Way.

6. *Location and type of landscaping including setback areas and the project's off-street parking areas;*

   Response: As described in the project description, the project has been designed to comply with all landscape requirements for setback areas and off-street parking areas. The project will provide approximately 10,465 square feet of interior landscaped area and 21 percent (26,013 square feet) of total landscape area for the Costco fueling facility development. Landscaping within the front setback area includes a combination of trees and shrubs designed in accordance with the landscape requirements described in the NCRSP.

7. *Appropriateness of sign design and exterior lighting, and other building graphics;*

   Response: As described in the project description, the project has been designed to comply with all lighting requirements. The under-canopy lighting will be Costco's standard CREE LED lighting fixtures and the canopy sign lighting will include a down-facing LED fixture.

   The fuel dispensing canopy includes one 20-square-foot "Costco Wholesale" sign located and centered on each façade of the canopy (four [4] signs total). The intent of the Master Sign Program is to allow for this sign design standard.

8. *Second story additions to existing single-story homes.*

   Response: The project does not include a second story addition to an existing single-story home.

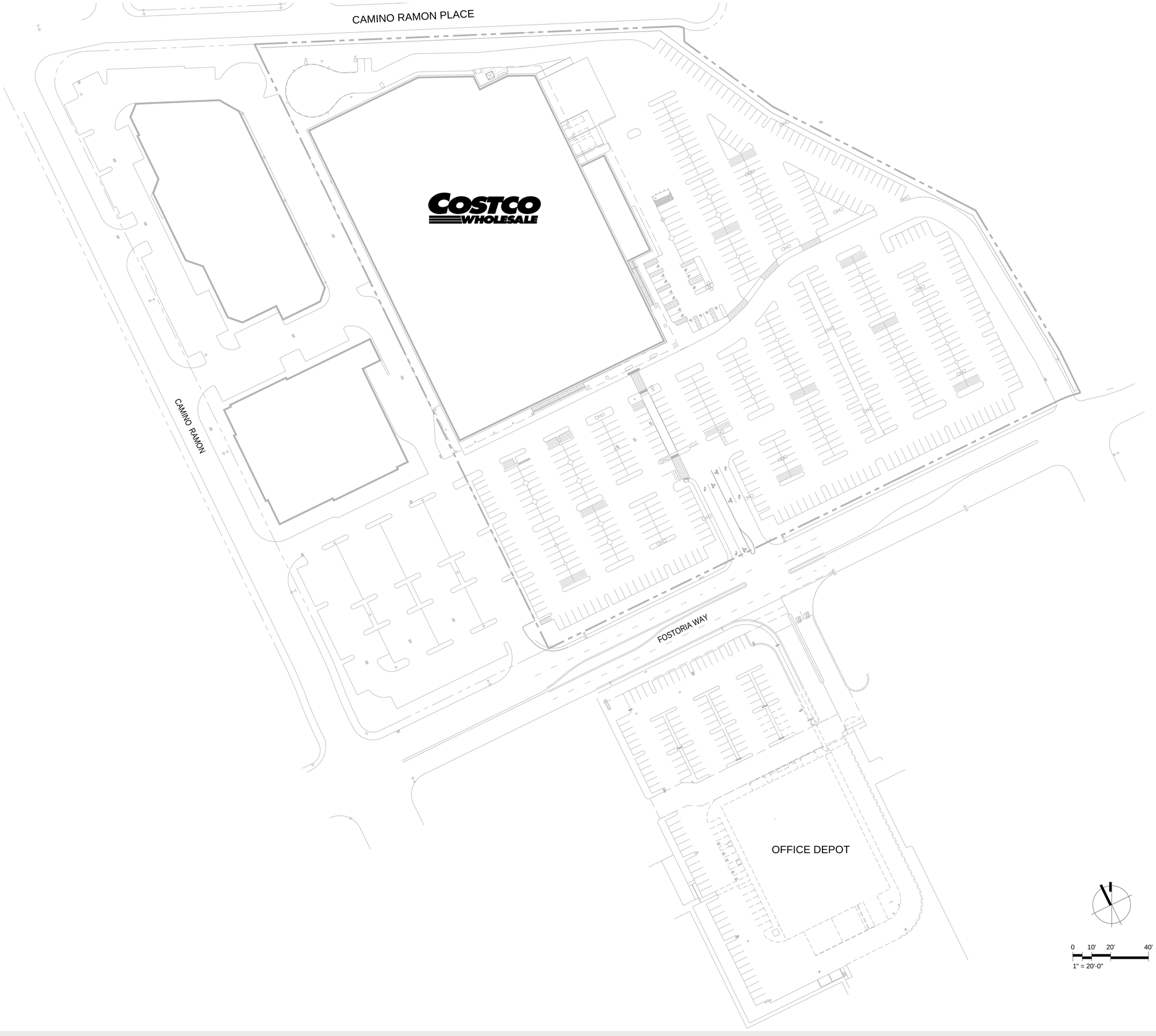
9. *In the best interest of the public health, safety, and general welfare of the community.*

   Response: As described throughout the document, the fueling facility is consistent with the allowed land uses and general character described in the NCRSP zone. Also, the fueling facility is an associated use with the Costco Warehouse in Danville and will serve an existing membership base within the surrounding community. Additionally, the fueling facility is design to meet all permitting and operational requirements of all local, state, and federal regulating agencies and is equipped with state-of-the-art systems for fuel containment and vapor recovery, along with a trained assistant during all operational hours to assist members, fuel deliveries, and implement safety and emergency procedures if necessary.

Conclusion:

The responses above and application materials demonstrate that this project meets the submittal criteria for a Minor Use Permit, Development Plan, and Architectural Review, in order for the City to deem this application complete and undertake review of this project.

Attachment: C. Project Description (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))



PROJECT DATA

CLIENT:	COSTCO WHOLESALE 999 LAKE DRIVE ISSAQUAH, WA 98027
PROJECT ADDRESS:	3111 FOSTORIA WAY SAN RAMON, CA 94583
ZONING:	NCRSP, NORTH CAMINO RAMON SPECIFIC PLAN
JURISDICTION:	TOWN OF DANVILLE, CA
SITE AREA:	11.72 ACRES (510,523 SF)

BUILDING DATA:

BUILDING AREA	135,233 S.F.
TIRE CENTER	5,184 S.F.
TOTAL BUILDING	140,417 S.F.

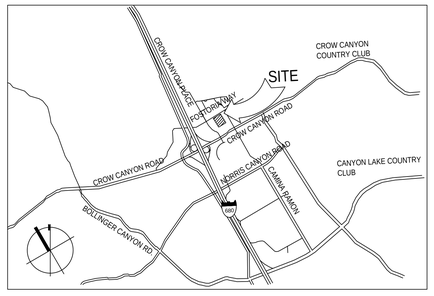
PARKING DATA:

PARKING PROVIDED:

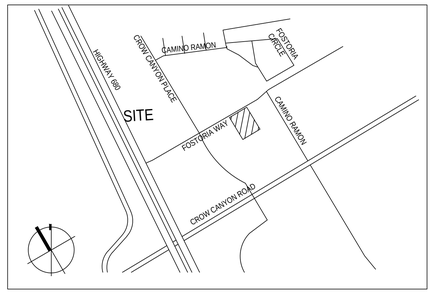
10' WIDE STALLS	0 STALLS
9' WIDE STALLS	622 STALLS
HC ACCESSIBLE STALLS	14 STALLS
TOTAL PARKING	636 STALLS
NO. OF STALLS PER 1000 SF OF BUILDING AREA:	4.53 STALLS

NOTES:
EXISTING CONDITIONS TO BE FIELD VERIFIED.

REGIONAL MAP



VICINITY MAP



0 10' 20' 40'
1" = 20'-0"

RECEIVED October 2, 2020

Attachment: D. Project Plans (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

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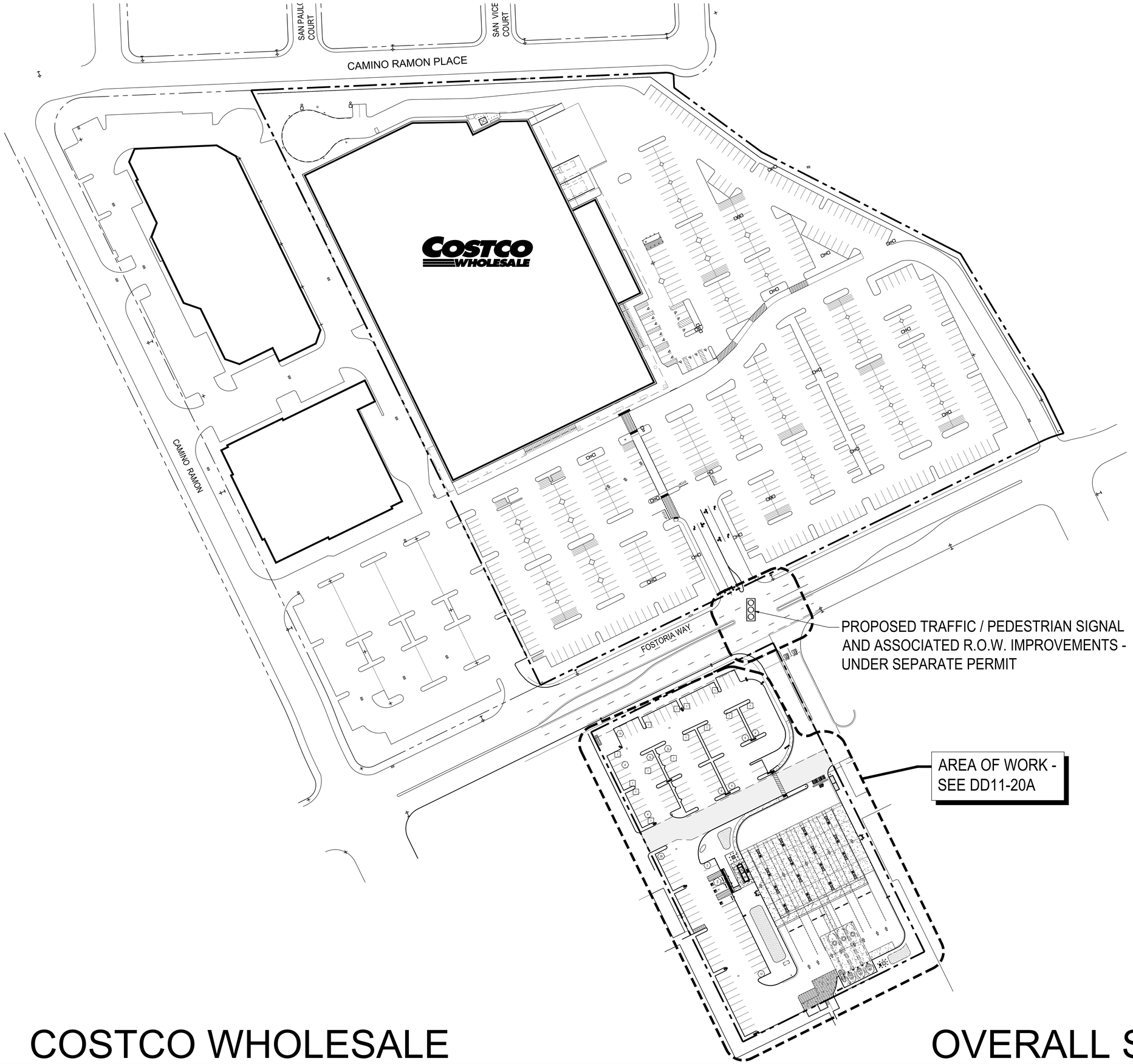
JULY 17, 2020
PROJECT #93-1360-28
SAN RAMON, CA

EXISTING SITE PLAN

EX11

COSTCO WHOLESALE



0 25' 50' 100'
1"=50'-0"

COSTCO WHOLESALE
DANVILLE, CA
#21

FOSTORIA
SAN RAMON, CA

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

93-1360-28
OCTOBER 2, 2020

OVERALL SITE PLAN

DD11-20

COSTCO WHOLESALE

SAN RAMON, CA

OVERALL SITE PLAN

OCTOBER 2, 2020

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Attachment: D. Project Plans (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

PROJECT DATA

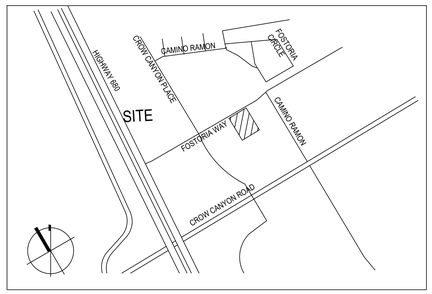
CLIENT:	COSTCO WHOLESALE 999 LAKE DRIVE ISSAQUAH, WA 98027
PROJECT ADDRESS:	3111 FOSTORIA WAY SAN RAMON, CA 94583
ZONING:	NCRSP, NORTH CAMINO RAMON SPECIFIC PLAN
JURISDICTION:	
WAREHOUSE SITE AREA: (TOWN OF DANVILLE)	11.7 ACRES (510,523.2 SF)
FUEL FACILITY SITE AREA: (CITY OF SAN RAMON)	2.88 ACRES (125,667 SF)
TOTAL SITE AREA:	14.6 ACRES (646,190.2 SF)
BOUNDARIES INFORMATION:	THIS PLAN HAS BEEN PREPARED USING TOPO SURVEY FROM KIER & WRIGHT DATED 03/2020.

BUILDING DATA:	
BUILDING AREA	135,233 SF
TIRE CENTER	5,184 SF
TOTAL BUILDING	140,417 SF
FUEL FACILITY CANOPY	12,663 SF

PARKING DATA (AT WAREHOUSE):	
# 10' WIDE STALLS	0 STALLS
# 9' WIDE STALLS	622 STALLS
# HC ACCESSIBLE STALLS	14 STALLS
TOTAL PARKING	636 STALLS
PARKING DATA (AT FUEL FACILITY):	
# 9' WIDE STALLS (EXISTING)	96 STALLS
# < 9' WIDE COMPACT STALLS (EXISTING)	14 STALLS
# 9' WIDE STALLS (PROPOSED)	14 STALLS
# HC ACCESSIBLE STALLS	3 STALLS
TOTAL PARKING	127 STALLS
TOTAL COSTCO PARKING:	763 STALLS
NO. OF STALLS PER 1000 SF OF BUILDING AREA:	5.43 STALLS

NOTES:
EXISTING CONDITIONS TO BE FIELD VERIFIED.

VICINITY MAP



0 10' 20' 40'
1" = 20'-0"

COSTCO WHOLESALE

DANVILLE, CA
#21

FOSTORIA
SAN RAMON, CA

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Seattle, WA 98101

206 962 6500
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93-1360-28
OCTOBER 2, 2020

ENLARGED
SITE PLAN

DD11-21A

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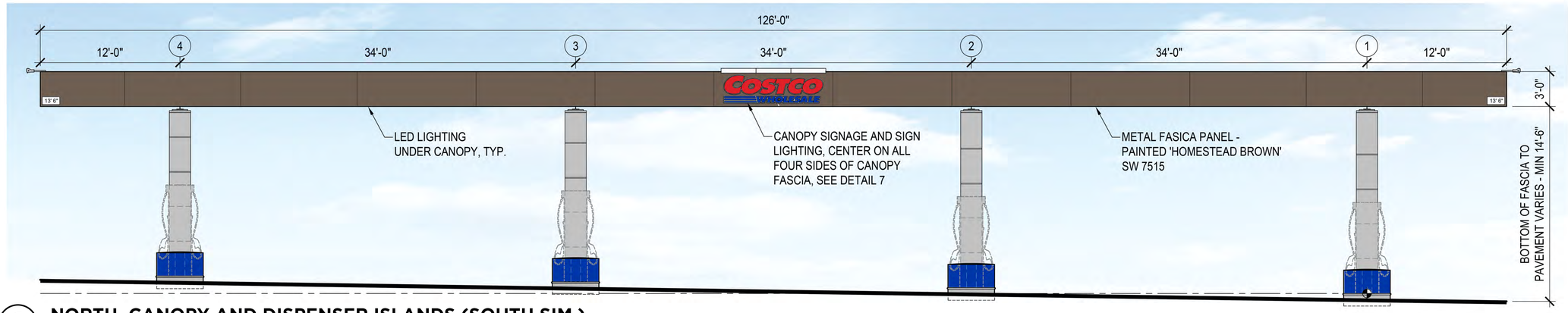
COSTCO WHOLESALE

SAN RAMON, CA

ENLARGED SITE PLAN

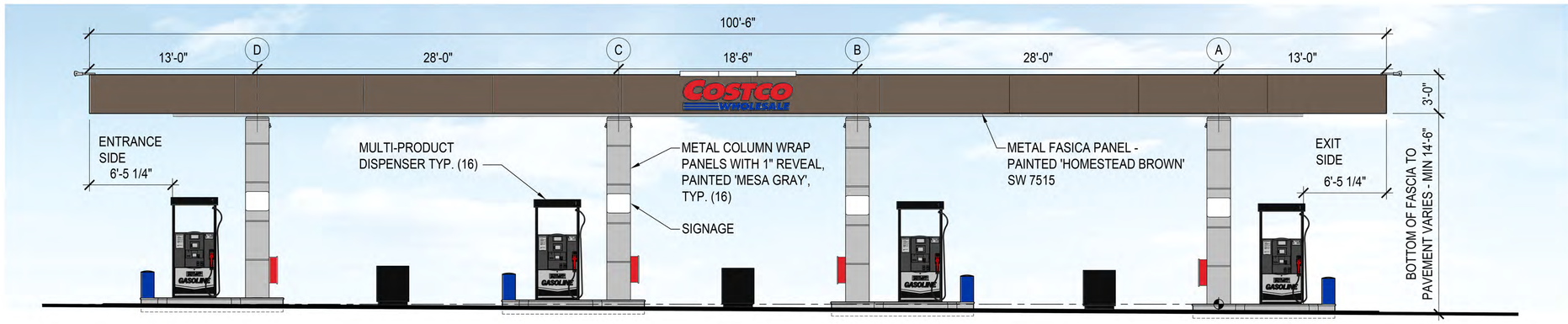
OCTOBER 2, 2020

Attachment: D. Project Plans (2929 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))



1 NORTH CANOPY AND DISPENSER ISLANDS (SOUTH SIM.)

SCALE: 1/4" = 1' - 0"

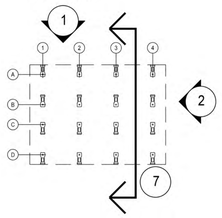


2 EAST CANOPY AND DISPENSER ISLANDS (WEST SIM.)

SCALE: 1/4" = 1' - 0"

KEY PLAN

SCALE: NTS

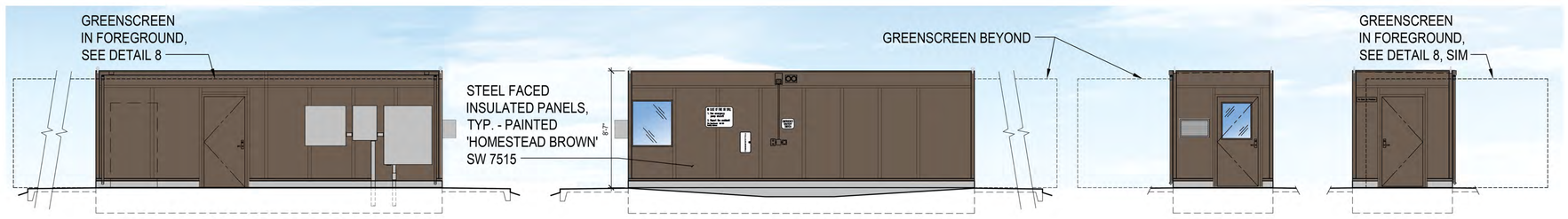


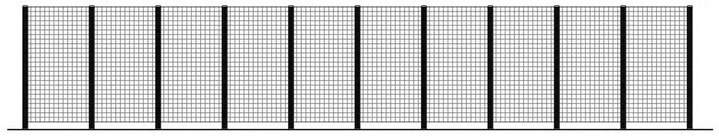
'COSTCO'
SW 4081
'SAFETY RED'

STRIPE AND 'WHOLESALE'
SW 1805
'LAPIS LAZULI'

CANOPY FASCIA
SW 7515
'HOMESTEAD BROWN'

PAINTED COLUMNS
'MESA GRAY'





3 SIDE FACING AWAY FROM CANOPY

SCALE: 1/4" = 1' - 0"

4 SIDE FACING CANOPY

SCALE: 1/4" = 1' - 0"

5 ELECTRICAL ENTRY

SCALE: 1/4" = 1' - 0"

6 STORAGE ENTRY

SCALE: 1/4" = 1' - 0"

8 GREENSCREEN

SCALE: 1/4" = 1' - 0"

7 SITE CROSS SECTION

SCALE: 1/16" = 1' - 0"

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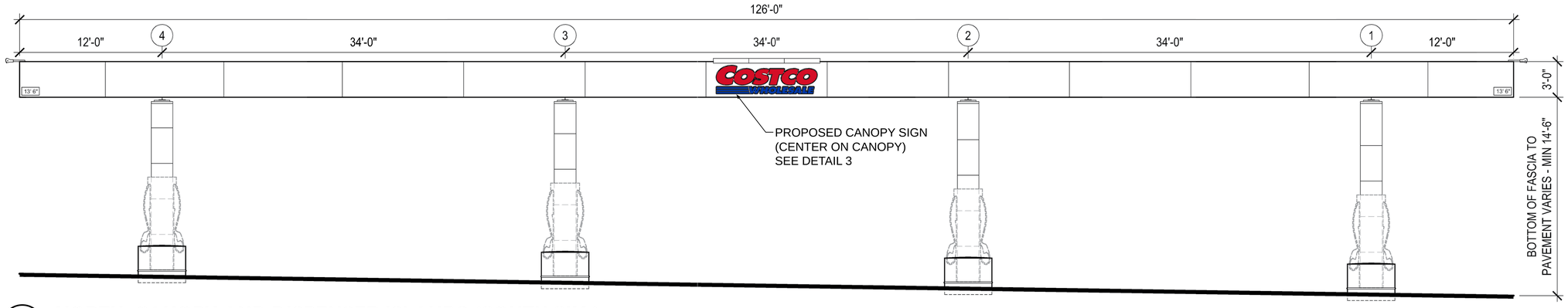
JULY 17, 2020
PROJECT #93-1360-28
SAN RAMON, CA

CONCEPT FUEL ELEVATIONS

DD31-02

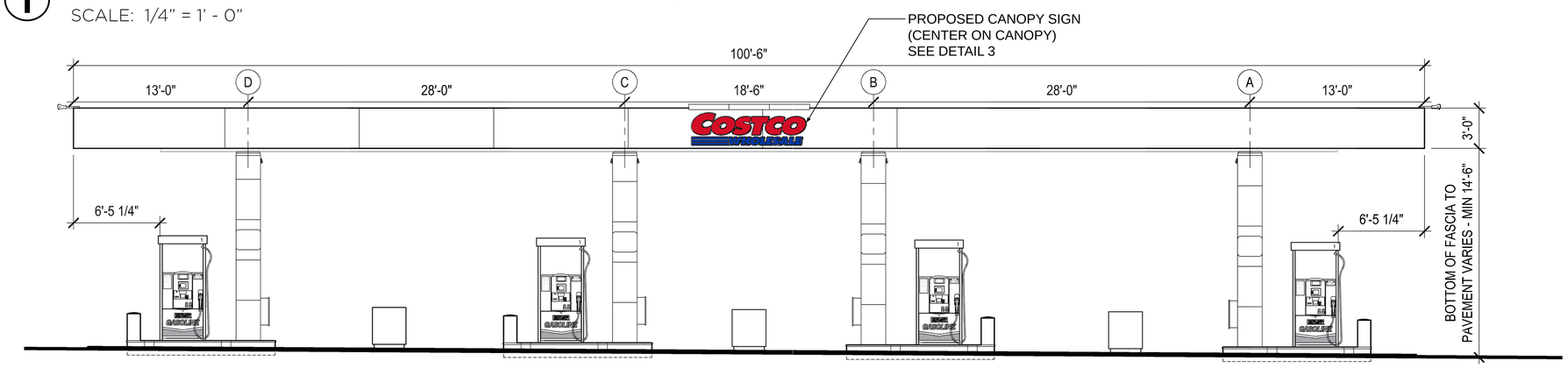
COSTCO WHOLESALE

Attachment: D. Project Plans (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, NUP 20-501-003, and MSP 20-700-001))



1 NORTH CANOPY AND DISPENSER ISLANDS (SOUTH SIM.)

SCALE: 1/4" = 1' - 0"

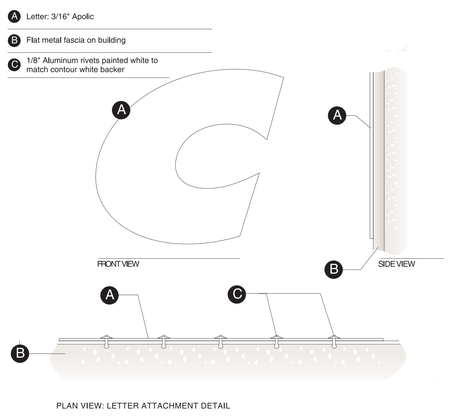


2 EAST CANOPY AND DISPENSER ISLANDS (WEST SIM.)

SCALE: 1/4" = 1' - 0"

3 CANOPY SIGN

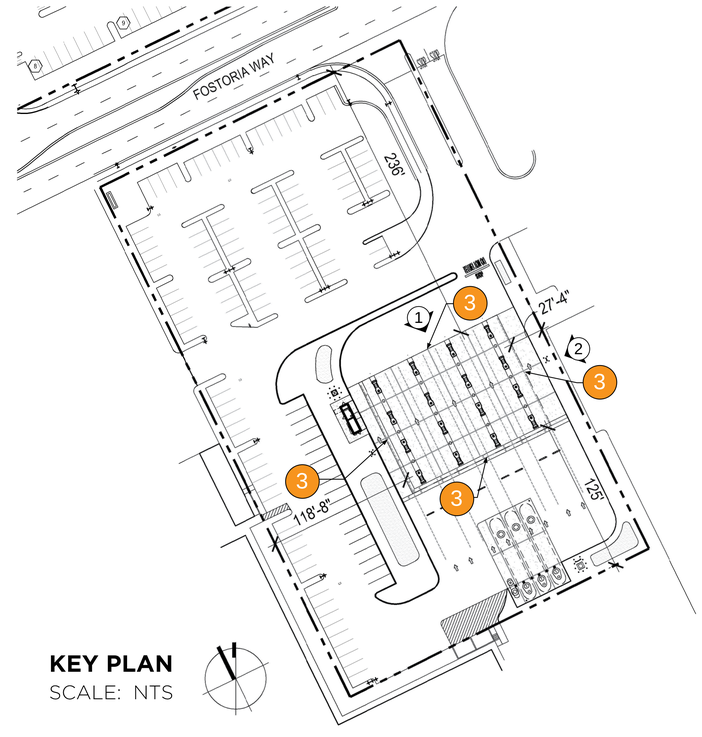
SCALE: 1/2" = 1' - 0"



4 ATTACHMENT DETAIL

SCALE: NTS

SIGNAGE AREA TABULATION (FASICA SIGNS)				
QTY.	SIGN	SIZE	AREA (S.F.) EA.	TOTAL S.F.
4	COSTCO WHOLESALE	2'-5 1/4" x 8'-6 5/8"	20.85 S.F.	82.32 S.F.
			TOTAL SIGNAGE AREA	82.32 S.F.



KEY PLAN

SCALE: NTS

MG2

JULY 17, 2020
PROJECT #93-1360-28
SAN RAMON, CA

PROPOSED FUEL SIGNAGE

DD32-02

COSTCO WHOLESALE

Attachment: D. Project Plans (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

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JULY 17, 2020
PROJECT #93-1360-28
SAN RAMON, CA

CONCEPT FUEL PERSPECTIVE

DD33-02

COSTCO WHOLESALE

Attachment: D. Project Plans (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

Attachment: D. Project Plans (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

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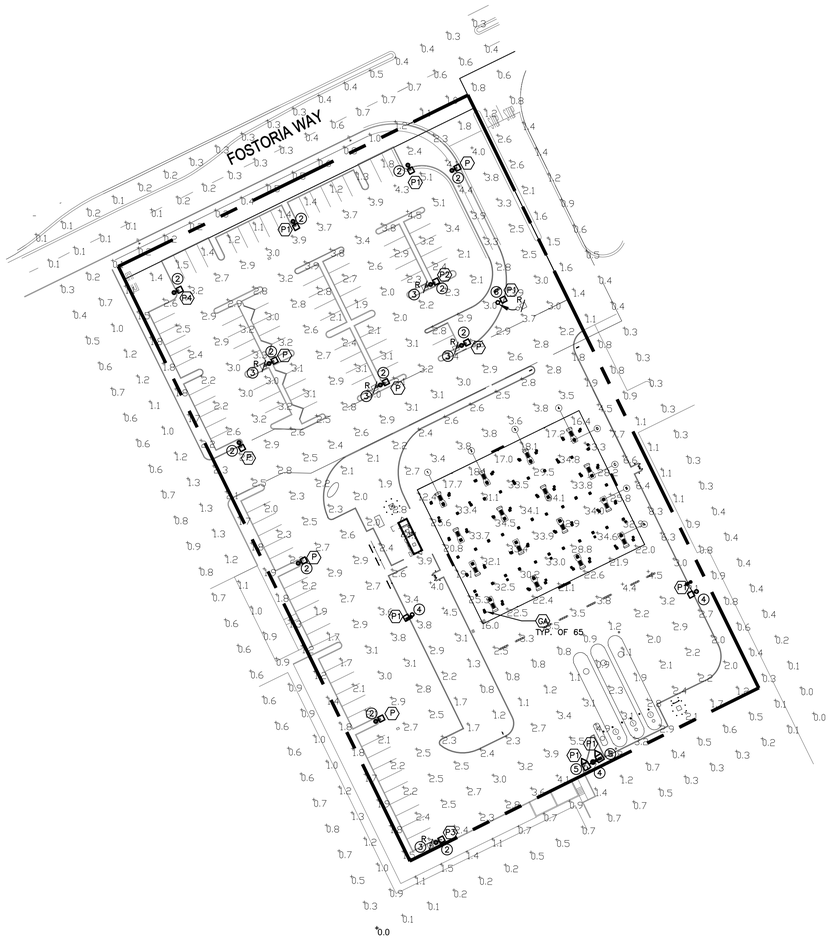
JULY 17, 2020
PROJECT #93-1360-28
SAN RAMON, CA

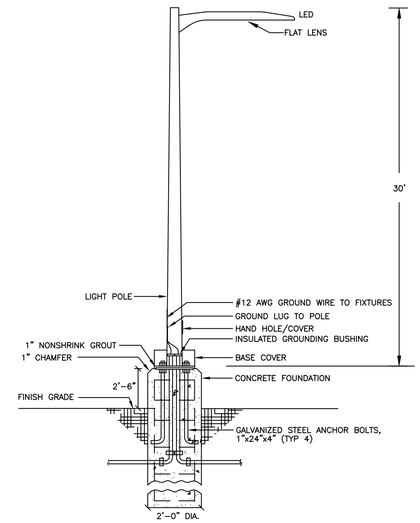
CONCEPT FUEL PERSPECTIVE

DD33-03

COSTCO WHOLESALE

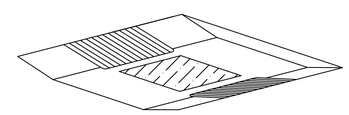


SITE PLAN
SCALE: 1" = 40'



NOTE: PROVIDE CONCRETE J-BOX AS REQUIRED.
THIS DETAIL IS FOR ELECTRICAL CONDUITS ROUTING ONLY.
SEE STRUCTURAL DRAWINGS FOR CONSTRUCTION DETAIL.

POLE BASE DETAIL
NO SCALE



FUEL FACILITY – LED (GA)
NO SCALE

LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER	NUMBER	LAMPS	MOUNT	WATT	REMARKS
GA	CREE	CPY250-B-PD-F-B-UL-WH-5000K	LED	SURFACE	96	
P	LITHONIA	DSX2-LED-P2-50K-T5W-MVOLT -DDBXD	LED 5000K	POLE	185	POLE ON CONCRETE BASE. NUMBER OF HEADS SHALL BE PER PLAN. SEE DETAIL SHEET SE-1.
P1	LITHONIA	DSX2-LED-P2-50K-T2M-MVOLT -DDBXD				
P2	LITHONIA	DSX2-LED-P1-50K-T5W-MVOLT -DDBXD			185	
P3	LITHONIA	DSX2-LED-P11-50K-T5W-L90-MVOLT -DDBXD			207	
P4	LITHONIA	DSX2-LED-P11-50K-T5W-R90-MVOLT -DDBXD				

PLAN NOTES:

1. E.C. TO PROVIDE NEW (65) FIXTURES AT EXPANDED FUEL FACILITY CANOPY.
2. EXISTING POLE TO REMAIN. E.C. TO REPLACE EXISTING POLE LIGHT FIXUTRE AS SHOWN.
3. E.C. TO REMOVE EXISTING POLE LIGHT FIXTURE
4. NEW POLE AND LIGHT FIXTURE
5. E.C. TO ROTATE OPTICS AS SHOWN
6. E.C. TO REMOVE AND RELOCATE EXISTING POLE, REPLACE LIGHT FIXTURE

ISSUED FOR BID

DRAWN: KML CHECKED: ANT/JGM

REVISION DATE: SEPTEMBER 28, 2020

ISSUE DATE: SEPTEMBER 23, 2020

09/25/20	ISSUED FOR PERMIT
10/01/20	ISSUED FOR BID

T.E., Inc.
830 N. RIVERSIDE DRIVE
SUITE #200
RENTON, WA 98057
PHONE: 425-970-3753
FAX: 425-970-3756

ARCHITECT REFERENCE NO: 93-1360-28

FUEL FACILITY

WAREHOUSE #021
3150 FOSTORIA WAY
DANVILLE, CA 94526

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SITE PLAN

PROJECT NO:20-149

SE-1

Attachment: D. Project Plans (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

K:\2020\140-149\20-149 - Costco - Danville (#021) - CA - Fuel Facility_149ES1.dwg, 9/28/2020 8:37:39 AM, TLeitch

WUCOLS LEGEND:

L Low Water Use

M Moderate Water Use

LANDSCAPE DATA:

Costco Gas Site Coverage
Total Parcel Area: +/-2.88 AC (+/- 125,667 SF)
Landscape Area Required: 18,850 SF (15% of the Total Lot Area 125,667 SF)
Landscape Area Provided: 22,753 SF (18.10%)

Shade Requirements:
Required: 50% Parking lot shading at 15 years.
Provided: 51.2%
Required: 20% Landscaped area shading at 15 years.
Provided: 86.7%
Required: 20% Hardscape area shading at 15 years.
Provided: 75.4%

IRRIGATION SYSTEM STATEMENT:

The irrigation system will be a water efficient low flow, point source system designed to provide adequate watering to support plant growth and ensure deeply rooted plant material while avoiding excess water application. The system will be programmable, allowing operation during late night and/or early morning hours, with multiple start times and cycles. The system will interface with a weather based sensor that will adjust the amount of water applied to the plant material based on daily weather conditions. Irrigation materials specified for the site will bn the basis of durability and ease of maintenance. Landscape irrigation will comply with the California Department of Water Resources Model Water Efficient Landscape Ordinance (MWELO).

Plant Legend

Symbol	Botanical / Common Name	Size	Tree Size Canopy (Anticipated width of Tree Canopy at Maturity)	WUCOLS (Water Use Classification of Landscape Species)	Comments
	Lagerstroemia hyb. 'Dynamite' / Dynamite (Red) Crape Myrtle	24" box	16'-0"	L	Multi-branched, matched in size.
	Lagerstroemia hyb. 'Muskogee' / Muskogee (Lavender) Crape Myrtle	24" box	16'-0"	L	Matched Standards
	Platanus x 'Columbia' / Columbia London Plane Tree	24"box	30'-0"	M	Matched Standards
	Quercus shumardii / Shumard Oak	24"box	30'-0"	L	Matched Standards
	Quercus macrocarpa 'Urban Pinnacle' / Urban Pinnacle Oak	24" box	25'-0"	L	Matched Standards
	Quercus virginiana 'Heritage' / Heritage Southern Live Oak	24" box	30'-0"	M	Matched Standards
	Existing tree to remain (Approx. canopy size)				

UNDERSTORY PLANTING:
Site Planting indicating shrubs, perennials, ornamental grasses and ground covers

SHRUBS:

Frangula californica 'Eve Case' / Eve Case Coffeeberry	5 gal.	L
Phlomis fruticosa / Jerusalem Sage	5 gal.	L
Rhus ovata / Sugar Bush	5 gal.	L
Rosa meidrifora 'Coral Drift' / Coral Drift Shrub Rose	2 gal.	M
Rosa meigalpio 'Red Drift' / Red Drift Shrub Rose	2 gal.	M
Salvia leucantha 'Santa Barbara' / Santa Barbara Sage	5 gal.	L

PERENNIALS:

Chondropetalum tectorum / Cape Rush	1 gal.	M/L
Dianella revolute 'Little Rev' / Little Rev Dianella	1 gal.	L
Dietes vegeta 'Variegatum' / Variegated Fortnight Lily	5 gal.	L
Hesperaloe parviflora 'Brakelights' / Brakelights Red Yucca	5 gal.	L
Lomandra longifloia 'Breeze' / Dwarf Mat Rush	1 gal.	L

ORNAMENTAL GRASSES:

Festuca mairei / Atlas Fescue	1 gal.	M/L
Muhlenbergia capillaris 'Regal Mist' / Regal Mist Pink Muhly Grass	1 gal.	M/L
Muhlenbergia rigens / Deer Grass	1 gal.	L
Pennisetum alopecuroides 'Hameln'/ Hameln Dwarf Fountain Grass	1 gal.	M/L
Pennisetum sectaceum 'Eaton Canyon / Eaton Canyon Fountain Grass	1 gal.	M/L

STORM WATER TREATMENT PLANTING
Perennials:

Chondropetalum tectorum / Cape Rush	1 gal.	L
Juncus patens 'Carman's Gray' / Carman's Gray California Rush	1 gal.	M/L
Nepeta racemosa 'Walkers Low' / Walker's Low Nepeta	1 gal.	L

DBA # P.306

DB+A

DAVID BABCOCK + ASSOCIATES
ARCHITECTURE LANDSCAPE PLANNING
3581 MT. DIABLO BLVD., SUITE 235
LAFAYETTE, CALIFORNIA 94549
T: 925.283.5070

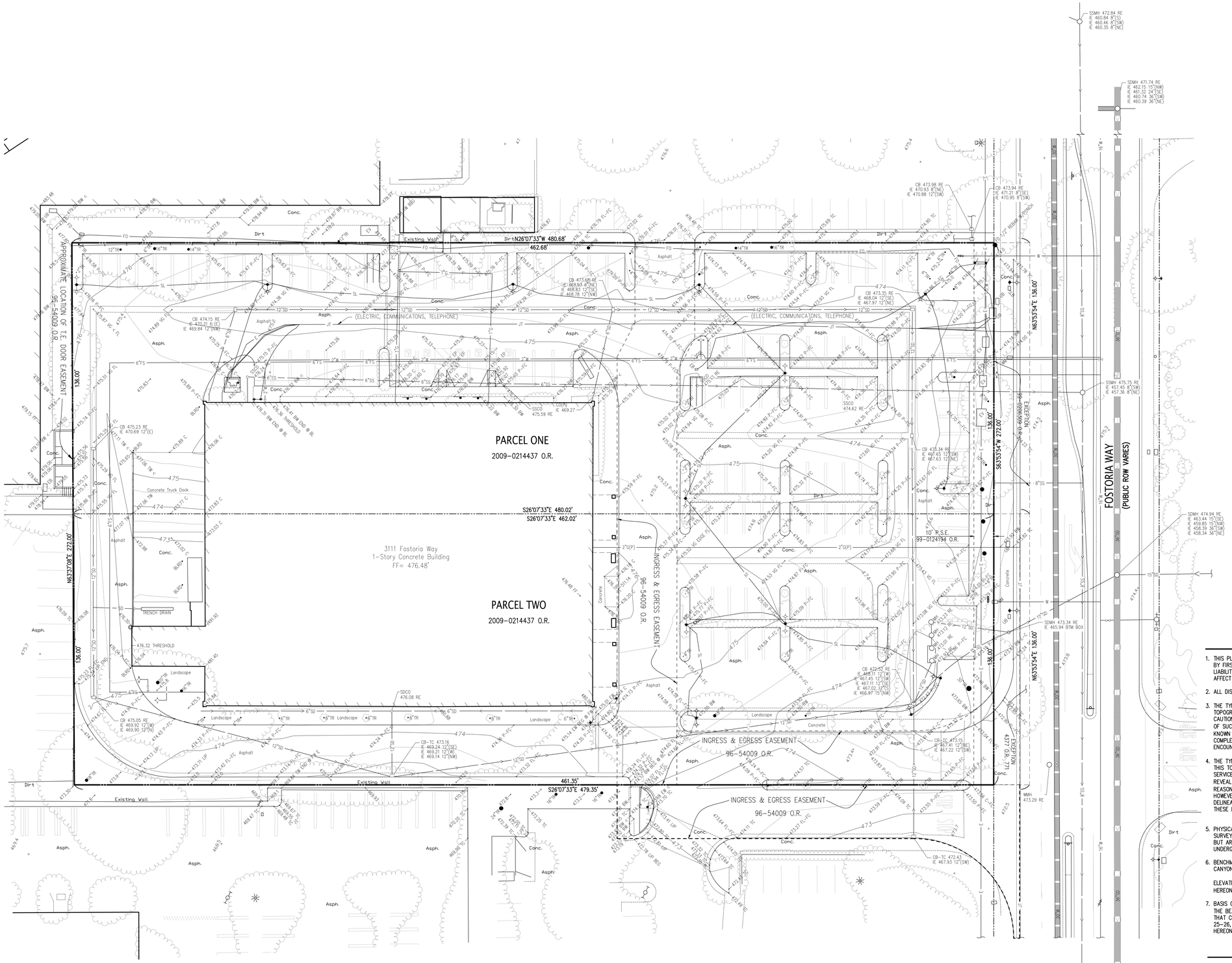
DANVILLE GAS & PARKING EXPANSION
PRELIMINARY LANDSCAPE PLAN

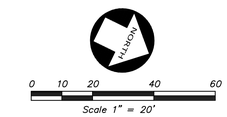
0 10' 20' 40'
SCALE 1"= 20'
SEPTEMBER 25, 2020

NORTH

SHEET 1 of 1

Attachment: D. Project Plans (2828 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))





LEGEND

	BUILDING LINE
	CENTERLINE
COM	COMMUNICATION LINE
	CONCRETE/BLOCK/RETAINING WALL
	CONCRETE CURB
	CONCRETE CURB & GUTTER
	DRIVEWAY
	EASEMENT LINE
	EDGE OF PAVEMENT
E	ELECTRIC LINE
X X	FENCE LINE
G GM	GAS LINE-VALVE & METER
JT	JOINT TRENCH LINE
	LOT LINE
	MONUMENT/MONUMENT LINE
	PROPERTY LINE
	OVERHANG
SS	SANITARY SEWER LINE-MANHOLE & CLEANOUT
	SIDEWALK
100.00	SPOT ELEVATION
SD	STORM DRAIN LINE-MANHOLE & CATCH BASIN
SD	STORM DRAIN LINE-MANHOLE & CATCH BASIN
SL	STREET LIGHT CONDUIT LINE
T	TELEPHONE LINE
W	WATER LINE & VALVE
	ACCESSIBLE PARKING SYMBOL
	BACKFLOW PREVENTION DEVICE
	ELECTROLIER
	FIRE DEPARTMENT CONNECTION
	FIRE HYDRANT
	GAS METER
	POST INDICATOR VALVE
T	TRANSFORMER
	UTILITY BOX
	WATER VALVE

ABBREVIATIONS

BTM	BOTTOM
CB	CATCH BASIN
CO	CLEANOUT
DOCK	DOCK
E	EAST
FF	FINISH FLOOR
IE	INVERT ELEVATION
N	NORTH
O.R.	OFFICIAL RECORD
P.S.E.	PUBLIC SERVICE EASEMENT
RE	RIM ELEVATION
ROW	RIGHT OF WAY
RWL	RAIN WATER LEADER
S	SOUTH
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SL	STREET LIGHT
SSCO	SANITARY SEWER CLEAN OUT
SSMH	SANITARY SEWER MANHOLE
SWI	STORM WATER INTERCEPTOR
TD	TRENCH DRAIN
W	WEST

NOTES

1. THIS PLOT WAS PREPARED FROM INFORMATION FURNISHED IN A COMMITMENT FOR TITLE INSURANCE, PREPARED BY FIRST AMERICAN TITLE INSURANCE COMPANY, DATED AUGUST 12, 2019, NUMBER NCS-975106-WA1. NO LIABILITY IS ASSUMED FOR MATTERS OF RECORD NOT STATED IN SAID PRELIMINARY TITLE REPORT THAT MAY AFFECT THE TITLE LINES, OR EXCEPTIONS, OR EASEMENTS OF THE PROPERTY.
2. ALL DISTANCES AND ELEVATIONS SHOWN HEREON ARE IN FEET AND DECIMALS THEREOF.
3. THE TYPES, LOCATIONS, SIZES AND/OR DEPTHS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS TOPOGRAPHIC SURVEY WERE OBTAINED FROM SOURCES OF VARYING RELIABILITY. THE CONTRACTOR IS CAUTIONED THAT ONLY ACTUAL EXCAVATION WILL REVEAL THE TYPES, EXTENT, SIZES, LOCATIONS AND DEPTHS OF SUCH UNDERGROUND UTILITIES. (A REASONABLE EFFORT HAS BEEN MADE TO LOCATE AND DELINEATE ALL KNOWN UNDERGROUND UTILITIES). HOWEVER, THE ENGINEER CAN ASSUME NO RESPONSIBILITY FOR THE COMPLETENESS OR ACCURACY OF ITS DELINEATION OF SUCH UNDERGROUND UTILITIES WHICH MAY BE ENCOUNTERED, BUT WHICH ARE NOT SHOWN ON THESE DRAWINGS.
4. THE TYPES, LOCATIONS, SIZES AND/OR DEPTHS OF EXISTING ON-SITE UNDERGROUND UTILITIES AS SHOWN ON THIS TOPOGRAPHIC SURVEY WERE OBTAINED BY FIELD LOCATING AND MAPPED BY SUBDYNAMIC LOCATING SERVICES, INC. ON 08-27-2020. THE CONTRACTOR IS CAUTIONED THAT ONLY ACTUAL EXCAVATION WILL REVEAL THE TYPES, EXTENT, SIZES, LOCATIONS AND DEPTHS OF SUCH UNDERGROUND UTILITIES. (A REASONABLE EFFORT HAS BEEN MADE TO LOCATE AND DELINEATE ALL KNOWN UNDERGROUND UTILITIES). HOWEVER, THE ENGINEER CAN ASSUME NO RESPONSIBILITY FOR THE COMPLETENESS OR ACCURACY OF ITS DELINEATION OF SUCH UNDERGROUND UTILITIES WHICH MAY BE ENCOUNTERED, BUT WHICH ARE NOT SHOWN ON THESE DRAWINGS.
5. PHYSICAL ITEMS SHOWN ON THIS SURVEY ARE LIMITED TO THOSE ITEMS VISIBLE AS OF THE DATE OF THIS SURVEY. SUBSURFACE STRUCTURES, IF ANY, ARE NOT SHOWN. SAID SUBSURFACE OBJECTS MAY INCLUDE, BUT ARE NOT LIMITED TO, CONCRETE FOOTINGS, SLABS, SHORING, STRUCTURAL PILES, UTILITY VAULTS, PIPING, UNDERGROUND TANKS, AND ANY OTHER SUBSURFACE STRUCTURES NOT REVEALED BY A SURFACE INSPECTION.
6. BENCHMARK: FIRST MONUMENT ON OMEGA ROAD NORTH OF THE INTERSECTION OF OMEGA ROAD, OLD CROW CANYON ROAD AND FOSTORIA PARKWAY, BM ON BRASS DISC.

   ELEVATION = 492.45' (DATUM = NGVD 1929 TO CONVERT TO NAVD 1988, ADD 2.75' TO ELEVATION SHOWN HEREON)
7. BASIS OF BEARINGS:
   THE BEARING OF NORTH 63° 53' 11" EAST TAKEN ON THE MONUMENT LINE OF FOSTORIA WAY AS SHOWN ON THAT CERTAIN PARCEL MAP, FILED FOR RECORD ON APRIL 26, 1989, IN BOOK 139 OF MAPS AT PAGES 25-26, OFFICIAL RECORDS OF CONTRA COSTA COUNTY WAS TAKEN AS THE BASIS FOR ALL BEARINGS SHOWN HEREON.

TOPOGRAPHIC SURVEY CERTIFICATION

TO COSTCO WHOLESALE CORPORATION

PROJECT NAME AND LOCATION OFFICE DEPOT, 3111 FOSTORIA WAY

I HEREBY CERTIFY TO COSTCO WHOLESALE CORPORATION THAT THIS SURVEY HAS BEEN PREPARED BY ME OR UNDER MY DIRECT SUPERVISION IN ACCORDANCE WITH THE TOPOGRAPHIC REQUIREMENTS AS SET FORTH BY COSTCO WHOLESALE CORPORATION, AND THAT THE SURVEY WAS ACTUALLY MADE UPON THE GROUND.

DEAN A. JURADO, P.L.S. 9032
DJURADO@KIERWRIGHT.COM

LICENSED LAND SURVEYOR DEAN A. JURADO No. 9032 STATE OF CALIFORNIA

9/18/2020
DATE

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09/18/2020

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NO.	REVISION	BY

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TOPOGRAPHIC AND BOUNDARY SURVEY
OF
3111 FOSTORIA WAY
FOR
COSTCO WHOLESALE CORPORATION

SAN RAMON, CALIFORNIA

DATE	SEP., 2020
SCALE	AS SHOWN
SURVEYOR	KJK
DRAWN BY	CSW
JOB NO.	A20555
SHEET	C1.0
OF	1 SHEETS

Attachment: D. Project Plans (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

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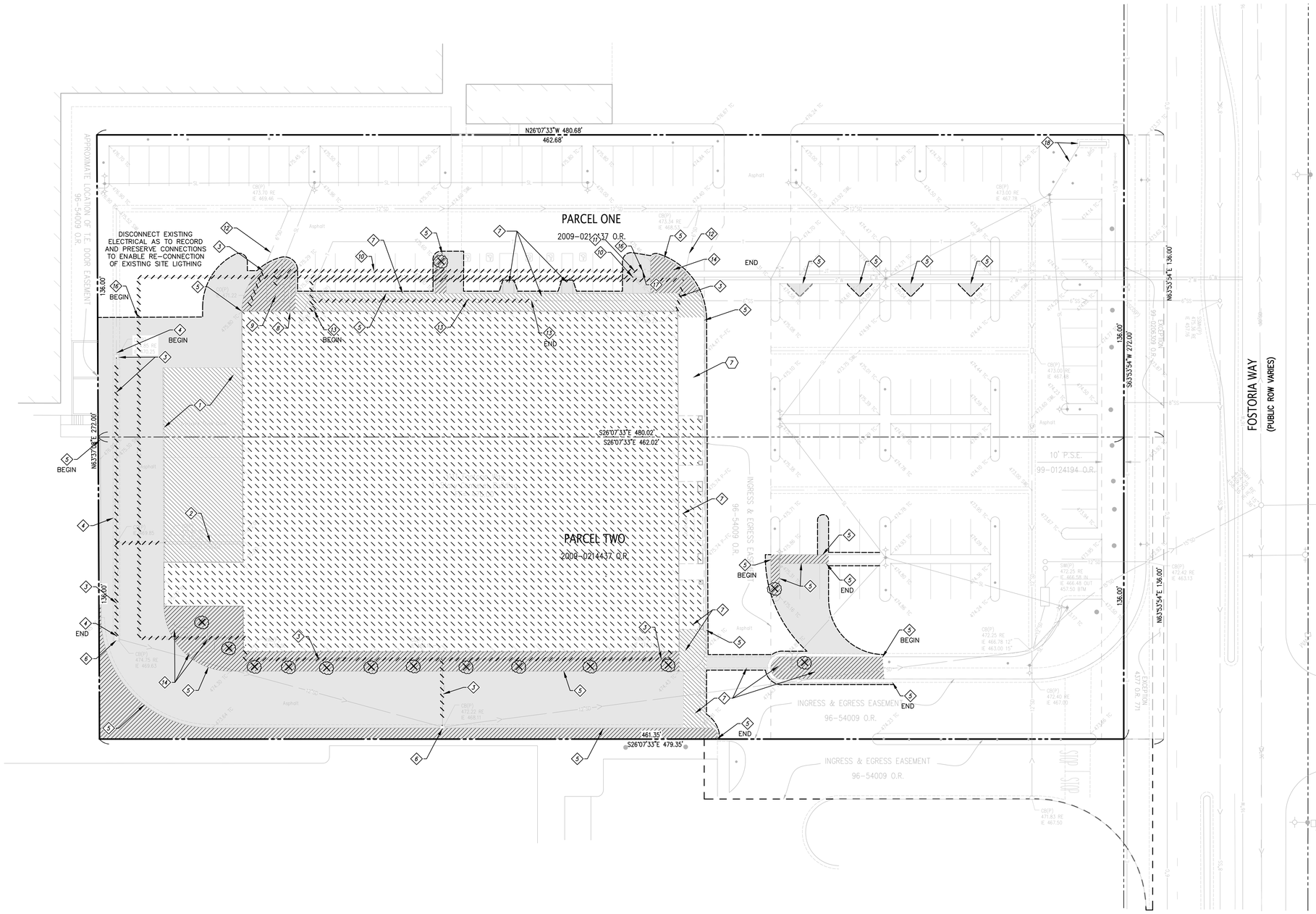

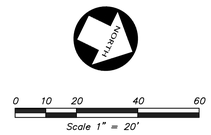

LEGEND

- EXISTING CURB & LANDSCAPE TO BE REMOVED
- EXISTING BUILDING TO BE DEMOLISHED
- EXISTING AC PAVEMENT TO BE REMOVED
- EXISTING CONCRETE TO BE REMOVED
- EXISTING LANDSCAPING TO BE REMOVED
- SAWCUT LINE
- EXISTING TREE TO BE REMOVED
- UNDERGROUND UTILITIES TO BE REMOVED
- UNDERGROUND UTILITIES TO BE ABANDONED
- PLUG AND CAP END
- 1 REMOVE EXISTING TRUCK DOCK TO SUBGRADE
- 2 REMOVE EXISTING TRENCH DRAIN
- 3 REMOVE EXISTING STORM DRAIN CATCH BASIN AND PIPES
- 4 REMOVE EXISTING CONCRETE VALLEY GUTTER
- 5 REMOVE EXISTING CURB OR CURB AND GUTTER
- 6 EXISTING CATCH BASIN TO REMAIN. ADJUST RE TO GRADE PER PLAN
- 7 REMOVE EXISTING CONCRETE SIDEWALK AND RAMP
- 8 ENSURE SAFE-OFF FOR EXISTING GAS. REMOVE OR ABANDON IN PLACE PER PG&E REQUIREMENTS.
- 9 REMOVE EXISTING TRANSFORMER PER PG&E REQUIREMENTS
- 10 REMOVE OR ABANDON IN PLACE EXISTING ELECTRICAL WIRING AND CONDUIT PER PG&E REQUIREMENTS.
- 11 PROVIDE FOR CONNECTION OF NEW ELECTRICAL CONDUIT TO EXISTING PER PG&E REQUIREMENTS.
- 12 CAP AND ABANDON IN PLACE EXISTING ROOF LEADER.
- 13 REMOVE EXISTING SANITARY SEWER AND CLEAN-OUTS.
- 14 REMOVE EXISTING 6" WATERLINE AND APPURTENANCES FROM BUILDING TO START OF ABANDON IN PLACE.
- 15 ABANDON IN PLACE EXISTING 2" WATER FROM BUILDING TO NEW POINT OF CONNECTION
- 16 ABANDON IN PLACE EXISTING WATERLINE UNDER PAVEMENT THAT IS NOT TO BE DISTURBED.
- 17 CUT AND CAP EXISTING WATER LINE NEAR TEE TO HYDRANT. HYDRANT AND VALVE TO REMAIN IN SERVICE.
- 18 REMOVE EXISTING MONUMENT SIGN. PROTECT EXISTING ELECTRICAL CONDUIT IN PLACE FOR CONNECTION TO NEW MONUMENT SIGN.

NO.	REVISION	BY

NO.	REVISION	BY

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PRELIMINARY DEMOLITION PLAN
OF
SAN RAMON GAS STATION
FOR
COSTCO WHOLESALE CORPORATION

SAN RAMON, CALIFORNIA

DATE	JULY 14, 2020
SCALE	AS SHOWN
DESIGNER	SJH
DRAWN BY	JMB
JOB NO.	A20555
SHEET	C2.0
OF	5 SHEETS

RECEIVED
JUL 28, 2020

Attachment: D. Project Plans (2929 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

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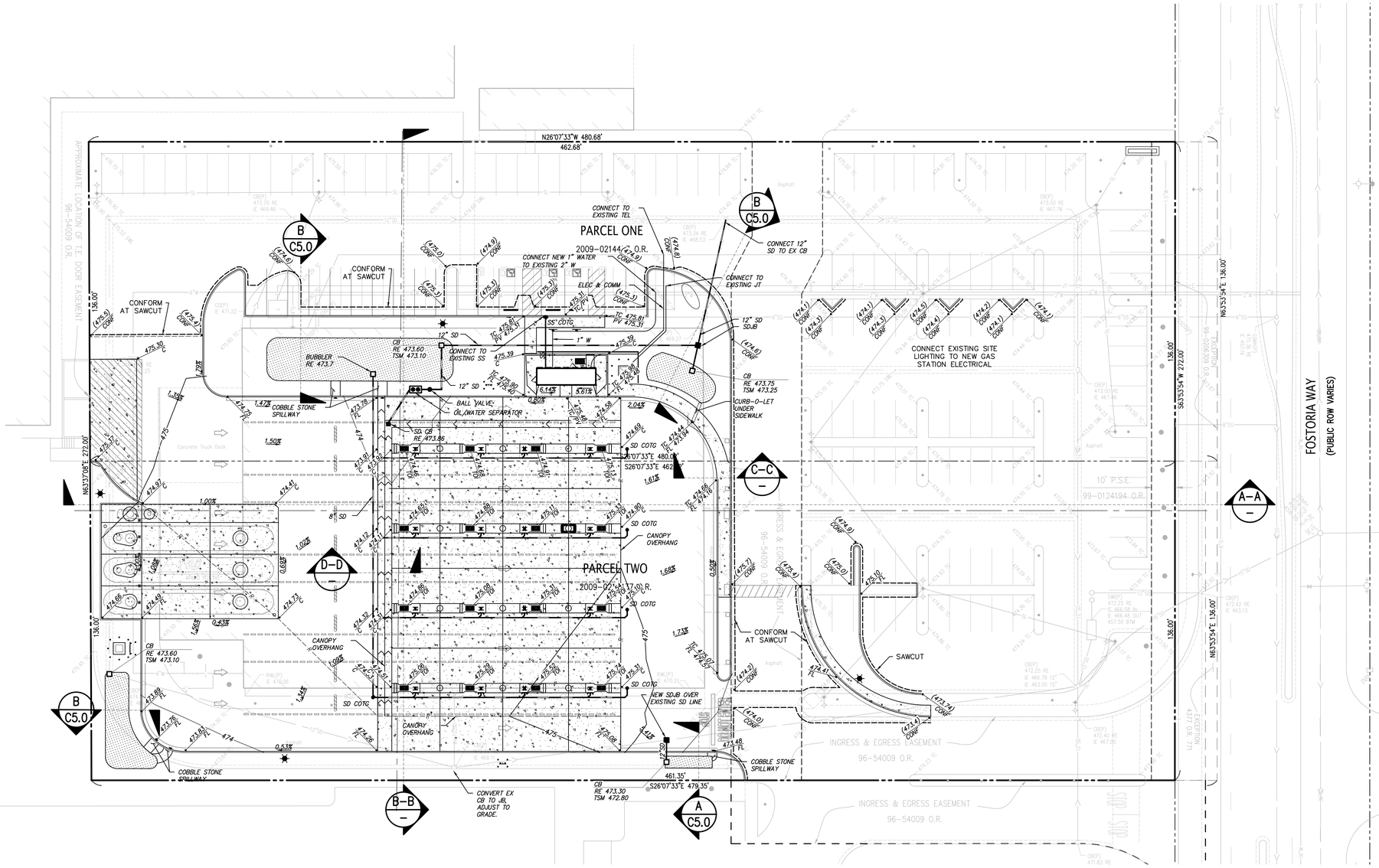

0 10 20 40 60

Scale 1" = 20'

LEGEND

▲	AREA DRAIN
□	STORM DRAIN CATCH BASIN
■	STORM DRAIN JUNCTION BOX
●	STORM DRAIN MANHOLE
FL	FLOW LINE
FF	FINISH FLOOR
PV	PAVEMENT
RE	RIM ELEVATION
TSM	TOP OF SOIL MATRIX
23.8	SPOT ELEVATION
X"SD	STORM DRAIN LINE
TC	TOP OF CURB
	SAWCUT LINE
	CURB CUTS

Curb-O-Let™ Thru The Curb Drain

Architects and Engineers
Curb-O-Let Thru the Curb Drain
Specifications & Cut Sheet

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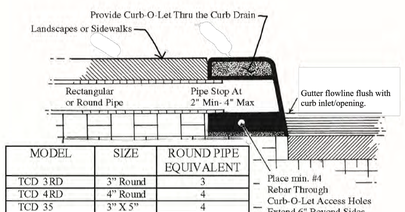
Install As Per Manufacturer's Recommendations



MODEL	SIZE	ROUND PIPE EQUIVALENT
TCD 3RD	3" Round	3
TCD 4RD	4" Round	4
TCD 35	3" X 5"	4
TCD 38	3" X 8"	5
TCD 312	3" X 12"	6
TCD 414	4" X 14"	8
TCD 420	4"X 20"	10

NOT TO SCALE

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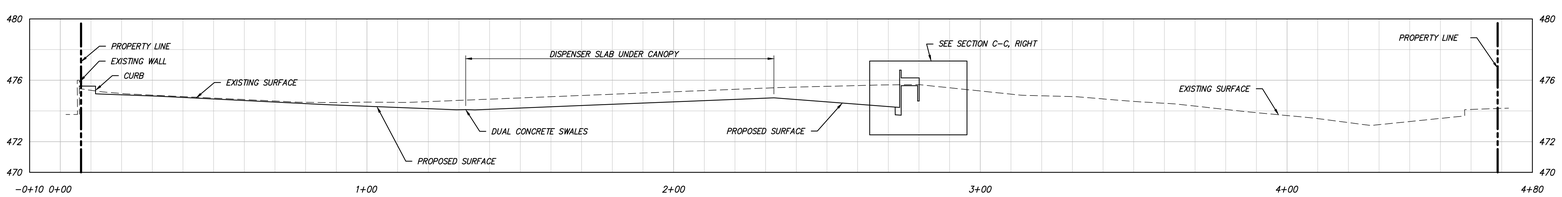

SECTION A-A

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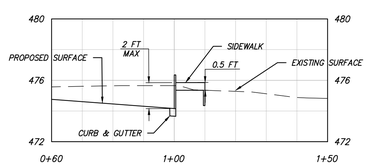

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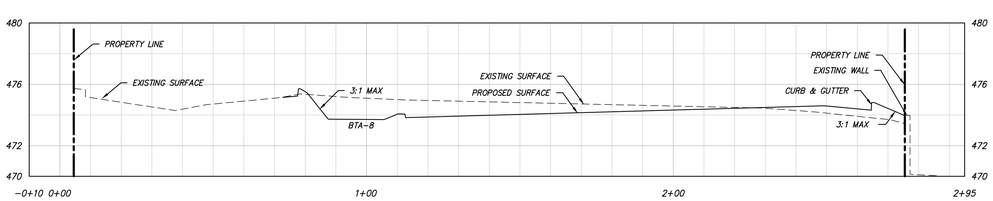

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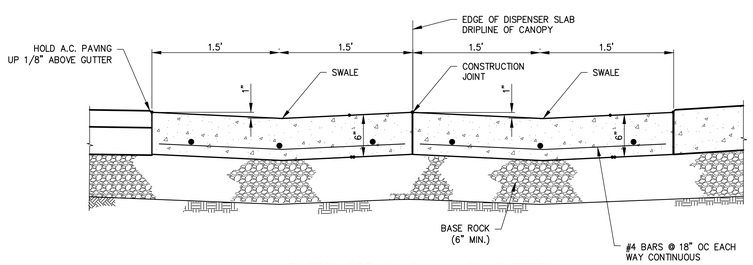

DISPENSER SLAB VALLEY GUTTER
WITH PAVED AREA VALLEY GUTTER

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D-D

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PRELIMINARY GRADING PLAN
OF
SAN RAMON GAS STATION
FOR
COSTCO WHOLESALE CORPORATION

SAN RAMON, CALIFORNIA

DATE	JULY 14, 2020
SCALE	AS SHOWN
DESIGNER	SJH
DRAWN BY	JMB
JOB NO.	A20555
SHEET	C3.0
OF	5 SHEETS

Attachment: D. Project Plans (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

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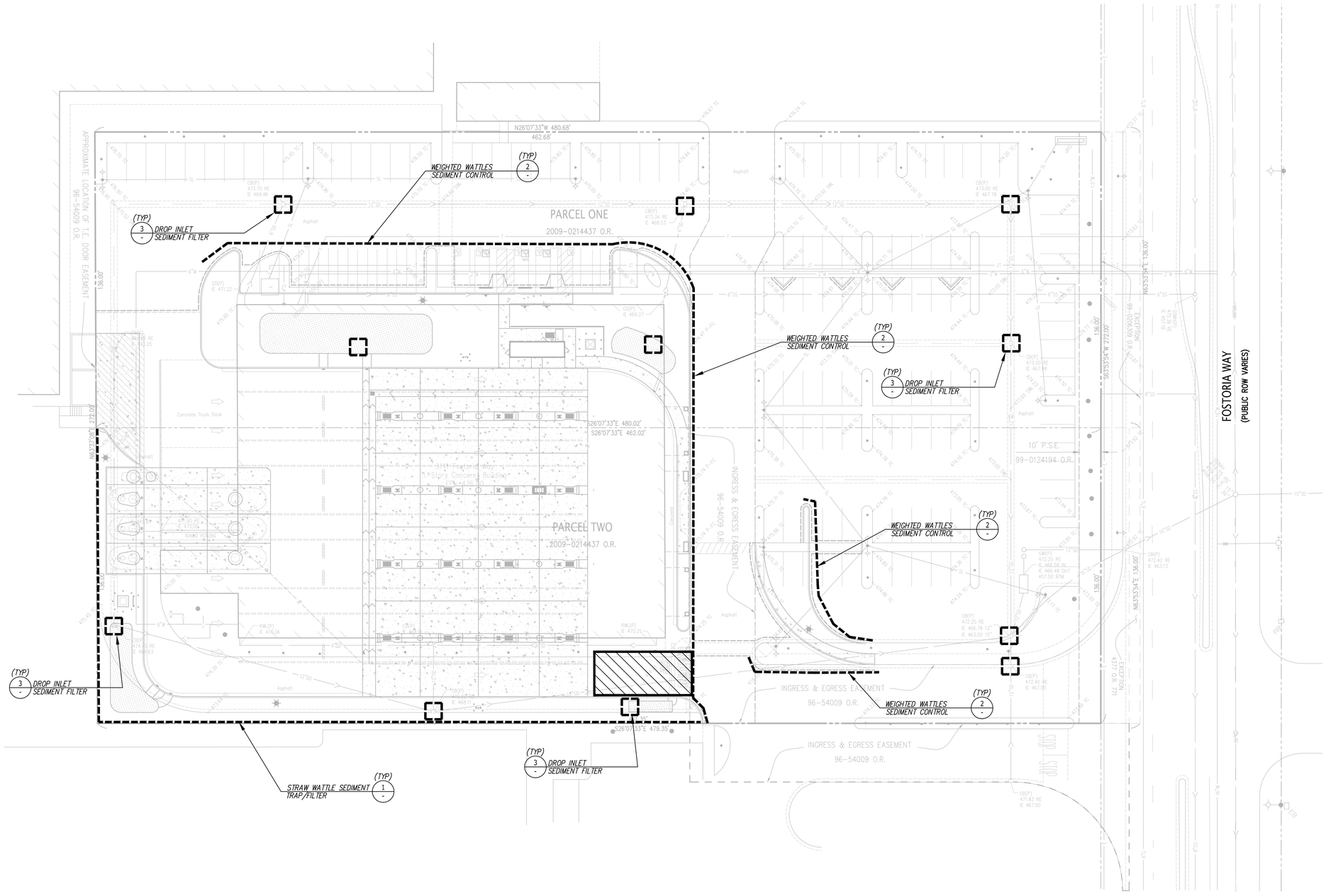
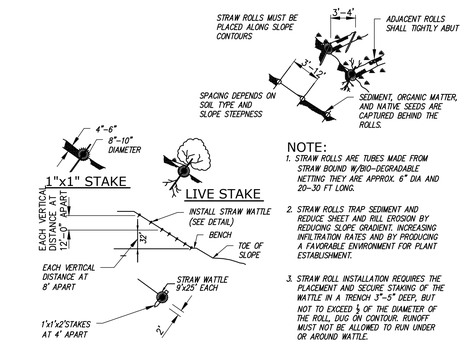


EROSION & SEDIMENT CONTROL MEASURES

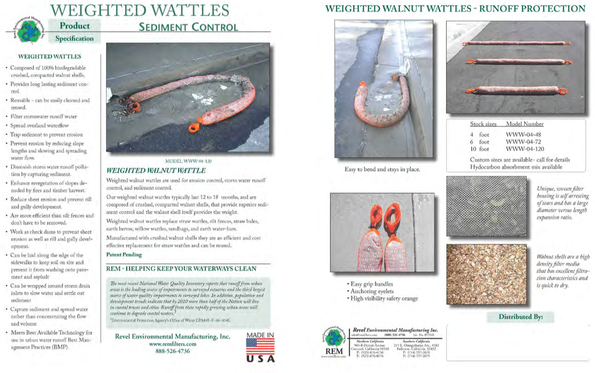
1. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE EFFECTIVE FOR THE DURATION OF CONSTRUCTION.
2. AFTER THE UNDERGROUND STORM DRAIN SYSTEM IS INSTALLED, THE CATCH BASINS WILL BE INSTALLED (AS SOON AS PRACTICAL) AND ROCK BARRIER BAGS WILL BE PLACED AROUND THOSE CATCH BASINS AS SHOWN ON THIS PLAN UNTIL THIS SITE IS PAVED.
3. SHOULD THE ON-SITE STORM DRAINS NOT BE INSTALLED COMPLETELY BY _____, THE CONTRACTOR SHALL CONSTRUCT TEMPORARY SEDIMENT BASINS AT THE EXISTING STORM PIPES STUBBED TO THE SITE.
4. PERSON RESPONSIBLE FOR IMPLEMENTATION OF EROSION AND SEDIMENTATION PLAN.

   NAME: _____
   ADDRESS: _____
   TELEPHONE: _____
5. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL DISTURBED AREAS ARE STABILIZED AND CHANGES TO THIS EROSION AND SEDIMENT CONTROL PLAN SHALL BE MADE TO MEET FIELD CONDITIONS ONLY WITH THE APPROVAL OF OR AT THE DIRECTION OF THE CITY ENGINEER.
6. ALL PAVED AREAS SHALL BE KEPT CLEAR OF EARTH MATERIAL AND DEBRIS. THE SITE SHALL BE MAINTAINED SO AS TO MINIMIZE SEDIMENT-LADEN RUN-OFF TO ANY STORM DRAINAGE SYSTEM.
7. THIS PLAN COVERS ONLY THE FIRST WINTER FOLLOWING GRADING. PLANS ARE TO BE RESUBMITTED FOR CITY APPROVAL PRIOR TO THE SEPTEMBER FIRST OF EACH SUBSEQUENT YEAR UNTIL THE SITE IMPROVEMENTS ARE ACCEPTED BY THE CITY.
8. ALL EROSION CONTROL FACILITIES MUST BE INSPECTED AND REPAIRED AT THE END OF EACH WORKING DAY.
9. SEDIMENT BASINS SHALL BE CLEANED OUT WHENEVER SEDIMENT REACHES THE SEDIMENT CLEANOUT LEVEL INDICATED ON THE PLANS.
10. BORROW AREAS AND TEMPORARY STOCKPILES SHALL BE PROTECTED WITH APPROPRIATE EROSION CONTROL MEASURES TO THE SATISFACTION OF THE CITY ENGINEER.
11. ALL CUT AND FILL SLOPES ARE TO BE PROTECTED TO PREVENT OVERBANK FLOW.
12. INLETS WHICH ARE NOT USED IN CONJUNCTION WITH ROCK BARRIER BAGS OR SEDIMENT BASINS SHOULD BE COVERED, OR OTHERWISE ADJUSTED TO PREVENT INFLOW, UNLESS THE AREA DRAINED IS UNDISTURBED OR STABILIZED.
13. THIS PLAN MAY NOT COVER ALL THE SITUATIONS THAT ARISE DURING CONSTRUCTION DUE TO ANTICIPATED FIELD CONDITIONS. VARIATIONS MAY BE MADE TO THE PLAN IN THE FIELD SUBJECT TO THE APPROVAL OF THE ENGINEER.
14. DETAILS FOR THE CONSTRUCTION OF FACILITIES ARE SHOWN ON THESE PLANS.
15. THIS PLAN IS INTENDED TO BE USED FOR EROSION CONTROL ONLY. OTHER INFORMATION SHOWN HEREIN MAY NOT BE THE MOST CURRENT. SEE SHEET C3.0 FOR OTHER INFORMATION.

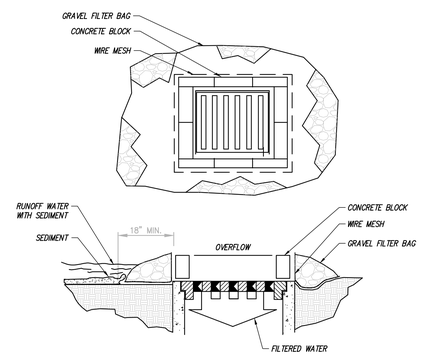


NOTE:
1. STRAW ROLLS ARE TUBES MADE FROM STRAW BOUND W/BIO-DEGRADABLE NETTING THEY ARE APPROX. 6" DIA AND 20-30 FT LONG.
2. STRAW ROLLS TRAP SEDIMENT AND REDUCE SHEET AND RILL EROSION BY REDUCING SLOPE GRADIENT. INCREASING INFILTRATION RATES AND BY PRODUCING A FAVORABLE ENVIRONMENT FOR PLANT ESTABLISHMENT.
3. STRAW ROLL INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE WATTLE IN A TRENCH 3"-5" DEEP, BUT NOT TO EXCEED ½ OF THE DIAMETER OF THE ROLL, DUG ON CONTOUR. RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND WATTLE.

STRAW WATTLE
NOT TO SCALE
1



WEIGHTED WATTLES–SEDIMENT CONTROL
NOT TO SCALE
2



DROP INLET SEDIMENT FILTER
NOT TO SCALE
3

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PRELIMINARY EROSION CONTROL OF SAN RAMON GAS STATION FOR COSTCO WHOLESALE CORPORATION

SAN RAMON, CALIFORNIA

DATE	JULY 14, 2020
SCALE	AS SHOWN
DESIGNER	SJH
DRAWN BY	JMB
JOB NO.	A20555
SHEET	C4.0
OF	5 SHEETS

Attachment: D. Project Plans (2829 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

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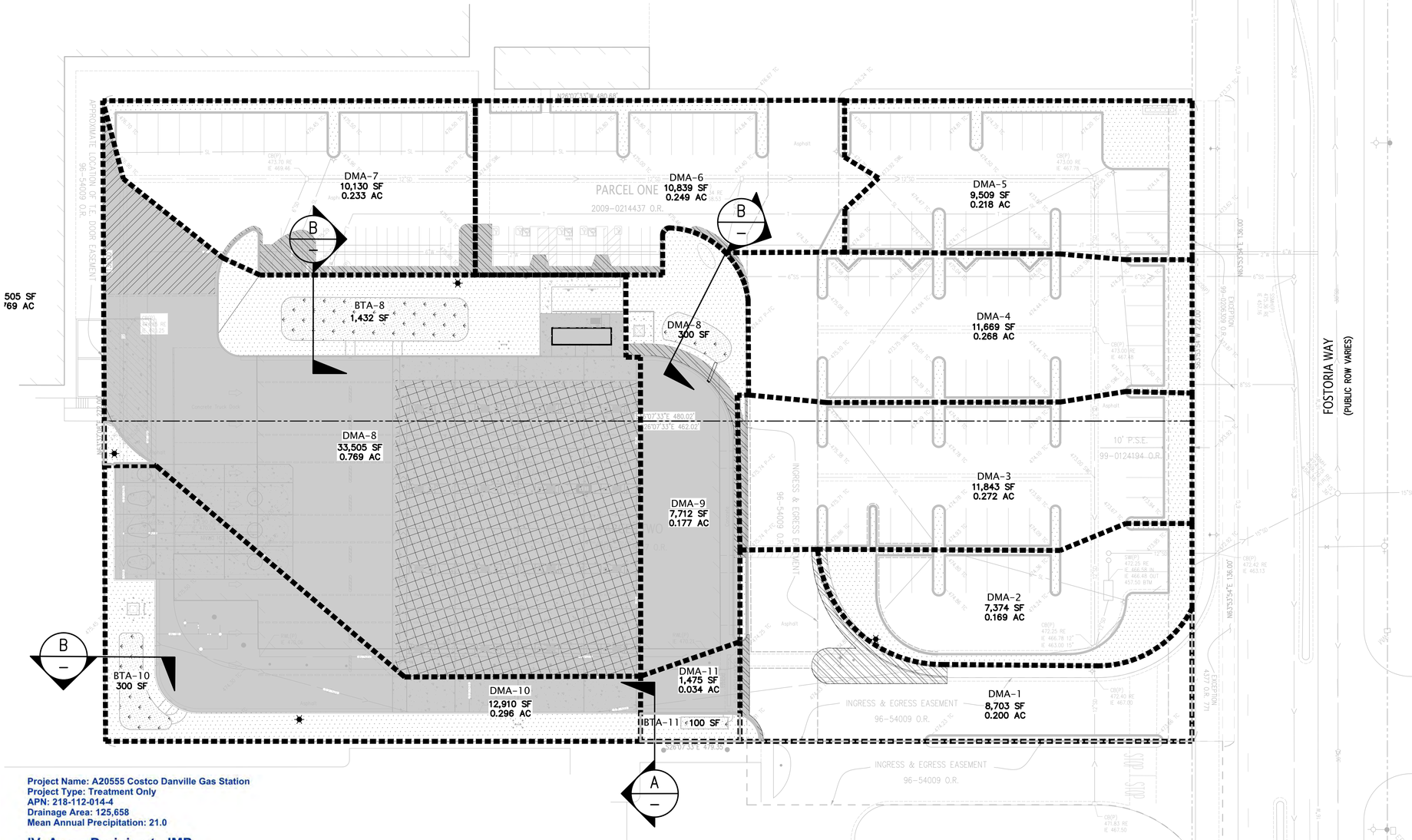
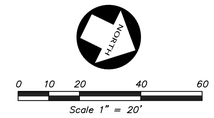


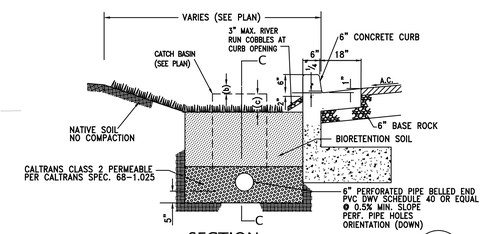


LEGEND

- TRIBUTARY AREA LIMITS
- LANDSCAPE AREA
- IMPERVIOUS ROOFTOP DRAINING TO BTA
- IMPERVIOUS PAVEMENT DRAINING TO BTA
- EXISTING, UNDISTURBED, IMPERVIOUS PAVEMENT DRAINING TO STORM DRAIN SYSTEM
- BIO-RETENTION TREATMENT AREA (BTA)
- CONCRETE AREA

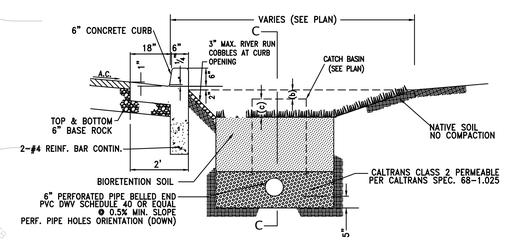
OVERLAY PATTERNS

- UNDISTURBED IMPERVIOUS DRAINING TO BIO-RETENTION
- NEW OR REPLACED IMPERVIOUS DRAINING TO STORM DRAIN (NOT TREATED)



SECTION A

NOT TO SCALE



SECTION B

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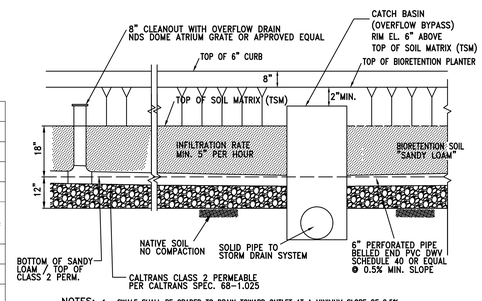


NOTES:
1. SWALE SHALL BE GRADED TO DRAIN TOWARD OUTLET AT A MINIMUM SLOPE OF 0.5%
2. ALL PERFORATED PIPE SHALL HAVE A MINIMUM OF THREE 3/4" DIA. HOLES EVENLY SPACED ALONG THE CIRCUMFERENCE OF THE PIPE AND NOT LESS THAN THREE HOLES PER LINEAL FOOT OF PIPE.
3. ALL TREES IN PLANTER AREA SHALL HAVE 4' x 4' ROOT BARRIER
4. BIORETENTION SOIL SHALL ACHIEVE A LONG-TERM INFILTRATION RATE OF AT LEAST 5 INCHES PER HOUR. BIORETENTION SOIL SHALL ALSO SUPPORT VIGOROUS PLANT GROWTH.

SECTION C

NOT TO SCALE

Project Name: A20555 Costco Danville Gas Station
Project Type: Treatment Only
APN: 218-112-014-4
Drainage Area: 125,658
Mean Annual Precipitation: 21.0

IV. Areas Draining to IMPs

IMP Name: BTA 8
IMP Type: Bioretention Facility
Soil Group: BTA 8

DMA Name	Area (sq ft)	Post Project Surface Type	DMA Runoff Factor	DMA Area x Runoff Factor
DMA 8 R	13,086	Conventional Roof	1.00	13,086
DMA 8 R	19,581	Concrete or Asphalt	1.00	19,581
DMA 8 L	906	Landscape	0.10	91
			Total	32,758
			Area	

IMP Sizing Factor	Rain Adjustment Factor	Minimum Area or Volume	Proposed Area or Volume
0.040	1.000	1,310	1,432

IMP Name: BTA 9
IMP Type: Bioretention Facility
Soil Group: BTA 9

DMA Name	Area (sq ft)	Post Project Surface Type	DMA Runoff Factor	DMA Area x Runoff Factor
DMA 9 P	4,912	Concrete or Asphalt	1.00	4,912
DMA 9 L	2,778	Landscape	0.10	278
			Total	5,190
			Area	

IMP Sizing Factor	Rain Adjustment Factor	Minimum Area or Volume	Proposed Area or Volume
0.040	1.000	208	300

IMP Name: BTA 10
IMP Type: Bioretention Facility
Soil Group: BTA 10

DMA Name	Area (sq ft)	Post Project Surface Type	DMA Runoff Factor	DMA Area x Runoff Factor
DMA 10 P	6,362	Concrete or Asphalt	1.00	6,362
DMA 10 L	4,905	Landscape	0.10	491
			Total	6,853
			Area	

IMP Sizing Factor	Rain Adjustment Factor	Minimum Area or Volume	Proposed Area or Volume
0.040	1.000	274	300

IMP Name: BTA 11
IMP Type: Bioretention Facility
Soil Group: BTA 11

DMA Name	Area (sq ft)	Post Project Surface Type	DMA Runoff Factor	DMA Area x Runoff Factor
DMA 11 P	2,198	Concrete or Asphalt	1.00	2,198
DMA 11 L	1,121	Landscape	0.10	112
			Total	2,310
			Area	

IMP Sizing Factor	Rain Adjustment Factor	Minimum Area or Volume	Proposed Area or Volume
0.040	1.000	92	150

Report generated on 4/9/2020 12:00:00 AM by the Contra Costa Clean Water Program IMP Sizing Tool software (version 1.3.1.0).

BIO-RETENTION SIZING- COMBINATION FLOW AND VOLUME METHOD

Area No.	Area (SF)	Area (AC)	Landscape (SF)	Landscape (AC)	Imperv. (SF)	Imperv. (AC)	Treatment Area* (SF)	Treatment Provided (SF)	Sizing Ratio (%)	Type of Treatment
DMA 1	8,703	0.20	**317**	0.01	8,386	0.19	8,418	**n/a**	n/a	**Existing Vault-Based Filter System**
DMA 2	7,374	0.17	**2,669**	0.06	4,705	0.11	4,972	**n/a**	n/a	**Existing Vault-Based Filter System**
DMA 3	11,843	0.27	**1,760**	0.04	10,083	0.23	10,259	**n/a**	n/a	**Existing Vault-Based Filter System**
DMA 4	11,669	0.27	**1,714**	0.04	9,955	0.23	10,126	**n/a**	n/a	**Existing Vault-Based Filter System**
DMA 5	9,509	0.22	**2,556**	0.06	6,953	0.16	7,209	**n/a**	n/a	**Existing Vault-Based Filter System**
DMA 6	10,839	0.25	**758**	0.02	10,081	0.23	10,157	**n/a**	n/a	**Existing Vault-Based Filter System**
DMA 7	10,130	0.23	**1,161**	0.03	8,969	0.21	9,085	**n/a**	n/a	**Existing Vault-Based Filter System**
DMA 8	33,505	0.77	**906**	0.02	32,599	0.75	32,690	**1,432**	4.4%	**Bioretention (BTA 8)**
DMA 9	7,712	0.18	**2,778**	0.06	4,934	0.11	5,212	**300**	5.8%	**Bioretention (BTA 9)**
DMA 10	12,910	0.30	**4,905**	0.11	8,005	0.18	8,496	**300**	3.5%	**Bioretention (BTA 10)**
DMA 11	1,475	0.03	**497**	0.01	978	0.02	1,028	**100**	9.7%	**Bioretention (BTA 11)**
Totals	125,669	2.9	20,021	0.46	105,648	0.53	23,649	2,132		

*: Total Treatment Area is equal to Impervious Area + 0.10 * Landscape Area.

IN-LIEU TREATMENT

Area No.	Undisturbed Impervious Area Treated by Bioretention (SF)	New or Replaced Impervious Area Not Treated by Bioretention (SF)	BioRetention Planter #
DMA 1	0	856	Not Treated
DMA 4	0	140	Not Treated
DMA 6	0	251	Not Treated
DMA 7	0	635	Not Treated
DMA 8	2,117	0	BTA 8
Totals	2,117	1,882	
		Net:	**235** SF

50% Rule Summary

110,554	SF	Total Existing Impervious
58,346	SF	Undisturbed Existing Impervious
52,208	SF	Disturbed Existing Impervious
47% Disturbed Impervious		
3,317	SF	3% Buffer of Undisturbed Impervious

I. PROJECT DATA

Table 1. Project Data

Project Name/Number	Costco Gas Station San Ramon – A20555
Application Submittal Date	[to be verified by municipal staff per 14 CCR §15060]
Project Location	3111 Fostoria Way, APN: 218-112-014-4
PableName of Developer	Costco Wholesale
Project Phase No.	NA
Project Type and Description	Demolish existing building and a portion of the existing site and construct a new Costco Gas Station facility in the footprint of the existing building.
Project Watershed	[Request from municipal staff]
Total Project Site Area (acres)	2.885 acres
Total Area of Land Disturbed (acres)	1.341 acres
Total New Impervious Surface Area (sq. ft.)	4,001 sf
Total Replaced Impervious Surface Area	41,350 sf
Total Pre-Project Impervious Surface Area	110,554 sf
Total Post-Project Impervious Surface Area	103,575 sf
50% Rule[*]	Does not Apply (47%)
Project Density	N/A
Applicable Special Project Categories [Complete even if all treatment is LID]	N/A
Percent LID and non-LID treatment	Site contains an existing non-LID vault-based filter system, with bypass, that covers the entire project
HM Compliance [†‡]	Exempt, based on a net decrease in impervious surface area relative to existing condition.

RECEIVED
JUL 28, 2020

NO.	BY	REVISION

NO.	BY	REVISION

KIER+WRIGHT
2850 Collier Canyon Road
Livermore, CA 94551
Phone: (925) 245-8788
www.kierwright.com

STORMWATER QUALITY CONTROL PLAN OF SAN RAMON GAS STATION FOR COSTCO WHOLESALE CORPORATION

SAN RAMON, CALIFORNIA

DATE	JULY 14, 2020
SCALE	AS SHOWN
DESIGNER	SJH
DRAWN BY	JMB
JOB NO.	A20555
SHEET	C5.0
OF	5 SHEETS

Attachment: D. Project Plans (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

\\Kierwright.local\Global\Z\2020\A20555\DWG\ENTITLEMENTS\A20555-PG SWQ.dwg 7-14-20 10:40:48 AM bsuhosky

CITY OF SAN RAMON
ARCHITECTURAL REVIEW BOARD
SUMMARY OF ACTIONS

CHAIR MAR GOSIENGFIAO • VICE CHAIR DAVID GATES • BOARD MEMBER WARREN FUJIMURA

ALTERNATES: JOHN NICOL

TELECONFERENCE **Regular Meeting**
May 14, 2020 – 2:00 P.M.

AGENDA QUESTIONS: PLEASE CALL PLANNING SERVICES (925) 973-2560

Documents received after publication of this Agenda and considered by the Architectural Review Board in its deliberation will be available for inspection in the Planning Services office at 2401 Crow Canyon Road, San Ramon during normal business hours and in the red binder at the Architectural Review Board Meeting.

1. CALL TO ORDER
Chair Mar Gosiengfiao called the meeting to order at 2:00 pm

2. ROLL CALL
Present: *Board Member David Gates, Alternate Member John Nicol, Vice Chair Warren Fujimura, Chair Mar Gosiengfiao*

3. PUBLIC COMMENTS
- None -

4. ADDITIONS AND REVISIONS
- None -

5. CONSENT ITEMS

5.1 Summary of Action Items from the February 13, 2020 regular meeting
Approved as written

6. CONTINUED ITEMS

7. CONCEPTUAL ITEMS

8. PRELIMINARY REVIEW ITEMS

9. FINAL REVIEW ITEMS

AGENDA # 7.1

Attachment: E. ARB Summary of Action - May 14, 2020 Item 9.2 (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

9.2 Costco Service Station (DP 20-300-002, AR 20-200-015, MUP 20-501-003, and MSP 20-700-001)
Staff Report by: Shinei Tsukamoto, Associate Planner

After hearing a presentation from Staff and the Applicant, the Board provided the following recommendations to the Applicant and Staff:

Site Layout

1. *Take a closer look at the western parking area and whether there may be any vehicular conflicts with vehicles backing out of the space and the drive aisle leading to the pumps.*
2. *Consider how pedestrian access will flow between the project site and the Costco Warehouse to the north—need to consider opportunities for a safe pedestrian crossing.*
3. *Potentially customers may use short cuts into the site via the cross access easements. Traffic analysis should consider if this impacts the queuing area leading to the pumps.*

Canopy Design:

1. *As proposed, the canopy appears too monolithic and massive. Consider enhancements under the canopy and at the end of the canopy to help break up the large massing of the roof. In addition, increase the width of the support beams so they are more proportionate to the overall canopy design.*

2. *Study the following sites for examples of canopy treatments: Safeway located on Bernal Avenue in Pleasanton, and the hydrogen fueling station on Norris Canyon Road in San Ramon.*

Landscape Design:

1. *Incorporate more landscape planting at the southeastern corner, facing CMG Plaza.*
2. *Consider additional grass plantings to enhance the plant palette.*
3. *Additional landscaping is necessary to help soften the appearance of the utility box located to the northwest of the canopy.*
4. *The Board is supportive of both Sycamore and Pear trees, however, a tree survey should be conducted, as well as a new and corrective landscape and irrigation plan once the plant palette has been revised.*

The Board recommended Final Architectural Review of the project and for their comments to be forwarded to the Planning Commission for consideration.

Costco Gas Danville Arborist Report

RECEIVED
09/18/2020

August 2020

Prepared for:
David Babock & Associates
3581 Mt. Diablo Blvd. Suite 235
Lafayette, CA 95549

Prepared by:
Leonardo Tuchman, Arborwell, Inc.

ISA Certified Arborist # WE-12453A

Arborwell
Employee-Owned Tree Management

Attachment: F. Arborist Report (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

Table of Contents

- Summary and Project Assignment
- Data Analysis
- Diagnostic Procedures – Overall Health & Structure Determination
- Description of Site
- Description of Trees
- Recommendations
- Tree Mitigation
- Certification
- Appraiser's Credentials
- References
- Exhibits/Attachments

Attachment: F. Arborist Report (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

Summary

Arborwell, Inc. has been contracted by Gerardo Fuentes with David Babcock & Associates to provide an arborist report for the Costco Gas Danville Parking and Site Improvement Project located in San Ramon, California. This report will address the current status of trees designated for preservation and the potential impacts of the site improvement project on said trees. Additionally, recommendations regarding preservation of trees during development will be addressed.

Project Assignment

This report was prepared to evaluate all trees on the property, located throughout the project site at 3111 Fostoria Way, San Ramon California. The surveyed area is based on documents provided by the aforementioned client, including the site development plans.

Data Analysis to include the following information:

1. An inventory of 74 trees composed of 6 species growing within the proposed development area.
2. An evaluation of all 74 trees growing within the proposed development area.

Appraisal Procedures

Site evaluation was conducted on September 2nd, 2020.

1. Tree species identification
2. DBH measurement of the trunk diameter at breast height of 4.5 feet above the natural grade, as defined by the International Society of Arboriculture
3. Approximate Tree Height: Visual measurement of tree height, using standard tape measure and surrounding, solid landscape elements as reference.
4. Approximate tree spread using surrounding landscape elements and aerial GIS analytics.
5. Individual tree identification number assigned and correlated to GPS site map.

****See Attached: Tree Assessment Grid*

Diagnostic Procedures – Overall Health & Structure Determination

During the site visit, conducted on September 2nd , 2020, a visual inspection of the roots, trunk, scaffold (large) branches, small branches & twigs as well as foliage & buds, presence of disease or decay and vigor were considered to assess the overall health of the trees. Additionally, a visual inspection was conducted to observe any structural defects including cavities in the trunk or major leaders, uneven canopy distribution, included bark and co-dominant stems. Lastly, the viability of preservation in relation to tree location & proposed development was considered.

Scoring System:

Critical to Poor (0% to 40%) - Extreme Problems: Tree is dead with no visible growth, in severe decline, or significantly diseased

Poor to Fair (41% to 60%)- Major Problems: Tree is in decline with decay and/or structural defects present, potential for future removal

Fair to Good (61% to 80%) - Minor Problems: Minor to significant problems present; some problems treatable and/or correctable

Good to Excellent (81% to 100%): No apparent problems, tree is in overall good health and vigor and is considered treatable to any observed health or pest problems

Description of Site - Tree Location Map

The site location is a lparking lot with trees dispsersed throughout, with trees growing both along the perimeter of the building and the property as a whole. The included tree location map was based upon a map provided our client.

***See Attached Exhibit* – Tree Location Map

Description of Trees

Each tree is identified by species and tree identification number, which corresponds with the inventory descriptions and assessments herein.

Of the trees surveyed there are 43 crape myrtle trees (*Lagerstroemia indica),* 9 Bradford pear (*Pyrus calleryana),* 8 mayten (*Maytenus boria),* 7 coast live oak *(Quercus agrifolia),* 6 Sycamore (*Platanus),* 1 Valley Oak (*Quercus lobata),*
****See Attached Exhibit – Tree Assessment Grid*

Recommendations

In addition to the attached pictorial tree index which notes the current condition of each tree , the following should be considered:

Site Wide Recommendations

The trees to remain on the site, which will be in direct contact with the public, should be pruned and an integrated pest management and tree wellness plan should be put in place. All tree work performed should be done under the direct supervision of a certified arborist who can ensure that ANSI A300 Standards and Arboricultural Best Practices are followed.

Trees Preservation & Protection Throughout Development and Grading

Any trees which may be impacted by development of the site shall have protection measures in place to avoid potential damage to the root zone, trunk or canopy. This includes, but is not limited to the establishment of a Tree Protection Zone (TPZ). However, the typical recommendation is the installation of a chain link fence with a minimum height of 60” from grade. When installation of the chain link fence cannot enclose the tree, additional measures shall be taken to protect the trunk of the tree by wrapping it. It is recommended that 4”-6” of wood mulch be placed throughout the development zone and ¾” plywood be placed on the ground within the TPZ to minimize soil compaction and protect surface roots. Equipment, materials & vehicles shall not be stored or driven through TPZ.

Applicable activities within the TPZ include, but are not limited to excavation, grading, trenching, cuts, fills & general disturbance of roots or soil within the dripline of the trees. Should these activities be necessary within the TPZ, it is recommended that the contractor use hydro-excavation, pneumatic excavation or hand digging.

Throughout development it is recommended that work near preserved trees be done under the direct supervision of a certified arborist. If the above measures are taken the likelihood of reasonable preservation will be increased. Potential impacts include root loss, soil displacement, compacted root zones, scraped trunks and broken limbs.

Attachment: F. Arborist Report (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

Certification

I, Leonardo Tuchman CERTIFY to the best of my knowledge and belief:

1. That the statements of fact contained in this plant appraisal are true and correct.
2. That the appraisal analysis, opinions and conclusions are limited only by the reported assumptions and limiting conditions, and that they are my personal, unbiased professional analysis, opinions and conclusions.
3. That I have no present or prospective interest in the plants that are the subject of this appraisal and that I have no personal interest or bias with respect to the parties involved.
4. That my compensation is not contingent upon a predetermined value or direction in value that favors the cause of the client, the amount of the value estimate, the attainment of a stipulated result, or the occurrence of a subsequent event.
5. That my analysis, opinions, and conclusions were developed, and this appraisal has been prepared in conformity with the *Guide for Plant Appraisal* (9th Edition, 2000) authored by the Council of Tree & Landscape Appraisers.
6. That method(s) found in this appraisal are based on a request to determine the value of plant(s) considering reasonable factors of plant appraisal.
7. That my appraisal is based on the information known to me at this time. If more information is disclosed, I may have further opinions.

Appraiser's Credentials

Leoardo Tuchman: I.S.A Certified Arborist WE-12453A & QAL: 146294

References

Guide for Plant Appraisal (9th Edition, 2000) authored by the Council of Tree & Landscape Appraisers

Species Classification and Group Assignment, (2004) an Official Publication of the Western Chapter of the International Society of Arboriculture.

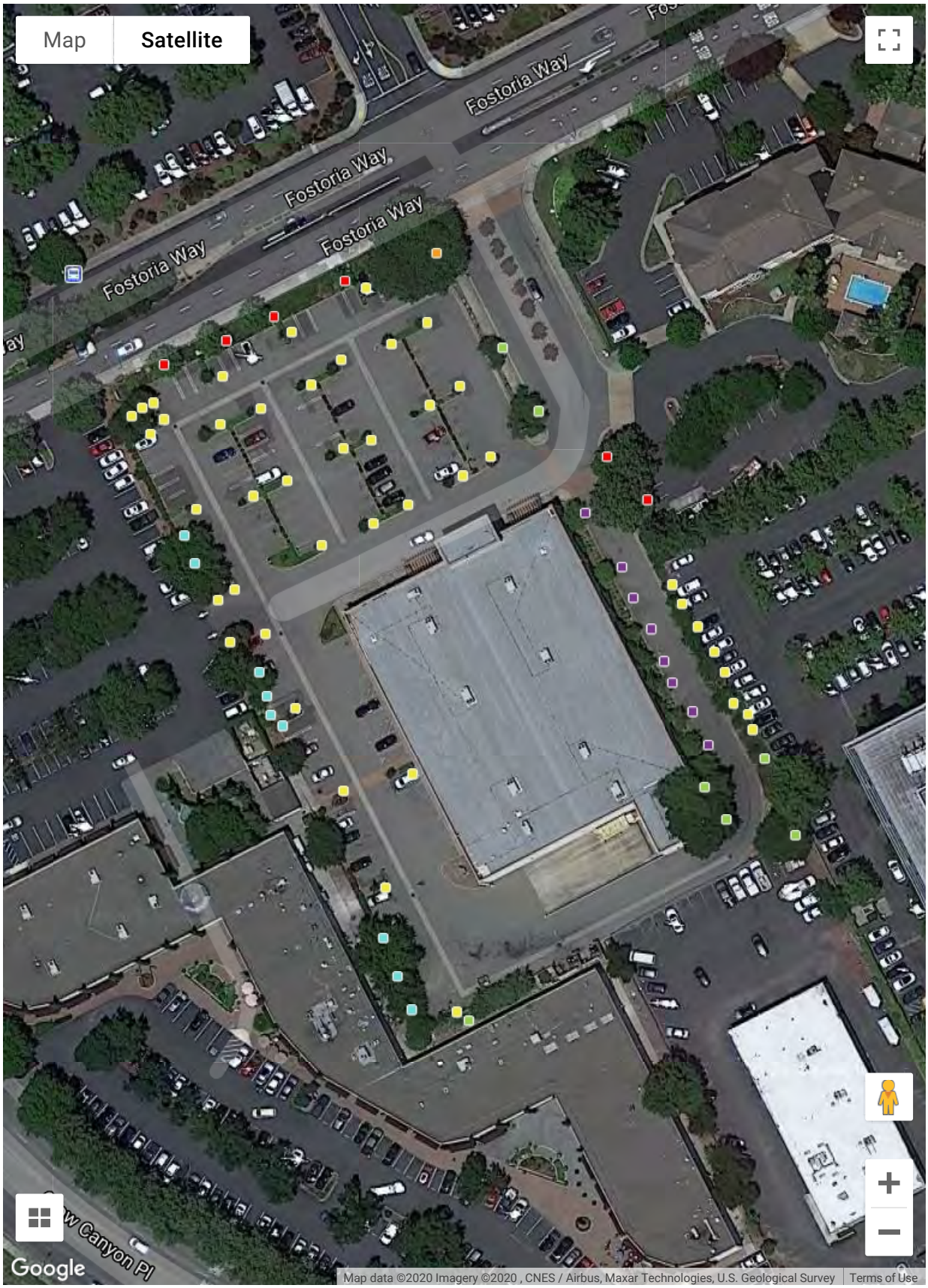
Attachment: F. Arborist Report (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

Attachments

1. Individual Tree Map
2. Tree Assessment Grid
3. Pictorial Tree Index

Arborview
Tree Management Technology

Danville Gas - San Ramon



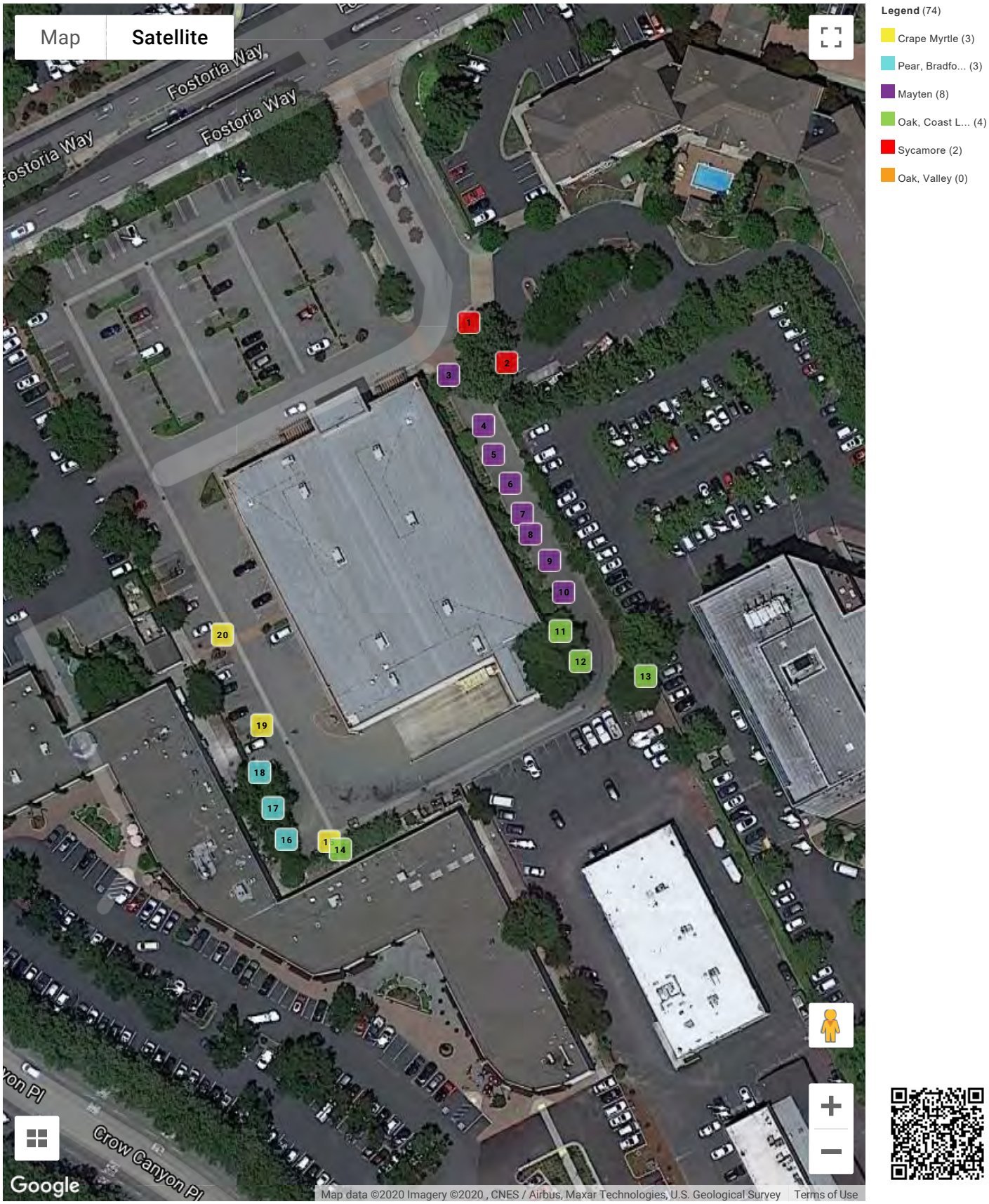
Legend (74)

- Crape Myrtle (43)
- Pear, Bradfo... (9)
- Mayten (8)
- Oak, Coast L... (7)
- Sycamore (6)
- Oak, Valley (1)

Attachment: F. Arborist Report (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

Arborview
Tree Management Technology

Danville Gas - San Ramon



Attachment: F. Arborist Report (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

Arborview
Tree Management Technology

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Legend (74)

- Crape Myrtle (13)
- Pear, Bradfo... (6)
- Mayten (0)
- Oak, Coast L... (0)
- Sycamore (1)
- Oak, Valley (0)

Attachment: F. Arborist Report (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

Arborview
Tree Management Technology

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Legend (74)

- Crape Myrtle (14)
- Pear, Bradfo... (0)
- Mayten (0)
- Oak, Coast L... (2)
- Sycamore (3)
- Oak, Valley (1)

Attachment: F. Arborist Report (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

Arborview
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Legend (74)

- Crape Myrtle (13)
- Pear, Bradfo... (0)
- Mayten (0)
- Oak, Coast L... (1)
- Sycamore (0)
- Oak, Valley (0)

Attachment: F. Arborist Report (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

Arborview
Tree Management Technology

ID	Species	Botanical Name	Height (ft)	DBH (in)	Health	Canopy (ft)	Recommendation
1	Sycamore	Platanus	46'-60'	15.5	90% - Very Good	25-30'	Pending Further Review
2	Sycamore	Platanus	46'-60'	16.5	90% - Very Good	30-35'	Pending Further Review
3	Mayten	Maytenus boria	1'-15'	7	60% - Fair	5-10'	Construction Required Removal
4	Mayten	Maytenus boria	1'-15'	6	40% - Poor	5-10'	Construction Required Removal
5	Mayten	Maytenus boria	1'-15'	5.5	20% - Critical	5-10'	Construction Required Removal
6	Mayten	Maytenus boria	1'-15'	5	20% - Critical	5-10'	Construction Required Removal
7	Mayten	Maytenus boria	1'-15'	6.5	20% - Critical	5-10'	Construction Required Removal
8	Mayten	Maytenus boria	1'-15'	5.5	60% - Fair	5-10'	Construction Required Removal
9	Mayten	Maytenus boria	1'-15'	7	80% - Good	5-10'	Construction Required Removal
10	Mayten	Maytenus boria	1'-15'	6.5	80% - Good	5-10'	Construction Required Removal
11	Oak, Coast Live	Quercus agrifolia	31'-45'	32	80% - Good	20-25'	Construction Required Removal
12	Oak, Coast Live	Quercus agrifolia	31'-45'	39.5	80% - Good	25-30'	Construction Required Removal
13	Oak, Coast Live	Quercus agrifolia	16'-30'	28.5	80% - Good	15-20'	Preserve
14	Oak, Coast Live	Quercus agrifolia	1'-15'	3	80% - Good	1-5'	Construction Required Removal
15	Crape Myrtle	Lagerstroemia indica	1'-15'	2	80% - Good	1-5'	Construction Required Removal
16	Pear, Bradford	Pyrus calleryana	16'-30'	21	60% - Fair	15-20'	Preserve
17	Pear, Bradford	Pyrus calleryana	16'-30'	15.5	80% - Good	10-15'	Preserve
18	Pear, Bradford	Pyrus calleryana	16'-30'	17	80% - Good	10-15'	Preserve
19	Crape Myrtle	Lagerstroemia indica	1'-15'	2	80% - Good	1-5'	Construction Required Removal
20	Crape Myrtle	Lagerstroemia indica	1'-15'	2.5	80% - Good	1-5'	Construction Required Removal
21	Crape Myrtle	Lagerstroemia indica	1'-15'	2	80% - Good	1-5'	Construction Required Removal
22	Pear, Bradford	Pyrus calleryana	1'-15'	6.5	80% - Good	5-10'	Preserve
23	Pear, Bradford	Pyrus calleryana	1'-15'	6.5	80% - Good	5-10'	Preserve
24	Crape Myrtle	Lagerstroemia indica	1'-15'	2.5	80% - Good	1-5'	Construction Required Removal
25	Pear, Bradford	Pyrus calleryana	1'-15'	17	80% - Good	5-10'	Preserve
26	Pear, Bradford	Pyrus calleryana	1'-15'	19.5	80% - Good	20-25'	Preserve
27	Crape Myrtle	Lagerstroemia indica	1'-15'	5.5	80% - Good	5-10'	Preserve
28	Crape Myrtle	Lagerstroemia indica	1'-15'	7.5	80% - Good	5-10'	Preserve
29	Crape Myrtle	Lagerstroemia indica	16'-30'	6	80% - Good	5-10'	Preserve
30	Crape Myrtle	Lagerstroemia indica	16'-30'	9	80% - Good	5-10'	Preserve
31	Pear, Bradford	Pyrus calleryana	1'-15'	16.5	80% - Good	20-25'	Preserve
32	Pear, Bradford	Pyrus calleryana	1'-15'	16.5	80% - Good	15-20'	Preserve
33	Crape Myrtle	Lagerstroemia indica	1'-15'	2	80% - Good	1-5'	Construction Required Removal
34	Crape Myrtle	Lagerstroemia indica	1'-15'	3	80% - Good	5-10'	Construction Required Removal
35	Crape Myrtle	Lagerstroemia indica	1'-15'	6.5	80% - Good	5-10'	Preserve
36	Crape Myrtle	Lagerstroemia indica	1'-15'	6.5	80% - Good	5-10'	Preserve

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37	Crape Myrtle	Lagerstroemia indica	1'-15'	7	80% - Good	5-10'	Preserve
38	Crape Myrtle	Lagerstroemia indica	1'-15'	6	80% - Good	5-10'	Preserve
39	Crape Myrtle	Lagerstroemia indica	1'-15'	6	80% - Good	5-10'	Preserve
40	Sycamore	Platanus	16'-30'	9	90% - Very Good	15-20'	Preserve
41	Crape Myrtle	Lagerstroemia indica	1'-15'	3	80% - Good	5-10'	Construction Required Removal
42	Sycamore	Platanus	16'-30'	9	90% - Very Good	15-20'	Preserve
43	Sycamore	Platanus	16'-30'	9.5	90% - Very Good	15-20'	Preserve
44	Crape Myrtle	Lagerstroemia indica	1'-15'	1.5	80% - Good	1-5'	Construction Required Removal
45	Sycamore	Platanus	16'-30'	4	90% - Very Good	5-10'	Preserve
46	Crape Myrtle	Lagerstroemia indica	1'-15'	2	80% - Good	1-5'	Construction Required Removal
47	Oak, Valley	Quercus lobata	31'-45'	31.5	80% - Good	35-40'	Preserve
48	Oak, Coast Live	Quercus agrifolia	1'-15'	9.5	60% - Fair	10-15'	Construction Required Removal
49	Oak, Coast Live	Quercus agrifolia	1'-15'	13.5	80% - Good	10-15'	Construction Required Removal
50	Crape Myrtle	Lagerstroemia indica	1'-15'	3.5	80% - Good	5-10'	Construction Required Removal
51	Crape Myrtle	Lagerstroemia indica	1'-15'	3	80% - Good	5-10'	Construction Required Removal
52	Crape Myrtle	Lagerstroemia indica	1'-15'	3	80% - Good	5-10'	Construction Required Removal
53	Crape Myrtle	Lagerstroemia indica	1'-15'	3	80% - Good	5-10'	Construction Required Removal
54	Crape Myrtle	Lagerstroemia indica	1'-15'	3	80% - Good	1-5'	Construction Required Removal
55	Crape Myrtle	Lagerstroemia indica	1'-15'	2	80% - Good	1-5'	Construction Required Removal
56	Crape Myrtle	Lagerstroemia indica	1'-15'	4	60% - Fair	1-5'	Construction Required Removal
57	Crape Myrtle	Lagerstroemia indica	1'-15'	4	80% - Good	1-5'	Construction Required Removal
58	Crape Myrtle	Lagerstroemia indica	1'-15'	2.5	80% - Good	1-5'	Construction Required Removal
59	Crape Myrtle	Lagerstroemia indica	1'-15'	2.5	80% - Good	1-5'	Construction Required Removal
60	Crape Myrtle	Lagerstroemia indica	1'-15'	3	80% - Good	1-5'	Construction Required Removal
61	Crape Myrtle	Lagerstroemia indica	1'-15'	3	80% - Good	5-10'	Construction Required Removal
62	Crape Myrtle	Lagerstroemia indica	1'-15'	3	80% - Good	5-10'	Construction Required Removal
63	Crape Myrtle	Lagerstroemia indica	1'-15'	3	80% - Good	5-10'	Construction Required Removal
64	Crape Myrtle	Lagerstroemia indica	1'-15'	2.5	80% - Good	1-5'	Construction Required Removal
65	Crape Myrtle	Lagerstroemia indica	1'-15'	6	60% - Fair	5-10'	Construction Required Removal
66	Crape Myrtle	Lagerstroemia indica	1'-15'	5	60% - Fair	5-10'	Construction Required Removal
67	Crape Myrtle	Lagerstroemia indica	1'-15'	11	60% - Fair	5-10'	Construction Required Removal
68	Crape Myrtle	Lagerstroemia indica	1'-15'	12	60% - Fair	5-10'	Construction Required Removal
69	Crape Myrtle	Lagerstroemia indica	1'-15'	14	60% - Fair	5-10'	Construction Required Removal
70	Crape Myrtle	Lagerstroemia indica	1'-15'	10	60% - Fair	5-10'	Construction Required Removal
71	Crape Myrtle	Lagerstroemia indica	1'-15'	16	60% - Fair	5-10'	Construction Required Removal
72	Crape Myrtle	Lagerstroemia indica	1'-15'	12	60% - Fair	5-10'	Construction Required Removal
73	Crape Myrtle	Lagerstroemia indica	1'-15'	13	60% - Fair	5-10'	Construction Required Removal

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74	Oak, Coast Live	Quercus agrifolia	1'-15'	3.5	80% - Good	1-5'	Construction Required Removal

Arborview
Tree Management Technology

Danville Gas - San Ramon

September 4, 2020

Sycamore ID# 1
Sycamore
Height: 46'-60' DBH: 15.5
Health: 90% - Very Good

Canopy 25-30'
Tree has low limbs

September 4, 2020

Sycamore ID# 2
Sycamore
Height: 46'-60' DBH: 16.5
Health: 90% - Very Good

Canopy 30-35'
Canopy has heavy limbs

September 4, 2020

Maytenus boaria ID# 3
Mayten
Height: 1'-15' DBH: 7
Health: 60% - Fair

Canopy 5-10'
Canopy sparse touching building

Attachment: F. Arborist Report (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

Arborview
Tree Management Technology

Danville Gas - San Ramon

September 4, 2020

Maytenus boaria ID# 4
Mayten
Height: 1'-15' DBH: 6
Health: 40% - Poor

Canopy 5-10'
Canopy is sparse

September 4, 2020

Maytenus boaria ID# 4
Mayten
Height: 1'-15' DBH: 6
Health: 40% - Poor

Canopy 5-10'
Canopy is sparse

September 4, 2020

Maytenus boaria ID# 5
Mayten
Height: 1'-15' DBH: 5.5
Health: 20% - Critical

Canopy 5-10'
Vines on canopy

Attachment: F. Arborist Report (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

Arborview
Tree Management Technology

Danville Gas - San Ramon

September 4, 2020

Maytenus boaria ID# 6
Mayten
Height: 1'-15' DBH: 5
Health: 20% - Critical

Canopy 5-10'
Canopy sparse vines climbing

September 4, 2020

Maytenus boaria ID# 7
Mayten
Height: 1'-15' DBH: 6.5
Health: 20% - Critical

Canopy 5-10'
Canopy dead

September 4, 2020

Maytenus boaria ID# 8
Mayten
Height: 1'-15' DBH: 5.5
Health: 60% - Fair

Canopy 5-10'
Canopy has extensive deadwood

Attachment: F. Arborist Report (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

Arborview
Tree Management Technology

Danville Gas - San Ramon

September 4, 2020

Maytenus boaria ID# 9
Mayten
Height: 1'-15' DBH: 7
Health: 80% - Good

Canopy 5-10'
Canopy is touching building

September 4, 2020

Maytenus boaria ID# 10
Mayten
Height: 1'-15' DBH: 6.5
Health: 80% - Good

Canopy 5-10'
Crowded out by oak

September 4, 2020

Oak, Coast Live ID# 11
Oak, Coast Live
Height: 31'-45' DBH: 32
Health: 80% - Good

Canopy 20-25'
Canopy is touching building and has deadwood

Attachment: F. Arborist Report (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

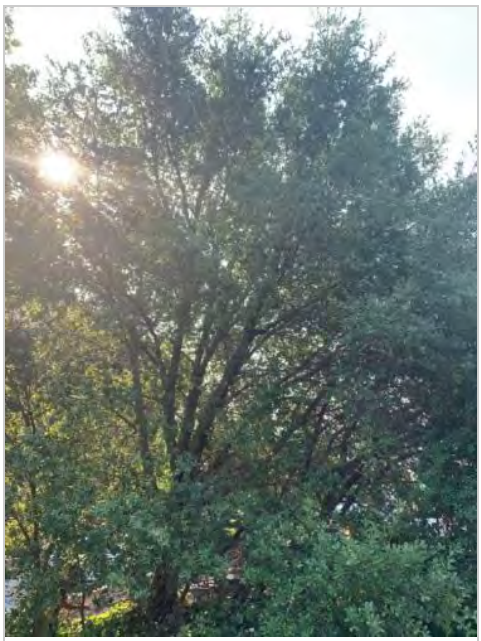
Arborview
Tree Management Technology

Danville Gas - San Ramon

September 4, 2020

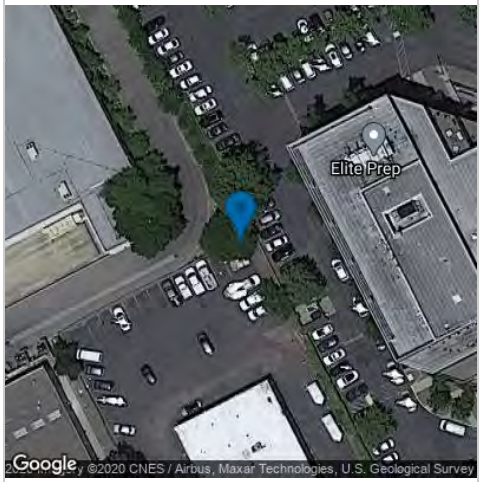
Oak, Coast Live ID# 12
Oak, Coast Live
Height: 31'-45' DBH: 39.5
Health: 80% - Good

Canopy 25-30'
Canopy is heavy and touching the building



September 4, 2020

Oak, Coast Live ID# 13
Oak, Coast Live
Height: 16'-30' DBH: 28.5
Health: 80% - Good



Canopy 15-20'
Canopy is dense and low to the ground

September 4, 2020

Oak, Coast Live ID# 14
Oak, Coast Live
Height: 1'-15' DBH: 3
Health: 80% - Good

Canopy 1-5'
Small volunteer growing in fence

Attachment: F. Arborist Report (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

Arborview
Tree Management Technology

Danville Gas - San Ramon

September 4, 2020

Crape Myrtle ID# 15
Crape Myrtle
Height: 1'-15' DBH: 2
Health: 80% - Good

Canopy 1-5'
Tree is small and stakes

September 4, 2020

Pear, Bradford ID# 16
Pear, Bradford
Height: 16'-30' DBH: 21
Health: 60% - Fair

Canopy 15-20'
Tree has heavy crown and multiple leaders, leans onto neighbors property

September 4, 2020

Pear, Bradford ID# 17
Pear, Bradford
Height: 16'-30' DBH: 15.5
Health: 80% - Good

Canopy 10-15'
Tree has heavy limbs and multiple leaders

Attachment: F. Arborist Report (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

Arborview
Tree Management Technology

Danville Gas - San Ramon

September 4, 2020

Pear, Bradford ID# 18
Pear, Bradford
Height: 16'-30' DBH: 17
Health: 80% - Good

Canopy 10-15'
Failures present from codominant junctures

September 4, 2020

Crape Myrtle ID# 19
Crape Myrtle
Height: 1'-15' DBH: 2
Health: 80% - Good

Canopy 1-5'
Small tree with thick crown

September 4, 2020

Crape Myrtle ID# 20
Crape Myrtle
Height: 1'-15' DBH: 2.5
Health: 80% - Good

Canopy 1-5'
Small tree with thick crown

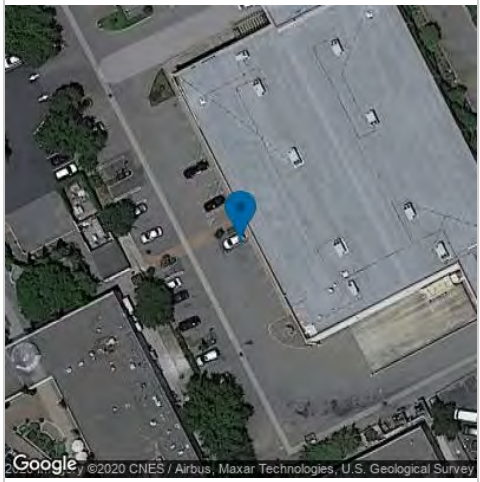
Attachment: F. Arborist Report (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

Arborview
Tree Management Technology

Danville Gas - San Ramon

September 4, 2020

Crape Myrtle ID# 21
Crape Myrtle
Height: 1'-15' DBH: 2
Health: 80% - Good



Canopy 1-5'
Small tree with thick crown

September 4, 2020

Pear, Bradford ID# 22
Pear, Bradford
Height: 1'-15' DBH: 6.5
Health: 80% - Good

Canopy 5-10'
Growing close to building and other pear leaning towards parking lot

September 4, 2020

Pear, Bradford ID# 23
Pear, Bradford
Height: 1'-15' DBH: 6.5
Health: 80% - Good

Canopy 5-10'
Growing between other pear and building, removal recommended

Attachment: F. Arborist Report (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

Arborview
Tree Management Technology

Danville Gas - San Ramon

September 4, 2020

Crape Myrtle ID# 24
Crape Myrtle
Height: 1'-15' DBH: 2.5
Health: 80% - Good

Canopy 1-5'
Small tree with sprouts growing from base

September 4, 2020

Pear, Bradford ID# 25
Pear, Bradford
Height: 1'-15' DBH: 17
Health: 80% - Good

Canopy 5-10'
Many sprouts no clear leader removal recommended

September 4, 2020

Pear, Bradford ID# 26
Pear, Bradford
Height: 1'-15' DBH: 19.5
Health: 80% - Good

Canopy 20-25'
Tree has heavy canopy with multiple codominant leaders

Attachment: F. Arborist Report (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

Arborview
Tree Management Technology

Danville Gas - San Ramon

September 4, 2020

Crape Myrtle ID# 27
Crape Myrtle
Height: 1'-15' DBH: 5.5
Health: 80% - Good

Canopy 5-10'
Tree has good health and structure

September 4, 2020

Crape Myrtle ID# 28
Crape Myrtle
Height: 1'-15' DBH: 7.5
Health: 80% - Good

Canopy 5-10'
Tree has good health and structure

September 4, 2020

Crape Myrtle ID# 29
Crape Myrtle
Height: 16'-30' DBH: 6
Health: 80% - Good

Canopy 5-10'
Good health and structure needs clearance from light

Attachment: F. Arborist Report (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

Arborview
Tree Management Technology

Danville Gas - San Ramon

September 4, 2020

Crape Myrtle ID# 30
Crape Myrtle
Height: 16'-30' DBH: 9
Health: 80% - Good

Canopy 5-10'
Tree has good health and structure

September 4, 2020

Pear, Bradford ID# 31
Pear, Bradford
Height: 1'-15' DBH: 16.5
Health: 80% - Good

Canopy 20-25'
Tree is heavy with codominant limbs handing over parking spaces

September 4, 2020

Pear, Bradford ID# 32
Pear, Bradford
Height: 1'-15' DBH: 16.5
Health: 80% - Good

Canopy 15-20'
Tree is heavy with codominant limbs handing over parking spaces

Attachment: F. Arborist Report (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

Arborview
Tree Management Technology

Danville Gas - San Ramon

September 4, 2020

Crape Myrtle ID# 33
Crape Myrtle
Height: 1'-15' DBH: 2
Health: 80% - Good

Canopy 1-5'
Treee is small and in good health

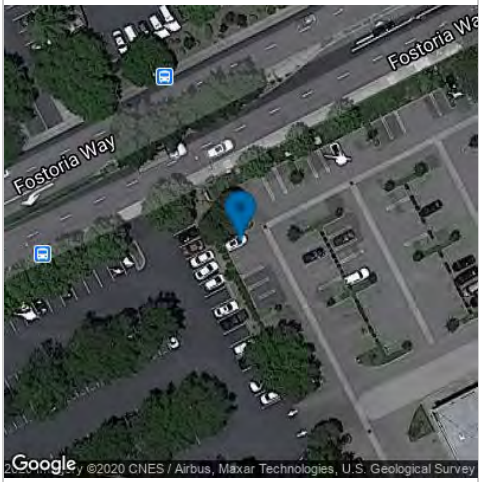
September 4, 2020

Crape Myrtle ID# 34
Crape Myrtle
Height: 1'-15' DBH: 3
Health: 80% - Good

Canopy 5-10'
Tree is in good health and structure, dirt piled up at bases should be removed

September 4, 2020

Crape Myrtle ID# 35
Crape Myrtle
Height: 1'-15' DBH: 6.5
Health: 80% - Good



Canopy 5-10'
Tree is healthy and has good structure

Attachment: F. Arborist Report (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

Arborview
Tree Management Technology

Danville Gas - San Ramon

September 4, 2020

Crape Myrtle ID# 36
Crape Myrtle
Height: 1'-15' DBH: 6.5
Health: 80% - Good

Canopy 5-10'
Tree is healthy and has good structure

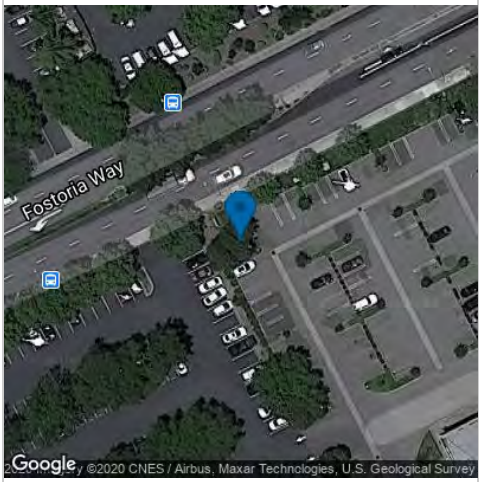
September 4, 2020

Crape Myrtle ID# 37
Crape Myrtle
Height: 1'-15' DBH: 7
Health: 80% - Good

Canopy 5-10'
Tree is healthy and has good structure

September 4, 2020

Crape Myrtle ID# 38
Crape Myrtle
Height: 1'-15' DBH: 6
Health: 80% - Good



Canopy 5-10'
Tree is healthy and has good structure

Attachment: F. Arborist Report (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

Arborview
Tree Management Technology

Danville Gas - San Ramon

September 4, 2020

Crape Myrtle ID# 39
Crape Myrtle
Height: 1'-15' DBH: 6
Health: 80% - Good

Canopy 5-10'
Tree is healthy and has good structure

September 4, 2020

Sycamore ID# 40
Sycamore
Height: 16'-30' DBH: 9
Health: 90% - Very Good

Canopy 15-20'
Tree is healthy, crown is low and dense

September 4, 2020

Crape Myrtle ID# 41
Crape Myrtle
Height: 1'-15' DBH: 3
Health: 80% - Good

Canopy 5-10'
Tree is healthy and has good structure

Attachment: F. Arborist Report (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

Arborview
Tree Management Technology

Danville Gas - San Ramon

September 4, 2020

Sycamore ID# 42
Sycamore
Height: 16'-30' DBH: 9
Health: 90% - Very Good

Canopy 15-20'
Tree is healthy and has general good structure, canopy is dense

September 4, 2020

Sycamore ID# 43
Sycamore
Height: 16'-30' DBH: 9.5
Health: 90% - Very Good

Canopy 15-20'
Tree is healthy and has general good structure, canopy is dense

September 4, 2020

Crape Myrtle ID# 44
Crape Myrtle
Height: 1'-15' DBH: 1.5
Health: 80% - Good

Canopy 1-5'
Tree is healthy and has good structure

Attachment: F. Arborist Report (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

Arborview
Tree Management Technology

Danville Gas - San Ramon

September 4, 2020

Sycamore ID# 45
Sycamore
Height: 16'-30' DBH: 4
Health: 90% - Very Good

Canopy 5-10'
Tree is healthy and has good structure

September 4, 2020

Crape Myrtle ID# 46
Crape Myrtle
Height: 1'-15' DBH: 2
Health: 80% - Good

Canopy 1-5'
Tree is healthy and has good structure

September 4, 2020

Oak, Coast Live ID# 48
Oak, Coast Live
Height: 1'-15' DBH: 9.5
Health: 60% - Fair

Canopy 10-15'
Tree has poor structure

Attachment: F. Arborist Report (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

Arborview
Tree Management Technology

Danville Gas - San Ramon

September 4, 2020

Oak, Coast Live ID# 49
Oak, Coast Live
Height: 1'-15' DBH: 13.5
Health: 80% - Good

Canopy 10-15'
Tree is healthy, canopy is low. Touching street lamp

September 4, 2020

Crape Myrtle ID# 50
Crape Myrtle
Height: 1'-15' DBH: 3.5
Health: 80% - Good

Canopy 5-10'
Tree is healthy and has good structure

September 4, 2020

Crape Myrtle ID# 51
Crape Myrtle
Height: 1'-15' DBH: 3
Health: 80% - Good

Canopy 5-10'
Tree is healthy and has good structure

Attachment: F. Arborist Report (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

Arborview
Tree Management Technology

Danville Gas - San Ramon

September 4, 2020

Crape Myrtle ID# 52
Crape Myrtle
Height: 1'-15' DBH: 3
Health: 80% - Good

Canopy 5-10'
Tree is healthy and has good structure

September 4, 2020

Crape Myrtle ID# 53
Crape Myrtle
Height: 1'-15' DBH: 3
Health: 80% - Good

Canopy 5-10'
Tree is healthy and has good structure

September 4, 2020

Crape Myrtle ID# 54
Crape Myrtle
Height: 1'-15' DBH: 3
Health: 80% - Good

Canopy 1-5'
Tree is healthy and has good structure

Attachment: F. Arborist Report (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

Arborview
Tree Management Technology

Danville Gas - San Ramon

September 4, 2020

Crape Myrtle ID# 55
Crape Myrtle
Height: 1'-15' DBH: 2
Health: 80% - Good

Canopy 1-5'
Tree is healthy and has good structure

September 4, 2020

Crape Myrtle ID# 56
Crape Myrtle
Height: 1'-15' DBH: 4
Health: 60% - Fair

Canopy 1-5'
Multiple leaders

September 4, 2020

Crape Myrtle ID# 57
Crape Myrtle
Height: 1'-15' DBH: 4
Health: 80% - Good

Canopy 1-5'
Tree is healthy and has good structure

Attachment: F. Arborist Report (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

Arborview
Tree Management Technology

Danville Gas - San Ramon

September 4, 2020

Crape Myrtle ID# 58
Crape Myrtle
Height: 1'-15' DBH: 2.5
Health: 80% - Good

Canopy 1-5'
Tree is healthy and has good structure

September 4, 2020

Crape Myrtle ID# 59
Crape Myrtle
Height: 1'-15' DBH: 2.5
Health: 80% - Good

Canopy 1-5'
Tree is healthy and has good structure

September 4, 2020

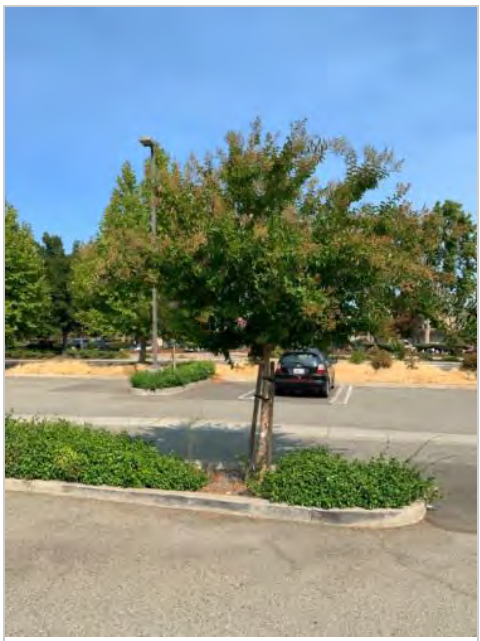
Crape Myrtle ID# 60
Crape Myrtle
Height: 1'-15' DBH: 3
Health: 80% - Good

Canopy 1-5'
Tree is healthy and has good structure

Attachment: F. Arborist Report (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

Arborview
Tree Management Technology

Danville Gas - San Ramon



September 4, 2020

Crape Myrtle ID# 61
Crape Myrtle
Height: 1'-15' DBH: 3
Health: 80% - Good

Canopy 5-10'
Tree is healthy and has good structure. Some heavy limbs

September 4, 2020

Crape Myrtle ID# 62
Crape Myrtle
Height: 1'-15' DBH: 3
Health: 80% - Good

Canopy 5-10'
Tree is healthy, multiple codominant leaders

September 4, 2020

Crape Myrtle ID# 63
Crape Myrtle
Height: 1'-15' DBH: 3
Health: 80% - Good

Canopy 5-10'
Tree is healthy and has good structure. Stake ties should be loosened

Attachment: F. Arborist Report (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

Arborview
Tree Management Technology

Danville Gas - San Ramon

September 4, 2020

Crape Myrtle ID# 64
Crape Myrtle
Height: 1'-15' DBH: 2.5
Health: 80% - Good

Canopy 1-5'
Tree is healthy and has good structure

September 4, 2020

Crape Myrtle ID# 65
Crape Myrtle
Height: 1'-15' DBH: 6
Health: 60% - Fair

Canopy 5-10'
Small and shrubby with multiple leaders

September 4, 2020

Crape Myrtle ID# 66
Crape Myrtle
Height: 1'-15' DBH: 5
Health: 60% - Fair

Canopy 5-10'
Multiple codominant leaders

Attachment: F. Arborist Report (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

Arborview
Tree Management Technology

Danville Gas - San Ramon

September 4, 2020

Crape Myrtle ID# 67
Crape Myrtle
Height: 1'-15' DBH: 11
Health: 60% - Fair

Canopy 5-10'
Multiple codominant leaders

September 4, 2020

Crape Myrtle ID# 68
Crape Myrtle
Height: 1'-15' DBH: 12
Health: 60% - Fair

Canopy 5-10'
Multiple codominant leaders

September 4, 2020

Crape Myrtle ID# 69
Crape Myrtle
Height: 1'-15' DBH: 14
Health: 60% - Fair

Canopy 5-10'
Multiple codominant leaders

Attachment: F. Arborist Report (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

Arborview
Tree Management Technology

Danville Gas - San Ramon

September 4, 2020

Crape Myrtle ID# 69
Crape Myrtle
Height: 1'-15' DBH: 14
Health: 60% - Fair

Canopy 5-10'
Multiple codominant leaders

September 4, 2020

Crape Myrtle ID# 70
Crape Myrtle
Height: 1'-15' DBH: 10
Health: 60% - Fair

Canopy 5-10'
Multiple codominant leaders

September 4, 2020

Crape Myrtle ID# 70
Crape Myrtle
Height: 1'-15' DBH: 10
Health: 60% - Fair

Canopy 5-10'
Multiple codominant leaders

Attachment: F. Arborist Report (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

Arborview
Tree Management Technology

Danville Gas - San Ramon

September 4, 2020

Crape Myrtle ID# 71
Crape Myrtle
Height: 1'-15' DBH: 16
Health: 60% - Fair

Canopy 5-10'
Multiple codominant leaders

September 4, 2020

Crape Myrtle ID# 72
Crape Myrtle
Height: 1'-15' DBH: 12
Health: 60% - Fair

Canopy 5-10'
Multiple codominant leaders

September 4, 2020

Crape Myrtle ID# 73
Crape Myrtle
Height: 1'-15' DBH: 13
Health: 60% - Fair

Canopy 5-10'
Multiple codominant leaders

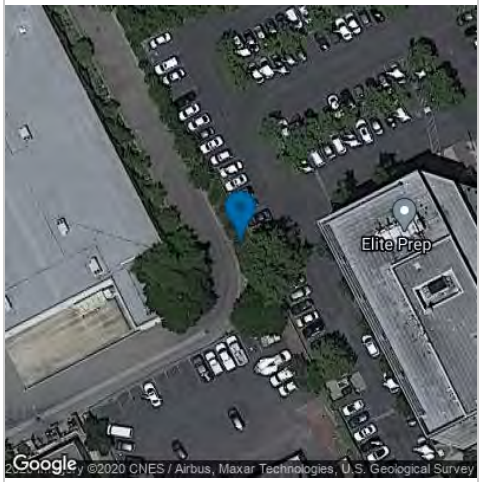
Attachment: F. Arborist Report (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

Arborview
Tree Management Technology

Danville Gas - San Ramon

September 4, 2020

Oak, Coast Live ID# 74
Oak, Coast Live
Height: 1'-15' DBH: 3.5
Health: 80% - Good



Canopy 1-5'
Tree is small with low canopy

Attachment: F. Arborist Report (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001))

San Ramon
CALIFORNIA

PLANNING SERVICES DIVISION

MEMORANDUM

To: Planning Commission

From: Debbie Chamberlain, Community Development Director

By: Shinei Tsukamoto, Associate Planner

Date: October 20, 2020

Subject: **Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001) – CEQA In-Fill Project Analysis**

This memorandum is prepared to summarize the CEQA Class 32 In-Fill Project Categorical Exemption analysis. The supporting technical report prepared by various professional are attached as Exhibits.

The Propose Project qualifies for the Class 32 In-Fill Project Categorical Exemption because the Project meets the following required five conditions, which followed by analysis:

1. **The proposed project is consistent with applicable general plan and specific plan policies and zoning regulations.**

   The subject property is located within the Mixed Use – Commercial land use designation of the General Plan and CMU (Commercial Mixed Use) designation of the NCRSP, and the proposed service station is an allowed use with a Minor Use Permit and meets the applicable development standards as discussed above.

   In accordance with General Plan Air Quality and Greenhouse Gas Element Implementing Policy 12.4-I-3, potential air quality and climate change impacts from the proposed project was analyzed by using applicable regulatory guidance, from the Bay Area Air Quality Management District's CEQA Air Quality Guidelines in the memorandum prepared by RAMBOLL dated September 22, 2020. (Exhibit A.). In addition, appropriate standard conditions of approval have been incorporated in accordance with General Plan Air Quality and Greenhouse Gas Element Implementing Policies 12.5-I-1 and 12.6-I-3 to minimize air quality and climate change impacts and to reduce hazardous particulate emissions from construction activities.

2. **The proposed development is within the City limit on a less than five-acre lot surrounded by urban uses.**

   The subject property is a 2.88-acre lot within the San Ramon city limit that was previously

developed for an approximately 30,000 sq. ft. commercial building and currently surround by retail and commercial uses on all sides.

3. **The project site has no habitat value for endangered, rare or threatened species.**

The Biological Assessment memorandum prepared by ESA dated September 17, 2020, (Exhibit B.) has found that the existing conditions of the subject property has no potential for special status plants or wildlife to occur nor in its vicinity.

4. **Approval of the project would not result in any significant effects to traffic, noise, air quality, or water quality.**

Traffic:

In evaluating potential traffic impacts from proposed projects, Level of Service (LOS) analyzing congestion levels at intersections is no longer used for CEQA analysis. Instead, Vehicle Miles Traveled (VMT) has become the new measurement as of July 1, 2020. Section 15064.3 of the CEQA Guidelines addresses how to determine the significance of transportation impacts with VMT and gives the City as a lead agency discretion to choose the most appropriate methodology. However, the City nor the Contra Costa Transportation Authority (CCTA) has not yet adopted a VMT standard of significance, so that the standard implemented by the City of San Jose was employed for this project under the direction of the San Ramon Traffic Engineer.

For the purpose of VMT analysis, the California Governor's Office of Planning and Research (OPR) broadly classifies land use categories in either residential and office uses or retail uses. Accordingly, the proposed service station is neither residential nor office therefore classified as retail. The OPR recommends that threshold for retail projects is a net increase in total VMT as a significant impact because new retail development typically redistributes shopping trips rather than creating new trips from new office or residential developments.

The Transportation Impact Analysis prepared by Kittelson & Associates dated October 2020 (Exhibit D.) has analyzed the service station existing daily VMT and projected daily VMT from the proposed Project. As indicated in the report, the three nearest Costco warehouses with service station to the City of San Ramon are in Livermore, Concord, and Hayward. The report has assumed 30% of the total fuel purchases currently occurring at these locations would shift to the proposed San Ramon location.

As summarized on Table 14 below, which is on page 44 of the report, the net VMT from the proposed project would decrease by 2,752 VMT therefore the proposed project would not result in any significant effects to traffic. (Note: "Gas-Only Trips" means trips for fuel purchasing purpose only.)

Table 14: Overall Project VMT

Trip Type	Costco Members' Existing Fuel-Related Daily VMT	Total Project Daily VMT	Net Project VMT
Net New Gas-Only Trips	827	1,665	838
Gas-Only Diverted Trips	147	876	729
Warehouse + Gas Trips	1,676	0	-1,676
Change in Costco Member Fuel Station	2,643	0	-2,643
Overall Net Project VMT	5,293	2,541	-2,752

Source: Kittelson & Associates, Inc. 2020

Noise:

The Noise Technical Memorandum prepared by ESA dated September 17, 2020, (Exhibit C.) analyzed the existing ambient noise level measured at the northeast corner of Fostoria Way and Camino Ramon, near the Fostoria Terrace townhome development, which is the nearest sensitive receptors to the subject property. The analysis considered potential noise and ground vibration impact from vehicles queuing for access to the gasoline pumps and daily fuel truck deliveries as well as increased traffic noise on Fostoria Way to neighboring properties and sensitive receptors in the project vicinity.

The existing ambient noise level measured was 63 to 64 dBA., which is within the conditionally acceptable level as described in the General Plan Noise Element, and General Plan Noise Element Implementing Policy 10.1-I-17 sets the thresholds for noise impact. Under current conditions, if noise level from the proposed project would increase by 3dBA or more, it would be considered a significant impact regardless of land uses. The analysis concluded that the noise from the operation of the proposed service station near the Fostoria Terrace townhome development would range from 0 to 2 dBA. As such, the proposed project would not result in significant noise imapct

Air Quality:

The California Emission Estimator Model (CalEEMod), a state-wide program, was used to quantify the CAP and GHG emission associated with the construction and operation of the proposed Project. The Bay Area Air Quality Management District Recommended Methods for Screening and Modeling Local Risks and Hazards was used to analyze the toxic air contaminants in the health risk assessment. Mobile sources associated with the Project included passenger car as well as fuel delivery truck travel, starting, idling, and evaporative losses.

The Air Quality Impact Analysis prepared by RAMBOLL dated September 22, 2020, (Exhibit A.) has provided a criteria air pollutant and greenhouse gas emissions as well as health risk assessment for all receptors associated with construction and operation of the proposed service station and concluded that there would be no significant air quality impact.

Water Quality:
The proposed Project is subject to the Stormwater C.3 provision of the Contra Costa County Clean Water Program to meet State and Federal stormwater regulations, so that there would be no significant water quality impact.

5. The project site can be adequately served by all required utilities.

The subject property was originally constructed in 1995 for a commercial use, and all required utilities are readily available for the proposed project.

EXHIBITS:

A. Air Quality Impact Analysis
B. Biological Assessment
C. Noise Technical Memorandum
D. Traffic Impact Analysis

EXHIBIT A.

Air Quality Impact Analysis

Costco Service Station
(AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001)
CEQA In-Fill Project Analysis

RAMBOLL

ENVIRONMENT
& HEALTH

MEMORANDUM

To: Sean Anderson, Barghausen Consulting Engineers, Inc.

From: Joseph Hower and Yi Tian, Ramboll US Corporation

Subject: **Air Quality Impact Analyses for the Proposed Costco Danville Fuel Station Contra Costa County, California**

Date September 22, 2020

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INTRODUCTION

Costco currently operates a warehouse store at 3150 Fostoria Way, Danville, California. Costco is proposing to construct a gasoline dispensing facility ("GDF" or "fuel station") with 16 dispensers (i.e., 32 fueling positions) across the road at 3111 Fostoria Way (the "Project") at the current location of the Office Depot store, which will be demolished. The Project is subject to the California Environmental Quality Act (CEQA), and the Lead Agency is the City of San Ramon. If the Project would not result in any significant air quality impacts as described in the Bay Area Air Quality Management District (BAAQMD) CEQA Guidelines[1], the city intends to employ the Class 32 categorized exemption (infill development) under CEQA. Ramboll has conducted the required air quality impact analyses.

This memorandum provides a criteria air pollutant (CAP) and greenhouse gas (GHG) emissions assessment of the proposed Project. Specifically, CAP and GHG emissions associated with construction and operation of the Project were estimated in order to evaluate if the Project would cause any significant air quality impact with its CAP and GHG emissions. We conclude that the proposed Project would not cause a significant air quality impact.

Additionally, this memorandum provides a human health risk assessment (HRA) of both GDF operational emissions and the on-road mobile source activities associated with the operation of the Project. Specifically, emissions of toxic air contaminants (TACs) associated with travel, starting and idling of passenger cars and fuel delivery trucks, and gasoline transfer and dispensing were estimated in order to evaluate if the Project would cause a significant health risk impact. We conclude that the TAC emissions from the proposed Project would not cause a significant health risk impact.

[1] California Environmental Quality Act Air Quality Guidelines, BAAQMD, May 2017. Available at: https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines. Accessed July 2020.

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A brief description of the methodology and results of the analyses are provided in the following sub-sections.

METHODOLOGY

Ramboll developed CAP and GHG emission inventories for the construction and operation of the proposed Project. Sources of Project-related construction emissions include off-road equipment, fugitive dust, off-gassing from paving, architectural coatings, and on-road mobile sources. The Project operational phase would generate emissions from area sources (such as architectural coatings, consumer products, and landscaping), energy sources (natural gas and electricity), mobile sources (passenger vehicles and fuel delivery trucks), and gasoline transfer and dispensing.

Construction Emissions

Ramboll utilized the California Emission Estimator Model version 2016.3.2 (CalEEMod®)[2] to quantify the CAP and GHG emissions associated with construction and operation of the Project. CalEEMod® is a state-wide program designed to calculate both CAP and GHG emissions from development projects in California. CalEEMod® is based on California Air Resources Board (CARB) approved Off-Road and On-Road Mobile-Source Emission Factor models (OFFROAD[3] and EMFAC[4], respectively), and is designed to estimate construction and operational emissions for land use development projects and allows for the input of project specific information. OFFROAD2011 is an emissions factor model used in CalEEMod® to calculate emission rates from off-road mobile sources (e.g., construction equipment, agricultural equipment). EMFAC2014 is the emissions factor model used in CalEEMod® to calculate emissions rates from on-road vehicles (e.g., passenger vehicles, fuel delivery trucks).

The following Project-specific assumptions were used as inputs to the CalEEMod® model runs:

- Construction Start Date: April 5, 2021 (with an estimated 4-month duration);
- Project Build-out Year: 2021;
- Fuel Station Land-Use Size: 32 dispensing stations/2.88 acres (based on Site Plan);
- Area of Parking Lot and Demolition Site: 40,000 square feet (size of the Office Depot);
- Material Import and Export: 3,028 tons exported, and 2,136 tons imported during the Grading Phase;
- Fugitive Dust Mitigation during Construction: 55% reduction (for watering at least two times daily as proposed by Costco and in compliance with the basic construction mitigation measures recommended for all proposed projects in BAAQMD[5]); and

[2] CAPCOA. 2017. California Emissions Estimator Model. Version 2016.3.2. Available at: http://www.caleemod.com/. Accessed: August 2020.

[3] CARB. 2019. MSEI – Off-Road Documentation. Available at: https://ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/msei-road-documentation-0. Accessed: August 2020.

[4] CARB. 2019. MSEI – Modeling Tools – EMFAC Software and Technical Support Documentation. Available at: https://ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/road-documentation/msei-modeling-tools-emfac. Accessed: August 2020.

[5] BAAQMD. 2017. CEQA Air Quality Guidelines Table 8-2. Available at: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en. Accessed: August 2020.

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- Title 24 2019 Standards: incorporated the reductions from Title 24 2016 to 2019 standards into energy use assumptions for compliance with the latest requirements for new construction.

All other inputs to the model were based on CalEEMod® defaults. A copy of the model output files is presented in Appendix A. Note, volatile organic compound (VOC) off-gassing emissions from paving of the fuel station were calculated externally using the CalEEMod® default emission factor of 2.62 lb. VOC/acre, as CalEEMod® estimates these emissions only for parking lot land-uses.

Operational Mobile Source Emissions

Mobile sources associated with the Project include passenger car travel, evaporative losses, starting, and idling[6], as well as fuel delivery truck travel, starting, and idling. The United States Environmental Protection Agency (USEPA) recently approved EMFAC2017; which supersedes EMFAC2014. In order to allow for a more accurate representation of mobile source operational emissions associated with the Project, operational mobile source emission factors were estimated using EMFAC2017 with SAFE Rule adjustments. These emissions factors were then used to estimate mobile source operational emissions based on CalEEMod® methodology and defaults along with Project-specific values where available.

The following assumptions were used to calculate emissions from Project-related mobile source emissions:

- EMFAC2017 Default Activity Inputs:
  - Run Mode: Emissions;
  - Run Type: Default Activity;
  - Area: Contra Costa County;
  - Calendar Year: 2021;
  - Season: Annual;
  - Aggregation Level: Day;
  - Vehicle Class: EMFAC2007 Vehicle Classes, LDA, LDT1, LDT2, MDV, HHDT;
  - Model Year: Aggregated;
  - Speed: Aggregated;
  - Output Natural Gas Heavy Duty Vehicles: Yes; and
  - Output: All pollutants, activities, and output by process.
- EMFAC2017 Project-Level Inputs:
  - Run Mode: Emission Rates;
  - Run Type: Project-Level Assessment;
  - Area: Contra Costa County;
  - Calendar Year: 2021;

[6] EMFAC2017 does not output idling emissions for light-duty autos, light-duty trucks, or medium duty vehicles. The idling emission rate for these vehicle categories was estimated as the running exhaust emission rate at 5 mph (grams per mile) multiplied by the speed correction factor.

- Season: Annual;
- Vehicle Class: EMFAC2007 Vehicle Classes, LDA, LDT1, LDT2, MDV, HHDT;
- Model Year: Aggregated;
- Fuel: By fuel;
- Speed: 5 mph;
- Meteorology: 59°F, 53% relative humidity; and
- Output: All pollutants.

- Passenger cars:
  - Vehicle class assumed to be light-duty autos, light-duty trucks, or medium duty vehicles;
  - Trip rates provided by Kittelson & Associates and the Project increase in trips above the baseline trips was evaluated;
  - Trip distances based on CalEEMod® defaults for Contra Costa County; and
  - Idle duration of 8 minutes, based on an average transaction time of four minutes and a maximum queue of two vehicles per line.
- Fuel delivery trucks:
  - Vehicle class assumed to be heavy-heavy duty trucks;
  - Trip rate (six fuel delivery trucks per day) provided by Costco;
  - Trip distance based on CalEEMod® default for commercial-non-work trips in Contra Costa County; and
  - Idle duration of five minutes based on CARB Air Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling.[7]

Details of the EMFAC2017 model runs and mobile source emission calculations are presented in Appendix B.

Operational Gasoline Transfer and Dispensing Emissions

Emissions from gasoline transfer and dispensing mainly occur during loading, breathing, refueling, spillage, and from hose permeation. Emission factors were obtained from Table I-I of CARB Revised Emission Factors for Gasoline Marketing Operations at California Gasoline Dispensing Facilities.[8] Hose permeation is based on the 2020 emission factor presented in Attachment 5,[9] and refueling is

[7] CARB. 2016. Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling. Available at: https://ww2.arb.ca.gov/our-work/programs/atcm-to-limit-vehicle-idling. Accessed: August 2020.

[8] CARB. 2013. Revised Emission Factors for Gasoline Marketing Operations at California Gasoline Dispensing Facilities. Available at: https://ww3.arb.ca.gov/vapor/gdf-emisfactor/gdfumbrella.pdf. Accessed: August 2020.

[9] CARB. 2013. Attachment 5: Proposed Emission Factors for Gasoline Dispensing Hose Permeation at California Gasoline Dispensing Facilities. Available at: https://ww3.arb.ca.gov/vapor/gdf-emisfactor/attachment5.pdf. Accessed: August 2020.

calculated using the number of ORVR vehicles expected in 2021 per Attachment 1.[10] Emissions were calculated based on an annual throughput of 34.5 million gallons per year.

Gasoline Emission Factors for the Proposed GDF				
Controlled Gasoline Emission Factor (lbs. VOC/1,000 gal)				
Loading	**Breathing**	**Refueling**	**Hose Permeation**	**Spillage**
0.15	0.024	0.069	0.007	0.24

TAC Emission Inventory

Operational Mobile Sources

Ramboll developed TAC emission inventories for the vehicle activities associated with the operation of the proposed GDF. Sources of Project-related vehicle emissions include passenger car travel, running loss, hot soak, starting and idling emissions, along with fuel delivery truck travel and idling. This analysis focused on TAC components of volatile organic compound (VOC) and particulate matter emissions found in gasoline and diesel vehicle exhaust. The TACs analyzed in this HRA are based on the Bay Area Air Quality Management District's (BAAQMD) Recommended Methods for Screening and Modeling Local Risks and Hazards.[11]

The compounds in Appendix C serve as the TACs for this HRA. Cancer and chronic non-cancer impacts for the diesel-fueled fuel delivery trucks were estimated using DPM emissions. Cancer and non-cancer chronic impacts for the gasoline-fueled passenger vehicles were estimated by speciating total organic gas (TOG) emissions. Acute impacts from passenger vehicles were estimated by speciating TOG emissions. Appendix C summarizes the speciation profile data used in this analysis.

Ramboll utilized California Air Resources Board's (CARB) approved On-Road Mobile-Source Emission Factor model[12] (EMFAC2017) to estimate annual average and maximum hourly TOG and DPM emissions from fuel delivery trucks and passenger vehicles. DPM was assumed to be equivalent to particulate matter less than 10 microns (PM_{10}) emissions from diesel-fueled trucks.

The following assumptions were used to calculate emissions from Project-related mobile source emissions:

- EMFAC2017 Default Activity Inputs:
  - Run Mode: Emissions;

[10] CARB. 2013. Attachment 1: Revised Emission Factors for Phase II Vehicle Fueling at California Gasoline Dispensing Facilities. Available at: https://ww3.arb.ca.gov/vapor/gdf-emisfactor/attachment1.pdf. Accessed: August 2020.

[11] BAAQMD. 2011. Recommended Methods for Screening and Modeling Local Risks and Hazards, May 2011. Available at: https://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/CEQA/BAAQMD%20Modeling%20Approach.ashx. Accessed: August 2020.

[12] CARB. 2019. MSEI – Modeling Tools – EMFAC Software and Technical Support Documentation. Available at: https://ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/road-documentation/msei-modeling-tools-emfac. Accessed: August 2020.

- Run Type: Default Activity;
- Area: Contra Costa County;
- Calendar Year: 2021;
- Season: Annual;
- Aggregation Level: Day;
- Vehicle Class: EMFAC2007 Vehicle Classes, LDA, LDT1, LDT2, MDV, HHDT;
- Model Year: Aggregated;
- Speed: Aggregated;
- Output Natural Gas Heavy Duty Vehicles: Yes; and
- Output: All pollutants, activities, and output by process.

- EMFAC2017 Project-Level Inputs:
  - Run Mode: Emission Rates;
  - Run Type: Project-Level Assessment;
  - Area: Contra Costa County;
  - Calendar Year: 2021;
  - Season: Annual;
  - Vehicle Class: EMFAC2007 Vehicle Classes, LDA, LDT1, LDT2, MDV, HHDT;
  - Model Year: Aggregated;
  - Fuel: By fuel;
  - Speed: 5 mph;
  - Meteorology: 59°F, 53% relative humidity; and
  - Output: All pollutants.
- Passenger cars:
  - Vehicle class assumed to be light-duty autos, light-duty trucks, or medium duty vehicles;
  - Traffic volumes on modeled roadways provided by Kittelson & Associates; and
  - Idle duration of 8 minutes based on an average transaction time of four minutes and a maximum queue of 14 vehicles across all pump lanes.
- Fuel delivery trucks:
  - Vehicle class assumed to be heavy-heavy duty trucks;
  - Truck volumes on modeled roadways (six fuel delivery trucks per day) provided by Costco; and

– Idle duration of five minutes based on CARB Air Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling.[13]

Details of the mobile source emission calculations are presented in Appendix B.

Operational Gasoline Transfer and Dispensing

In addition to the TAC emissions from operational mobile sources, Ramboll estimated TAC emissions associated with gasoline transfer and dispensing. Emissions from gasoline transfer and dispensing mainly occur during loading, breathing, refueling, spillage, and from hose permeation. Emission factors were obtained from Table I-I of CARB Revised Emission Factors for Gasoline Marketing Operations at California Gasoline Dispensing Facilities.[14] The following assumptions were used to calculate emissions from gasoline transfer and dispensing:

- Maximum hourly throughput of 4,800 gallons per hour based on a maximum of 15 vehicles per dispensing position and an average fill-up of 10 gallons per vehicle.
- Annual throughput of 34.5 million gallons per year.

Details of the gasoline transfer and dispensing emission calculations are presented in Appendix C.

Air Dispersion Modeling

Model Selection

The AMS/EPA Regulatory Model Improvement Committee (AERMIC) Model (AERMOD) (Version 19191) was used to estimate the ambient air TAC concentrations.[15] AERMOD has been approved for use in various regulatory applications by USEPA, CARB, and BAAQMD. AERMOD uses mathematical equations to simulate the movement and dispersion of air contaminants in the atmosphere. For each receptor location, the model generates air concentrations (or air dispersion factors as unit emissions were modeled) that result from emissions from multiple sources.

Per BAAQMD Guidelines[16], the population from the San Francisco–Oakland–Berkeley, CA Metropolitan Statistical Area (MSA) was used to incorporate the effects of increased surface heating from an urban area on pollutant dispersion under stable atmospheric conditions. The UTM NAD83 coordinate system was used to model project sources. The regulatory default option, urban dispersion characteristics, and 1-hour and PERIOD averaging times were selected based on BAAQMD modeling recommendations.[17] Dispersion model averaging times are specified based on the averaging times of ambient air quality standards and the air quality significance thresholds established by the appropriate regulatory agencies. For the HRA, the 1-hour averaging time was used to evaluate acute (short-term)

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[13] CARB. 2016. Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling. Available at: https://ww2.arb.ca.gov/our-work/programs/atcm-to-limit-vehicle-idling. Accessed: August 2020.

[14] CARB. 2013. Revised Emission Factors for Gasoline Marketing Operations at California Gasoline Dispensing Facilities. Available at: https://ww3.arb.ca.gov/vapor/gdf-emisfactor/gdfumbrella.pdf. Accessed: August 2020.

[15] USEPA. 2019. Air Quality Dispersion Modeling - Preferred and Recommended Models. Available at: https://www.epa.gov/scram/air-quality-dispersion-modeling-preferred-and-recommended-models#aermod. Accessed: August 2020.

[16] BAAQMD Health Risk Assessment Modeling Protocol. Available at: https://www.baaqmd.gov/~/media/files/ab617-community-health/facility-risk-reduction/documents/baaqmd_hra_modeling_protocol_august_2020-pdf.pdf?la=en. Accessed September 2020.

[17] BAAQMD Recommended Methods for Screening and Modeling Local Risks and Hazards. Available at: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/risk-modeling-approach-may-2012.pdf?la=en. Accessed: August 2020.

effects and the PERIOD averaging time (average concentration for the 5-year meteorological data set) was used to evaluate chronic (long-term) health effects. Emissions from passenger vehicle activity were assumed to occur between the hours of 5:30 AM and 10:00 PM, 7 days per week, and 365 days per year based on the anticipated operating schedule of the fueling station. Emissions from fuel delivery truck activity were to occur 24 hours per day, 7 days per week, and 365 days per year based on the potential for fuel to be delivered at any time of day. Emissions were modeled using the χ/Q ("chi over cue") method such that each source group had unit emission rates (i.e., a total of 1 gram per second [g/s]) and the model estimated dispersion factors (with a unit of micrograms per cubic meter per grams per second [$\mu g/m^3$]/[g/s]).

Source Characterization

Off-site vehicle travel was evaluated for roadway links with available traffic data within 0.25 miles of the fueling station boundary. Line (area) sources were used in the air dispersion model to represent the on-site and off-site passenger vehicle and fuel delivery truck travel. Areapoly sources were used to represent on-site passenger vehicle and fuel delivery truck idling. The GDF emission sources were modeled as point sources (loading and breathing emissions) and volume sources (refueling, hose permeation, and spillage). Modeled source locations are shown in 1. Detailed AERMOD inputs is presented in Appendix D.

Source parameters for mobile sources (Table D-1) were developed based on USEPA's Particulate Matter Conformity Guidance for Hotspot Analysis[18] and the USEPA AERMOD user guide.[19] Table D-2 presents a list of mobile sources and modeled emission rates. A source group was created for each roadway segment. As described earlier, modeling was done using the χ/Q method and emission rates were set to 1 gram per second for each source group.

Source parameters for the GDF emission sources (Tables D-3 and D-4) were developed based on CARB Gasoline Dispensing Facilities Guidance and the dimensions of the proposed GDF.[20] The emission rate for each source was modeled as 1 gram per second.

Meteorology

BAAQMD's Livermore Municipal Airport (KLVK) meteorological data set was selected to analyze the Project's impacts, based on that station's close geographic proximity to the Project (Figure 2) and best representation of the facility's meteorological conditions (such as prevailing winds), terrain, and surrounding land use.[21] The BAAQMD meteorological data set is for January 1, 2011 to December 31, 2015.[22] Oakland was used as the upper air meteorological station in this data set.

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[18] EPA. 2015. Transportation Conformity Guidance for Quantitative Hot-spot Analyses in PM2.5 and PM10 Nonattainment and Maintenance Areas Appendix J: Additional Reference Information on Air Quality Models and Data Inputs. Available at: https://nepis.epa.gov/Exe/ZyPdf.cgi?Dockey=P100NN22.pdf. Accessed: August 2020.

[19] USEPA. User's Guide for the AMS/EPA Regulatory Model (AERMOD). Available at: https://www3.epa.gov/ttn/scram/models/aermod/aermod_userguide.pdf. Accessed: August 2020.

[20] The exact location of the proposed storage tank is unknown. Therefore, the loading and breathing emission sources associated with the storage tank were placed in the center of the gas station canopy.

[21] BAAQMD Health Risk Assessment Modeling Protocol. Available at: https://www.baaqmd.gov/~/media/files/ab617-community-health/facility-risk-reduction/documents/baaqmd_hra_modeling_protocol_august_2020-pdf.pdf?la=en. Accessed September 2020.

[22] CARB. HARP AERMOD Meteorological Files. Available at: https://ww2.arb.ca.gov/resources/documents/harp-aermod-meteorological-files. Accessed: September 2020.

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Terrain data was sourced from the National Elevation Dataset (NED), 1/3 arc second at 10-meter resolution.

Receptors

Analyzing impacts of receptors close to sources of TACs is important in determining cancer and non-cancer health risk impacts. Receptor exposure to emission sources is greatest nearest to the emission source. ARB and SCAQMD emissions and modeling analyses showed an 80-percent drop-off in pollutant concentration at approximately 1,000 feet from traffic-related sources.[23] In order to evaluate health impacts to off-site receptors, including nearby residential and sensitive receptor populations, the geographic scope of this assessment was extended to a one-quarter mile radius or 1,320 feet from the modeled Project sources. Per BAAQMD guidance[24], receptors around the Project development were covered in two grids of receptors:

- Fine Grid 25 m x 25 m up to 200 m from modeled Project sources; and
- Coarse Grid 50 m x 50 m from 200 m to 1,320 feet from modeled Project sources.

Grid receptors were classified as residential or worker based on the current land use. The nearest residential receptor is located 491 ft east of the Project site boundary, consistent with the noise analysis conducted by Environmental Science Associates (ESA).

BAAQMD requires inclusion of sensitive receptors for all sources subject to Rule 11-18 or Air Toxics "Hot Spots" HRAs and identifies the following as sensitive receptors: schools, daycare facilities, hospitals, and care facilities for seniors or disabled persons. [25] Non-residential sensitive receptor locations were identified within a one-quarter mile (1,320 feet) radius of the modeled Project sources, based on publicly available databases.[26] Google Earth Pro was also used to identify schools and day care centers in the Project vicinity. Based on the database search, one sensitive receptor, The Redwoods International Montessori Preschool & Kindergarten, was identified 819 ft west of the nearest modeled Project source.

Receptor locations are illustrated in Figure 3. Receptor heights were assumed to be 1.5 meters based on BAAQMD guidance.[27]

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[23] CARB. Air Quality and Land Use Handbook: A Community Health Perspective. 2005. Available at: https://www.arb.ca.gov/ch/handbook.pdf. Accessed: August 2020.

[24] BAAQMD Health Risk Assessment Modeling Protocol. Available at: https://www.baaqmd.gov/~/media/files/ab617-community-health/facility-risk-reduction/documents/baaqmd_hra_modeling_protocol_august_2020-pdf.pdf?la=en. Accessed September 2020.

[25] BAAQMD Health Risk Assessment Modeling Protocol. Available at: https://www.baaqmd.gov/~/media/files/ab617-community-health/facility-risk-reduction/documents/baaqmd_hra_modeling_protocol_august_2020-pdf.pdf?la=en. Accessed September 2020.

[26] California Department of Education, California School Directory. Available at: https://www.cde.ca.gov/schooldirectory/. Accessed: August 2020.

California Community Care Licensing Division - licensed care facilities including adult residential facilities and daycares (Available at: https://www.ccld.dss.ca.gov/carefacilitysearch/. Accessed: August 2020.

[27] BAAQMD Health Risk Assessment Modeling Protocol. Available at: https://www.baaqmd.gov/~/media/files/ab617-community-health/facility-risk-reduction/documents/baaqmd_hra_modeling_protocol_august_2020-pdf.pdf?la=en. Accessed September 2020.

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Health Risk Assessment

Ramboll used CARB's Hotspots Analysis and Reporting Program (HARP2) Air Dispersion and Modeling and Risk Tool[28] (ADMRT) to calculate the health risks associated with emissions from Project-related mobile sources. HARP2 has been developed by CARB for estimating health risk values and it incorporates the requirements of the latest version of the Office of Environmental Health Hazard Assessment (OEHHA) Air Toxics Hot Spots Risk Assessment guidelines.[29] Annual average and maximum hourly TAC emissions input to HARP2 are shown in Appendix C.

Lifetime cancer risk, chronic hazard index (HIC), and acute hazard index (HIA) were calculated at each receptor. To estimate these impacts, the following runs were performed for the Project: residential cancer risk, residential non-cancer chronic risk, worker cancer risk, worker non-cancer chronic risk, and non-cancer acute risk. The health risk assessment options chosen for these runs (Table 4) were based on BAAQMD's default assumptions for HRAs.[30]

RESULTS

Criteria Air Pollutant Emissions

Mass Daily Emissions

Table 1 presents the maximum daily CAP emission estimates from Project construction for calendar year 2021. As shown in this table, the construction emissions for the proposed Project are **less than** the BAAQMD mass daily significance thresholds[31] for all pollutants.

Table 2 presents the maximum daily CAP emission estimates from Project operation. As shown in the table, the operational emissions for the Project are **less than** the BAAQMD mass daily significance thresholds for all pollutants.

The Transportation Impact Analysis[32] prepared by Kittelson & Associates, Inc. for the fuel station shows that the overall change in total regional daily vehicle miles traveled (VMT) is net negative. This is due to customers living in the Danville and San Ramon area who currently purchase gasoline from farther Costco stations being able to utilize the new station and reduce miles traveled to obtain gasoline, as well as due to diverting trips to existing fuel stations and home-based trips to existing fuel stations. Thus, this analysis of criteria air pollutant emissions is conservative.

Greenhouse Gas Emissions

Table 3 presents the annual average GHG emissions associated with Project construction and operation. One-time emissions from construction were annualized over a 30-year period[11] and summed with operational emissions. As shown in Table 3, the Project related GHG emissions are

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[28] CARB. 2019. Hot Spots Analysis and Reporting Program (HARP). May. Available at: https://ww3.arb.ca.gov/toxics/harp/harp.htm. Accessed: September 2020.

[29] Cal/EPA. 2015. Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments. Office of Environmental Health Hazard Assessment. February. Available at: https://oehha.ca.gov/air/crnr/notice-adoption-air-toxics-hot-spots-program-guidance-manual-preparation-health-risk-0. Accessed: September 2020.

[30] BAAQMD Health Risk Assessment Modeling Protocol. Available at: https://www.baaqmd.gov/~/media/files/ab617-community-health/facility-risk-reduction/documents/baaqmd_hra_modeling_protocol_august_2020-pdf.pdf?la=en. Accessed September 2020.

[31] BAAQMD. 2017. BAAQMD Air Quality Significance Thresholds. Available at: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en. Accessed: August 2020.

[32] Kittleson & Associates. 2020. Transportation Impact Analysis. Costco Gasoline Fuel Station Addition.

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estimated to be 3,623 MT CO_2e/year. The stationary source related emissions are 36 MT CO_2e/year, and if judged by the BAAQMD threshold for stationary sources of 10,000 metric tons carbon dioxide per year, that element of the Project is less than significant.[33] The Kittleson traffic analysis demonstrates that the regional daily VMT is estimated to decrease, therefore the annual VMT would decrease, and thus this analysis of greenhouse gas emissions is conservative.

Considering the Project as a whole (stationary and mobile sources), the project is consistent with the City of San Ramon's 2011 Climate Action Plan (CAP)[34], which is a "qualified" Greenhouse Gas Reduction Strategy pursuant to current BAAQMD recommendations. The gas station is consistent with the mixed-use designation shown in the CAP (Figure 2) and the more recently adopted mixed-use - commercial designation of the land in the Land Use Diagram provided as Figure 4-2 of the City of San Ramon General Plan 2035[35]. The greenhouse gas emissions inventories for the years 2020 and 2030 are based on General Plan buildout data assuming steady growth in each year. Given that the land use for the proposed gas station is consistent with the General Plan land use, the future emissions inventory estimates in the CAP for the land that the gas station is proposed to occupy should be representative of emissions from the proposed Project.

The CAP establishes that if a project chooses to rely on compliance with the CAP to result in a less than significant impact, the project must demonstrate a 15-percent reduction of GHGs compared to 2008 emissions from all development that will occur in implementing the General Plan. The North Camino Ramon Specific Plan (NCRSP) area in which the proposed Project is located encourages mixed-use development that combines housing, commercial, retail, civic and office uses and places these key community elements and destinations close to one another. The transportation impact analysis shows that there is expected to be an overall VMT reduction resulting from the Project, and the NCRSP is expected to have reductions that will meet the 15 percent GHG reduction goal.

Hence, the Project would not cause a significant GHG impact.

Health Risk Assessment

A summary of the maximum health risk impacts is shown in Table 5. HARP2 outputs for all receptors are shown in Appendix E. Locations for the receptors with the maximum health risks are shown in Figure 3. As shown in Table 5, the emissions associated with operation of the proposed Project are **less than** the BAAQMD significance thresholds.[36] While the cumulative HRA and $PM_{2.5}$ risks were not

[33] BAAQMD. 2017. BAAQMD Air Quality Significance Thresholds. Available at: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en. Accessed: August 2020.

[34] City of San Ramon Climate Action Plan. 2011. Available at: https://www.sanramon.ca.gov/UserFiles/Servers/Server_10826046/File/Our%20City/Departments/Community%20Development/Planning/General%20Plan/Climate%20Action%20Plan/adoptedcap.pdf. Accessed: September 2020.

[35] City of San Ramon General Plan 2035. Available at: https://www.sanramon.ca.gov/UserFiles/Servers/Server_10826046/File/Our%20City/Departments/Community%20Development/Planning/General%20Plan/FINAL%20ADOPTED%20GP2035%20(updated%20as%20of%204-22-20).pdf. Accessed: September 2020.

[36] BAAQMD. 2017. BAAQMD Air Quality Significance Thresholds. Available at: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en. Accessed: August 2020.

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quantitatively assessed, when considering the net VMT analysis from the Kittleson traffic report, the Project contribution of $PM_{2.5}$ and health risk will be less than significant in the cumulative context.[37]

CONCLUSION

As described in the results section, the proposed Project would not cause a significant air quality or greenhouse gas impact, and the proposed Project would not result in a significant health risk.

[37] Kittleson & Associates. 2020. Transportation Impact Analysis. Costco Gasoline Fuel Station Addition.

TABLES

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Table 1. Average Daily Criteria Air Pollutant Emission Estimates for Project Construction
Danville Costco Fuel Station
Contra Costa County, California

Year[1]	Average Daily Criteria Air Pollutant Emission Estimates[1]					
	VOC[2]	NO_x	CO	SO_x[3]	Exhaust PM_{10}	Exhaust $PM_{2.5}$
	(lb/day)					
2021	2.9	18.8	14.8	0.03	0.8	0.8
Maximum Emissions	**2.9**	**18.8**	**14.8**	**0.03**	**0.8**	**0.8**
BAAQMD Mass Daily Significance Thresholds[4]	**54**	**54**	**None**	**None**	**82**	**54**
Exceeds Threshold for any Year of Construction?	NO	NO	NO	NO	NO	NO

Notes:

[1] Total emissions for project construction were estimated using CalEEMod® (see Appendix A). Total construction emissions include construction of the fuel station and parking lot, and demolition of the existing Office Depot. PM fugitive dust emissions include a 55% reduction (for watering twice daily to comply with BAAQMD Rule 6).

[2] For purposes of this analysis VOC emissions are assumed to be equal to ROG.

[3] For purposes of this analysis SO_X emissions are assumed to be equal to SO_2.

[4] BAAQMD Air Quality Significance Thresholds. Available at https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en. Accessed: July 2020.

Abbreviations:

BAAQMD - Bay Area Air Quality Management District
CalEEMod® - CALifornia Emissions Estimator MODel
CO - carbon monoxide
lbs - pounds
NO_x - nitrogen oxide compounds (NO + NO_2)
$PM_{2.5}$ - particulate matter less than 2.5 microns in diameter
PM_{10} - particulate matter less than 10 microns in diameter
ROG - reactive organic gases
SO_2 - sulfur dioxide
SO_x - sulfur oxide compounds
VOC - volatile organic compounds

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Table 2. Average Daily and Annual Criteria Air Pollutant Emission Estimates for Project Operation
Danville Costco Fuel Station
Contra Costa County, California

Emission Category	Average Daily Criteria Air Pollutant Emission Estimates[1]						Annual Criteria Air Pollutant Emission Estimates[1]					
	VOC[2]	NO_x	CO	SO_X[3]	Exhaust PM_{10}	Exhaust $PM_{2.5}$	VOC[2]	NO_x	CO	SO_X[3]	Exhaust PM_{10}	Exhaust $PM_{2.5}$
	(lb/day)						(tons/year)					
Area[4]	1.3E-01	5.5E-05	8.1E-03	0.0E+00	5.5E-05	5.5E-05	0.0245	1.0E-05	1.5E-03	5.5E-05	1.0E-05	1.0E-05
Energy[4]	3.5E-03	3.2E-02	2.7E-02	1.6E-04	2.4E-03	2.4E-03	6.4E-04	5.8E-03	4.9E-03	2.4E-03	4.4E-04	4.4E-04
Mobile[5]	7.2	9.7	64.2	0.2	2.9	1.2	1.3	1.8	11.7	0.04	0.5	0.2
Gasoline Dispensing Facility	46.3	--	--	--	--	--	8.5	--	--	--	--	--
Total Emissions	**53.7**	**9.7**	**64.3**	**0.2**	**2.9**	**1.3**	**9.8**	**1.8**	**11.7**	**0.04**	**0.5**	**0.2**
BAAQMD Significance Thresholds[6]	**54**	**54**	**None**	**None**	**82**	**54**	**10**	**10**	**None**	**None**	**15**	**10**
Exceeds Threshold?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

Notes:

[1] Emissions totals may not add up due to rounding. Emissions shown as zero may be non-zero values, however, they are below a meaningful reporting level for this analysis.

[2] For purposes of this analysis VOC emissions are assumed to be equal to ROG.

[3] For purposes of this analysis SO_X emissions are assumed to be equal to SO_2.

[4] Total area and energy emissions were estimated using CalEEMod® (see Appendix A).

[5] Total mobile emissions were estimated using CalEEMod® default trip lengths, EMFAC2017 emission factors, and Project-specific vehicle trip rates provided by Kittelson & Associates. See Appendix B for details.

[6] BAAQMD Air Quality Significance Thresholds. Available at https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en. Accessed: July 2020.

Abbreviations:

BAAQMD - Bay Area Air Quality Management District
CalEEMod® - CALifornia Emissions Estimator MODel
CO - carbon monoxide
lbs - pounds
NO_x - nitrogen oxide compounds ($NO + NO_2$)
$PM_{2.5}$ - particulate matter less than 2.5 microns in diameter
PM_{10} - particulate matter less than 10 microns in diameter
ROG - reactive organic gases
SO_2 - sulfur dioxide
SO_x - sulfur oxide compounds
VOC - volatile organic compounds

Table 3. Summary of GHG Emissions
Danville Costco Fuel Station
Contra Costa County, California

Emissions Category[1]	GHG Emissions[2,3] (MT CO_2e/yr)
Area Sources	0.003
Energy Usage	21
Mobile[4]	3,588
Water	1.5
Waste Disposed	8.7
Operational Sub-Total	***3,619***
Construction Amortized[5]	4
Total[6]	**3,623**

Notes:

[1] One-time emissions (i.e., construction) and operational emissions were calculated using CalEEMod®. See Appendix A for details

[2] Emissions are presented as CO_2e, which include CO_2, CH_4, and N_2O emissions, weighted by their respective global warming potentials.

[3] Emissions shown as zero may be non-zero values, however, they are below a meaningful reporting level for this analysis.

[4] Total mobile emissions were estimated using CalEEMod® default trip lengths, EMFAC2017 emission factors, and Project-specific vehicle trip rates provided by Kittelson & Associates. See Appendix B for details.

[5] One-time emissions from construction were amortized over a 30-year period.

[6] Sum of annualized one-time emissions and operational emissions.

Abbreviations:

BAAQMD - Bay Area Air Quality Management District
CalEEMod® - CALifornia Emissions Estimator MODel
CH_4 - methane
CO_2 - carbon dioxide
CO_2e - carbon dioxide equivalents
GHG - greenhouse gases
MT - metric tons
N_2O - nitrous oxide
yr - year

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Table 4. Health Risk Assessment Options Used in HARP2 ADMRT Tool
Danville Costco Fuel Station
Contra Costa County, California

HARP2 Risk Analyses Screen / Option Title		Options Chosen				
		Residential Cancer Risk Run	**Residential Chronic Risk Run**	**Worker Cancer Risk Run**	**Worker Chronic Risk Run**	**Acute Risk Run**
Select Risk Scenario	Analysis Type	Cancer Risk	Chronic Risk (Non-cancer)	Cancer Risk	Chronic Risk (Non-cancer)	Acute Risk (Non-cancer)
	Receptor Type	Individual Resident		Worker		N/A
	Exposure Duration	30-Year	N/A	25-Year	N/A	N/A
	Intake Rate Percentile	RMP using the Derived Method	OEHHA Derived Method	OEHHA Derived Method		N/A
Select Pathways to Evaluate	Tab "Pathways to Evaluate"	Select "Mandatory Minimum Pathways"		Select "Worker Pathways"		Default Inhalation Only Pathway
		Select deposition rate of 0.02 m/s		Select deposition rate of 0.02 m/s		
	Tab "Inh"	Check box "Apply the default fraction of time spent at home (FAH) to ages greater than or equal to 16 years"		Check box "Use Adjustment Factors" with WAF = 1.5[2]		Use Defaults (No Change)
	Tab "Soil"	Use Defaults (No Change)		Use Defaults (No Change)		N/A
	Tab "Derm"	Use Defaults (No Change)		Use Defaults (No Change)		N/A
	Tab "MMlk"	Use Defaults (No Change)		N/A	N/A	N/A

Notes:

[1] BAAQMD Health Risk Assessment Modeling Protocol. Available at: https://www.baaqmd.gov/~/media/files/ab617-community-health/facility-risk-reduction/documents/baaqmd_hra_modeling_protocol_august_2020-pdf.pdf?la=en. Accessed: September 2020.

[2] Annual concentration adjustment factor for worker is set based on a schedule of 5:30 AM to 10:00 PM, 7 days a week.

[3] HARP2 run using BAAQMD-approved health table.

Abbreviations:

ADMRT - Air Dispersion Modeling and Risk Tool
BAAQMD - Bay Area Air Quality Management District
EIR - environmental impact report
HARP - Hotspots Analysis and Reporting Program
HRA - health risk assessment
m - mile
N/A - not applicable
OEHHA - Office of Environmental Health Hazard Assessment
RMP - Risk Management Policy
s - second

Table 5. Health Risk Assessment Results
Danville Costco Fuel Station
Contra Costa County, California

Receptor Type	Maximum Estimated Cancer Risk (in a million)	Maximum Estimated Chronic Hazard Index	Maximum Estimated Acute Hazard Index
Residential	2.27	0.0083	0.0536
Sensitive	0.53	0.0019	0.0158
Worker	5.86	0.1695	0.3233
BAAQMD Threshold[1]	10	1	1

Notes:

[1] BAAQMD CEQA Thresholds of Significance. Available at: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/tools/ceqa-guidelines-may-2017-thresholds-table-pdf.pdf?la=en. Accessed: August 2020.

Abbreviations:

ADMRT - Air Dispersion Modeling and Risk Tool

BAAQMD - Bay Area Air Quality Management District

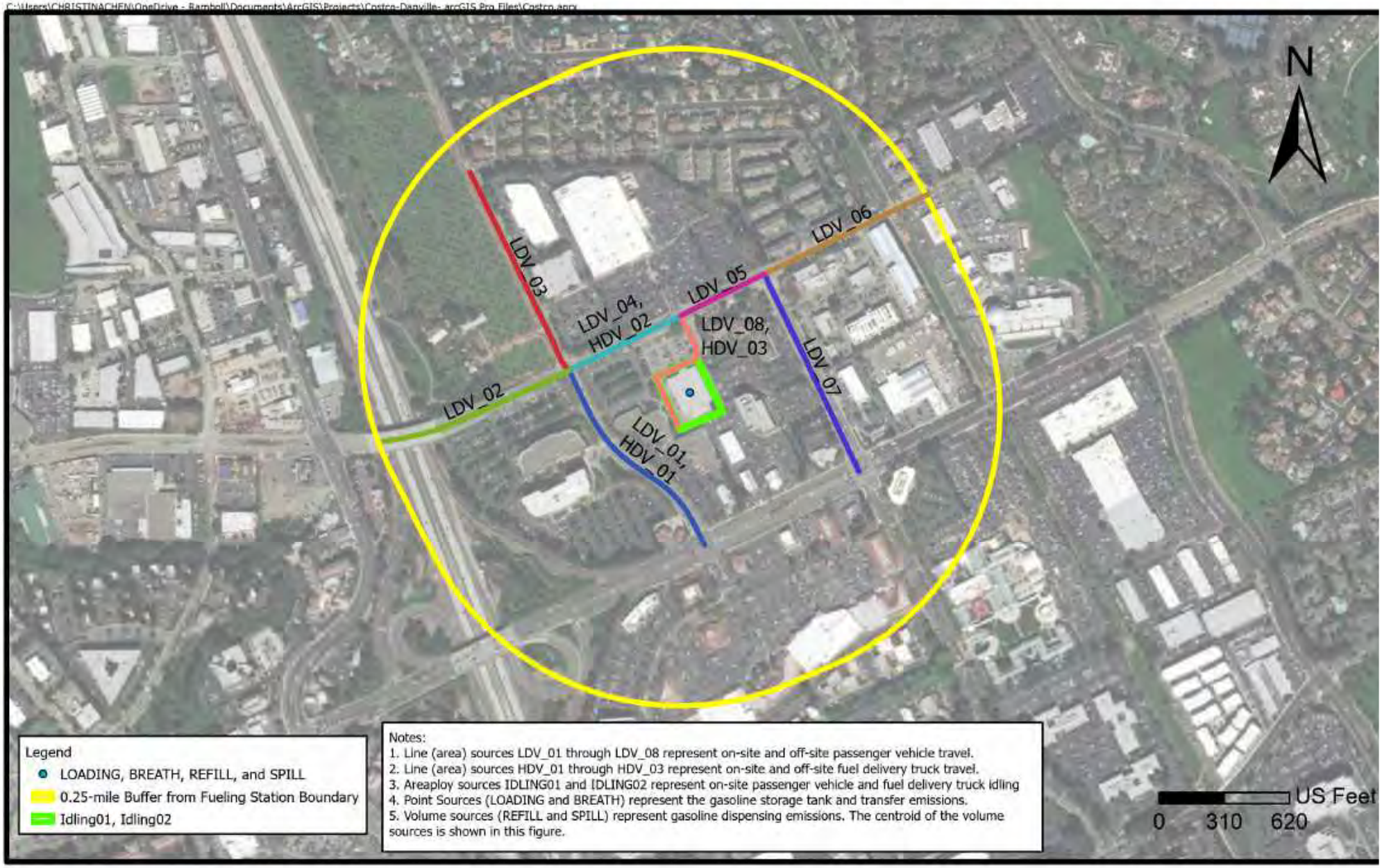
CEQA - California Environmental Quality Act

HARP - Hotspots Analysis and Reporting Program

FIGURES

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

C:\Users\CHRISTINACHEN\OneDrive - Ramboll\Documents\ArcGIS\Projects\Costco-Danville- arcGIS Pro Files\Costco.aprx



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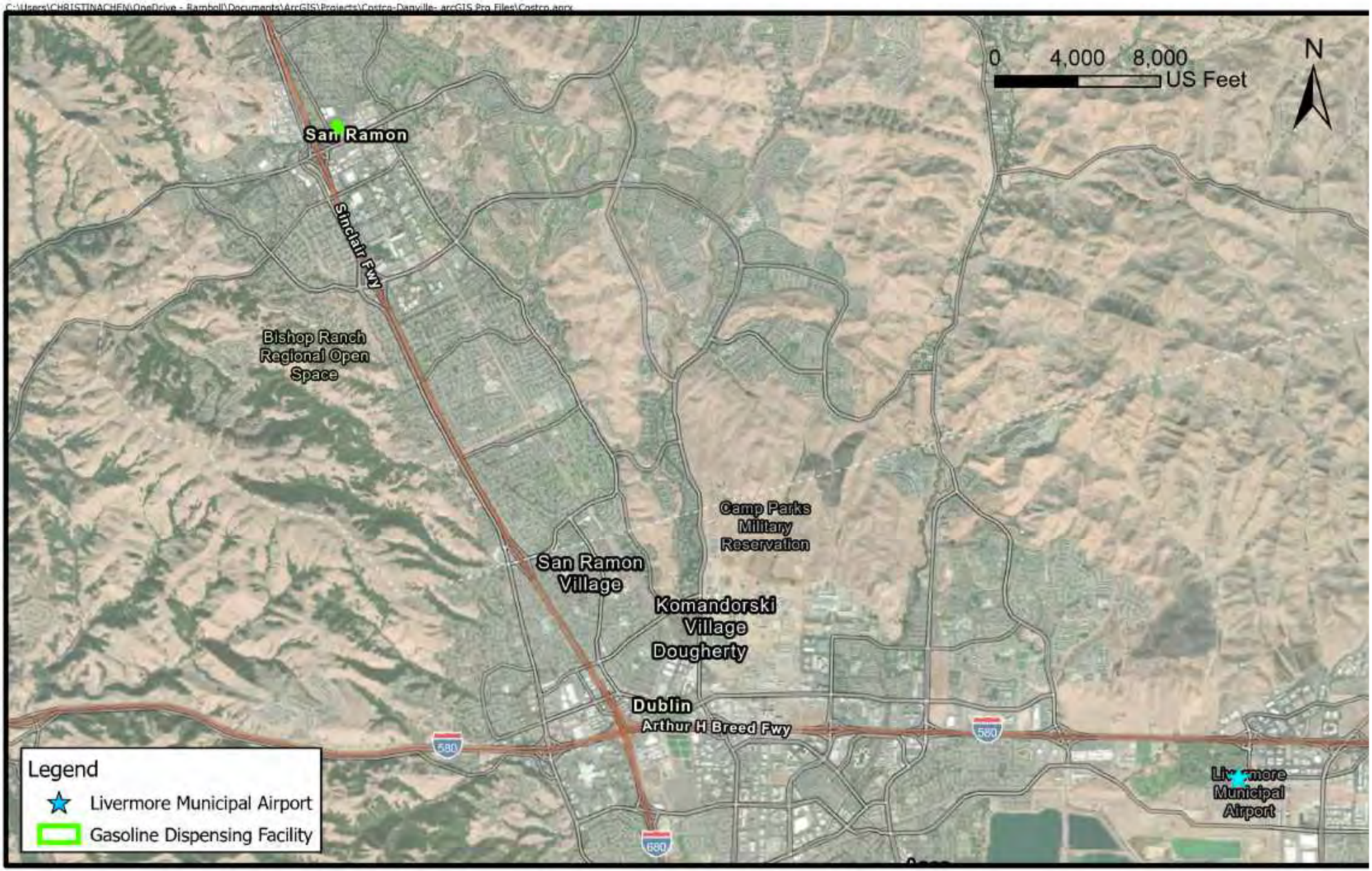
DRAFTED BY: C. Chen | DATE: 9/9/2020

Modeled Source Locations

FIGURE 1



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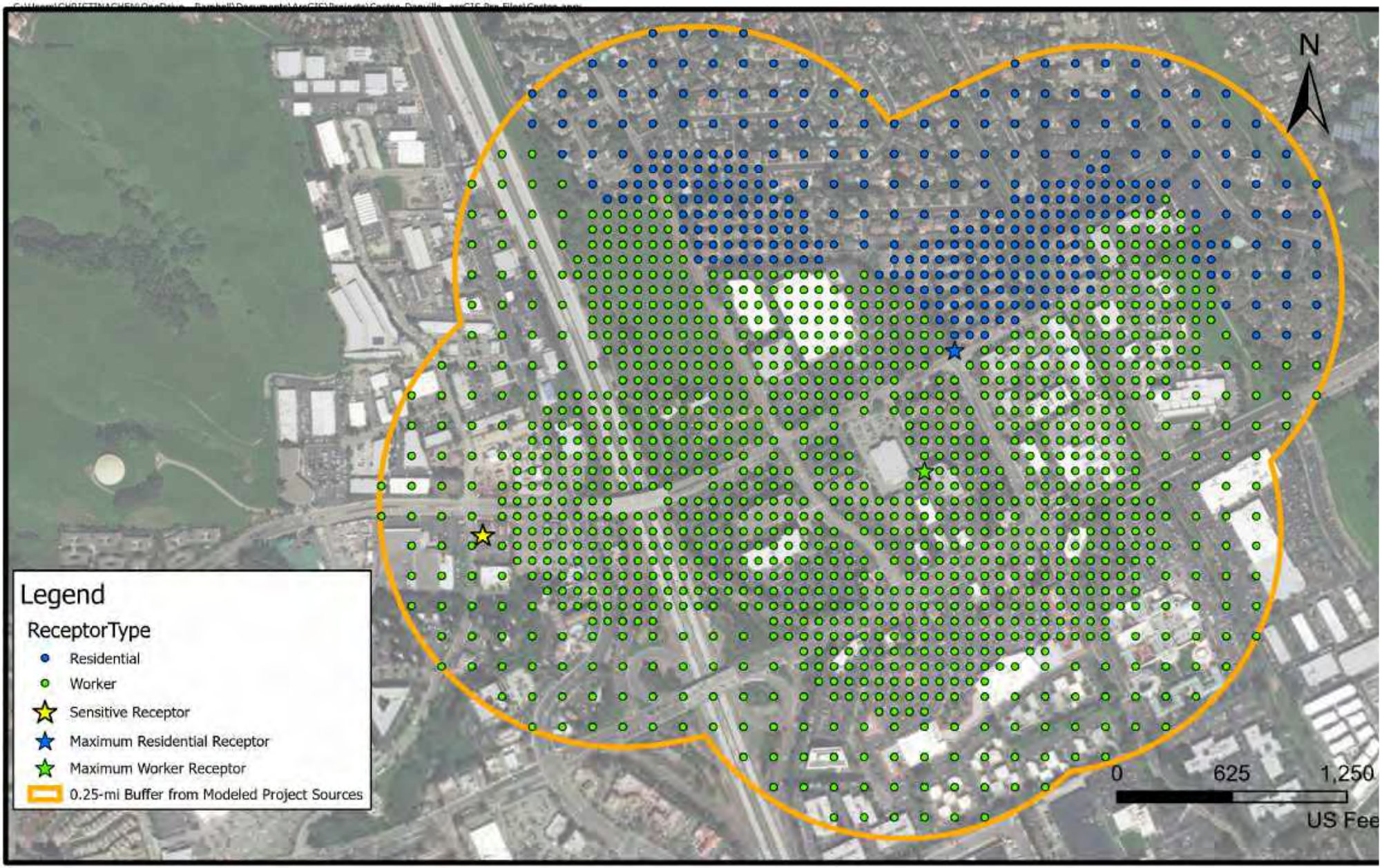
Meteorological Station Location

FIGURE 2



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Modeled Receptor Locations

FIGURE
3

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

APPENDICES

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

APPENDIX A
CALEEMOD® OUTPUT FILES

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

List of CalEEMod Runs

Appendix A.1: Costco Danville – Contra Costa County, Annual
Appendix A.2: Costco Danville – Contra Costa County, Summer
Appendix A.3: Costco Danville – Contra Costa County, Winter

APPENDIX A.1
COSTCO DANVILLE –
CONTRA COSTA COUNTY, ANNUAL

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Costco Danville

Contra Costa County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Gasoline/Service Station	32.00	Pump	1.74	4,517.60	0
Parking Lot	127.00	Space	1.14	50,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site plan

Construction Phase - Construction schedule based on project-specific information

Grading - material imported and exported

Demolition -

Vehicle Trips - Mobile emissions calculated externally

Energy Use - Title 24 2019

Construction Off-road Equipment Mitigation - 2x daily watering

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	3.00
tblConstructionPhase	NumDays	220.00	67.00
tblConstructionPhase	NumDays	20.00	6.00
tblConstructionPhase	NumDays	6.00	5.00
tblConstructionPhase	NumDays	10.00	3.00
tblConstructionPhase	NumDays	3.00	1.00
tblConstructionPhase	PhaseEndDate	4/14/2022	7/30/2021
tblConstructionPhase	PhaseEndDate	3/17/2022	7/22/2021
tblConstructionPhase	PhaseEndDate	4/30/2021	4/12/2021
tblConstructionPhase	PhaseEndDate	5/13/2021	4/20/2021
tblConstructionPhase	PhaseEndDate	3/31/2022	7/27/2021
tblConstructionPhase	PhaseEndDate	5/5/2021	4/13/2021
tblConstructionPhase	PhaseStartDate	4/1/2022	7/28/2021
tblConstructionPhase	PhaseStartDate	5/14/2021	4/21/2021
tblConstructionPhase	PhaseStartDate	5/6/2021	4/14/2021
tblConstructionPhase	PhaseStartDate	3/18/2022	7/23/2021
tblConstructionPhase	PhaseStartDate	5/1/2021	4/13/2021
tblEnergyUse	LightingElect	3.08	2.75
tblEnergyUse	LightingElect	0.35	0.31
tblEnergyUse	T24E	1.48	1.32
tblEnergyUse	T24NG	19.71	19.51
tblGrading	AcresOfGrading	2.50	3.00
tblGrading	AcresOfGrading	1.50	4.50
tblGrading	MaterialExported	0.00	3,028.00
tblGrading	MaterialImported	0.00	2,136.00
tblLandUse	LotAcreage	0.10	1.74

tblVehicleTrips	ST_TR	168.56	0.00
tblVehicleTrips	SU_TR	168.56	0.00
tblVehicleTrips	WD_TR	168.56	0.00

2.0 Emissions Summary

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1238	0.7998	0.6277	1.4200e-003	0.0537	0.0346	0.0883	0.0157	0.0329	0.0487	0.0000	123.7676	123.7676	0.0195	0.0000	124.2554
Maximum	**0.1238**	**0.7998**	**0.6277**	**1.4200e-003**	**0.0537**	**0.0346**	**0.0883**	**0.0157**	**0.0329**	**0.0487**	**0.0000**	**123.7676**	**123.7676**	**0.0195**	**0.0000**	**124.2554**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1238	0.7998	0.6277	1.4200e-003	0.0323	0.0346	0.0668	9.2900e-003	0.0329	0.0422	0.0000	123.7675	123.7675	0.0195	0.0000	124.2553
Maximum	**0.1238**	**0.7998**	**0.6277**	**1.4200e-003**	**0.0323**	**0.0346**	**0.0668**	**9.2900e-003**	**0.0329**	**0.0422**	**0.0000**	**123.7675**	**123.7675**	**0.0195**	**0.0000**	**124.2553**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**39.90**	**0.00**	**24.28**	**40.98**	**0.00**	**13.24**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**4-5-2021**	**7-4-2021**	0.7298	0.7298
2	**7-5-2021**	**9-30-2021**	0.1722	0.1722
		Highest	0.7298	0.7298

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0245	1.0000e-005	1.4700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8400e-003	2.8400e-003	1.0000e-005	0.0000	3.0300e-003
Energy	6.4000e-004	5.8000e-003	4.8700e-003	3.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	21.1042	21.1042	7.9000e-004	2.5000e-004	21.1996
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	3.5016	0.0000	3.5016	0.2069	0.0000	8.6751
Water						0.0000	0.0000		0.0000	0.0000	0.1348	0.9343	1.0691	0.0139	3.4000e-004	1.5165
Total	**0.0251**	**5.8100e-003**	**6.3400e-003**	**3.0000e-005**	**0.0000**	**4.5000e-004**	**4.5000e-004**	**0.0000**	**4.5000e-004**	**4.5000e-004**	**3.6364**	**22.0413**	**25.6777**	**0.2216**	**5.9000e-004**	**31.3942**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0245	1.0000e-005	1.4700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8400e-003	2.8400e-003	1.0000e-005	0.0000	3.0300e-003
Energy	6.4000e-004	5.8000e-003	4.8700e-003	3.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	21.1042	21.1042	7.9000e-004	2.5000e-004	21.1996
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	3.5016	0.0000	3.5016	0.2069	0.0000	8.6751
Water						0.0000	0.0000		0.0000	0.0000	0.1348	0.9343	1.0691	0.0139	3.4000e-004	1.5165
Total	**0.0251**	**5.8100e-003**	**6.3400e-003**	**3.0000e-005**	**0.0000**	**4.5000e-004**	**4.5000e-004**	**0.0000**	**4.5000e-004**	**4.5000e-004**	**3.6364**	**22.0413**	**25.6777**	**0.2216**	**5.9000e-004**	**31.3942**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/5/2021	4/12/2021	5	6	
2	Site Preparation	Site Preparation	4/13/2021	4/13/2021	5	1	
3	Grading	Grading	4/14/2021	4/20/2021	5	5	
4	Building Construction	Building Construction	4/21/2021	7/22/2021	5	67	
5	Paving	Paving	7/23/2021	7/27/2021	5	3	
6	Architectural Coating	Architectural Coating	7/28/2021	7/30/2021	5	3	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 3

Acres of Paving: 1.14

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 6,776; Non-Residential Outdoor: 2,259; Striped Parking Area: 3,048 (Architectural Coating – sqft)

<u>OffRoad Equipment</u>

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Paving	Paving Equipment	1	8.00	132	0.36
Site Preparation	Scrapers	1	8.00	367	0.48
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	182.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	511.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	23.00	9.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0197	0.0000	0.0197	2.9800e-003	0.0000	2.9800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.9800e-003	0.0591	0.0435	7.0000e-005		3.1200e-003	3.1200e-003		2.9100e-003	2.9100e-003	0.0000	6.3214	6.3214	1.6200e-003	0.0000	6.3618
Total	**5.9800e-003**	**0.0591**	**0.0435**	**7.0000e-005**	**0.0197**	**3.1200e-003**	**0.0228**	**2.9800e-003**	**2.9100e-003**	**5.8900e-003**	**0.0000**	**6.3214**	**6.3214**	**1.6200e-003**	**0.0000**	**6.3618**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.1000e-004	0.0244	4.8300e-003	7.0000e-005	1.5400e-003	8.0000e-005	1.6200e-003	4.2000e-004	7.0000e-005	5.0000e-004	0.0000	6.8152	6.8152	3.0000e-004	0.0000	6.8227
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	8.0000e-005	8.9000e-004	0.0000	3.1000e-004	0.0000	3.1000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2617	0.2617	1.0000e-005	0.0000	0.2619
Total	**8.3000e-004**	**0.0244**	**5.7200e-003**	**7.0000e-005**	**1.8500e-003**	**8.0000e-005**	**1.9300e-003**	**5.0000e-004**	**7.0000e-005**	**5.8000e-004**	**0.0000**	**7.0770**	**7.0770**	**3.1000e-004**	**0.0000**	**7.0846**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					8.8600e-003	0.0000	8.8600e-003	1.3400e-003	0.0000	1.3400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.9800e-003	0.0591	0.0435	7.0000e-005		3.1200e-003	3.1200e-003		2.9100e-003	2.9100e-003	0.0000	6.3214	6.3214	1.6200e-003	0.0000	6.3618
Total	**5.9800e-003**	**0.0591**	**0.0435**	**7.0000e-005**	**8.8600e-003**	**3.1200e-003**	**0.0120**	**1.3400e-003**	**2.9100e-003**	**4.2500e-003**	**0.0000**	**6.3214**	**6.3214**	**1.6200e-003**	**0.0000**	**6.3618**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.1000e-004	0.0244	4.8300e-003	7.0000e-005	1.5400e-003	8.0000e-005	1.6200e-003	4.2000e-004	7.0000e-005	5.0000e-004	0.0000	6.8152	6.8152	3.0000e-004	0.0000	6.8227
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	8.0000e-005	8.9000e-004	0.0000	3.1000e-004	0.0000	3.1000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2617	0.2617	1.0000e-005	0.0000	0.2619
Total	**8.3000e-004**	**0.0244**	**5.7200e-003**	**7.0000e-005**	**1.8500e-003**	**8.0000e-005**	**1.9300e-003**	**5.0000e-004**	**7.0000e-005**	**5.8000e-004**	**0.0000**	**7.0770**	**7.0770**	**3.1000e-004**	**0.0000**	**7.0846**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.7000e-004	9.1400e-003	5.3700e-003	1.0000e-005		3.5000e-004	3.5000e-004		3.2000e-004	3.2000e-004	0.0000	1.0763	1.0763	3.5000e-004	0.0000	1.0850
Total	**7.7000e-004**	**9.1400e-003**	**5.3700e-003**	**1.0000e-005**	**2.3900e-003**	**3.5000e-004**	**2.7400e-003**	**2.6000e-004**	**3.2000e-004**	**5.8000e-004**	**0.0000**	**1.0763**	**1.0763**	**3.5000e-004**	**0.0000**	**1.0850**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0268	0.0268	0.0000	0.0000	0.0269
Total	**1.0000e-005**	**1.0000e-005**	**9.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0268**	**0.0268**	**0.0000**	**0.0000**	**0.0269**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0700e-003	0.0000	1.0700e-003	1.2000e-004	0.0000	1.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.7000e-004	9.1400e-003	5.3700e-003	1.0000e-005		3.5000e-004	3.5000e-004		3.2000e-004	3.2000e-004	0.0000	1.0763	1.0763	3.5000e-004	0.0000	1.0850
Total	**7.7000e-004**	**9.1400e-003**	**5.3700e-003**	**1.0000e-005**	**1.0700e-003**	**3.5000e-004**	**1.4200e-003**	**1.2000e-004**	**3.2000e-004**	**4.4000e-004**	**0.0000**	**1.0763**	**1.0763**	**3.5000e-004**	**0.0000**	**1.0850**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0268	0.0268	0.0000	0.0000	0.0269
Total	**1.0000e-005**	**1.0000e-005**	**9.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0268**	**0.0268**	**0.0000**	**0.0000**	**0.0269**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0169	0.0000	0.0169	8.4800e-003	0.0000	8.4800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.5700e-003	0.0505	0.0244	5.0000e-005		2.2900e-003	2.2900e-003		2.1100e-003	2.1100e-003	0.0000	4.5260	4.5260	1.4600e-003	0.0000	4.5626
Total	**4.5700e-003**	**0.0505**	**0.0244**	**5.0000e-005**	**0.0169**	**2.2900e-003**	**0.0192**	**8.4800e-003**	**2.1100e-003**	**0.0106**	**0.0000**	**4.5260**	**4.5260**	**1.4600e-003**	**0.0000**	**4.5626**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.9900e-003	0.0684	0.0136	2.0000e-004	4.3300e-003	2.2000e-004	4.5400e-003	1.1900e-003	2.1000e-004	1.4000e-003	0.0000	19.1351	19.1351	8.4000e-004	0.0000	19.1560
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	5.0000e-005	5.7000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1678	0.1678	0.0000	0.0000	0.1679
Total	**2.0700e-003**	**0.0685**	**0.0141**	**2.0000e-004**	**4.5300e-003**	**2.2000e-004**	**4.7400e-003**	**1.2400e-003**	**2.1000e-004**	**1.4500e-003**	**0.0000**	**19.3028**	**19.3028**	**8.4000e-004**	**0.0000**	**19.3239**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5900e-003	0.0000	7.5900e-003	3.8200e-003	0.0000	3.8200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.5700e-003	0.0505	0.0244	5.0000e-005		2.2900e-003	2.2900e-003		2.1100e-003	2.1100e-003	0.0000	4.5260	4.5260	1.4600e-003	0.0000	4.5626
Total	**4.5700e-003**	**0.0505**	**0.0244**	**5.0000e-005**	**7.5900e-003**	**2.2900e-003**	**9.8800e-003**	**3.8200e-003**	**2.1100e-003**	**5.9300e-003**	**0.0000**	**4.5260**	**4.5260**	**1.4600e-003**	**0.0000**	**4.5626**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.9900e-003	0.0684	0.0136	2.0000e-004	4.3300e-003	2.2000e-004	4.5400e-003	1.1900e-003	2.1000e-004	1.4000e-003	0.0000	19.1351	19.1351	8.4000e-004	0.0000	19.1560
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	5.0000e-005	5.7000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1678	0.1678	0.0000	0.0000	0.1679
Total	**2.0700e-003**	**0.0685**	**0.0141**	**2.0000e-004**	**4.5300e-003**	**2.2000e-004**	**4.7400e-003**	**1.2400e-003**	**2.1000e-004**	**1.4500e-003**	**0.0000**	**19.3028**	**19.3028**	**8.4000e-004**	**0.0000**	**19.3239**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0685	0.5369	0.4879	8.4000e-004		0.0274	0.0274		0.0262	0.0262	0.0000	69.5623	69.5623	0.0137	0.0000	69.9045
Total	**0.0685**	**0.5369**	**0.4879**	**8.4000e-004**		**0.0274**	**0.0274**		**0.0262**	**0.0262**	**0.0000**	**69.5623**	**69.5623**	**0.0137**	**0.0000**	**69.9045**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.9000e-004	0.0312	7.9200e-003	8.0000e-005	1.9800e-003	7.0000e-005	2.0500e-003	5.7000e-004	7.0000e-005	6.4000e-004	0.0000	7.7939	7.7939	3.6000e-004	0.0000	7.8030
Worker	2.3900e-003	1.6700e-003	0.0177	6.0000e-005	6.1100e-003	4.0000e-005	6.1500e-003	1.6300e-003	4.0000e-005	1.6600e-003	0.0000	5.1710	5.1710	1.2000e-004	0.0000	5.1740
Total	**3.3800e-003**	**0.0328**	**0.0256**	**1.4000e-004**	**8.0900e-003**	**1.1000e-004**	**8.2000e-003**	**2.2000e-003**	**1.1000e-004**	**2.3000e-003**	**0.0000**	**12.9649**	**12.9649**	**4.8000e-004**	**0.0000**	**12.9769**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0685	0.5369	0.4879	8.4000e-004		0.0274	0.0274		0.0262	0.0262	0.0000	69.5622	69.5622	0.0137	0.0000	69.9044
Total	**0.0685**	**0.5369**	**0.4879**	**8.4000e-004**		**0.0274**	**0.0274**		**0.0262**	**0.0262**	**0.0000**	**69.5622**	**69.5622**	**0.0137**	**0.0000**	**69.9044**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.9000e-004	0.0312	7.9200e-003	8.0000e-005	1.9800e-003	7.0000e-005	2.0500e-003	5.7000e-004	7.0000e-005	6.4000e-004	0.0000	7.7939	7.7939	3.6000e-004	0.0000	7.8030
Worker	2.3900e-003	1.6700e-003	0.0177	6.0000e-005	6.1100e-003	4.0000e-005	6.1500e-003	1.6300e-003	4.0000e-005	1.6600e-003	0.0000	5.1710	5.1710	1.2000e-004	0.0000	5.1740
Total	**3.3800e-003**	**0.0328**	**0.0256**	**1.4000e-004**	**8.0900e-003**	**1.1000e-004**	**8.2000e-003**	**2.2000e-003**	**1.1000e-004**	**2.3000e-003**	**0.0000**	**12.9649**	**12.9649**	**4.8000e-004**	**0.0000**	**12.9769**

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.5900e-003	0.0160	0.0177	3.0000e-005		8.7000e-004	8.7000e-004		8.1000e-004	8.1000e-004	0.0000	2.3257	2.3257	7.4000e-004	0.0000	2.3442
Paving	1.4900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.0800e-003**	**0.0160**	**0.0177**	**3.0000e-005**		**8.7000e-004**	**8.7000e-004**		**8.1000e-004**	**8.1000e-004**	**0.0000**	**2.3257**	**2.3257**	**7.4000e-004**	**0.0000**	**2.3442**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

3.6 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	5.0000e-005	5.2000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1510	0.1510	0.0000	0.0000	0.1511
Total	**7.0000e-005**	**5.0000e-005**	**5.2000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**1.8000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1510**	**0.1510**	**0.0000**	**0.0000**	**0.1511**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.5900e-003	0.0160	0.0177	3.0000e-005		8.7000e-004	8.7000e-004		8.1000e-004	8.1000e-004	0.0000	2.3257	2.3257	7.4000e-004	0.0000	2.3441
Paving	1.4900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.0800e-003**	**0.0160**	**0.0177**	**3.0000e-005**		**8.7000e-004**	**8.7000e-004**		**8.1000e-004**	**8.1000e-004**	**0.0000**	**2.3257**	**2.3257**	**7.4000e-004**	**0.0000**	**2.3441**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

3.6 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	5.0000e-005	5.2000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1510	0.1510	0.0000	0.0000	0.1511
Total	**7.0000e-005**	**5.0000e-005**	**5.2000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**1.8000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1510**	**0.1510**	**0.0000**	**0.0000**	**0.1511**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0342					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.3000e-004	2.2900e-003	2.7300e-003	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	0.3830	0.3830	3.0000e-005	0.0000	0.3837
Total	**0.0345**	**2.2900e-003**	**2.7300e-003**	**0.0000**		**1.4000e-004**	**1.4000e-004**		**1.4000e-004**	**1.4000e-004**	**0.0000**	**0.3830**	**0.3830**	**3.0000e-005**	**0.0000**	**0.3837**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

3.7 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	2.0000e-005	1.7000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0503	0.0503	0.0000	0.0000	0.0504
Total	**2.0000e-005**	**2.0000e-005**	**1.7000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0503**	**0.0503**	**0.0000**	**0.0000**	**0.0504**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0342					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.3000e-004	2.2900e-003	2.7300e-003	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	0.3830	0.3830	3.0000e-005	0.0000	0.3836
Total	**0.0345**	**2.2900e-003**	**2.7300e-003**	**0.0000**		**1.4000e-004**	**1.4000e-004**		**1.4000e-004**	**1.4000e-004**	**0.0000**	**0.3830**	**0.3830**	**3.0000e-005**	**0.0000**	**0.3836**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

3.7 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	2.0000e-005	1.7000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0503	0.0503	0.0000	0.0000	0.0504
Total	**2.0000e-005**	**2.0000e-005**	**1.7000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0503**	**0.0503**	**0.0000**	**0.0000**	**0.0504**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Gasoline/Service Station	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Gasoline/Service Station	9.50	7.30	7.30	2.00	79.00	19.00	14	27	59
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Gasoline/Service Station	0.582298	0.039109	0.186022	0.123408	0.017184	0.005083	0.010615	0.023794	0.001605	0.001810	0.005454	0.002746	0.000871
Parking Lot	0.582298	0.039109	0.186022	0.123408	0.017184	0.005083	0.010615	0.023794	0.001605	0.001810	0.005454	0.002746	0.000871

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	14.7928	14.7928	6.7000e-004	1.4000e-004	14.8507
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	14.7928	14.7928	6.7000e-004	1.4000e-004	14.8507
NaturalGas Mitigated	6.4000e-004	5.8000e-003	4.8700e-003	3.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	6.3114	6.3114	1.2000e-004	1.2000e-004	6.3489
NaturalGas Unmitigated	6.4000e-004	5.8000e-003	4.8700e-003	3.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	6.3114	6.3114	1.2000e-004	1.2000e-004	6.3489

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Gasoline/Service Station	118271	6.4000e-004	5.8000e-003	4.8700e-003	3.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	6.3114	6.3114	1.2000e-004	1.2000e-004	6.3489
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**6.4000e-004**	**5.8000e-003**	**4.8700e-003**	**3.0000e-005**		**4.4000e-004**	**4.4000e-004**		**4.4000e-004**	**4.4000e-004**	**0.0000**	**6.3114**	**6.3114**	**1.2000e-004**	**1.2000e-004**	**6.3489**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Gasoline/Service Station	118271	6.4000e-004	5.8000e-003	4.8700e-003	3.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	6.3114	6.3114	1.2000e-004	1.2000e-004	6.3489
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**6.4000e-004**	**5.8000e-003**	**4.8700e-003**	**3.0000e-005**		**4.4000e-004**	**4.4000e-004**		**4.4000e-004**	**4.4000e-004**	**0.0000**	**6.3114**	**6.3114**	**1.2000e-004**	**1.2000e-004**	**6.3489**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Gasoline/Service Station	35101.8	10.2115	4.6000e-004	1.0000e-004	10.2515
Parking Lot	15748	4.5813	2.1000e-004	4.0000e-005	4.5992
Total		**14.7928**	**6.7000e-004**	**1.4000e-004**	**14.8507**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Gasoline/Service Station	35101.8	10.2115	4.6000e-004	1.0000e-004	10.2515
Parking Lot	15748	4.5813	2.1000e-004	4.0000e-005	4.5992
Total		**14.7928**	**6.7000e-004**	**1.4000e-004**	**14.8507**

6.0 Area Detail

6.1 Mitigation Measures Area

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0245	1.0000e-005	1.4700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8400e-003	2.8400e-003	1.0000e-005	0.0000	3.0300e-003
Unmitigated	0.0245	1.0000e-005	1.4700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8400e-003	2.8400e-003	1.0000e-005	0.0000	3.0300e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.4200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0209					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.4000e-004	1.0000e-005	1.4700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8400e-003	2.8400e-003	1.0000e-005	0.0000	3.0300e-003
Total	**0.0245**	**1.0000e-005**	**1.4700e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**2.8400e-003**	**2.8400e-003**	**1.0000e-005**	**0.0000**	**3.0300e-003**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.4200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0209					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.4000e-004	1.0000e-005	1.4700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8400e-003	2.8400e-003	1.0000e-005	0.0000	3.0300e-003
Total	**0.0245**	**1.0000e-005**	**1.4700e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**2.8400e-003**	**2.8400e-003**	**1.0000e-005**	**0.0000**	**3.0300e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1.0691	0.0139	3.4000e-004	1.5165
Unmitigated	1.0691	0.0139	3.4000e-004	1.5165

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Gasoline/Service Station	0.42502 / 0.260496	1.0691	0.0139	3.4000e-004	1.5165
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**1.0691**	**0.0139**	**3.4000e-004**	**1.5165**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Gasoline/Service Station	0.42502 / 0.260496	1.0691	0.0139	3.4000e-004	1.5165
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**1.0691**	**0.0139**	**3.4000e-004**	**1.5165**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	3.5016	0.2069	0.0000	8.6751
Unmitigated	3.5016	0.2069	0.0000	8.6751

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Gasoline/Service Station	17.25	3.5016	0.2069	0.0000	8.6751
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**3.5016**	**0.2069**	**0.0000**	**8.6751**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Gasoline/Service Station	17.25	3.5016	0.2069	0.0000	8.6751
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**3.5016**	**0.2069**	**0.0000**	**8.6751**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

APPENDIX A.2
COSTCO DANVILLE – CONTRA COSTA COUNTY, SUMMER

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Costco Danville

Contra Costa County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Gasoline/Service Station	32.00	Pump	1.74	4,517.60	0
Parking Lot	127.00	Space	1.14	50,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site plan

Construction Phase - Construction schedule based on project-specific information

Grading - material imported and exported

Demolition -

Vehicle Trips - Mobile emissions calculated externally

Energy Use - Title 24 2019

Construction Off-road Equipment Mitigation - 2x daily watering

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	3.00
tblConstructionPhase	NumDays	220.00	67.00
tblConstructionPhase	NumDays	20.00	6.00
tblConstructionPhase	NumDays	6.00	5.00
tblConstructionPhase	NumDays	10.00	3.00
tblConstructionPhase	NumDays	3.00	1.00
tblConstructionPhase	PhaseEndDate	4/14/2022	7/30/2021
tblConstructionPhase	PhaseEndDate	3/17/2022	7/22/2021
tblConstructionPhase	PhaseEndDate	4/30/2021	4/12/2021
tblConstructionPhase	PhaseEndDate	5/13/2021	4/20/2021
tblConstructionPhase	PhaseEndDate	3/31/2022	7/27/2021
tblConstructionPhase	PhaseEndDate	5/5/2021	4/13/2021
tblConstructionPhase	PhaseStartDate	4/1/2022	7/28/2021
tblConstructionPhase	PhaseStartDate	5/14/2021	4/21/2021
tblConstructionPhase	PhaseStartDate	5/6/2021	4/14/2021
tblConstructionPhase	PhaseStartDate	3/18/2022	7/23/2021
tblConstructionPhase	PhaseStartDate	5/1/2021	4/13/2021
tblEnergyUse	LightingElect	3.08	2.75
tblEnergyUse	LightingElect	0.35	0.31
tblEnergyUse	T24E	1.48	1.32
tblEnergyUse	T24NG	19.71	19.51
tblGrading	AcresOfGrading	2.50	3.00
tblGrading	AcresOfGrading	1.50	4.50
tblGrading	MaterialExported	0.00	3,028.00
tblGrading	MaterialImported	0.00	2,136.00
tblLandUse	LotAcreage	0.10	1.74

tblVehicleTrips	ST_TR	168.56	0.00
tblVehicleTrips	SU_TR	168.56	0.00
tblVehicleTrips	WD_TR	168.56	0.00

2.0 Emissions Summary

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	23.0036	47.0822	16.3833	0.1013	8.6181	1.0670	9.6202	3.9039	0.9965	4.8290	0.0000	10,574.8472	10,574.8472	1.0077	0.0000	10,600.0403
Maximum	**23.0036**	**47.0822**	**16.3833**	**0.1013**	**8.6181**	**1.0670**	**9.6202**	**3.9039**	**0.9965**	**4.8290**	**0.0000**	**10,574.8472**	**10,574.8472**	**1.0077**	**0.0000**	**10,600.0403**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	23.0036	47.0822	16.3833	0.1013	4.9052	1.0670	5.9073	2.0378	0.9965	2.9629	0.0000	10,574.8472	10,574.8472	1.0077	0.0000	10,600.0403
Maximum	**23.0036**	**47.0822**	**16.3833**	**0.1013**	**4.9052**	**1.0670**	**5.9073**	**2.0378**	**0.9965**	**2.9629**	**0.0000**	**10,574.8472**	**10,574.8472**	**1.0077**	**0.0000**	**10,600.0403**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**43.08**	**0.00**	**38.60**	**47.80**	**0.00**	**38.64**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1349	1.5000e-004	0.0163	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0348	0.0348	9.0000e-005		0.0371
Energy	3.4900e-003	0.0318	0.0267	1.9000e-004		2.4100e-003	2.4100e-003		2.4100e-003	2.4100e-003		38.1211	38.1211	7.3000e-004	7.0000e-004	38.3477
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1384**	**0.0319**	**0.0430**	**1.9000e-004**	**0.0000**	**2.4700e-003**	**2.4700e-003**	**0.0000**	**2.4700e-003**	**2.4700e-003**		**38.1559**	**38.1559**	**8.2000e-004**	**7.0000e-004**	**38.3848**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1349	1.5000e-004	0.0163	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0348	0.0348	9.0000e-005		0.0371
Energy	3.4900e-003	0.0318	0.0267	1.9000e-004		2.4100e-003	2.4100e-003		2.4100e-003	2.4100e-003		38.1211	38.1211	7.3000e-004	7.0000e-004	38.3477
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1384**	**0.0319**	**0.0430**	**1.9000e-004**	**0.0000**	**2.4700e-003**	**2.4700e-003**	**0.0000**	**2.4700e-003**	**2.4700e-003**		**38.1559**	**38.1559**	**8.2000e-004**	**7.0000e-004**	**38.3848**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/5/2021	4/12/2021	5	6	
2	Site Preparation	Site Preparation	4/13/2021	4/13/2021	5	1	
3	Grading	Grading	4/14/2021	4/20/2021	5	5	
4	Building Construction	Building Construction	4/21/2021	7/22/2021	5	67	
5	Paving	Paving	7/23/2021	7/27/2021	5	3	
6	Architectural Coating	Architectural Coating	7/28/2021	7/30/2021	5	3	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 3

Acres of Paving: 1.14

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 6,776; Non-Residential Outdoor: 2,259; Striped Parking Area: 3,048 (Architectural Coating – sqft)

OffRoad Equipment

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Paving	Paving Equipment	1	8.00	132	0.36
Site Preparation	Scrapers	1	8.00	367	0.48
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	182.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	511.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	23.00	9.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5624	0.0000	6.5624	0.9936	0.0000	0.9936			0.0000			0.0000
Off-Road	1.9930	19.6966	14.4925	0.0241		1.0409	1.0409		0.9715	0.9715		2,322.7171	2,322.7171	0.5940		2,337.5658
Total	**1.9930**	**19.6966**	**14.4925**	**0.0241**	**6.5624**	**1.0409**	**7.6033**	**0.9936**	**0.9715**	**1.9651**		**2,322.7171**	**2,322.7171**	**0.5940**		**2,337.5658**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2330	7.9690	1.5568	0.0237	0.5299	0.0255	0.5553	0.1452	0.0244	0.1696		2,522.4132	2,522.4132	0.1070		2,525.0879
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0437	0.0252	0.3340	1.0500e-003	0.1068	6.7000e-004	0.1075	0.0283	6.2000e-004	0.0289		104.8368	104.8368	2.3800e-003		104.8963
Total	**0.2766**	**7.9942**	**1.8907**	**0.0248**	**0.6366**	**0.0261**	**0.6628**	**0.1735**	**0.0250**	**0.1985**		**2,627.2500**	**2,627.2500**	**0.1094**		**2,629.9842**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.9531	0.0000	2.9531	0.4471	0.0000	0.4471			0.0000			0.0000
Off-Road	1.9930	19.6966	14.4925	0.0241		1.0409	1.0409		0.9715	0.9715	0.0000	2,322.7171	2,322.7171	0.5940		2,337.5658
Total	**1.9930**	**19.6966**	**14.4925**	**0.0241**	**2.9531**	**1.0409**	**3.9940**	**0.4471**	**0.9715**	**1.4186**	**0.0000**	**2,322.7171**	**2,322.7171**	**0.5940**		**2,337.5658**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2330	7.9690	1.5568	0.0237	0.5299	0.0255	0.5553	0.1452	0.0244	0.1696		2,522.4132	2,522.4132	0.1070		2,525.0879
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0437	0.0252	0.3340	1.0500e-003	0.1068	6.7000e-004	0.1075	0.0283	6.2000e-004	0.0289		104.8368	104.8368	2.3800e-003		104.8963
Total	**0.2766**	**7.9942**	**1.8907**	**0.0248**	**0.6366**	**0.0261**	**0.6628**	**0.1735**	**0.0250**	**0.1985**		**2,627.2500**	**2,627.2500**	**0.1094**		**2,629.9842**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.7723	0.0000	4.7723	0.5153	0.0000	0.5153			0.0000			0.0000
Off-Road	1.5463	18.2862	10.7496	0.0245		0.7019	0.7019		0.6457	0.6457		2,372.8832	2,372.8832	0.7674		2,392.0692
Total	**1.5463**	**18.2862**	**10.7496**	**0.0245**	**4.7723**	**0.7019**	**5.4741**	**0.5153**	**0.6457**	**1.1610**		**2,372.8832**	**2,372.8832**	**0.7674**		**2,392.0692**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0269	0.0155	0.2055	6.5000e-004	0.0657	4.1000e-004	0.0661	0.0174	3.8000e-004	0.0178		64.5150	64.5150	1.4600e-003		64.5516
Total	**0.0269**	**0.0155**	**0.2055**	**6.5000e-004**	**0.0657**	**4.1000e-004**	**0.0661**	**0.0174**	**3.8000e-004**	**0.0178**		**64.5150**	**64.5150**	**1.4600e-003**		**64.5516**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.1475	0.0000	2.1475	0.2319	0.0000	0.2319			0.0000			0.0000
Off-Road	1.5463	18.2862	10.7496	0.0245		0.7019	0.7019		0.6457	0.6457	0.0000	2,372.8832	2,372.8832	0.7674		2,392.0692
Total	**1.5463**	**18.2862**	**10.7496**	**0.0245**	**2.1475**	**0.7019**	**2.8494**	**0.2319**	**0.6457**	**0.8776**	**0.0000**	**2,372.8832**	**2,372.8832**	**0.7674**		**2,392.0692**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0269	0.0155	0.2055	6.5000e-004	0.0657	4.1000e-004	0.0661	0.0174	3.8000e-004	0.0178		64.5150	64.5150	1.4600e-003		64.5516
Total	**0.0269**	**0.0155**	**0.2055**	**6.5000e-004**	**0.0657**	**4.1000e-004**	**0.0661**	**0.0174**	**3.8000e-004**	**0.0178**		**64.5150**	**64.5150**	**1.4600e-003**		**64.5516**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.7508	0.0000	6.7508	3.3929	0.0000	3.3929			0.0000			0.0000
Off-Road	1.8271	20.2135	9.7604	0.0206		0.9158	0.9158		0.8425	0.8425		1,995.6114	1,995.6114	0.6454		2,011.7470
Total	**1.8271**	**20.2135**	**9.7604**	**0.0206**	**6.7508**	**0.9158**	**7.6665**	**3.3929**	**0.8425**	**4.2354**		**1,995.6114**	**1,995.6114**	**0.6454**		**2,011.7470**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.7849	26.8493	5.2452	0.0799	1.7852	0.0858	1.8710	0.4892	0.0821	0.5713		8,498.5921	8,498.5921	0.3605		8,507.6039
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0336	0.0194	0.2569	8.1000e-004	0.0822	5.2000e-004	0.0827	0.0218	4.7000e-004	0.0223		80.6437	80.6437	1.8300e-003		80.6894
Total	**0.8184**	**26.8687**	**5.5021**	**0.0807**	**1.8673**	**0.0863**	**1.9537**	**0.5110**	**0.0826**	**0.5935**		**8,579.2358**	**8,579.2358**	**0.3623**		**8,588.2933**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.0379	0.0000	3.0379	1.5268	0.0000	1.5268			0.0000			0.0000
Off-Road	1.8271	20.2135	9.7604	0.0206		0.9158	0.9158		0.8425	0.8425	0.0000	1,995.6114	1,995.6114	0.6454		2,011.7470
Total	**1.8271**	**20.2135**	**9.7604**	**0.0206**	**3.0379**	**0.9158**	**3.9536**	**1.5268**	**0.8425**	**2.3693**	**0.0000**	**1,995.6114**	**1,995.6114**	**0.6454**		**2,011.7470**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.7849	26.8493	5.2452	0.0799	1.7852	0.0858	1.8710	0.4892	0.0821	0.5713		8,498.5921	8,498.5921	0.3605		8,507.6039
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0336	0.0194	0.2569	8.1000e-004	0.0822	5.2000e-004	0.0827	0.0218	4.7000e-004	0.0223		80.6437	80.6437	1.8300e-003		80.6894
Total	**0.8184**	**26.8687**	**5.5021**	**0.0807**	**1.8673**	**0.0863**	**1.9537**	**0.5110**	**0.0826**	**0.5935**		**8,579.2358**	**8,579.2358**	**0.3623**		**8,588.2933**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0451	16.0275	14.5629	0.0250		0.8173	0.8173		0.7831	0.7831		2,288.9355	2,288.9355	0.4503		2,300.1935
Total	**2.0451**	**16.0275**	**14.5629**	**0.0250**		**0.8173**	**0.8173**		**0.7831**	**0.7831**		**2,288.9355**	**2,288.9355**	**0.4503**		**2,300.1935**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0288	0.9206	0.2204	2.4600e-003	0.0609	2.0600e-003	0.0630	0.0175	1.9700e-003	0.0195		259.2465	259.2465	0.0114		259.5325
Worker	0.0772	0.0446	0.5908	1.8600e-003	0.1889	1.1900e-003	0.1901	0.0501	1.0900e-003	0.0512		185.4805	185.4805	4.2100e-003		185.5857
Total	**0.1060**	**0.9652**	**0.8113**	**4.3200e-003**	**0.2499**	**3.2500e-003**	**0.2531**	**0.0677**	**3.0600e-003**	**0.0707**		**444.7270**	**444.7270**	**0.0157**		**445.1182**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0451	16.0275	14.5629	0.0250		0.8173	0.8173		0.7831	0.7831	0.0000	2,288.9355	2,288.9355	0.4503		2,300.1935
Total	**2.0451**	**16.0275**	**14.5629**	**0.0250**		**0.8173**	**0.8173**		**0.7831**	**0.7831**	**0.0000**	**2,288.9355**	**2,288.9355**	**0.4503**		**2,300.1935**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0288	0.9206	0.2204	2.4600e-003	0.0609	2.0600e-003	0.0630	0.0175	1.9700e-003	0.0195		259.2465	259.2465	0.0114		259.5325
Worker	0.0772	0.0446	0.5908	1.8600e-003	0.1889	1.1900e-003	0.1901	0.0501	1.0900e-003	0.0512		185.4805	185.4805	4.2100e-003		185.5857
Total	**0.1060**	**0.9652**	**0.8113**	**4.3200e-003**	**0.2499**	**3.2500e-003**	**0.2531**	**0.0677**	**3.0600e-003**	**0.0707**		**444.7270**	**444.7270**	**0.0157**		**445.1182**

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0633	10.6478	11.7756	0.0178		0.5826	0.5826		0.5371	0.5371		1,709.1107	1,709.1107	0.5417		1,722.6524
Paving	0.9956					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.0589**	**10.6478**	**11.7756**	**0.0178**		**0.5826**	**0.5826**		**0.5371**	**0.5371**		**1,709.1107**	**1,709.1107**	**0.5417**		**1,722.6524**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

3.6 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0504	0.0291	0.3853	1.2100e-003	0.1232	7.7000e-004	0.1240	0.0327	7.1000e-004	0.0334		120.9656	120.9656	2.7400e-003		121.0342
Total	**0.0504**	**0.0291**	**0.3853**	**1.2100e-003**	**0.1232**	**7.7000e-004**	**0.1240**	**0.0327**	**7.1000e-004**	**0.0334**		**120.9656**	**120.9656**	**2.7400e-003**		**121.0342**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0633	10.6478	11.7756	0.0178		0.5826	0.5826		0.5371	0.5371	0.0000	1,709.1107	1,709.1107	0.5417		1,722.6524
Paving	0.9956					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.0589**	**10.6478**	**11.7756**	**0.0178**		**0.5826**	**0.5826**		**0.5371**	**0.5371**	**0.0000**	**1,709.1107**	**1,709.1107**	**0.5417**		**1,722.6524**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

3.6 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0504	0.0291	0.3853	1.2100e-003	0.1232	7.7000e-004	0.1240	0.0327	7.1000e-004	0.0334		120.9656	120.9656	2.7400e-003		121.0342
Total	**0.0504**	**0.0291**	**0.3853**	**1.2100e-003**	**0.1232**	**7.7000e-004**	**0.1240**	**0.0327**	**7.1000e-004**	**0.0334**		**120.9656**	**120.9656**	**2.7400e-003**		**121.0342**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	22.7679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**22.9868**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

3.7 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0168	9.6900e-003	0.1284	4.0000e-004	0.0411	2.6000e-004	0.0413	0.0109	2.4000e-004	0.0111		40.3219	40.3219	9.1000e-004		40.3447
Total	**0.0168**	**9.6900e-003**	**0.1284**	**4.0000e-004**	**0.0411**	**2.6000e-004**	**0.0413**	**0.0109**	**2.4000e-004**	**0.0111**		**40.3219**	**40.3219**	**9.1000e-004**		**40.3447**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	22.7679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**22.9868**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

3.7 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0168	9.6900e-003	0.1284	4.0000e-004	0.0411	2.6000e-004	0.0413	0.0109	2.4000e-004	0.0111		40.3219	40.3219	9.1000e-004		40.3447
Total	**0.0168**	**9.6900e-003**	**0.1284**	**4.0000e-004**	**0.0411**	**2.6000e-004**	**0.0413**	**0.0109**	**2.4000e-004**	**0.0111**		**40.3219**	**40.3219**	**9.1000e-004**		**40.3447**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Gasoline/Service Station	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Gasoline/Service Station	9.50	7.30	7.30	2.00	79.00	19.00	14	27	59
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Gasoline/Service Station	0.582298	0.039109	0.186022	0.123408	0.017184	0.005083	0.010615	0.023794	0.001605	0.001810	0.005454	0.002746	0.000871
Parking Lot	0.582298	0.039109	0.186022	0.123408	0.017184	0.005083	0.010615	0.023794	0.001605	0.001810	0.005454	0.002746	0.000871

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	3.4900e-003	0.0318	0.0267	1.9000e-004		2.4100e-003	2.4100e-003		2.4100e-003	2.4100e-003		38.1211	38.1211	7.3000e-004	7.0000e-004	38.3477
NaturalGas Unmitigated	3.4900e-003	0.0318	0.0267	1.9000e-004		2.4100e-003	2.4100e-003		2.4100e-003	2.4100e-003		38.1211	38.1211	7.3000e-004	7.0000e-004	38.3477

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Gasoline/Service Station	324.03	3.4900e-003	0.0318	0.0267	1.9000e-004		2.4100e-003	2.4100e-003		2.4100e-003	2.4100e-003		38.1211	38.1211	7.3000e-004	7.0000e-004	38.3477
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**3.4900e-003**	**0.0318**	**0.0267**	**1.9000e-004**		**2.4100e-003**	**2.4100e-003**		**2.4100e-003**	**2.4100e-003**		**38.1211**	**38.1211**	**7.3000e-004**	**7.0000e-004**	**38.3477**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Gasoline/Service Station	0.32403	3.4900e-003	0.0318	0.0267	1.9000e-004		2.4100e-003	2.4100e-003		2.4100e-003	2.4100e-003		38.1211	38.1211	7.3000e-004	7.0000e-004	38.3477
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**3.4900e-003**	**0.0318**	**0.0267**	**1.9000e-004**		**2.4100e-003**	**2.4100e-003**		**2.4100e-003**	**2.4100e-003**		**38.1211**	**38.1211**	**7.3000e-004**	**7.0000e-004**	**38.3477**

6.0 Area Detail

6.1 Mitigation Measures Area

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1349	1.5000e-004	0.0163	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0348	0.0348	9.0000e-005		0.0371
Unmitigated	0.1349	1.5000e-004	0.0163	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0348	0.0348	9.0000e-005		0.0371

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0187					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1147					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.5200e-003	1.5000e-004	0.0163	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0348	0.0348	9.0000e-005		0.0371
Total	**0.1349**	**1.5000e-004**	**0.0163**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**		**0.0348**	**0.0348**	**9.0000e-005**		**0.0371**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0187					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1147					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.5200e-003	1.5000e-004	0.0163	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0348	0.0348	9.0000e-005		0.0371
Total	**0.1349**	**1.5000e-004**	**0.0163**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**		**0.0348**	**0.0348**	**9.0000e-005**		**0.0371**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

APPENDIX A.3
COSTCO DANVILLE – CONTRA COSTA COUNTY, WINTER

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Costco Danville

Contra Costa County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Gasoline/Service Station	32.00	Pump	1.74	4,517.60	0
Parking Lot	127.00	Space	1.14	50,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site plan

Construction Phase - Construction schedule based on project-specific information

Grading - material imported and exported

Demolition -

Vehicle Trips - Mobile emissions calculated externally

Energy Use - Title 24 2019

Construction Off-road Equipment Mitigation - 2x daily watering

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

Costco Danville - Contra Costa County, Winter

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	3.00
tblConstructionPhase	NumDays	220.00	67.00
tblConstructionPhase	NumDays	20.00	6.00
tblConstructionPhase	NumDays	6.00	5.00
tblConstructionPhase	NumDays	10.00	3.00
tblConstructionPhase	NumDays	3.00	1.00
tblConstructionPhase	PhaseEndDate	4/14/2022	7/30/2021
tblConstructionPhase	PhaseEndDate	3/17/2022	7/22/2021
tblConstructionPhase	PhaseEndDate	4/30/2021	4/12/2021
tblConstructionPhase	PhaseEndDate	5/13/2021	4/20/2021
tblConstructionPhase	PhaseEndDate	3/31/2022	7/27/2021
tblConstructionPhase	PhaseEndDate	5/5/2021	4/13/2021
tblConstructionPhase	PhaseStartDate	4/1/2022	7/28/2021
tblConstructionPhase	PhaseStartDate	5/14/2021	4/21/2021
tblConstructionPhase	PhaseStartDate	5/6/2021	4/14/2021
tblConstructionPhase	PhaseStartDate	3/18/2022	7/23/2021
tblConstructionPhase	PhaseStartDate	5/1/2021	4/13/2021
tblEnergyUse	LightingElect	3.08	2.75
tblEnergyUse	LightingElect	0.35	0.31
tblEnergyUse	T24E	1.48	1.32
tblEnergyUse	T24NG	19.71	19.51
tblGrading	AcresOfGrading	2.50	3.00
tblGrading	AcresOfGrading	1.50	4.50
tblGrading	MaterialExported	0.00	3,028.00
tblGrading	MaterialImported	0.00	2,136.00
tblLandUse	LotAcreage	0.10	1.74

tblVehicleTrips	ST_TR	168.56	0.00
tblVehicleTrips	SU_TR	168.56	0.00
tblVehicleTrips	WD_TR	168.56	0.00

2.0 Emissions Summary

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	23.0038	47.6840	16.4798	0.0998	8.6181	1.0675	9.6217	3.9039	0.9969	4.8304	0.0000	10,420.8926	10,420.8926	1.0296	0.0000	10,446.6318
Maximum	**23.0038**	**47.6840**	**16.4798**	**0.0998**	**8.6181**	**1.0675**	**9.6217**	**3.9039**	**0.9969**	**4.8304**	**0.0000**	**10,420.8926**	**10,420.8926**	**1.0296**	**0.0000**	**10,446.6318**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	23.0038	47.6840	16.4798	0.0998	4.9052	1.0675	5.9088	2.0378	0.9969	2.9643	0.0000	10,420.8926	10,420.8926	1.0296	0.0000	10,446.6318
Maximum	**23.0038**	**47.6840**	**16.4798**	**0.0998**	**4.9052**	**1.0675**	**5.9088**	**2.0378**	**0.9969**	**2.9643**	**0.0000**	**10,420.8926**	**10,420.8926**	**1.0296**	**0.0000**	**10,446.6318**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**43.08**	**0.00**	**38.59**	**47.80**	**0.00**	**38.63**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1349	1.5000e-004	0.0163	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0348	0.0348	9.0000e-005		0.0371
Energy	3.4900e-003	0.0318	0.0267	1.9000e-004		2.4100e-003	2.4100e-003		2.4100e-003	2.4100e-003		38.1211	38.1211	7.3000e-004	7.0000e-004	38.3477
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1384**	**0.0319**	**0.0430**	**1.9000e-004**	**0.0000**	**2.4700e-003**	**2.4700e-003**	**0.0000**	**2.4700e-003**	**2.4700e-003**		**38.1559**	**38.1559**	**8.2000e-004**	**7.0000e-004**	**38.3848**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1349	1.5000e-004	0.0163	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0348	0.0348	9.0000e-005		0.0371
Energy	3.4900e-003	0.0318	0.0267	1.9000e-004		2.4100e-003	2.4100e-003		2.4100e-003	2.4100e-003		38.1211	38.1211	7.3000e-004	7.0000e-004	38.3477
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1384**	**0.0319**	**0.0430**	**1.9000e-004**	**0.0000**	**2.4700e-003**	**2.4700e-003**	**0.0000**	**2.4700e-003**	**2.4700e-003**		**38.1559**	**38.1559**	**8.2000e-004**	**7.0000e-004**	**38.3848**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/5/2021	4/12/2021	5	6	
2	Site Preparation	Site Preparation	4/13/2021	4/13/2021	5	1	
3	Grading	Grading	4/14/2021	4/20/2021	5	5	
4	Building Construction	Building Construction	4/21/2021	7/22/2021	5	67	
5	Paving	Paving	7/23/2021	7/27/2021	5	3	
6	Architectural Coating	Architectural Coating	7/28/2021	7/30/2021	5	3	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 3

Acres of Paving: 1.14

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 6,776; Non-Residential Outdoor: 2,259; Striped Parking Area: 3,048 (Architectural Coating – sqft)

OffRoad Equipment

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Paving	Paving Equipment	1	8.00	132	0.36
Site Preparation	Scrapers	1	8.00	367	0.48
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	182.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	511.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	23.00	9.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5624	0.0000	6.5624	0.9936	0.0000	0.9936			0.0000			0.0000
Off-Road	1.9930	19.6966	14.4925	0.0241		1.0409	1.0409		0.9715	0.9715		2,322.7171	2,322.7171	0.5940		2,337.5658
Total	**1.9930**	**19.6966**	**14.4925**	**0.0241**	**6.5624**	**1.0409**	**7.6033**	**0.9936**	**0.9715**	**1.9651**		**2,322.7171**	**2,322.7171**	**0.5940**		**2,337.5658**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2395	8.1462	1.6824	0.0233	0.5299	0.0259	0.5558	0.1452	0.0248	0.1700		2,478.9681	2,478.9681	0.1135		2,481.8061
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0443	0.0311	0.3048	9.5000e-004	0.1068	6.7000e-004	0.1075	0.0283	6.2000e-004	0.0289		94.9852	94.9852	2.1800e-003		95.0397
Total	**0.2837**	**8.1773**	**1.9873**	**0.0243**	**0.6366**	**0.0266**	**0.6632**	**0.1735**	**0.0254**	**0.1989**		**2,573.9533**	**2,573.9533**	**0.1157**		**2,576.8458**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.9531	0.0000	2.9531	0.4471	0.0000	0.4471			0.0000			0.0000
Off-Road	1.9930	19.6966	14.4925	0.0241		1.0409	1.0409		0.9715	0.9715	0.0000	2,322.7171	2,322.7171	0.5940		2,337.5658
Total	**1.9930**	**19.6966**	**14.4925**	**0.0241**	**2.9531**	**1.0409**	**3.9940**	**0.4471**	**0.9715**	**1.4186**	**0.0000**	**2,322.7171**	**2,322.7171**	**0.5940**		**2,337.5658**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2395	8.1462	1.6824	0.0233	0.5299	0.0259	0.5558	0.1452	0.0248	0.1700		2,478.9681	2,478.9681	0.1135		2,481.8061
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0443	0.0311	0.3048	9.5000e-004	0.1068	6.7000e-004	0.1075	0.0283	6.2000e-004	0.0289		94.9852	94.9852	2.1800e-003		95.0397
Total	**0.2837**	**8.1773**	**1.9873**	**0.0243**	**0.6366**	**0.0266**	**0.6632**	**0.1735**	**0.0254**	**0.1989**		**2,573.9533**	**2,573.9533**	**0.1157**		**2,576.8458**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.7723	0.0000	4.7723	0.5153	0.0000	0.5153			0.0000			0.0000
Off-Road	1.5463	18.2862	10.7496	0.0245		0.7019	0.7019		0.6457	0.6457		2,372.8832	2,372.8832	0.7674		2,392.0692
Total	**1.5463**	**18.2862**	**10.7496**	**0.0245**	**4.7723**	**0.7019**	**5.4741**	**0.5153**	**0.6457**	**1.1610**		**2,372.8832**	**2,372.8832**	**0.7674**		**2,392.0692**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0272	0.0191	0.1876	5.9000e-004	0.0657	4.1000e-004	0.0661	0.0174	3.8000e-004	0.0178		58.4524	58.4524	1.3400e-003		58.4860
Total	**0.0272**	**0.0191**	**0.1876**	**5.9000e-004**	**0.0657**	**4.1000e-004**	**0.0661**	**0.0174**	**3.8000e-004**	**0.0178**		**58.4524**	**58.4524**	**1.3400e-003**		**58.4860**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.1475	0.0000	2.1475	0.2319	0.0000	0.2319			0.0000			0.0000
Off-Road	1.5463	18.2862	10.7496	0.0245		0.7019	0.7019		0.6457	0.6457	0.0000	2,372.8832	2,372.8832	0.7674		2,392.0692
Total	**1.5463**	**18.2862**	**10.7496**	**0.0245**	**2.1475**	**0.7019**	**2.8494**	**0.2319**	**0.6457**	**0.8776**	**0.0000**	**2,372.8832**	**2,372.8832**	**0.7674**		**2,392.0692**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0272	0.0191	0.1876	5.9000e-004	0.0657	4.1000e-004	0.0661	0.0174	3.8000e-004	0.0178		58.4524	58.4524	1.3400e-003		58.4860
Total	**0.0272**	**0.0191**	**0.1876**	**5.9000e-004**	**0.0657**	**4.1000e-004**	**0.0661**	**0.0174**	**3.8000e-004**	**0.0178**		**58.4524**	**58.4524**	**1.3400e-003**		**58.4860**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.7508	0.0000	6.7508	3.3929	0.0000	3.3929			0.0000			0.0000
Off-Road	1.8271	20.2135	9.7604	0.0206		0.9158	0.9158		0.8425	0.8425		1,995.6114	1,995.6114	0.6454		2,011.7470
Total	**1.8271**	**20.2135**	**9.7604**	**0.0206**	**6.7508**	**0.9158**	**7.6665**	**3.3929**	**0.8425**	**4.2354**		**1,995.6114**	**1,995.6114**	**0.6454**		**2,011.7470**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.8069	27.4466	5.6685	0.0785	1.7852	0.0873	1.8725	0.4892	0.0835	0.5727		8,352.2156	8,352.2156	0.3825		8,361.7774
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0341	0.0239	0.2345	7.3000e-004	0.0822	5.2000e-004	0.0827	0.0218	4.7000e-004	0.0223		73.0656	73.0656	1.6800e-003		73.1075
Total	**0.8409**	**27.4704**	**5.9030**	**0.0793**	**1.8673**	**0.0878**	**1.9552**	**0.5110**	**0.0840**	**0.5950**		**8,425.2812**	**8,425.2812**	**0.3842**		**8,434.8849**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.0379	0.0000	3.0379	1.5268	0.0000	1.5268			0.0000			0.0000
Off-Road	1.8271	20.2135	9.7604	0.0206		0.9158	0.9158		0.8425	0.8425	0.0000	1,995.6114	1,995.6114	0.6454		2,011.7470
Total	**1.8271**	**20.2135**	**9.7604**	**0.0206**	**3.0379**	**0.9158**	**3.9536**	**1.5268**	**0.8425**	**2.3693**	**0.0000**	**1,995.6114**	**1,995.6114**	**0.6454**		**2,011.7470**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.8069	27.4466	5.6685	0.0785	1.7852	0.0873	1.8725	0.4892	0.0835	0.5727		8,352.2156	8,352.2156	0.3825		8,361.7774
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0341	0.0239	0.2345	7.3000e-004	0.0822	5.2000e-004	0.0827	0.0218	4.7000e-004	0.0223		73.0656	73.0656	1.6800e-003		73.1075
Total	**0.8409**	**27.4704**	**5.9030**	**0.0793**	**1.8673**	**0.0878**	**1.9552**	**0.5110**	**0.0840**	**0.5950**		**8,425.2812**	**8,425.2812**	**0.3842**		**8,434.8849**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0451	16.0275	14.5629	0.0250		0.8173	0.8173		0.7831	0.7831		2,288.9355	2,288.9355	0.4503		2,300.1935
Total	**2.0451**	**16.0275**	**14.5629**	**0.0250**		**0.8173**	**0.8173**		**0.7831**	**0.7831**		**2,288.9355**	**2,288.9355**	**0.4503**		**2,300.1935**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0305	0.9284	0.2549	2.4000e-003	0.0609	2.1300e-003	0.0630	0.0175	2.0300e-003	0.0196		252.6092	252.6092	0.0125		252.9216
Worker	0.0783	0.0550	0.5393	1.6900e-003	0.1889	1.1900e-003	0.1901	0.0501	1.0900e-003	0.0512		168.0508	168.0508	3.8600e-003		168.1472
Total	**0.1089**	**0.9834**	**0.7942**	**4.0900e-003**	**0.2499**	**3.3200e-003**	**0.2532**	**0.0677**	**3.1200e-003**	**0.0708**		**420.6600**	**420.6600**	**0.0164**		**421.0688**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0451	16.0275	14.5629	0.0250		0.8173	0.8173		0.7831	0.7831	0.0000	2,288.9355	2,288.9355	0.4503		2,300.1935
Total	**2.0451**	**16.0275**	**14.5629**	**0.0250**		**0.8173**	**0.8173**		**0.7831**	**0.7831**	**0.0000**	**2,288.9355**	**2,288.9355**	**0.4503**		**2,300.1935**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0305	0.9284	0.2549	2.4000e-003	0.0609	2.1300e-003	0.0630	0.0175	2.0300e-003	0.0196		252.6092	252.6092	0.0125		252.9216
Worker	0.0783	0.0550	0.5393	1.6900e-003	0.1889	1.1900e-003	0.1901	0.0501	1.0900e-003	0.0512		168.0508	168.0508	3.8600e-003		168.1472
Total	**0.1089**	**0.9834**	**0.7942**	**4.0900e-003**	**0.2499**	**3.3200e-003**	**0.2532**	**0.0677**	**3.1200e-003**	**0.0708**		**420.6600**	**420.6600**	**0.0164**		**421.0688**

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0633	10.6478	11.7756	0.0178		0.5826	0.5826		0.5371	0.5371		1,709.1107	1,709.1107	0.5417		1,722.6524
Paving	0.9956					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.0589**	**10.6478**	**11.7756**	**0.0178**		**0.5826**	**0.5826**		**0.5371**	**0.5371**		**1,709.1107**	**1,709.1107**	**0.5417**		**1,722.6524**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

3.6 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0511	0.0358	0.3517	1.1000e-003	0.1232	7.7000e-004	0.1240	0.0327	7.1000e-004	0.0334		109.5983	109.5983	2.5200e-003		109.6612
Total	**0.0511**	**0.0358**	**0.3517**	**1.1000e-003**	**0.1232**	**7.7000e-004**	**0.1240**	**0.0327**	**7.1000e-004**	**0.0334**		**109.5983**	**109.5983**	**2.5200e-003**		**109.6612**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0633	10.6478	11.7756	0.0178		0.5826	0.5826		0.5371	0.5371	0.0000	1,709.1107	1,709.1107	0.5417		1,722.6524
Paving	0.9956					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.0589**	**10.6478**	**11.7756**	**0.0178**		**0.5826**	**0.5826**		**0.5371**	**0.5371**	**0.0000**	**1,709.1107**	**1,709.1107**	**0.5417**		**1,722.6524**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

3.6 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0511	0.0358	0.3517	1.1000e-003	0.1232	7.7000e-004	0.1240	0.0327	7.1000e-004	0.0334		109.5983	109.5983	2.5200e-003		109.6612
Total	**0.0511**	**0.0358**	**0.3517**	**1.1000e-003**	**0.1232**	**7.7000e-004**	**0.1240**	**0.0327**	**7.1000e-004**	**0.0334**		**109.5983**	**109.5983**	**2.5200e-003**		**109.6612**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	22.7679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**22.9868**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

3.7 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0170	0.0120	0.1172	3.7000e-004	0.0411	2.6000e-004	0.0413	0.0109	2.4000e-004	0.0111		36.5328	36.5328	8.4000e-004		36.5537
Total	**0.0170**	**0.0120**	**0.1172**	**3.7000e-004**	**0.0411**	**2.6000e-004**	**0.0413**	**0.0109**	**2.4000e-004**	**0.0111**		**36.5328**	**36.5328**	**8.4000e-004**		**36.5537**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	22.7679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**22.9868**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

3.7 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0170	0.0120	0.1172	3.7000e-004	0.0411	2.6000e-004	0.0413	0.0109	2.4000e-004	0.0111		36.5328	36.5328	8.4000e-004		36.5537
Total	**0.0170**	**0.0120**	**0.1172**	**3.7000e-004**	**0.0411**	**2.6000e-004**	**0.0413**	**0.0109**	**2.4000e-004**	**0.0111**		**36.5328**	**36.5328**	**8.4000e-004**		**36.5537**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Gasoline/Service Station	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Gasoline/Service Station	9.50	7.30	7.30	2.00	79.00	19.00	14	27	59
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Gasoline/Service Station	0.582298	0.039109	0.186022	0.123408	0.017184	0.005083	0.010615	0.023794	0.001605	0.001810	0.005454	0.002746	0.000871
Parking Lot	0.582298	0.039109	0.186022	0.123408	0.017184	0.005083	0.010615	0.023794	0.001605	0.001810	0.005454	0.002746	0.000871

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	3.4900e-003	0.0318	0.0267	1.9000e-004		2.4100e-003	2.4100e-003		2.4100e-003	2.4100e-003		38.1211	38.1211	7.3000e-004	7.0000e-004	38.3477
NaturalGas Unmitigated	3.4900e-003	0.0318	0.0267	1.9000e-004		2.4100e-003	2.4100e-003		2.4100e-003	2.4100e-003		38.1211	38.1211	7.3000e-004	7.0000e-004	38.3477

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Gasoline/Service Station	324.03	3.4900e-003	0.0318	0.0267	1.9000e-004		2.4100e-003	2.4100e-003		2.4100e-003	2.4100e-003		38.1211	38.1211	7.3000e-004	7.0000e-004	38.3477
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**3.4900e-003**	**0.0318**	**0.0267**	**1.9000e-004**		**2.4100e-003**	**2.4100e-003**		**2.4100e-003**	**2.4100e-003**		**38.1211**	**38.1211**	**7.3000e-004**	**7.0000e-004**	**38.3477**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Gasoline/Service Station	0.32403	3.4900e-003	0.0318	0.0267	1.9000e-004		2.4100e-003	2.4100e-003		2.4100e-003	2.4100e-003		38.1211	38.1211	7.3000e-004	7.0000e-004	38.3477
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**3.4900e-003**	**0.0318**	**0.0267**	**1.9000e-004**		**2.4100e-003**	**2.4100e-003**		**2.4100e-003**	**2.4100e-003**		**38.1211**	**38.1211**	**7.3000e-004**	**7.0000e-004**	**38.3477**

6.0 Area Detail

6.1 Mitigation Measures Area

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1349	1.5000e-004	0.0163	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0348	0.0348	9.0000e-005		0.0371
Unmitigated	0.1349	1.5000e-004	0.0163	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0348	0.0348	9.0000e-005		0.0371

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0187					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1147					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.5200e-003	1.5000e-004	0.0163	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0348	0.0348	9.0000e-005		0.0371
Total	**0.1349**	**1.5000e-004**	**0.0163**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**		**0.0348**	**0.0348**	**9.0000e-005**		**0.0371**

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0187					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1147					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.5200e-003	1.5000e-004	0.0163	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0348	0.0348	9.0000e-005		0.0371
Total	**0.1349**	**1.5000e-004**	**0.0163**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**		**0.0348**	**0.0348**	**9.0000e-005**		**0.0371**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

APPENDIX B
MOBILE SOURCE EMISSION CALCULATIONS

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Table B-1. Trip Lengths and Vehicle Miles Traveled by Operational Mobile Sources
Danville Costco Fuel Station
Contra Costa County, California

Trip Type		Average One-Way Trip Length[1,2]	Peak Daily Trips (one-way trips/day)[3]	Peak Daily VMT[4]	Annual Trips (one-way trips/year)[3]	Annual VMT[4]
Passenger Vehicles	Primary	7.3	3,740	27,467	1,318,120	9,680,273
	Internal	0.12	2,379	285	834,666	100,160
Fuel Delivery Trucks	Primary	36.0	12	432	4,380	157,680

Notes:

[1] Passenger vehicles represent vehicles used by patrons of the fuel station. Average trip length for primary trip types is assumed to be equal to the CalEEMod® default trip lengths for Contra Costa County. Internal trip length includes on-site driveways and was measured using Google Earth.

[2] Fuel delivery truck trip length is assumed to be 36 miles based on the distance to the fuel rack in Richmond, California.

[3] Trip rates based Project-specific data provided by Kittelson & Associates.

[4] Estimated as a product of average trip length and number of trips.

Abbreviations:

CalEEMod® - CALifornia Emissions Estimator MODel
VMT - vehicle miles traveled

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Table B-2. Operational Mobile Source Fleet Mixes
Danville Costco Fuel Station
Contra Costa County, California

CalEEMod® Default[1]	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
	58.2%	3.9%	18.6%	12.3%	1.7%	0.5%	1.1%	2.4%	0.2%	0.2%	0.5%	0.3%	0.1%

Passenger Vehicles[2]	LDA	LDT1	LDT2	MDV
	62.6%	4.2%	20.0%	13.3%

Notes:
[1] CalEEMod® default for Gasoline Service Station land use subtype in Contra Costa County.
[2] Passenger cars represent vehicles used by patrons of the fuel station. Fleet mix for passenger vehicles are estimated based on the ratio of the vehicle classes in CalEEMod® default fleet mix.

Abbreviations:
CalEEMod® - CALifornia Emissions Estimator MODel
LDA - Light Duty Automobile
LDT - Light-Duty Truck
LHD - Light-Heavy Duty truck
HHDT - Heavy-Heavy Duty truck
MDV - Medium-Duty Vehicle
MH - Motor Home
MHD - Medium-Heavy Duty truck
OBUS - Other Buses
UBUS - Urban Buses
MCY - Motorcycle
SBUS - School Bus

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

Table B-3. Operational Mobile Source CAP Emission Factors - Running Exhaust, Running Loss, Tire Wear, and Brake Wear
Danville Costco Fuel Station
Contra Costa County, California

EMFAC Vehicle Class	EMFAC VMT Output[1] (miles/day)	EMFAC Emissions Output[1,2] (tons/day)					
		VOC[3]	NO_x	CO	SO_x	PM_{10}[4]	$PM_{2.5}$[4]
Passenger Vehicles[5]							
LDA	14,954,127	0.68	0.75	11.25	0.04	0.76	0.32
LDT1	1,533,931	0.21	0.19	2.08	0.01	0.08	0.03
LDT2	5,101,508	0.41	0.48	5.02	0.02	0.26	0.11
MDV	3,450,715	0.37	0.49	4.54	0.02	0.18	0.07
Fuel Delivery Trucks[5]							
HHDT	594,872	0.09	2.72	0.35	0.01	0.10	0.06

EMFAC Vehicle Class	Project Specific Fleet Mix[6]	Running Exhaust, Running Loss, Tire Wear and Brake Wear Emission Factors[7] (grams/mile)					
		VOC[3]	NO_x	CO	SO_x	PM_{10}[4]	$PM_{2.5}$[4]
Passenger Vehicles[5]							
LDA	62.6%	0.041	0.045	0.68	0.0027	0.046	0.019
LDT1	4.2%	0.127	0.112	1.23	0.0031	0.047	0.020
LDT2	20.0%	0.073	0.085	0.89	0.0034	0.046	0.019
MDV	13.3%	0.096	0.129	1.19	0.0042	0.046	0.019
Weighted Emission Factor[8]		0.059	0.067	0.815	0.003	0.046	0.019
Fuel Delivery Trucks[5]							
HHDT	100.0%	0.14	4.14	0.53	0.014	0.16	0.09

Notes:

[1] Data obtained from EMFAC2017 for default emissions activity.

[2] Sum of running exhaust, running loss, tire wear, and brake wear emissions obtained from EMFAC2017 for default emissions activity.

[3] For purposes of this analysis VOC is assumed to be equal to ROG.

[4] PM emissions are a sum of exhaust, tire wear, and brake wear.

[5] Passenger vehicles are assumed to be gasoline-fueled. Fuel delivery trucks are assumed to be diesel-fueled.

[6] Data obtained from Table B-2.

[7] Emission factors for EMFAC vehicle classes are estimated as a ratio of the EMFAC emissions output and EMFAC VMT output.

[8] Emission factors for EMFAC vehicle classes are weighted based on project-specific fleet mix to estimate VMT-based emission factors for passenger vehicles.

Abbreviations:

CAP - criteria air pollutant
CO - carbon monoxide
EMFAC - EMission FACtors model
LDA - Light Duty Automobile
LDT - Light-Duty Truck
HHDT - Heavy-Heavy Duty truck
MDV - medium-duty vehicle
NO_x - nitrogen oxide compounds (NO + NO_2)
PM - particulate matter
$PM_{2.5}$ - particulate matter less than 2.5 microns in diameter
PM_{10} - particulate matter less than 10 microns in diameter
ROG - reactive organic gases
SO_x - sulfur oxide compounds
VOC - volatile organic compounds
VMT - vehicle miles traveled

Conversion Factor:

907184.74 grams per ton

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Table B-4. Operational Mobile Source CAP Emission Factors - Off-Site Starting Exhaust, Hot Soak, Diurnal Loss, and Resting Loss
Danville Costco Fuel Station
Contra Costa County, California

EMFAC Vehicle Class	EMFAC Vehicle Trips Output[1] (trips/day)	EMFAC Emissions Output[1] (tons/day)								
		VOC[2]				NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
		Off-site Starting Exhaust	Hot Soak	Diurnal	Resting Loss	Off-site Starting Exhaust				
Passenger Vehicles[3]										
LDA	1,864,798	0.6	0.2	0.1	0.1	0.5	5.0	0.001	0.004	0.004
LDT1	190,905	0.1	0.0	0.0	0.0	0.1	0.6	0.000	0.001	0.001
LDT2	624,616	0.3	0.1	0.0	0.0	0.2	2.1	0.001	0.001	0.001
MDV	446,600	0.3	0.1	0.0	0.0	0.2	1.8	0.000	0.001	0.001
Fuel Delivery Trucks[3]										
HHDT	52,150	0	0	0	0	0.1	0	0	0	0

Vehicle Class	Project Specific Fleet Mix[4]	Off-Site Starting Exhaust, Hot Soak, Diurnal, and Resting Loss Emission Factors[5] (grams/trip)								
		VOC[2]				NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
		Off-site Starting Exhaust	Hot Soak	Diurnal	Resting Loss	Off-site Starting Exhaust				
Passenger Vehicles[3]										
LDA	62.6%	0.29	0.12	0.05	0.05	0.22	2.4	0.00057	0.0020	0.0019
LDT1	4.2%	0.4	0.22	0.11	0.10	0.30	2.6	0.00067	0.0027	0.0025
LDT2	20.0%	0.37	0.14	0.06	0.07	0.33	3.1	0.00074	0.0019	0.0017
MDV	13.3%	0.52	0.17	0.08	0.08	0.44	3.7	0.00091	0.0021	0.0020
Weighted Emission Factor[6]		0.34	0.13	0.06	0.06	0.28	2.75	0.00	0.00	0.00
Fuel Delivery Trucks[3]										
HHDT	100.0%	0	0	0	0	1.9	0	0	0	0

Notes:
[1] Data obtained from EMFAC2017 for default emissions activity.
[2] For purposes of this analysis VOC is assumed to be equal to ROG.
[3] Passenger vehicles are assumed to be gasoline-fueled. Fuel delivery trucks are assumed to be diesel-fueled.
[4] Data obtained from Table B-2.
[5] Emission factors for EMFAC vehicle classes are estimated as a ratio of the EMFAC emissions output and EMFAC trip output.
[6] Emission factors for EMFAC vehicle classes are weighted based on project-specific fleet mix to estimate trip-based emission factors for passenger vehicles.

Abbreviations:
CAP - criteria air pollutant
CO - carbon monoxide
EMFAC - EMission FACtors model
LDA - Light Duty Automobile
LDT - Light-Duty Truck
HHDT - Heavy-Heavy Duty truck
MDV - medium-duty vehicle
NO_x - nitrogen oxide compounds ($NO + NO_2$)
PM - particulate matter
$PM_{2.5}$ - particulate matter less than 2.5 microns in diameter
PM_{10} - particulate matter less than 10 microns in diameter
ROG - reactive organic gases
SO_x - sulfur oxide compounds
VOC - volatile organic compounds

Conversion Factor:
907184.74 grams per ton

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Table B-5. Operational Mobile Source CAP Emission Factors - On-Site Starting Exhaust
Danville Costco Fuel Station
Contra Costa County, California

Vehicle Class	Project Specific Fleet Mix[1]	On-Site Starting Exhaust Emission Factors[2] (grams/trip)					
		VOC[3]	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Passenger Vehicles[4]							
LDA	62.6%	0.027	0.040	0.196	0.0001	0.0002	0.0002
LDT1	4.2%	0.043	0.063	0.214	0.0001	0.0002	0.0002
LDT2	20.0%	0.037	0.060	0.233	0.0001	0.0002	0.0001
MDV	13.3%	0.052	0.080	0.338	0.0001	0.0002	0.0002
Weighted Emission Factor[5]		0.033	0.050	0.223	0.0001	0.0002	0.0002
Fuel Delivery Trucks[4]							
HHDT	100.0%	0	1.89	0	0	0	0

Notes:

[1] Data obtained from Table B-2.

[2] Passenger vehicles will turn off their engines for approximately 4 minutes while fueling on-site. Hence, on-site starting exhaust emission factors for these vehicles were obtained from EMFAC2017 project-level output for starting exhaust with a 5-minute soak time. Fuel delivery trucks would turn off their engines for longer periods of time while filling up the on-site underground fuel tank. Hence, on-site starting exhaust emission factors for these vehicles were obtained from EMFAC2017 for default emissions activity.

[3] For purposes of this analysis VOC is assumed to be equal to ROG.

[4] Passenger vehicles are assumed to be gasoline-fueled. Fuel delivery trucks are assumed to be diesel-fueled.

[5] Emission factors for EMFAC vehicle classes are weighted based on project-specific fleet mix to estimate trip-based emission factors for passenger vehicles.

Abbreviations:

CAP - criteria air pollutant
CO - carbon monoxide
EMFAC - EMission FACtors model
LDA - Light Duty Automobile
LDT - Light-Duty Truck
HHDT - Heavy-Heavy Duty truck
MDV - medium-duty vehicle
NO_x - nitrogen oxide compounds ($NO + NO_2$)
PM - particulate matter
$PM_{2.5}$ - particulate matter less than 2.5 microns in diameter
PM_{10} - particulate matter less than 10 microns in diameter
ROG - reactive organic gases
SO_x - sulfur oxide compounds
VOC - volatile organic compounds

Conversion Factor:

907184.74 grams per ton

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Table B-6. Operational Mobile Source CAP Emission Factors - Idling
Danville Costco Fuel Station
Contra Costa County, California

EMFAC Vehicle Class	Project Specific Fleet Mix[1]	Idling Emission Factors[2] (grams/idle-minute)					
		VOC[3]	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Passenger Vehicles[4]							
LDA	62.6%	3.0E-03	3.5E-03	5.3E-02	2.6E-04	4.3E-04	4.0E-04
LDT1	4.2%	6.8E-03	9.0E-03	1.0E-01	3.1E-04	5.6E-04	5.2E-04
LDT2	20.0%	4.3E-03	6.7E-03	7.1E-02	3.4E-04	4.2E-04	3.8E-04
MDV	13.3%	6.9E-03	9.8E-03	9.9E-02	4.1E-04	4.5E-04	4.1E-04
Weighted Emission Factor[5]		3.9E-03	5.2E-03	6.5E-02	3.0E-04	4.4E-04	4.0E-04
Fuel Delivery Trucks[4]							
HHDT	100.0%	4.0E-02	5.6E-01	5.3E-01	9.6E-04	4.2E-04	4.0E-04

Notes:

[1] Data obtained from Table B-2.

[2] Data obtained from EMFAC2017 project-level output. Passenger vehicle emission rates are equivalent to the running exhuast emission rate in grams per mile at 5 mph, multiplied by the speed correction factor of 2.5 mph.

[3] For purposes of this analysis VOC is assumed to be equal to ROG.

[4] Passenger vehicles are assumed to be gasoline-fueled. Fuel delivery trucks are assumed to be diesel-fueled.

[5] Emission factors for EMFAC vehicle classes are weighted based on project-specific fleet mix to estimate idling emission factors for passenger vehicles.

Abbreviations:

CAP - criteria air pollutant
CO - carbon monoxide
EMFAC - EMission FACtors model
LDA - Light Duty Automobile
LDT - Light-Duty Truck
HHDT - Heavy-Heavy Duty truck
MDV - medium-duty vehicle
mph - miles per hour
NO_x - nitrogen oxide compounds ($NO + NO_2$)
PM - particulate matter
$PM_{2.5}$ - particulate matter less than 2.5 microns in diameter
PM_{10} - particulate matter less than 10 microns in diameter
ROG - reactive organic gases
SO_x - sulfur oxide compounds
VOC - volatile organic compounds

Conversion Factor:

60 minutes per hour

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Table B-7. Entrained Road Dust Emission Factors for Operational Mobile Sources
Danville Costco Fuel Station
Contra Costa County, California

Vehicle Type	Entrained Road Dust Emission Factor[1] (lb/VMT)	
	PM_{10}	$PM_{2.5}$
Passenger Vehicles	0.00066	0.00016
Fuel Delivery Trucks		

Notes:

[1] Emission factor calculated following guidance in the CalEEMod® User's Guide, Appendix A, which is based on AP-42, Section 13.2.1 for vehicles traveling on paved roads. The equation is:

$EF = k \times (sL)^{0.91} \times (W)^{1.02}$, where:

0.0022 = k_{PM10} (lb/VMT), PM_{10} particle size multiplier

0.00054 = $k_{PM2.5}$ (lb/VMT), $PM_{2.5}$ particle size multiplier

0.1 = sL (g/m^2), silt loading (CalEEMod® Default)

2.4 = W (tons), mean vehicle weight (CalEEMod® Default)

[3] Assumes 100% of on-road travel occurs on paved roads.

Abbreviations:

CalEEMod® - CALifornia Emissions Estimator MODel

EF - emission factor

lb - pounds

PM_{10} - particulate matter less than 10 microns in aerodynamic diameter

$PM_{2.5}$ - particulate matter less than 2.5 microns in aerodynamic diameter

VMT - vehicle miles traveled

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Table B-8. Operational Mobile Source GHG Emission Factors - Running Exhaust
Danville Costco Fuel Station
Contra Costa County, California

EMFAC Vehicle Class	EMFAC VMT Output[1] (miles/day)	EMFAC Running Exhaust Emissions Output[2] (tons/day)		
		CO_2	N_2O	CH_4
Passenger Vehicles[3]				
LDA	14,954,127	4,451	0.081	0.045
LDT1	1,533,931	534	0.015	0.010
LDT2	5,101,508	1,936	0.040	0.022
MDV	3,450,715	1,610	0.037	0.023
Fuel Delivery Trucks[3]				
HHDT	594,872	998	0.157	0.004

EMFAC Vehicle Class	Project Specific Fleet Mix[4]	Running Exhaust Emission Factors[5] (grams/mile)		
		CO_2	N_2O	CH_4
Passenger Vehicles[3]				
LDA	62.6%	270	0.005	0.0028
LDT1	4.2%	316	0.009	0.0061
LDT2	20.0%	344	0.007	0.0040
MDV	13.3%	423	0.010	0.0060
Weighted Emission Factor[6]		**307**	**0.006**	**0.004**
Fuel Delivery Trucks[3]				
HHDT	100.0%	1,523	0.24	0.006

Notes:

[1] Data obtained from EMFAC2017 for default emissions activity.

[2] Running exhaust emissions obtained from EMFAC2017 for default emissions activity.

[3] Passenger vehicles are assumed to be gasoline-fueled. Fuel delivery trucks are assumed to be diesel-fueled.

[4] Data obtained from Table B-2.

[5] Emission factors for EMFAC vehicle classes are estimated as a ratio of the EMFAC emissions output and EMFAC VMT output.

[6] Emission factors for EMFAC vehicle classes are weighted based on project-specific fleet mix to estimate VMT-based emission factors for passenger vehicles.

Abbreviations:

CH_4 - methane
CO_2 - carbon dioxide
EMFAC - EMission FACtors model
GHG - greenhouse gas
LDA - Light Duty Automobile
LDT - Light-Duty Truck
HHDT - Heavy-Heavy Duty truck
MDV - medium-duty vehicle
N_2O - nitrous oxide

Conversion Factor:

907,184.74 grams per ton

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Table B-9. Operational Mobile Source GHG Emission Factors - Off-Site Starting Exhaust
Danville Costco Fuel Station
Contra Costa County, California

EMFAC Vehicle Class	EMFAC Vehicle Trips Output[1] (trips/day)	EMFAC Starting Exhaust Emissions Output[1,2] (tons/day)		
		CO_2	N_2O	CH_4
Passenger Vehicles[3]				
LDA	1,864,798	118	0.058	0.13
LDT1	190,905	14	0.007	0.018
LDT2	624,616	51	0.025	0.055
MDV	446,600	46	0.020	0.050
Fuel Delivery Trucks[3]				
HHDT	52,150	0	0	0

Vehicle Class	Project Specific Fleet Mix[4]	Off-Site Starting Exhaust Emission Factors[5] (grams/trip)		
		CO_2	N_2O	CH_4
Passenger Vehicles[3]				
LDA	62.6%	58	0.028	0.061
LDT1	4.2%	68	0.032	0.086
LDT2	20.0%	75	0.036	0.080
MDV	13.3%	92	0.041	0.102
Weighted Emission Factor[6]		**66**	**0.032**	**0.071**
Fuel Delivery Trucks[3]				
HHDT	100.0%	0	0	0

Notes:

[1] Data obtained from EMFAC2017 for default emissions activity.

[2] Greenhouse gas starting exhaust emissions for HHDT are zero, as reported by EMFAC.

[3] Passenger vehicles are assumed to be gasoline-fueled. Fuel delivery trucks are assumed to be diesel-fueled.

[4] Data obtained from Table B-2.

[5] Emission factors for EMFAC vehicle classes are estimated as a ratio of the EMFAC emissions output and EMFAC trip output.

[6] Emission factors for EMFAC vehicle classes are weighted based on project-specific fleet mix to estimate trip-based emission factors for passenger vehicles.

Abbreviations:

CH_4 - methane
CO_2 - carbon dioxide
EMFAC - EMission FACtors model
GHG - greenhouse gas
LDA - Light Duty Automobile
LDT - Light-Duty Truck
HHDT - Heavy-Heavy Duty truck
MDV - medium-duty vehicle
N_2O - nitrous oxide

Conversion Factor:

907,184.74 grams per ton

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Table B-10. Operational Mobile Source GHG Emission Factors - On-Site Starting Exhaust
Danville Costco Fuel Station
Contra Costa County, California

Vehicle Class	Project Specific Fleet Mix[1]	On-Site Starting Exhaust Emission Factors[2] (grams/trip)		
		CO_2	N_2O[3]	CH_4
Passenger Vehicles[4]				
LDA	62.6%	8.1	0.028	0.006
LDT1	4.2%	9.1	0.032	0.009
LDT2	20.0%	10.5	0.036	0.009
MDV	13.3%	13.0	0.041	0.011
Weighted Emission Factor[5]		9.2	0.032	0.008
Fuel Delivery Trucks[4]				
HHDT	100.0%	0	0	0

Notes:

[1] Data obtained from Table B-2.

[2] Passenger vehicles will turn off their engines for approximately 4 minutes while fueling on-site. Hence, on-site starting exhaust emission factors for these vehicles obtained from EMFAC2017 project-level output for starting exhaust with a 5-minute soak time. Greenhouse gas starting exhaust emissions for HHDT are zero, as reported by EMFAC.

[3] EMFAC2017 project-level tool does not output N_2O emissions. N_2O emissions shown in this table are obtained from Table B-9.

[4] Passenger vehicles are assumed to be gasoline-fueled. Fuel delivery trucks are assumed to be diesel-fueled.

[5] Emission factors for EMFAC vehicle classes are weighted based on project-specific fleet mix to estimate trip-based emission factors for passenger vehicles.

Abbreviations:

CH_4 - methane
CO_2 - carbon dioxide
EMFAC - EMission FACtors model
GHG - greenhouse gas
LDA - Light Duty Automobile
LDT - Light-Duty Truck
HHDT - Heavy-Heavy Duty truck
MDV - medium-duty vehicle
N_2O - nitrous oxide

Conversion Factor:

907184.74 grams per ton

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Table B-11. Operational Mobile Source GHG Emission Factors - Idling
Danville Costco Fuel Station
Contra Costa County, California

EMFAC Vehicle Class	Project Specific Fleet Mix[1]	Idling Emission Factors for Trucks[2] (grams/idle-minute)		
		CO_2	N_2O	CH_4
Passenger Vehicles[3]				
LDA	62.6%	26	0	0.001
LDT1	4.2%	31	0	0.001
LDT2	20.0%	34	0	0.001
MDV	13.3%	41	0	0.001
Weighted Emission Factor[4]		**30**	**0**	**0.001**
Fuel Delivery Trucks[3]				
HHDT	100.0%	101	0	0.002

Notes:

[1] Data obtained from EMFAC2017 project-level output.

[2] Data obtained from EMFAC2017 project-level output. N_2O emissions are zero, as reported by EMFAC. Passenger vehicle emission rates are equivalent to the running exhuast emission rate in grams per mile at 5 mph, multiplied by the speed correction factor of 2.5 mph.

[3] Passenger vehicles are assumed to be gasoline-fueled. Fuel delivery trucks are assumed to be diesel-fueled.

[3] Emission factors for EMFAC vehicle classes are weighted based on project-specific fleet mix to estimate idling emission factors for trucks.

Abbreviations:

CH_4 - methane
CO_2 - carbon dioxide
EMFAC - EMission FACtors model
GHG - greenhouse gas
LDA - Light Duty Automobile
LDT - Light-Duty Truck
HHDT - Heavy-Heavy Duty truck
MDV - medium-duty vehicle
N_2O - nitrous oxide

Conversion Factor:

60 minutes per hour

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Table B-12. Average Daily Criteria Air Pollutant Emission Estimates for Operational Mobile Sources
Danville Costco Fuel Station
Contra Costa County, California

Mobile Source Activity	Trip Type	Trip Distance[1] (miles)	Average Daily Trips[1] (one-way trips/day)	Average Daily VMT[2] (miles/day)	Idle Duration[3] (minutes/ round trip)	Average Daily Emissions (lb/day)					
						VOC[4]	NO_x[5]	CO[5]	SO_x[5]	PM_{10}[6]	$PM_{2.5}$[6]
Passenger Vehicles (Off-Site)[7]	Primary	7.2	3,611	26,088	--	5.72	4.95	57.8	0.18	19.9	5.34
Passenger Vehicles (On-Site)[8]	Primary	0.12	3,611	433	8	0.84	0.42	3.60	0.01	0.34	0.10
	Internal	0.12	2,287	274	8	0.53	0.27	2.28	0.01	0.22	0.06
Fuel Delivery Trucks (Off-Site)[7]	Primary	35.9	12	431	--	0.13	3.96	0.50	1.4E-02	0.44	0.16
Fuel Delivery Trucks (On-Site)[9]	Primary	0.12	12	1	5	3.1E-03	7.5E-02	3.7E-02	1.1E-04	1.5E-03	5.6E-04
					On-Site Emissions	1.4	0.8	5.9	2.0E-02	0.6	0.2
					Total Emissions	**7.2**	**9.7**	**64.2**	**0.2**	**20.9**	**5.7**

Notes

[1] Data obtained from Table B-1. The off-site trip distance is equivalent to the average trip length minus the on-site distance of 0.12 miles.

[2] VMT is calculated as the product of the trip distance and peak daily trips shown in this table.

[3] Idle duration for passenger vehicles is estimated using a maximum queue length of 14 vehicles across all pump lanes and a transaction time of 4 minutes per vehicle. Fuel delivery truck idle duration is 5 minutes based on the CARB Air Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling. Available at: https://ww2.arb.ca.gov/our-work/programs/atcm-to-limit-vehicle-idling/about. Accessed: July 2020.

[4] VOC emissions include running exhaust, running loss, hot soak, diurnal, resting loss, starting exhaust, and idling exhaust. Emissions were estimated using emission factors from Tables B-3, B-4, B-5, and B-6 along with peak daily VMT and peak daily trips.

[5] NO_X, CO, and SO_X emissions include running exhaust, starting exhaust, and idling exhaust. Emissions were estimated using emission factors from Tables B-3, B-4, B-5, and B-6 along with peak daily VMT and peak daily trips.

[6] PM_{10} and $PM_{2.5}$ emissions include running exhaust, tire wear, brake wear, fugitive dust, starting exhaust, and idling exhaust. Emissions were estimated using emission factors from Tables B-3, B-4, B-5, B-6, and B-7 along with peak daily VMT and peak daily trips.

[7] Off-site primary trip emissions include travel emissions (running exhaust, running loss, tire wear, brake wear, and fugitive dust), off-site evaporative emissions (hot soak, diurnal, and resting loss) using the number of round trips (i.e., half of the one-way trips), and off-site starts using the number of round trips.

[8] On-site passenger vehicle trip emissions include travel emissions (running exhaust, running loss, tire wear, brake wear, and fugitive dust), on-site evaporative emissions (hot soak) using the number of round trips (i.e., half of the one-way trips), on-site starts using the number of round trips, and idling exhaust using the number of round trips. Since passenger vehicles turn off their engines for approximately 4 minutes while fueling on-site, they will not emit diurnal and resting loss emissions; these types of emissions occur after the engine has been turned off for more than 30 minutes.

[9] On-site fuel delivery truck trip emissions include travel emissions (running exhaust, running loss, tire wear, brake wear, and fugitive dust), on-site evaporative emissions (hot soak, diurnal, and resting loss) using the number of round trips (i.e., half of the one-way trips), on-site starts using the number of round trips, and idling exhaust using the number of round trips.

Abbreviations:

CO - carbon monoxide
lb - pounds
NO - nitrogen monoxide
NO_2 - nitrogen dioxide
NO_x - nitrogen oxide compounds (NO + NO_2)
PM - particulate matter
$PM_{2.5}$ - particulate matter less than 2.5 microns in diameter
PM_{10} - particulate matter less than 10 microns in diameter
ROG - reactive organic gases
SO_x - sulfur oxide compounds
VOC - volatile organic compounds
VMT - vehicle miles traveled

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

Table B-13. Operational Mobile Source Greenhouse Gas Emissions Summary
Danville Costco Fuel Station
Contra Costa County, California

Mobile Source Activity	Trip Type	Trip Distance[1] (miles)	Annual Trips[1] (one-way trips/year)	Annual Average VMT[2] (miles/year)	Idle Duration[3] (minutes/ round trip)	GHG Emissions[4] (MT/yr)			
						CO_2	N_2O	CH_4	CO_2e[2]
Passenger Cars (Off-Site)[6]	Primary	7.2	1,318,120	9,522,099	--	2,968	0.08	0.081	2,993
Passenger Cars (On-Site)[7]	Primary	0.12	1,318,120	158,174	8	203	0.02	0.010	209
	Internal	0.12	834,666	100,160	8	128	0.01	0.006	133
Fuel Delivery Trucks (Off-Site)[6]	Primary	35.9	4,380	157,154	--	239	0.04	0.0010	251
Fuel Delivery Trucks (On-Site)[7]	Primary	0.12	4,380	526	5	2	0.00	0.0000	1.9
					Total Emissions[5]	**3,540**	**0.15**	**0.098**	**3,588**

Notes

[1] Data obtained from Table B-1. The off-site trip distance is equivalent to the average trip length minus the on-site distance of 0.12 miles.

[2] VMT is calculated as the product of the trip distance and annual trips shown in this table.

[3] Idle duration for passenger vehicles is estimated using a maximum queue length of 14 vehicles across all pump lanes and a transaction time of 4 minutes per vehicle. Fuel delivery truck idle duration is 5 minutes based on the CARB Air Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling. Available at: https://ww2.arb.ca.gov/our-work/programs/atcm-to-limit-vehicle-idling/about. Accessed: July 2020.

[4] Includes emissions from running exhaust, starting exhaust, and idling exhaust. Emissions were estimated using emission factors from Tables B-8, B-9, B-10, and B-11 along with annual average VMT and annual average trips.

[5] CO_2e estimated based on Global Warming Potentials for 100-year time horizon for CO_2, N_2O, and CH_4 as presented in the Intergovernmental Panel on Climate Change Fourth Assessment Report.

[6] Off-site trip emissions include travel emissions (running exhaust) and off-site starts using the number of round trips (i.e., half of the one-way trips).

[7] On-site trip emissions include travel emissions (running exhaust), on-site starts using the number of round trips (i.e., half of the one-way trips), and idling exhaust using the number of round trips.

Abbreviations:

CH_4 - methane
CO_2 - carbon dioxide
CO_2e - carbon dioxide equivalents
lbs - pounds
MT - metric tonnes
N_2O - nitrous oxide
VMT - vehicle miles traveled
yr - year

Conversion Factors:

2204.62 lb/MT
453.592 g/lb

Global Warming Potentials

CO_2	1
CH_4	25
N_2O	298

APPENDIX C
TOXIC AIR CONTAMINANT EMISSION CALCULATIONS

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Table C-1. Traffic Volumes and Vehicle Miles Traveled on Modeled Roadways
Danville Costco Fuel Station
Contra Costa County, California

Modeled Roadway Links[1]		Source Group ID	Peak Hour Trip Rates[2] (one-way trips/hour)				
			Internal[5]	External			Total[7]
				Primary	Diverted	Pass-by[6]	
Fuel Delivery Trucks	North Entrance	HDV_01	0	2	0	0	2
	Fostoria Way (btwn. Crow Canyon Pl and North Entrance)	HDV_02	0	2	0	0	2
	Crow Canyon Pl	HDV_03	0	2	0	0	2
	On-Site Idling	IDLING02	0	2	0	0	2
Passenger Cars[8]	Crow Canyon Pl	LDV_01	0	44	0	0	44
	Fostoria Way (ending at Camino Ramon)	LDV_02	0	112	0	0	112
	Camino Ramon (North of Fostoria Way)	LDV_03	0	50	0	0	50
	Fostoria Way (btwn. Crow Canyon Pl and North Entrance)	LDV_04	0	205	0	0	205
	Fostoria Way (btwn. North Entrance and Camino Ramon)	LDV_05	0	240	0	0	240
	Fostoria Way (btwn. Camino Ramon and Iron Horse Trail)	LDV_06	0	5	0	0	5
	Camino Ramon (South of Fostoria Way)	LDV_07	0	235	0	0	235
	North Entrance	LDV_08	0	696	0	0	696
	On-Site Idling, Starting, and Evaporative	IDLING01	0	696	0	0	696

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

Table C-1. Traffic Volumes and Vehicle Miles Traveled on Modeled Roadways
Danville Costco Fuel Station
Contra Costa County, California

Modeled Roadway Links[1]		Source Group ID	Annual Trip Rates[2] (one-way trips/year)					Segment Length (m)	Segment Length[3] (miles)	Peak Hour VMT[4] (miles/hour)	Annual VMT[4] (miles/year)
			Internal[5]	External			Total[7]				
				Primary	Diverted	Pass-by[6]					
Fuel Delivery Trucks	North Entrance	HDV_01	0	4,380	0	0	4,380	51.6	0.03	0.06	140
	Fostoria Way (btwn. Crow Canyon Pl and North Entrance)	HDV_02	0	4,380	0	0	4,380	175.9	0.11	0.22	479
	Crow Canyon Pl	HDV_03	0	4,380	0	0	4,380	326.2	0.20	0.41	888
	On-Site Idling	IDLING02	0	4,380	0	0	4,380	-	-	-	-
Passenger Cars[8]	Crow Canyon Pl	LDV_01	0	168,779	0	0	168,779	326.2	0.20	8.92	34,210
	Fostoria Way (ending at Camino Ramon)	LDV_02	0	430,629	0	0	430,629	291.7	0.18	20.30	78,053
	Camino Ramon (North of Fostoria Way)	LDV_03	0	190,991	0	0	190,991	309.7	0.19	9.62	36,754
	Fostoria Way (btwn. Crow Canyon Pl and North Entrance)	LDV_04	0	790,138	0	0	790,138	175.9	0.11	22.41	86,361
	Fostoria Way (btwn. North Entrance and Camino Ramon)	LDV_05	0	923,618	0	0	923,618	141.6	0.09	21.12	81,266
	Fostoria Way (btwn. Camino Ramon and Iron Horse Trail)	LDV_06	0	17,832	0	0	17,832	274.5	0.17	0.85	3,042
	Camino Ramon (South of Fostoria Way)	LDV_07	0	905,786	0	0	905,786	308.1	0.19	44.99	173,408
	North Entrance	LDV_08	0	1,713,756	0	0	1,713,756	51.6	0.03	22.32	54,948
	On-Site Idling, Starting, and Evaporative	IDLING01	834,666	2,152,786	0	0	2,987,452	-	-	-	-

Notes:

[1] See Figure 1 for a graphic representation of the modeled sources.

[2] Trip rates based Project-specific data and peak hour trip rates provided by Kittelson & Associates. Fuel delivery truck trip rates assume one truck per hour and six trucks per day.

[3] Segment length based on modeled source length in AERMOD.

[4] VMT is calculated as the product of the segment length and the total number of trips in the respective averaging period.

[5] Internal trips include trips made by patrons visiting the Costco member warehouse. Project-related emissions from internal trips are assumed to be from idling only.

[6] Pass-by trips include vehicles already on the roadway that make an additional stop at the fuel station while on their current route. Project-related emissions from pass-by trips are assumed to occur on the project driveway road segments and during idling.

[7] Total trips are the sum of all internal and external trips for each modeled source.

[8] Passenger cars represent vehicles used by patrons of the fuel station.

Abbreviations:

AERMOD - American Meteorological Society/Environmental Protection Agency Regulatory Model
btwn - between
VMT - vehicle miles traveled

Table C-2. Operational Mobile Source Fleet Mixes
Danville Costco Fuel Station
Contra Costa County, California

	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
CalEEMod® Default[1]	58.2%	3.9%	18.6%	12.3%	1.7%	0.5%	1.1%	2.4%	0.2%	0.2%	0.5%	0.3%	0.1%

	LDA	LDT1	LDT2	MDV
Passenger Vehicles[2]	62.6%	4.2%	20.0%	13.3%

Notes:

[1] CalEEMod® default for Gasoline Service Station land use subtype in Contra Costa County.

[2] Passenger cars represent vehicles used by patrons of the fuel station. Fleet mix for passenger vehicles are estimated based on the ratio of the vehicle classes in CalEEMod® default fleet mix.

Abbreviations:

CalEEMod® - CALifornia Emissions Estimator MODel
LDA - Light Duty Automobile
LDT - Light-Duty Truck
LHD - Light-Heavy Duty truck
HHDT - Heavy-Heavy Duty truck
MDV - Medium-Duty Vehicle
MH - Motor Home
MHD - Medium-Heavy Duty truck
OBUS - Other Buses
UBUS - Urban Buses
MCY - Motorcycle
SBUS - School Bus

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

Table C-3. Total Organic Gas Emission Factors
Danville Costco Fuel Station
Contra Costa County, California

EMFAC Vehicle Class	EMFAC VMT Output[1] (miles/day)	EMFAC Vehicle Trips Output[1] (trips/day)	TOG Emission Factor					
			Off-site Running Exhaust[2] (g/mile)	On-site Running Exhaust[3] (g/mile)	Running Loss[4] (g/mile)	Hot Soak[5] (g/trip)	Starting Exhaust[6] (g/trip)	Idle Exhaust[7] (g/idle-minute)
Passenger Vehicles[8]								
LDA	14,954,127	1,864,798	0.016	0.105	0.030	0.099	0.029	0.004
LDT1	1,533,931	190,905	0.039	0.239	0.100	0.187	0.047	0.010
LDT2	5,101,508	624,616	0.023	0.151	0.057	0.116	0.041	0.006
MDV	3,450,715	446,600	0.038	0.236	0.069	0.141	0.057	0.010
Weighted Emission Factor[9]			**0.021**	**0.137**	**0.044**	**0.112**	**0.036**	**0.006**

Notes:

[1] Data obtained from EMFAC2017 output for default emissions activity.

[2] Off-site running exhaust emission factor is based on EMFAC2017 default activity output for aggregated speeds.

[3] On-site running exhaust emission factor is based on EMFAC2017 project-level emission rate output for a speed of 5 mph.

[4] Running loss emission factor is based on EMFAC2017 output for default emissions activity.

[5] Hot soak emission factor is based on EMFAC2017 project-level emission rate output.

[6] Passenger vehicles will turn off their engines for approximately 4 minutes while fueling on-site. Hence, on-site starting exhaust emission factors for these vehicles were obtained from EMFAC2017 project-level output for starting exhaust with a 5-minute soak time.

[7] Passenger vehicle idle exhaust emission factors are equivalent to the EMFAC2017 project-level running exhaust emission rate in grams per mile at 5 mph, multiplied by the speed correction factor of 2.5 mph.

[8] Passenger vehicles are assumed to be gasoline-fueled.

[9] Emission factors for EMFAC vehicle classes are weighted based on the project-specific fleet mix in Table C-2 to estimate emission factors for passenger vehicles.

Abbreviations:

EMFAC - EMission FACtors model
LDA - Light Duty Automobile
LDT - Light-Duty Truck
MDV - medium-duty vehicle
mph - miles per hour
TOG - total organic gases
VMT - vehicle miles travelled

Conversion Factors:

60 minutes per hour
907184.74 g per ton

Table C-4. Diesel Particulate Matter Emission Factors
Danville Costco Fuel Station
Contra Costa County, California

EMFAC Vehicle Class	EMFAC VMT Output[1] (miles/day)	DPM Emission Factor[2]		
		Off-site Running Exhaust[3] (g/mile)	On-site Running Exhaust[4] (g/mile)	Idle Exhaust (g/idle-minute)
Fuel Delivery Trucks[6]				
HHDT	594,872	0.06	0.10	0.00042

Notes:

[1] Data obtained from EMFAC2017 output for HHDT diesel vehicle default emissions activity.

[2] For purposes of this analysis, DPM emissions are assumed to be equal to PM_{10} exhaust emissions from diesel vehicles.

[3] Off-site running exhaust emission factor is based on EMFAC2017 default activity output for aggregated speeds.

[4] On-site running exhaust emission factor is based on EMFAC2017 project-level emission rate output for a speed of 5 mph.

Abbreviations:

DPM - diesel particulate matter
EMFAC - EMission FACtors model
HHDT - Heavy-Heavy Duty truck
mph - miles per hour
PM_{10} - particulate matter less than 10 microns in diameter
VMT - vehicle miles travelled

Conversion Factors:

60 minutes per hour
907184.74 g per ton

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Table C-5. Passenger Vehicle Emissions
Danville Costco Fuel Station
Contra Costa County, California

Source Group ID[1]	Modeled Roadway Link	Project VMT[2] (miles)		Project Trips[2] (one-way trips)		Idle Duration (minutes/ round trip)	TOG Exhaust Emissions[3]		TOG Evaporative Emissions[3]	
		Peak Hour	Annual	Peak Hour	Annual		Peak Hour (lb/hr)	Annual (lb/year)	Peak Hour (lb/hr)	Annual (lb/year)
LDV_01	Crow Canyon Pl	8.92	34,210	44	168,779	-	4.19E-04	1.61E+00	8.61E-04	3.30E+00
LDV_02	Fostoria Way (ending at Camino Ramon)	20.30	78,053	112	430,629	-	9.53E-04	3.66E+00	1.96E-03	7.54E+00
LDV_03	Camino Ramon (North of Fostoria Way)	9.62	36,754	50	190,991	-	4.52E-04	1.73E+00	9.29E-04	3.55E+00
LDV_04	Fostoria Way (btwn. Crow Canyon Pl and North Entrance)	22.41	86,361	205	790,138	-	1.05E-03	4.05E+00	2.16E-03	8.34E+00
LDV_05	Fostoria Way (btwn. North Entrance and Camino Ramon)	21.12	81,266	240	923,618	-	9.91E-04	3.81E+00	2.04E-03	7.85E+00
LDV_06	Fostoria Way (btwn. Camino Ramon and Iron Horse Trail)	0.85	3,042	5	17,832	-	4.00E-05	1.43E-01	8.24E-05	2.94E-01
LDV_07	Camino Ramon (South of Fostoria Way)	44.99	173,408	235	905,786	-	2.11E-03	8.14E+00	4.34E-03	1.67E+01
LDV_08	North Entrance	22.32	54,948	696	1,713,756	-	1.05E-03	2.58E+00	2.15E-03	5.31E+00
IDLING01	On-Site Idling, Starting, and Evaporative[4]	-	-	696	2,987,452	8	6.06E-02	2.60E+02	8.56E-02	3.67E+02

Notes:

[1] See Figure 1 for a graphic representation of the modeled sources.

[2] Data obtained from Table C-1.

[3] TOG emissions calculated using emission factors from Table C-3 along with Project VMT trips. Evaporative emissions include running loss and hotsoak emissions.

[4] Includes emissions from on-site vehicle idling, on-site starts, and hotsoak emissions estimated using the number of round trips (i.e., half of the one-way trips).

Abbreviations:

btwn - between
CalEEMod® - CALifornia Emissions Estimator MODel
TOG - total organic gases
VMT - vehicle miles traveled

Conversion Factor:

453.592 g/lb

Table C-6. Fuel Delivery Truck Emissions
Danville Costco Fuel Station
Contra Costa County, California

Source Group ID[1]	Modeled Roadway Link	Project VMT[2] (miles)		Project Trips[2] (one-way trips)		Idle Duration (minutes/ round trip)	DPM Exhaust Emissions[3]
		Peak Hour	Annual	Peak Hour	Annual		Annual (lb/year)
HDV_01	North Entrance	0.06	140	2	4,380	-	1.94E-02
HDV_02	Fostoria Way (btwn. Crow Canyon Pl and North Entrance)	0.22	479	2	4,380	-	6.61E-02
HDV_03	Crow Canyon Pl	0.41	888	2	4,380	-	1.23E-01
IDLING02	On-Site Idling[4]	-	-	2	4,380	5	1.01E-02

Notes:
[1] See Figure 1 for a graphic representation of the modeled sources.
[2] Data obtained from Table C-1.
[3] DPM emissions calculated using emission factors from Table C-4 along with Project VMT and trips.
[4] Includes emissions from on-site vehicle idling that is estimated using the number of round trips (i.e. half of the one-way trips).

Abbreviations:
btwn - between
CalEEMod® - CALifornia Emissions Estimator MODel
DPM - diesel particulate matter
VMT - vehicle miles traveled

Conversion Factor:
453.592 g/lb

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

Table C-7. Toxic Speciation of Total Organic Gas Emissions
Danville Costco Fuel Station
Contra Costa County, California

Chemical Name	CAS	Gasoline Tailpipe Exhaust Emissions	Gasoline Evaporative Emissions
Acetaldehyde	75070	0.0028	0
Acrolein	107028	0.0013	0
Benzene	71432	0.0247	0.0036
1,3-Butadiene	106990	0.0055	0
Ethylbenzene	100414	0.0105	0.0012
Formaldehyde	50000	0.0158	0
Hexane	110543	0.0160	0.0154
Methanol	67561	0.0012	0
Methyl Ethyl Ketone	78933	0.0002	0
Naphthalene	91203	0.0005	0
Propylene	115071	0.0306	0
Styrene	100425	0.0012	0
Toluene	108883	0.0576	0.0170
Xylenes	1330207	0.0480	0.0058

Notes:
[1] Speciation profiles obtained from BAAQMD guidance. Available at: https://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/CEQA/BAAQMD%20Modeling%20Approach.ashx. Accessed: September 2020.

Table C-8. Gasoline Transfer and Dispensing Emissions
Danville Costco Fuel Station
Contra Costa County, California

		Source Group ID					
		LOADING	BREATH	REFILL			SPILL
		Loading	Breathing	Refueling	Hose Permeation	Total	Spillage
VOC Emission Factor (lb/1,000 gallons)		0.15	0.024	0.069	0.007	--	0.24
Weight Percent	Benzene	0.455%	0.455%	0.455%	0.455%	--	0.707%
	Ethyl Benzene	0.107%	0.107%	0.107%	0.107%	--	1.290%
	Naphthalene	0.0004%	0.0004%	0.0004%	0.0004%	--	0.174%
Emissions (lb/hr)	Benzene	0.0032760	0.0005242	0.0015043	0.0001529	0.0016572	0.0081446
	Ethyl Benzene	0.0007704	0.0001233	0.0003538	0.0000360	0.0003897	0.0148608
	Naphthalene	0.0000029	0.0000005	0.0000013	0.0000001	0.0000015	0.0020045
Emissions (lb/year)	Benzene	23.55	3.77	10.81	1.10	11.91	58.54
	Ethyl Benzene	5.54	0.89	2.54	0.26	2.80	106.81
	Naphthalene	0.02	0.00	0.01	0.00	0.01	14.41

Throughput:

Maximum Hourly 4,800 gallons/hr
Annual 34.5 million gallons/year

Notes:

[1] Emission factors obtained from Table I-1 of CARB Revised Emission Factors for Gasoline Marketing Operations at California Gasoline Dispensing Facilities. Available at: https://ww3.arb.ca.gov/vapor/gdf-emisfactor/gdfumbrella.pdf. Accessed: August 2020.

[2] Maximum hourly throughput is based on a maximum of 15 vehicles per dispensing position per hour, with an average fill up of 10 gallons per vehicle.

Abbreviations:

CARB - California Air Resources Board
hr - hour
lb - pounds
VOC - volatile organic compounds

APPENDIX D
AERMOD INPUTS

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Table D-1 Modeled Source Parameters – Mobile Sources
Danville Costco Fuel Station
Contra Costa County, California

Source Parameters	Fuel Delivery Truck Travel	Passenger Vehicle Travel	Fuel Delivery Truck Idling	Passenger Vehicle Idling
Source Type	Line-Area	Line-Area	Areapoly	Areapoly
Width (m)	3.3 per lane	3.3 per lane	N/A	N/A
Initial Vertical Dimension[2] (m)	6.8	2.6	6.8	2.60
Initial Vertical Dispersion Coefficient[3,4] (m)	3.16	1.21	0.79	0.30
Release Height[5] (m)	3.4	1.3	3.4	1.3

Notes:

[1] Road width is estimated as a product of the number of lanes and width of a lane. The width of the lane is defined as 3.3 meters based on the USEPA Transportation Conformity Guidance.

[2] The initial vertical dimension for truck exhaust is assumed to be equal to 1.7 times the vehicle height. Vehicle height is based on the USEPA Transportation Conformity Guidance.

[3] The initial vertical dispersion coefficient for vehicle travel is estimated as the initial vertical dimension divided by 2.15 based on the USEPA Transportation Conformity Guidance.

[4] For on-site idling emission sources, the initial vertical dispersion coefficient is estimated as the initial vertical dimension divided by 4.3, based on the USEPA AERMOD User Guide.

[5] Release height is estimated as half of the initial vertical dimension based on the USEPA Transportation Conformity Guidance.

Abbreviations:

AERMOD - American Meteorological Society/Environmental Protection Agency Regulatory Model

ft - feet

m - meters

N/A - not applicable

PM - particulate matter

USEPA - United States Environmental Protection Agency

I-215 - Interstate 215

References:

USEPA. 2015. Transportation Conformity Guidance for Quantitative Hot-spot Analyses in PM2.5 and PM10 Nonattainment and Maintenance Areas Appendices. November. Available at: https://nepis.epa.gov/Exe/ZyPdf.cgi?Dockey=P100NN22.pdf. Accessed: August 2020.

USEPA. 2019. User's Guide for the AMS/EPA Regulatory Model. August. Available at: https://www3.epa.gov/ttn/scram/models/aermod/aermod_userguide.pdf. Accessed: August 2020.

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-

Table D-2 Modeled Emission Rates – Mobile Sources
Danville Costco Fuel Station
Contra Costa County, California

Modeled Roadway Links[1]	Roadway Link Description	Source Group ID[1]	Total Area of Source in Source Group (m^2)	Source ID[2]	Modeled Emission Rate ($g/s/m^2$)
Passenger Vehicle Off-Site Travel	Crow Canyon Pl	LDV_01	4,306	A0000001	2.322E-04
				A0000002	2.322E-04
				A0000003	2.322E-04
				A0000004	2.322E-04
	Fostoria Way (ending at Camino Ramon)	LDV_02	3,851	A0000005	2.597E-04
				A0000006	2.597E-04
				A0000007	2.597E-04
	Camino Ramon (North of Fostoria Way)	LDV_03	2,044	A0000008	4.893E-04
				A0000009	4.893E-04
				A0000010	4.893E-04
				A0000011	4.893E-04
				A0000012	4.893E-04
	Fostoria Way (btwn. Crow Canyon Pl and North Entrance)	LDV_04	2,322	A0000013	4.306E-04
				A0000014	4.306E-04
	Fostoria Way (btwn. North Entrance and Camino Ramon)	LDV_05	1,870	A0000015	5.348E-04
				A0000016	5.348E-04
	Fostoria Way (btwn. Camino Ramon and Iron Horse Trail)	LDV_06	1,812	A0000017	5.520E-04
				A0000018	5.520E-04
				A0000019	5.520E-04
				A0000020	5.520E-04
				A0000021	5.520E-04
	Camino Ramon (South of Fostoria Way)	LDV_07	4,067	A0000022	2.459E-04
				A0000023	2.459E-04
				A0000024	2.459E-04
Passenger Vehicle On-Site Driveway Travel	North Entrance	LDV_08	1,423	A0000039	7.029E-04
				A0000040	7.029E-04
				A0000041	7.029E-04
				A0000042	7.029E-04
				A0000043	7.029E-04
Fuel Delivery Truck Off-Site Travel	Crow Canyon Pl	HDV_01	4,306	A0000044	2.322E-04
				A0000045	2.322E-04
				A0000046	2.322E-04
				A0000047	2.322E-04
	Fostoria Way (btwn. Crow Canyon Pl and North Entrance)	HDV_02	2,322	A0000029	4.306E-04
				A0000030	4.306E-04
Fuel Delivery Truck On-Site Driveway Travel	North Entrance	HDV_03	1,423	A0000034	7.029E-04
				A0000035	7.029E-04
				A0000036	7.029E-04
				A0000037	7.029E-04
				A0000038	7.029E-04
Passenger Vehicle Idling, Starting, and Evaporative Emissions	On-Site Idling, Starting, and Evaporative	IDLING01	4,666	IDLING_01	2.143E-04
Fuel Delivery Truck Idling	On-Site Idling	IDLING02	4,666	IDLING_02	2.143E-04

Notes:
[1] Refer to Figure 1 for spatial location of modeled roadways.
[2] Since the roadways are not always a straight line, they are represented by a series of line (area) sources.

Abbreviations:
btwn - between
m^2 - square meters
$g/s/m^2$ - grams per second per square meter

Table D-3. Modeled Source Parameters - Point Sources
Danville Costco Fuel Station
Contra Costa County, California

Model ID	Description	Stack Height[1] (m)	Stack Temperature[1] (K)	Exit Velocity[2] (m/s)	Stack Diameter[1] (m)	Emission Rate (g/s)
LOADING	GDF loading emissions	3.66	291.48	0.00063	0.051	1
BREATH	GDF breathing emissions	3.66	288.71	0.00010	0.051	1

Notes:

[1] Stack parameters are based on CAPCOA Gasoline Service Station Industrywide Risk Assessment Guidelines. Avaliable at: https://ww2.arb.ca.gov/sites/default/files/classic//ab2588/rrap-iwra/gasiwra.pdf. Accessed: August 2020.

[2] Exit velocity based on SCAQMD Risk Assessment Procedures, Appendix X and Appendix XIII - Exhibit X. Available at: http://www.aqmd.gov/docs/default-source/permitting/rule-1401-risk-assessment/riskassessproc-v8-1.pdf?sfvrsn=12. Accessed: August 2020.

Abbreviations:

CAPCOA- California Air Pollution Control Officers Association
gal- gallons
GDF - gasoline dispensing facility
K - Kelvin
m - meters
SCAQMD - South Coast Air Quality Management District
s - second
yr- year

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Table D-4. Modeled Source Parameters - Volume Sources
Danville Costco Fuel Station
Contra Costa County, California

Model ID	Description	Release Height[1] (m)	Initial Lateral Dimension, Sigma Y[2] (m)	Initial Vertical Dimension, Sigma Z[1] (m)	Emission Rate (g/s)
REFILL	Refueling and Hose Permeation	1.00	7.98	1.86	1
SPILL	Spillage	0.00	7.98	1.86	1

Notes:

[1] Release height and Sigma Z are based on CAPCOA Gasoline Service Station Industrywide Risk Assessment Guidelines. Avaliable at: https://ww2.arb.ca.gov/sites/default/files/classic//ab2588/rrap-iwra/gasiwra.pdf. Accessed:August 2020.

[2] Initial lateral dimension is based on the dimensions of the gas station canopy.

Abbreviations:

m - meters

CAPCOA- California Air Pollution Control Officers Association

APPENDIX E
HARP2 RESULTS

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Table E-1. Health Risk Assessment Results for All Receptors
Danville Costco Fuel Station
Contra Costa County, California

Receptor ID	X-Coordinate (m)	Y-Coordinate (m)	Receptor Type	Cancer Risk (in a million)	Chronic Hazard Index	Acute Hazard Index
1	589863.00	4181828.00	Sensitive	0.53	1.88E-03	1.58E-02
2	590527.46	4181552.00	Worker	0.06	1.80E-03	2.16E-02
3	590552.45	4181552.67	Worker	0.06	1.80E-03	2.07E-02
4	590577.43	4181553.34	Worker	0.06	1.80E-03	2.25E-02
5	590602.42	4181554.01	Worker	0.06	1.78E-03	2.10E-02
6	590476.83	4181575.65	Worker	0.06	1.95E-03	2.06E-02
7	590501.81	4181576.32	Worker	0.07	1.98E-03	2.35E-02
8	590526.80	4181576.99	Worker	0.07	2.00E-03	2.35E-02
9	590551.78	4181577.66	Worker	0.07	2.01E-03	2.26E-02
10	590576.77	4181578.32	Worker	0.07	2.00E-03	2.44E-02
11	590601.75	4181578.99	Worker	0.07	1.98E-03	2.25E-02
12	590626.74	4181579.66	Worker	0.06	1.95E-03	2.32E-02
13	590651.72	4181580.33	Worker	0.06	1.92E-03	2.57E-02
14	590426.19	4181599.30	Worker	0.07	2.08E-03	2.33E-02
15	590451.17	4181599.97	Worker	0.07	2.13E-03	2.38E-02
16	590476.16	4181600.64	Worker	0.07	2.18E-03	2.25E-02
17	590501.14	4181601.31	Worker	0.07	2.22E-03	2.55E-02
18	590526.13	4181601.97	Worker	0.07	2.25E-03	2.56E-02
19	590551.11	4181602.64	Worker	0.07	2.25E-03	2.49E-02
20	590576.10	4181603.31	Worker	0.07	2.24E-03	2.66E-02
21	590601.08	4181603.98	Worker	0.07	2.22E-03	2.40E-02
22	590626.07	4181604.64	Worker	0.07	2.18E-03	2.59E-02
23	590651.06	4181605.31	Worker	0.07	2.14E-03	2.72E-02
24	590676.04	4181605.98	Worker	0.07	2.08E-03	2.52E-02
25	590701.03	4181606.65	Worker	0.07	2.04E-03	2.51E-02
26	590425.52	4181624.29	Worker	0.08	2.34E-03	2.58E-02
27	590450.50	4181624.96	Worker	0.08	2.40E-03	2.55E-02
28	590475.49	4181625.62	Worker	0.08	2.45E-03	2.53E-02
29	590500.48	4181626.29	Worker	0.08	2.51E-03	2.76E-02
30	590525.46	4181626.96	Worker	0.08	2.54E-03	2.81E-02
31	590550.45	4181627.63	Worker	0.08	2.55E-03	2.75E-02
32	590575.43	4181628.29	Worker	0.08	2.53E-03	2.90E-02
33	590600.42	4181628.96	Worker	0.08	2.50E-03	2.71E-02
34	590625.40	4181629.63	Worker	0.08	2.46E-03	3.00E-02
35	590650.39	4181630.30	Worker	0.08	2.40E-03	2.91E-02
36	590675.37	4181630.97	Worker	0.08	2.34E-03	2.60E-02
37	590700.36	4181631.63	Worker	0.08	2.29E-03	2.79E-02
38	590725.34	4181632.30	Worker	0.08	2.27E-03	2.67E-02
39	590399.87	4181648.61	Worker	0.09	2.58E-03	3.02E-02
40	590424.85	4181649.27	Worker	0.09	2.64E-03	2.83E-02
41	590449.84	4181649.94	Worker	0.09	2.72E-03	2.83E-02
42	590474.82	4181650.61	Worker	0.09	2.79E-03	2.88E-02
43	590499.81	4181651.28	Worker	0.09	2.86E-03	2.99E-02
44	590524.79	4181651.94	Worker	0.10	2.90E-03	3.10E-02
45	590549.78	4181652.61	Worker	0.10	2.91E-03	3.06E-02
46	590574.76	4181653.28	Worker	0.10	2.89E-03	3.17E-02
47	590599.75	4181653.95	Worker	0.09	2.85E-03	3.08E-02
48	590624.73	4181654.62	Worker	0.09	2.79E-03	3.41E-02
49	590649.72	4181655.28	Worker	0.09	2.72E-03	3.16E-02
50	590674.71	4181655.95	Worker	0.09	2.65E-03	3.01E-02
51	590699.69	4181656.62	Worker	0.09	2.61E-03	3.04E-02
52	590724.68	4181657.29	Worker	0.09	2.60E-03	3.01E-02
53	590774.65	4181658.62	Worker	0.09	2.70E-03	2.67E-02
54	590799.63	4181659.29	Worker	0.09	2.78E-03	2.40E-02
55	590374.21	4181672.92	Worker	0.10	2.86E-03	3.02E-02
56	590399.20	4181673.59	Worker	0.10	2.94E-03	3.26E-02
57	590424.18	4181674.26	Worker	0.10	3.02E-03	3.21E-02
58	590449.17	4181674.93	Worker	0.10	3.11E-03	3.16E-02
59	590474.15	4181675.59	Worker	0.11	3.21E-03	3.25E-02
60	590499.14	4181676.26	Worker	0.11	3.29E-03	3.22E-02
61	590524.13	4181676.93	Worker	0.11	3.35E-03	3.43E-02
62	590549.11	4181677.60	Worker	0.11	3.36E-03	3.44E-02
63	590574.10	4181678.27	Worker	0.11	3.33E-03	3.48E-02
64	590599.08	4181678.93	Worker	0.11	3.28E-03	3.46E-02
65	590624.07	4181679.60	Worker	0.11	3.20E-03	3.75E-02
66	590649.05	4181680.27	Worker	0.10	3.11E-03	3.38E-02
67	590674.04	4181680.94	Worker	0.10	3.04E-03	3.46E-02
68	590699.02	4181681.60	Worker	0.10	3.01E-03	3.31E-02
69	590724.01	4181682.27	Worker	0.10	3.04E-03	3.03E-02
70	590748.99	4181682.94	Worker	0.10	3.10E-03	2.98E-02

Table E-1. Health Risk Assessment Results for All Receptors
Danville Costco Fuel Station
Contra Costa County, California

Receptor ID	X-Coordinate (m)	Y-Coordinate (m)	Receptor Type	Cancer Risk (in a million)	Chronic Hazard Index	Acute Hazard Index
71	590773.98	4181683.61	Worker	0.11	3.20E-03	2.71E-02
72	590798.96	4181684.28	Worker	0.11	3.31E-03	2.71E-02
73	590823.95	4181684.94	Worker	0.12	3.42E-03	2.61E-02
74	590848.94	4181685.61	Worker	0.12	3.50E-03	2.40E-02
75	590873.92	4181686.28	Worker	0.12	3.54E-03	2.29E-02
76	590048.73	4181689.23	Worker	0.11	3.19E-03	1.88E-02
77	590073.72	4181689.90	Worker	0.11	3.26E-03	1.90E-02
78	590098.71	4181690.56	Worker	0.12	3.34E-03	2.00E-02
79	590123.69	4181691.23	Worker	0.12	3.37E-03	2.14E-02
80	590148.68	4181691.90	Worker	0.11	3.12E-03	2.05E-02
81	590348.56	4181697.24	Worker	0.11	3.24E-03	3.08E-02
82	590373.54	4181697.91	Worker	0.11	3.30E-03	3.13E-02
83	590398.53	4181698.58	Worker	0.11	3.39E-03	3.49E-02
84	590423.52	4181699.24	Worker	0.12	3.50E-03	3.79E-02
85	590448.50	4181699.91	Worker	0.12	3.61E-03	3.59E-02
86	590473.49	4181700.58	Worker	0.12	3.73E-03	3.64E-02
87	590498.47	4181701.25	Worker	0.13	3.84E-03	3.45E-02
88	590523.46	4181701.92	Worker	0.13	3.91E-03	3.87E-02
89	590548.44	4181702.58	Worker	0.13	3.93E-03	3.90E-02
90	590573.43	4181703.25	Worker	0.13	3.89E-03	3.88E-02
91	590598.41	4181703.92	Worker	0.13	3.82E-03	3.95E-02
92	590623.40	4181704.59	Worker	0.12	3.72E-03	4.05E-02
93	590648.38	4181705.25	Worker	0.12	3.61E-03	3.69E-02
94	590673.37	4181705.92	Worker	0.12	3.54E-03	3.81E-02
95	590698.36	4181706.59	Worker	0.12	3.55E-03	3.70E-02
96	590723.34	4181707.26	Worker	0.12	3.62E-03	3.32E-02
97	590748.33	4181707.93	Worker	0.13	3.74E-03	3.15E-02
98	590773.31	4181708.59	Worker	0.13	3.88E-03	3.05E-02
99	590798.30	4181709.26	Worker	0.14	4.01E-03	2.92E-02
100	590823.28	4181709.93	Worker	0.14	4.10E-03	2.69E-02
101	590848.27	4181710.60	Worker	0.14	4.15E-03	2.57E-02
102	590873.25	4181711.26	Worker	0.14	4.14E-03	2.39E-02
103	590898.24	4181711.93	Worker	0.14	4.09E-03	2.13E-02
104	589998.10	4181712.88	Worker	0.11	3.16E-03	2.05E-02
105	590023.08	4181713.54	Worker	0.11	3.28E-03	2.04E-02
106	590048.07	4181714.21	Worker	0.12	3.40E-03	2.03E-02
107	590073.05	4181714.88	Worker	0.12	3.55E-03	2.02E-02
108	590098.04	4181715.55	Worker	0.13	3.67E-03	2.09E-02
109	590123.02	4181716.22	Worker	0.12	3.36E-03	2.00E-02
110	590148.01	4181716.88	Worker	0.13	3.51E-03	2.09E-02
111	590172.99	4181717.55	Worker	0.13	3.64E-03	2.26E-02
112	590197.98	4181718.22	Worker	0.13	3.75E-03	2.36E-02
113	590222.96	4181718.89	Worker	0.14	3.83E-03	2.43E-02
114	590247.95	4181719.56	Worker	0.14	3.87E-03	2.56E-02
115	590322.91	4181721.56	Worker	0.13	3.85E-03	2.91E-02
116	590347.89	4181722.23	Worker	0.13	3.84E-03	3.11E-02
117	590372.88	4181722.89	Worker	0.13	3.88E-03	3.60E-02
118	590397.86	4181723.56	Worker	0.13	3.97E-03	3.76E-02
119	590422.85	4181724.23	Worker	0.14	4.10E-03	4.18E-02
120	590447.83	4181724.90	Worker	0.14	4.25E-03	4.10E-02
121	590472.82	4181725.57	Worker	0.15	4.40E-03	4.01E-02
122	590497.80	4181726.23	Worker	0.15	4.55E-03	3.91E-02
123	590522.79	4181726.90	Worker	0.16	4.65E-03	4.45E-02
124	590547.78	4181727.57	Worker	0.16	4.67E-03	4.46E-02
125	590572.76	4181728.24	Worker	0.15	4.62E-03	4.40E-02
126	590597.75	4181728.90	Worker	0.15	4.53E-03	4.76E-02
127	590622.73	4181729.57	Worker	0.15	4.39E-03	4.48E-02
128	590647.72	4181730.24	Worker	0.14	4.26E-03	4.44E-02
129	590672.70	4181730.91	Worker	0.14	4.23E-03	4.27E-02
130	590697.69	4181731.58	Worker	0.15	4.29E-03	3.66E-02
131	590722.67	4181732.24	Worker	0.15	4.43E-03	3.74E-02
132	590747.66	4181732.91	Worker	0.16	4.61E-03	3.47E-02
133	590772.64	4181733.58	Worker	0.16	4.77E-03	3.33E-02
134	590797.63	4181734.25	Worker	0.17	4.89E-03	3.04E-02
135	590822.61	4181734.91	Worker	0.17	4.93E-03	2.91E-02
136	590847.60	4181735.58	Worker	0.17	4.91E-03	2.62E-02
137	590872.59	4181736.25	Worker	0.17	4.81E-03	2.38E-02
138	590897.57	4181736.92	Worker	0.16	4.68E-03	2.25E-02
139	590922.56	4181737.59	Worker	0.16	4.51E-03	2.20E-02
140	589972.44	4181737.19	Worker	0.09	2.46E-03	1.59E-02

Table E-1. Health Risk Assessment Results for All Receptors
Danville Costco Fuel Station
Contra Costa County, California

Receptor ID	X-Coordinate (m)	Y-Coordinate (m)	Receptor Type	Cancer Risk (in a million)	Chronic Hazard Index	Acute Hazard Index
141	589997.43	4181737.86	Worker	0.11	3.07E-03	2.07E-02
142	590022.41	4181738.53	Worker	0.12	3.29E-03	2.27E-02
143	590047.40	4181739.20	Worker	0.12	3.48E-03	2.24E-02
144	590072.38	4181739.87	Worker	0.13	3.74E-03	2.29E-02
145	590097.37	4181740.53	Worker	0.14	3.90E-03	2.27E-02
146	590122.36	4181741.20	Worker	0.13	3.68E-03	2.08E-02
147	590147.34	4181741.87	Worker	0.14	3.90E-03	2.26E-02
148	590172.33	4181742.54	Worker	0.15	4.11E-03	2.34E-02
149	590197.31	4181743.20	Worker	0.15	4.30E-03	2.49E-02
150	590222.30	4181743.87	Worker	0.16	4.47E-03	2.69E-02
151	590247.28	4181744.54	Worker	0.16	4.60E-03	2.77E-02
152	590272.27	4181745.21	Worker	0.17	4.68E-03	2.95E-02
153	590297.25	4181745.88	Worker	0.17	4.71E-03	3.07E-02
154	590322.24	4181746.54	Worker	0.16	4.71E-03	3.31E-02
155	590347.22	4181747.21	Worker	0.16	4.68E-03	3.36E-02
156	590372.21	4181747.88	Worker	0.16	4.68E-03	3.69E-02
157	590397.19	4181748.55	Worker	0.16	4.75E-03	4.13E-02
158	590422.18	4181749.22	Worker	0.17	4.90E-03	4.55E-02
159	590447.17	4181749.88	Worker	0.17	5.08E-03	4.93E-02
160	590472.15	4181750.55	Worker	0.18	5.28E-03	4.69E-02
161	590497.14	4181751.22	Worker	0.18	5.49E-03	4.70E-02
162	590522.12	4181751.89	Worker	0.19	5.65E-03	5.17E-02
163	590547.11	4181752.55	Worker	0.19	5.70E-03	5.18E-02
164	590572.09	4181753.22	Worker	0.19	5.64E-03	4.99E-02
165	590597.08	4181753.89	Worker	0.18	5.46E-03	5.57E-02
166	590622.06	4181754.56	Worker	0.18	5.27E-03	4.88E-02
167	590647.05	4181755.23	Worker	0.17	5.16E-03	5.00E-02
168	590672.03	4181755.89	Worker	0.18	5.19E-03	4.66E-02
169	590697.02	4181756.56	Worker	0.18	5.36E-03	4.43E-02
170	590722.01	4181757.23	Worker	0.19	5.59E-03	4.06E-02
171	590746.99	4181757.90	Worker	0.20	5.80E-03	3.85E-02
172	590771.98	4181758.56	Worker	0.20	5.94E-03	3.47E-02
173	590796.96	4181759.23	Worker	0.21	5.98E-03	3.33E-02
174	590821.95	4181759.90	Worker	0.20	5.91E-03	2.88E-02
175	590846.93	4181760.57	Worker	0.20	5.76E-03	2.69E-02
176	590871.92	4181761.24	Worker	0.19	5.55E-03	2.58E-02
177	590896.90	4181761.90	Worker	0.18	5.30E-03	2.50E-02
178	590921.89	4181762.57	Worker	0.17	5.02E-03	2.30E-02
179	590946.87	4181763.24	Worker	0.16	4.74E-03	2.28E-02
180	589946.79	4181761.51	Worker	0.08	2.27E-03	1.59E-02
181	589971.78	4181762.18	Worker	0.09	2.46E-03	1.67E-02
182	589996.76	4181762.85	Worker	0.10	2.66E-03	1.74E-02
183	590021.75	4181763.52	Worker	0.10	2.87E-03	1.82E-02
184	590046.73	4181764.18	Worker	0.11	3.10E-03	1.92E-02
185	590071.72	4181764.85	Worker	0.14	3.84E-03	2.49E-02
186	590096.70	4181765.52	Worker	0.13	3.64E-03	2.26E-02
187	590121.69	4181766.19	Worker	0.14	3.93E-03	2.30E-02
188	590146.67	4181766.85	Worker	0.15	4.24E-03	2.43E-02
189	590171.66	4181767.52	Worker	0.16	4.55E-03	2.47E-02
190	590196.64	4181768.19	Worker	0.18	4.87E-03	2.69E-02
191	590221.63	4181768.86	Worker	0.19	5.16E-03	2.78E-02
192	590246.61	4181769.53	Worker	0.19	5.42E-03	3.03E-02
193	590271.60	4181770.19	Worker	0.20	5.63E-03	3.21E-02
194	590296.59	4181770.86	Worker	0.21	5.78E-03	3.45E-02
195	590321.57	4181771.53	Worker	0.21	5.85E-03	3.59E-02
196	590346.56	4181772.20	Worker	0.21	5.86E-03	3.89E-02
197	590371.54	4181772.86	Worker	0.20	5.84E-03	4.03E-02
198	590396.53	4181773.53	Worker	0.20	5.86E-03	4.61E-02
199	590421.51	4181774.20	Worker	0.20	5.99E-03	4.95E-02
200	590446.50	4181774.87	Worker	0.21	6.21E-03	5.63E-02
201	590471.48	4181775.54	Worker	0.22	6.48E-03	5.54E-02
202	590496.47	4181776.20	Worker	0.23	6.77E-03	5.65E-02
203	590521.45	4181776.87	Worker	0.24	7.01E-03	6.07E-02
204	590571.42	4181778.21	Worker	0.24	6.97E-03	5.92E-02
205	590596.41	4181778.88	Worker	0.23	6.72E-03	6.20E-02
206	590621.40	4181779.54	Worker	0.22	6.50E-03	5.98E-02
207	590646.38	4181780.21	Worker	0.22	6.45E-03	5.74E-02
208	590671.37	4181780.88	Worker	0.22	6.63E-03	5.19E-02
209	590696.35	4181781.55	Worker	0.24	6.94E-03	4.82E-02
210	590721.34	4181782.21	Worker	0.25	7.23E-03	4.52E-02

Table E-1. Health Risk Assessment Results for All Receptors
Danville Costco Fuel Station
Contra Costa County, California

Receptor ID	X-Coordinate (m)	Y-Coordinate (m)	Receptor Type	Cancer Risk (in a million)	Chronic Hazard Index	Acute Hazard Index
211	590746.32	4181782.88	Worker	0.25	7.40E-03	4.03E-02
212	590771.31	4181783.55	Worker	0.25	7.41E-03	3.81E-02
213	590796.29	4181784.22	Worker	0.25	7.27E-03	3.35E-02
214	590821.28	4181784.89	Worker	0.24	7.01E-03	3.11E-02
215	590846.26	4181785.55	Worker	0.23	6.68E-03	3.04E-02
216	590871.25	4181786.22	Worker	0.22	6.30E-03	2.78E-02
217	590896.24	4181786.89	Worker	0.20	5.91E-03	2.70E-02
218	590921.22	4181787.56	Worker	0.19	5.51E-03	2.56E-02
219	590946.21	4181788.22	Worker	0.18	5.13E-03	2.33E-02
220	589921.14	4181785.83	Worker	0.08	2.30E-03	1.67E-02
221	589946.12	4181786.50	Worker	0.08	2.21E-03	1.58E-02
222	589971.11	4181787.17	Worker	0.09	2.40E-03	1.67E-02
223	589996.09	4181787.83	Worker	0.10	2.62E-03	1.79E-02
224	590021.08	4181788.50	Worker	0.10	2.85E-03	1.90E-02
225	590046.06	4181789.17	Worker	0.11	3.10E-03	2.00E-02
226	590071.05	4181789.84	Worker	0.12	3.39E-03	2.10E-02
227	590096.03	4181790.50	Worker	0.14	3.72E-03	2.21E-02
228	590121.02	4181791.17	Worker	0.15	4.08E-03	2.44E-02
229	590146.01	4181791.84	Worker	0.16	4.47E-03	2.67E-02
230	590170.99	4181792.51	Worker	0.18	4.90E-03	2.73E-02
231	590195.98	4181793.18	Worker	0.19	5.35E-03	2.92E-02
232	590220.96	4181793.84	Worker	0.21	5.82E-03	3.01E-02
233	590245.95	4181794.51	Worker	0.23	6.27E-03	3.29E-02
234	590270.93	4181795.18	Worker	0.24	6.70E-03	3.45E-02
235	590295.92	4181795.85	Worker	0.25	7.06E-03	3.78E-02
236	590320.90	4181796.51	Worker	0.26	7.32E-03	4.01E-02
237	590345.89	4181797.18	Worker	0.26	7.48E-03	4.27E-02
238	590370.87	4181797.85	Worker	0.26	7.53E-03	4.66E-02
239	590395.86	4181798.52	Worker	0.26	7.52E-03	4.95E-02
240	590420.84	4181799.19	Worker	0.26	7.59E-03	5.77E-02
241	590445.83	4181799.85	Worker	0.27	7.82E-03	6.27E-02
242	590470.82	4181800.52	Worker	0.28	8.19E-03	6.83E-02
243	590495.80	4181801.19	Worker	0.29	8.61E-03	6.72E-02
244	590545.77	4181802.52	Worker	0.31	9.10E-03	7.36E-02
245	590570.76	4181803.19	Worker	0.30	8.87E-03	7.33E-02
246	590595.74	4181803.86	Worker	0.29	8.53E-03	7.13E-02
247	590620.73	4181804.53	Worker	0.28	8.32E-03	7.00E-02
248	590645.71	4181805.20	Worker	0.29	8.47E-03	6.09E-02
249	590670.70	4181805.86	Worker	0.30	8.88E-03	5.82E-02
250	590695.68	4181806.53	Worker	0.32	9.31E-03	5.42E-02
251	590720.67	4181807.20	Worker	0.33	9.52E-03	4.79E-02
252	590745.65	4181807.87	Worker	0.33	9.47E-03	4.39E-02
253	590770.64	4181808.54	Worker	0.32	9.18E-03	3.85E-02
254	590795.63	4181809.20	Worker	0.30	8.73E-03	3.72E-02
255	590820.61	4181809.87	Worker	0.28	8.19E-03	3.49E-02
256	590845.60	4181810.54	Worker	0.26	7.61E-03	3.27E-02
257	590870.58	4181811.21	Worker	0.24	7.03E-03	3.08E-02
258	590895.57	4181811.87	Worker	0.22	6.46E-03	2.76E-02
259	590920.55	4181812.54	Worker	0.21	5.93E-03	2.56E-02
260	590945.54	4181813.21	Worker	0.19	5.44E-03	2.39E-02
261	590970.52	4181813.88	Worker	0.17	4.99E-03	2.28E-02
262	589920.47	4181810.82	Worker	0.08	2.23E-03	1.62E-02
263	589945.45	4181811.48	Worker	0.08	2.12E-03	1.53E-02
264	589970.44	4181812.15	Worker	0.08	2.31E-03	1.62E-02
265	589995.42	4181812.82	Worker	0.09	2.53E-03	1.75E-02
266	590020.41	4181813.49	Worker	0.10	2.77E-03	1.88E-02
267	590045.40	4181814.15	Worker	0.11	3.04E-03	2.03E-02
268	590070.38	4181814.82	Worker	0.12	3.34E-03	2.15E-02
269	590095.37	4181815.49	Worker	0.14	3.69E-03	2.32E-02
270	590120.35	4181816.16	Worker	0.15	4.09E-03	2.48E-02
271	590145.34	4181816.83	Worker	0.17	4.56E-03	2.64E-02
272	590170.32	4181817.49	Worker	0.19	5.08E-03	2.81E-02
273	590195.31	4181818.16	Worker	0.21	5.67E-03	3.19E-02
274	590220.29	4181818.83	Worker	0.23	6.32E-03	3.38E-02
275	590245.28	4181819.50	Worker	0.25	7.01E-03	3.61E-02
276	590270.26	4181820.16	Worker	0.28	7.73E-03	3.79E-02
277	590295.25	4181820.83	Worker	0.30	8.44E-03	4.15E-02
278	590320.24	4181821.50	Worker	0.33	9.08E-03	4.39E-02
279	590345.22	4181822.17	Worker	0.34	9.60E-03	4.77E-02
280	590370.21	4181822.84	Worker	0.35	9.94E-03	5.23E-02

Table E-1. Health Risk Assessment Results for All Receptors
Danville Costco Fuel Station
Contra Costa County, California

Receptor ID	X-Coordinate (m)	Y-Coordinate (m)	Receptor Type	Cancer Risk (in a million)	Chronic Hazard Index	Acute Hazard Index
281	590395.19	4181823.50	Worker	0.35	1.01E-02	5.75E-02
282	590420.18	4181824.17	Worker	0.35	1.01E-02	6.22E-02
283	590445.16	4181824.84	Worker	0.35	1.03E-02	7.16E-02
284	590470.15	4181825.51	Worker	0.37	1.08E-02	8.23E-02
285	590520.12	4181826.84	Worker	0.41	1.20E-02	8.77E-02
286	590545.10	4181827.51	Worker	0.41	1.21E-02	9.09E-02
287	590570.09	4181828.18	Worker	0.40	1.18E-02	9.40E-02
288	590595.07	4181828.85	Worker	0.38	1.13E-02	8.64E-02
289	590620.06	4181829.51	Worker	0.38	1.13E-02	8.24E-02
290	590645.05	4181830.18	Worker	0.40	1.18E-02	7.48E-02
291	590670.03	4181830.85	Worker	0.43	1.25E-02	6.68E-02
292	590695.02	4181831.52	Worker	0.44	1.28E-02	5.89E-02
293	590720.00	4181832.18	Worker	0.43	1.26E-02	5.10E-02
294	590744.99	4181832.85	Worker	0.41	1.20E-02	4.62E-02
295	590769.97	4181833.52	Worker	0.38	1.11E-02	4.48E-02
296	590794.96	4181834.19	Worker	0.35	1.02E-02	4.14E-02
297	590819.94	4181834.86	Worker	0.32	9.34E-03	3.83E-02
298	590844.93	4181835.52	Worker	0.29	8.46E-03	3.36E-02
299	590869.91	4181836.19	Worker	0.27	7.64E-03	3.11E-02
300	590894.90	4181836.86	Worker	0.24	6.91E-03	2.86E-02
301	590919.89	4181837.53	Worker	0.22	6.25E-03	2.74E-02
302	590944.87	4181838.20	Worker	0.20	5.67E-03	2.51E-02
303	590969.86	4181838.86	Worker	0.18	5.15E-03	2.32E-02
304	589919.80	4181835.80	Worker	0.08	2.12E-03	1.70E-02
305	589944.79	4181836.47	Worker	0.08	2.22E-03	1.68E-02
306	589969.77	4181837.14	Worker	0.08	2.18E-03	1.63E-02
307	589994.76	4181837.80	Worker	0.09	2.40E-03	1.73E-02
308	590019.74	4181838.47	Worker	0.10	2.64E-03	1.83E-02
309	590044.73	4181839.14	Worker	0.11	2.91E-03	1.95E-02
310	590069.71	4181839.81	Worker	0.12	3.22E-03	2.09E-02
311	590094.70	4181840.48	Worker	0.13	3.57E-03	2.30E-02
312	590119.68	4181841.14	Worker	0.15	3.99E-03	2.50E-02
313	590144.67	4181841.81	Worker	0.16	4.48E-03	2.70E-02
314	590169.65	4181842.48	Worker	0.18	5.06E-03	2.96E-02
315	590194.64	4181843.15	Worker	0.21	5.73E-03	3.19E-02
316	590219.63	4181843.81	Worker	0.24	6.52E-03	3.45E-02
317	590244.61	4181844.48	Worker	0.27	7.44E-03	3.83E-02
318	590269.60	4181845.15	Worker	0.31	8.49E-03	4.29E-02
319	590294.58	4181845.82	Worker	0.35	9.64E-03	4.60E-02
320	590319.57	4181846.49	Worker	0.39	1.09E-02	4.96E-02
321	590344.55	4181847.15	Worker	0.43	1.21E-02	5.38E-02
322	590369.54	4181847.82	Worker	0.47	1.31E-02	5.90E-02
323	590394.52	4181848.49	Worker	0.49	1.39E-02	6.68E-02
324	590419.51	4181849.16	Worker	0.50	1.43E-02	7.34E-02
325	590444.49	4181849.82	Worker	0.51	1.45E-02	8.04E-02
326	590494.47	4181851.16	Worker	0.54	1.59E-02	1.06E-01
327	590519.45	4181851.83	Worker	0.57	1.69E-02	1.07E-01
328	590544.44	4181852.50	Worker	0.58	1.72E-02	1.16E-01
329	590569.42	4181853.16	Worker	0.56	1.66E-02	1.17E-01
330	590594.41	4181853.83	Worker	0.55	1.61E-02	1.09E-01
331	590619.39	4181854.50	Worker	0.57	1.68E-02	9.85E-02
332	590644.38	4181855.17	Worker	0.61	1.78E-02	8.54E-02
333	590669.36	4181855.83	Worker	0.62	1.81E-02	7.46E-02
334	590694.35	4181856.50	Worker	0.60	1.75E-02	6.29E-02
335	590719.33	4181857.17	Worker	0.56	1.62E-02	5.91E-02
336	590744.32	4181857.84	Worker	0.51	1.47E-02	5.27E-02
337	590769.30	4181858.51	Worker	0.46	1.32E-02	5.00E-02
338	590794.29	4181859.17	Worker	0.41	1.17E-02	4.30E-02
339	590819.28	4181859.84	Worker	0.36	1.03E-02	3.89E-02
340	590844.26	4181860.51	Worker	0.32	9.12E-03	3.62E-02
341	590869.25	4181861.18	Worker	0.28	8.09E-03	3.29E-02
342	590894.23	4181861.85	Worker	0.25	7.20E-03	2.99E-02
343	590919.22	4181862.51	Worker	0.22	6.44E-03	2.73E-02
344	590944.20	4181863.18	Worker	0.20	5.80E-03	2.57E-02
345	590969.19	4181863.85	Worker	0.18	5.23E-03	2.36E-02
346	589894.15	4181860.12	Worker	0.06	1.83E-03	1.79E-02
347	589919.13	4181860.79	Worker	0.07	1.95E-03	1.85E-02
348	589944.12	4181861.45	Worker	0.07	2.06E-03	1.86E-02
349	589969.10	4181862.12	Worker	0.07	2.04E-03	1.75E-02
350	589994.09	4181862.79	Worker	0.08	2.23E-03	1.86E-02

Table E-1. Health Risk Assessment Results for All Receptors
Danville Costco Fuel Station
Contra Costa County, California

Receptor ID	X-Coordinate (m)	Y-Coordinate (m)	Receptor Type	Cancer Risk (in a million)	Chronic Hazard Index	Acute Hazard Index
351	590019.07	4181863.46	Worker	0.09	2.46E-03	1.97E-02
352	590044.06	4181864.13	Worker	0.10	2.73E-03	2.08E-02
353	590069.05	4181864.79	Worker	0.11	3.04E-03	2.21E-02
354	590094.03	4181865.46	Worker	0.13	3.39E-03	2.31E-02
355	590119.02	4181866.13	Worker	0.14	3.81E-03	2.44E-02
356	590144.00	4181866.80	Worker	0.16	4.29E-03	2.61E-02
357	590168.99	4181867.46	Worker	0.18	4.86E-03	2.88E-02
358	590193.97	4181868.13	Worker	0.20	5.54E-03	3.23E-02
359	590218.96	4181868.80	Worker	0.23	6.38E-03	3.57E-02
360	590243.94	4181869.47	Worker	0.27	7.41E-03	3.94E-02
361	590268.93	4181870.14	Worker	0.31	8.68E-03	4.35E-02
362	590293.91	4181870.80	Worker	0.37	1.02E-02	4.82E-02
363	590318.90	4181871.47	Worker	0.44	1.21E-02	5.59E-02
364	590343.88	4181872.14	Worker	0.51	1.42E-02	6.13E-02
365	590368.87	4181872.81	Worker	0.59	1.66E-02	6.86E-02
366	590393.86	4181873.47	Worker	0.68	1.90E-02	7.38E-02
367	590418.84	4181874.14	Worker	0.75	2.10E-02	8.55E-02
368	590468.81	4181875.48	Worker	0.80	2.30E-02	1.16E-01
369	590493.80	4181876.15	Worker	0.83	2.43E-02	1.40E-01
370	590518.78	4181876.81	Worker	0.88	2.62E-02	1.43E-01
371	590543.77	4181877.48	Worker	0.90	2.69E-02	1.57E-01
372	590568.75	4181878.15	Worker	0.87	2.57E-02	1.46E-01
373	590593.74	4181878.82	Worker	0.89	2.60E-02	1.31E-01
374	590618.72	4181879.48	Worker	0.95	2.76E-02	1.16E-01
375	590643.71	4181880.15	Worker	0.96	2.78E-02	9.86E-02
376	590668.70	4181880.82	Worker	0.89	2.59E-02	8.17E-02
377	590693.68	4181881.49	Worker	0.79	2.30E-02	7.29E-02
378	590718.67	4181882.16	Worker	0.69	1.99E-02	6.69E-02
379	590743.65	4181882.82	Worker	0.60	1.72E-02	5.64E-02
380	590793.62	4181884.16	Worker	0.45	1.28E-02	4.60E-02
381	590818.61	4181884.83	Worker	0.38	1.10E-02	4.08E-02
382	590843.59	4181885.49	Worker	0.33	9.50E-03	3.68E-02
383	590868.58	4181886.16	Worker	0.29	8.31E-03	3.34E-02
384	590893.56	4181886.83	Worker	0.26	7.32E-03	2.95E-02
385	590918.55	4181887.50	Worker	0.23	6.50E-03	2.60E-02
386	590943.54	4181888.17	Worker	0.20	5.81E-03	2.38E-02
387	590968.52	4181888.83	Worker	0.18	5.23E-03	2.23E-02
388	589893.48	4181885.10	Worker	0.06	1.66E-03	1.85E-02
389	589918.47	4181885.77	Worker	0.06	1.77E-03	1.94E-02
390	589943.45	4181886.44	Worker	0.07	1.88E-03	1.97E-02
391	589968.44	4181887.11	Worker	0.07	1.88E-03	1.78E-02
392	589993.42	4181887.77	Worker	0.07	2.05E-03	1.89E-02
393	590018.41	4181888.44	Worker	0.08	2.26E-03	2.01E-02
394	590043.39	4181889.11	Worker	0.09	2.50E-03	2.13E-02
395	590068.38	4181889.78	Worker	0.10	2.78E-03	2.25E-02
396	590168.32	4181892.45	Worker	0.18	4.66E-03	3.10E-02
397	590193.30	4181893.12	Worker	0.19	5.20E-03	3.29E-02
398	590218.29	4181893.79	Worker	0.22	5.96E-03	3.56E-02
399	590243.28	4181894.45	Worker	0.25	6.96E-03	3.85E-02
400	590268.26	4181895.12	Worker	0.30	8.25E-03	4.37E-02
401	590293.25	4181895.79	Worker	0.36	9.92E-03	5.02E-02
402	590318.23	4181896.46	Worker	0.44	1.21E-02	5.66E-02
403	590343.22	4181897.12	Worker	0.54	1.50E-02	6.48E-02
404	590368.20	4181897.79	Worker	0.67	1.88E-02	7.52E-02
405	590393.19	4181898.46	Worker	0.84	2.36E-02	8.80E-02
406	590443.16	4181899.80	Worker	1.25	3.52E-02	1.16E-01
407	590468.14	4181900.46	Worker	1.41	3.99E-02	1.44E-01
408	590493.13	4181901.13	Worker	1.52	4.33E-02	1.78E-01
409	590518.12	4181901.80	Worker	1.63	4.74E-02	2.09E-01
410	590543.10	4181902.47	Worker	1.69	4.93E-02	2.29E-01
411	590568.09	4181903.13	Worker	1.65	4.78E-02	2.08E-01
412	590593.07	4181903.80	Worker	1.73	5.02E-02	1.73E-01
413	590618.06	4181904.47	Worker	1.68	4.87E-02	1.37E-01
414	590643.04	4181905.14	Worker	1.46	4.22E-02	1.16E-01
415	590668.03	4181905.81	Worker	1.20	3.47E-02	9.91E-02
416	590693.01	4181906.47	Worker	0.97	2.81E-02	8.04E-02
417	590718.00	4181907.14	Worker	0.79	2.28E-02	7.02E-02
418	590742.98	4181907.81	Worker	0.66	1.88E-02	6.06E-02
419	590767.97	4181908.48	Worker	0.56	1.59E-02	5.41E-02
420	590792.95	4181909.14	Worker	0.46	1.32E-02	4.55E-02

Table E-1. Health Risk Assessment Results for All Receptors
Danville Costco Fuel Station
Contra Costa County, California

Receptor ID	X-Coordinate (m)	Y-Coordinate (m)	Receptor Type	Cancer Risk (in a million)	Chronic Hazard Index	Acute Hazard Index
421	590817.94	4181909.81	Worker	0.39	1.11E-02	3.87E-02
422	590842.93	4181910.48	Worker	0.33	9.56E-03	3.55E-02
423	590867.91	4181911.15	Worker	0.29	8.30E-03	3.24E-02
424	590892.90	4181911.82	Worker	0.25	7.27E-03	2.98E-02
425	590917.88	4181912.48	Worker	0.22	6.42E-03	2.75E-02
426	590942.87	4181913.15	Worker	0.20	5.72E-03	2.53E-02
427	590967.85	4181913.82	Worker	0.18	5.13E-03	2.33E-02
428	589917.80	4181910.76	Worker	0.06	1.60E-03	1.98E-02
429	589942.78	4181911.42	Worker	0.06	1.70E-03	2.01E-02
430	589967.77	4181912.09	Worker	0.06	1.73E-03	1.80E-02
431	589992.75	4181912.76	Worker	0.07	1.89E-03	1.92E-02
432	590017.74	4181913.43	Worker	0.08	2.07E-03	2.06E-02
433	590042.72	4181914.10	Worker	0.08	2.27E-03	2.19E-02
434	590067.71	4181914.76	Worker	0.09	2.50E-03	2.33E-02
435	590092.70	4181915.43	Worker	0.10	2.79E-03	2.48E-02
436	590117.68	4181916.10	Worker	0.12	3.13E-03	2.65E-02
437	590142.67	4181916.77	Worker	0.13	3.55E-03	2.87E-02
438	590167.65	4181917.43	Worker	0.15	4.07E-03	3.15E-02
439	590242.61	4181919.44	Worker	0.23	6.30E-03	4.12E-02
440	590267.59	4181920.11	Worker	0.27	7.39E-03	4.62E-02
441	590292.58	4181920.77	Worker	0.32	8.90E-03	5.22E-02
442	590317.56	4181921.44	Worker	0.40	1.10E-02	5.86E-02
443	590342.55	4181922.11	Worker	0.50	1.38E-02	6.66E-02
444	590367.53	4181922.78	Worker	0.65	1.80E-02	7.83E-02
445	590417.51	4181924.11	Worker	1.21	3.38E-02	1.15E-01
446	590442.49	4181924.78	Worker	1.71	4.84E-02	1.48E-01
447	590467.48	4181925.45	Worker	2.43	6.93E-02	1.85E-01
448	590492.46	4181926.12	Worker	3.27	9.31E-02	2.37E-01
449	590567.42	4181928.12	Worker	4.39	1.24E-01	3.12E-01
450	590592.40	4181928.79	Worker	3.73	1.07E-01	2.20E-01
451	590617.39	4181929.46	Worker	2.72	7.85E-02	1.72E-01
452	590642.37	4181930.12	Worker	1.93	5.59E-02	1.31E-01
453	590667.36	4181930.79	Worker	1.41	4.07E-02	1.03E-01
454	590692.35	4181931.46	Worker	1.06	3.07E-02	8.36E-02
455	590717.33	4181932.13	Worker	0.83	2.39E-02	6.98E-02
456	590767.30	4181933.46	Worker	0.55	1.57E-02	5.40E-02
457	590792.29	4181934.13	Worker	0.45	1.29E-02	4.72E-02
458	590817.27	4181934.80	Worker	0.38	1.09E-02	4.12E-02
459	590842.26	4181935.47	Worker	0.32	9.30E-03	3.63E-02
460	590867.24	4181936.13	Worker	0.28	8.05E-03	3.28E-02
461	590892.23	4181936.80	Worker	0.25	7.03E-03	2.96E-02
462	590917.21	4181937.47	Worker	0.22	6.20E-03	2.68E-02
463	590942.20	4181938.14	Worker	0.19	5.52E-03	2.43E-02
464	589917.13	4181935.74	Worker	0.05	1.46E-03	1.85E-02
465	589942.12	4181936.41	Worker	0.06	1.55E-03	1.88E-02
466	589967.10	4181937.08	Worker	0.06	1.60E-03	1.81E-02
467	589992.09	4181937.75	Worker	0.06	1.74E-03	1.93E-02
468	590017.07	4181938.41	Worker	0.07	1.90E-03	2.07E-02
469	590042.06	4181939.08	Worker	0.08	2.08E-03	2.21E-02
470	590067.04	4181939.75	Worker	0.08	2.27E-03	2.35E-02
471	590092.03	4181940.42	Worker	0.09	2.51E-03	2.53E-02
472	590117.01	4181941.08	Worker	0.10	2.80E-03	2.73E-02
473	590142.00	4181941.75	Worker	0.11	3.14E-03	2.96E-02
474	590166.98	4181942.42	Worker	0.13	3.54E-03	3.23E-02
475	590191.97	4181943.09	Worker	0.15	4.05E-03	3.53E-02
476	590216.95	4181943.76	Worker	0.17	4.69E-03	3.90E-02
477	590241.94	4181944.42	Worker	0.21	5.59E-03	4.36E-02
478	590291.91	4181945.76	Worker	0.29	7.71E-03	5.36E-02
479	590316.90	4181946.43	Worker	0.34	9.32E-03	6.11E-02
480	590341.88	4181947.09	Worker	0.42	1.16E-02	7.08E-02
481	590366.87	4181947.76	Worker	0.54	1.51E-02	8.32E-02
482	590416.84	4181949.10	Worker	1.05	2.93E-02	1.23E-01
483	590441.82	4181949.77	Worker	1.62	4.57E-02	1.60E-01
484	590466.81	4181950.43	Worker	2.82	8.04E-02	2.18E-01
485	590591.74	4181953.77	Worker	5.86	1.70E-01	2.59E-01
486	590616.72	4181954.44	Worker	3.23	9.37E-02	1.84E-01
487	590641.71	4181955.11	Worker	2.04	5.90E-02	1.36E-01
488	590666.69	4181955.78	Worker	1.40	4.06E-02	1.03E-01
489	590691.68	4181956.44	Worker	1.03	2.97E-02	8.23E-02
490	590716.66	4181957.11	Worker	0.79	2.28E-02	7.03E-02

Table E-1. Health Risk Assessment Results for All Receptors
Danville Costco Fuel Station
Contra Costa County, California

Receptor ID	X-Coordinate (m)	Y-Coordinate (m)	Receptor Type	Cancer Risk (in a million)	Chronic Hazard Index	Acute Hazard Index
491	590766.63	4181958.45	Worker	0.52	1.48E-02	5.25E-02
492	590791.62	4181959.12	Worker	0.43	1.22E-02	4.60E-02
493	590816.60	4181959.78	Worker	0.36	1.03E-02	4.07E-02
494	590841.59	4181960.45	Worker	0.31	8.79E-03	3.64E-02
495	590866.58	4181961.12	Worker	0.27	7.61E-03	3.27E-02
496	590891.56	4181961.79	Worker	0.23	6.66E-03	2.96E-02
497	590916.55	4181962.45	Worker	0.21	5.89E-03	2.70E-02
498	590941.53	4181963.12	Worker	0.18	5.25E-03	2.47E-02
499	589916.46	4181960.73	Worker	0.05	1.34E-03	1.65E-02
500	589941.45	4181961.40	Worker	0.05	1.38E-03	1.54E-02
501	589966.43	4181962.06	Worker	0.05	1.49E-03	1.64E-02
502	589991.42	4181962.73	Worker	0.06	1.62E-03	1.74E-02
503	590016.40	4181963.40	Worker	0.06	1.76E-03	1.86E-02
504	590041.39	4181964.07	Worker	0.07	1.92E-03	1.99E-02
505	590066.37	4181964.73	Worker	0.07	2.08E-03	2.13E-02
506	590091.36	4181965.40	Worker	0.08	2.29E-03	2.28E-02
507	590116.35	4181966.07	Worker	0.09	2.53E-03	2.47E-02
508	590141.33	4181966.74	Worker	0.10	2.82E-03	2.68E-02
509	590166.32	4181967.41	Worker	0.11	3.16E-03	2.92E-02
510	590191.30	4181968.07	Worker	0.13	3.57E-03	3.23E-02
511	590216.29	4181968.74	Worker	0.15	4.07E-03	3.59E-02
512	590241.27	4181969.41	Worker	0.17	4.70E-03	4.02E-02
513	590266.26	4181970.08	Worker	0.20	5.51E-03	4.54E-02
514	590291.24	4181970.74	Worker	0.25	6.61E-03	5.20E-02
515	590341.21	4181972.08	Worker	0.36	9.72E-03	6.87E-02
516	590391.18	4181973.42	Worker	0.58	1.59E-02	1.01E-01
517	590416.17	4181974.08	Worker	0.79	2.19E-02	1.27E-01
518	590441.16	4181974.75	Worker	1.17	3.28E-02	1.66E-01
519	590466.14	4181975.42	Worker	2.00	5.56E-02	2.32E-01
520	590591.07	4181978.76	Worker	4.76	1.38E-01	2.70E-01
521	590616.05	4181979.43	Worker	2.69	7.80E-02	1.87E-01
522	590641.04	4181980.09	Worker	1.74	5.02E-02	1.41E-01
523	590666.02	4181980.76	Worker	1.22	3.52E-02	1.11E-01
524	590691.01	4181981.43	Worker	0.91	2.62E-02	8.94E-02
525	590740.98	4181982.77	Worker	0.58	1.64E-02	6.47E-02
526	590765.97	4181983.43	Worker	0.47	1.34E-02	5.57E-02
527	590790.95	4181984.10	Worker	0.39	1.12E-02	4.90E-02
528	590815.94	4181984.77	Worker	0.33	9.46E-03	4.35E-02
529	590840.92	4181985.44	Worker	0.28	8.14E-03	3.89E-02
530	590865.91	4181986.10	Worker	0.25	7.08E-03	3.50E-02
531	590890.89	4181986.77	Worker	0.22	6.22E-03	3.17E-02
532	590915.88	4181987.44	Worker	0.19	5.52E-03	2.89E-02
533	590940.86	4181988.11	Worker	0.17	4.94E-03	2.66E-02
534	589940.78	4181986.38	Worker	0.05	1.30E-03	1.52E-02
535	589965.76	4181987.05	Worker	0.05	1.40E-03	1.64E-02
536	589990.75	4181987.72	Worker	0.05	1.52E-03	1.78E-02
537	590015.74	4181988.38	Worker	0.06	1.64E-03	1.93E-02
538	590040.72	4181989.05	Worker	0.06	1.78E-03	2.09E-02
539	590065.71	4181989.72	Worker	0.07	1.93E-03	2.27E-02
540	590090.69	4181990.39	Worker	0.07	2.11E-03	2.46E-02
541	590115.68	4181991.06	Worker	0.08	2.32E-03	2.68E-02
542	590140.66	4181991.72	Worker	0.09	2.57E-03	2.93E-02
543	590165.65	4181992.39	Worker	0.10	2.86E-03	3.21E-02
544	590190.63	4181993.06	Worker	0.11	3.21E-03	3.51E-02
545	590215.62	4181993.73	Worker	0.13	3.63E-03	3.86E-02
546	590240.60	4181994.39	Worker	0.15	4.15E-03	4.25E-02
547	590265.59	4181995.06	Worker	0.17	4.80E-03	4.74E-02
548	590290.58	4181995.73	Worker	0.21	5.63E-03	5.39E-02
549	590315.56	4181996.40	Worker	0.25	6.72E-03	6.17E-02
550	590340.55	4181997.07	Worker	0.31	8.24E-03	7.15E-02
551	590390.52	4181998.40	Worker	0.50	1.31E-02	9.96E-02
552	590415.50	4181999.07	Worker	0.62	1.72E-02	1.25E-01
553	590440.49	4181999.74	Worker	0.86	2.42E-02	1.51E-01
554	590565.41	4182003.08	Worker	4.42	1.28E-01	3.23E-01
555	590590.40	4182003.74	Worker	2.83	8.21E-02	2.26E-01
556	590615.39	4182004.41	Worker	1.89	5.48E-02	1.69E-01
557	590640.37	4182005.08	Worker	1.34	3.87E-02	1.31E-01
558	590665.36	4182005.75	Worker	0.99	2.87E-02	1.06E-01
559	590690.34	4182006.42	Worker	0.77	2.22E-02	8.56E-02
560	590740.31	4182007.75	Worker	0.50	1.44E-02	6.21E-02

Table E-1. Health Risk Assessment Results for All Receptors
Danville Costco Fuel Station
Contra Costa County, California

Receptor ID	X-Coordinate (m)	Y-Coordinate (m)	Receptor Type	Cancer Risk (in a million)	Chronic Hazard Index	Acute Hazard Index
561	590765.30	4182008.42	Worker	0.42	1.19E-02	5.49E-02
562	590790.28	4182009.09	Worker	0.35	1.01E-02	4.87E-02
563	590815.27	4182009.75	Worker	0.30	8.61E-03	4.33E-02
564	590840.25	4182010.42	Worker	0.26	7.46E-03	3.95E-02
565	590865.24	4182011.09	Worker	0.23	6.54E-03	3.61E-02
566	590890.23	4182011.76	Worker	0.20	5.78E-03	3.31E-02
567	590915.21	4182012.43	Worker	0.18	5.15E-03	3.03E-02
568	589940.11	4182011.37	Worker	0.04	1.23E-03	1.72E-02
569	589965.10	4182012.03	Worker	0.05	1.32E-03	1.82E-02
570	589990.08	4182012.70	Worker	0.05	1.43E-03	1.94E-02
571	590015.07	4182013.37	Worker	0.05	1.54E-03	2.06E-02
572	590040.05	4182014.04	Worker	0.06	1.67E-03	2.17E-02
573	590065.04	4182014.71	Worker	0.06	1.81E-03	2.32E-02
574	590090.02	4182015.37	Worker	0.07	1.96E-03	2.47E-02
575	590115.01	4182016.04	Worker	0.08	2.15E-03	2.67E-02
576	590139.99	4182016.71	Worker	0.08	2.37E-03	2.89E-02
577	590164.98	4182017.38	Worker	0.09	2.62E-03	3.14E-02
578	590189.97	4182018.04	Worker	0.10	2.93E-03	3.43E-02
579	590214.95	4182018.71	Worker	0.12	3.30E-03	3.77E-02
580	590239.94	4182019.38	Worker	0.13	3.74E-03	4.09E-02
581	590264.92	4182020.05	Worker	0.15	4.30E-03	4.59E-02
582	590289.91	4182020.72	Worker	0.18	5.00E-03	5.15E-02
583	590314.89	4182021.38	Worker	0.21	5.90E-03	6.10E-02
584	590364.86	4182022.72	Worker	0.32	8.71E-03	7.82E-02
585	590389.85	4182023.39	Worker	0.41	1.10E-02	9.41E-02
586	590439.82	4182024.72	Worker	0.69	1.89E-02	1.45E-01
587	590564.75	4182028.06	Worker	2.08	6.01E-02	2.05E-01
588	590589.73	4182028.73	Worker	1.69	4.89E-02	1.81E-01
589	590614.72	4182029.40	Worker	1.29	3.74E-02	1.38E-01
590	590639.70	4182030.06	Worker	1.00	2.89E-02	1.17E-01
591	590664.69	4182030.73	Worker	0.79	2.28E-02	9.82E-02
592	590714.66	4182032.07	Worker	0.53	1.52E-02	7.04E-02
593	590739.64	4182032.74	Worker	0.44	1.26E-02	5.99E-02
594	590764.63	4182033.40	Worker	0.37	1.06E-02	5.35E-02
595	590789.62	4182034.07	Worker	0.31	9.03E-03	4.64E-02
596	590814.60	4182034.74	Worker	0.27	7.81E-03	3.96E-02
597	590839.59	4182035.41	Worker	0.24	6.82E-03	3.61E-02
598	590864.57	4182036.08	Worker	0.21	6.02E-03	3.34E-02
599	590889.56	4182036.74	Worker	0.19	5.35E-03	3.06E-02
600	590914.54	4182037.41	Worker	0.17	4.80E-03	2.87E-02
601	589964.43	4182037.02	Worker	0.04	1.25E-03	1.79E-02
602	589989.41	4182037.69	Worker	0.05	1.35E-03	1.90E-02
603	590014.40	4182038.35	Worker	0.05	1.45E-03	2.02E-02
604	590039.39	4182039.02	Worker	0.05	1.57E-03	2.14E-02
605	590064.37	4182039.69	Worker	0.06	1.70E-03	2.31E-02
606	590089.36	4182040.36	Worker	0.06	1.84E-03	2.45E-02
607	590114.34	4182041.03	Worker	0.07	2.00E-03	2.57E-02
608	590139.33	4182041.69	Worker	0.08	2.20E-03	2.83E-02
609	590164.31	4182042.36	Worker	0.08	2.44E-03	3.03E-02
610	590189.30	4182043.03	Worker	0.09	2.71E-03	3.29E-02
611	590214.28	4182043.70	Worker	0.11	3.04E-03	3.78E-02
612	590239.27	4182044.37	Worker	0.12	3.44E-03	4.12E-02
613	590264.25	4182045.03	Worker	0.14	3.92E-03	4.61E-02
614	590289.24	4182045.70	Worker	0.16	4.53E-03	5.02E-02
615	590314.22	4182046.37	Worker	0.19	5.30E-03	5.31E-02
616	590339.21	4182047.04	Worker	0.22	6.32E-03	6.54E-02
617	590364.20	4182047.70	Worker	0.26	7.53E-03	7.22E-02
618	590389.18	4182048.37	Worker	0.32	9.18E-03	9.14E-02
619	590414.17	4182049.04	Worker	0.40	1.14E-02	1.02E-01
620	590439.15	4182049.71	Worker	0.52	1.44E-02	1.25E-01
621	590489.12	4182051.04	Worker	0.84	2.35E-02	1.75E-01
622	590539.09	4182052.38	Worker	1.17	3.30E-02	1.67E-01
623	590564.08	4182053.05	Worker	1.17	3.37E-02	1.46E-01
624	590589.06	4182053.71	Worker	1.07	3.10E-02	1.36E-01
625	590614.05	4182054.38	Worker	0.91	2.63E-02	1.23E-01
626	590639.04	4182055.05	Worker	0.75	2.17E-02	1.00E-01
627	590664.02	4182055.72	Worker	0.62	1.80E-02	8.40E-02
628	590713.99	4182057.05	Worker	0.45	1.28E-02	6.66E-02
629	590738.98	4182057.72	Worker	0.38	1.09E-02	5.76E-02
630	590763.96	4182058.39	Worker	0.32	9.32E-03	5.13E-02

Table E-1. Health Risk Assessment Results for All Receptors
Danville Costco Fuel Station
Contra Costa County, California

Receptor ID	X-Coordinate (m)	Y-Coordinate (m)	Receptor Type	Cancer Risk (in a million)	Chronic Hazard Index	Acute Hazard Index
631	590788.95	4182059.06	Worker	0.28	8.07E-03	4.53E-02
632	590813.93	4182059.73	Worker	0.24	7.06E-03	4.06E-02
633	590838.92	4182060.39	Worker	0.22	6.23E-03	3.67E-02
634	590863.90	4182061.06	Worker	0.19	5.53E-03	3.38E-02
635	590888.89	4182061.73	Worker	0.17	4.96E-03	3.02E-02
636	590913.87	4182062.40	Worker	0.15	4.46E-03	2.68E-02
637	590013.73	4182063.34	Worker	0.05	1.38E-03	1.97E-02
638	590038.72	4182064.01	Worker	0.05	1.48E-03	2.11E-02
639	590063.70	4182064.68	Worker	0.06	1.60E-03	2.20E-02
640	590088.69	4182065.34	Worker	0.06	1.74E-03	2.36E-02
641	590113.67	4182066.01	Worker	0.07	1.90E-03	2.64E-02
642	590138.66	4182066.68	Worker	0.07	2.08E-03	2.88E-02
643	590163.64	4182067.35	Worker	0.08	2.29E-03	3.05E-02
644	590188.63	4182068.02	Worker	0.09	2.54E-03	3.35E-02
645	590213.62	4182068.68	Worker	0.10	2.83E-03	3.60E-02
646	590238.60	4182069.35	Worker	0.11	3.18E-03	3.65E-02
647	590263.59	4182070.02	Worker	0.12	3.61E-03	4.19E-02
648	590288.57	4182070.69	Worker	0.14	4.14E-03	4.87E-02
649	590338.54	4182072.02	Worker	0.19	5.59E-03	6.29E-02
650	590363.53	4182072.69	Worker	0.22	6.52E-03	6.99E-02
651	590388.51	4182073.36	Worker	0.26	7.71E-03	8.02E-02
652	590413.50	4182074.03	Worker	0.31	9.21E-03	9.30E-02
653	590438.48	4182074.69	Worker	0.38	1.11E-02	1.00E-01
654	590463.47	4182075.36	Worker	0.46	1.34E-02	1.23E-01
655	590488.45	4182076.03	Worker	0.56	1.60E-02	1.40E-01
656	590538.43	4182077.36	Worker	0.75	2.13E-02	1.29E-01
657	590563.41	4182078.03	Worker	0.75	2.17E-02	1.00E-01
658	590588.40	4182078.70	Worker	0.72	2.09E-02	9.92E-02
659	590613.38	4182079.37	Worker	0.66	1.91E-02	1.01E-01
660	590638.37	4182080.04	Worker	0.58	1.67E-02	9.09E-02
661	590688.34	4182081.37	Worker	0.44	1.25E-02	6.69E-02
662	590713.32	4182082.04	Worker	0.37	1.07E-02	6.05E-02
663	590738.31	4182082.71	Worker	0.32	9.31E-03	5.36E-02
664	590763.29	4182083.37	Worker	0.28	8.14E-03	4.88E-02
665	590788.28	4182084.04	Worker	0.25	7.16E-03	4.24E-02
666	590813.27	4182084.71	Worker	0.22	6.35E-03	4.08E-02
667	590838.25	4182085.38	Worker	0.20	5.66E-03	3.58E-02
668	590863.24	4182086.05	Worker	0.18	5.08E-03	3.25E-02
669	590888.22	4182086.71	Worker	0.16	4.58E-03	2.99E-02
670	590913.21	4182087.38	Worker	0.14	4.15E-03	2.72E-02
671	590938.19	4182088.05	Worker	0.13	3.78E-03	2.57E-02
672	590963.18	4182088.72	Worker	0.12	3.46E-03	2.40E-02
673	590088.02	4182090.33	Worker	0.06	1.66E-03	2.40E-02
674	590113.01	4182091.00	Worker	0.06	1.80E-03	2.59E-02
675	590137.99	4182091.66	Worker	0.07	1.97E-03	2.75E-02
676	590162.98	4182092.33	Worker	0.07	2.16E-03	2.75E-02
677	590187.96	4182093.00	Worker	0.08	2.38E-03	2.92E-02
678	590212.95	4182093.67	Worker	0.09	2.65E-03	3.43E-02
679	590237.93	4182094.34	Worker	0.10	2.96E-03	3.79E-02
680	590262.92	4182095.00	Worker	0.11	3.33E-03	3.96E-02
681	590287.90	4182095.67	Worker	0.13	3.79E-03	4.73E-02
682	590312.89	4182096.34	Worker	0.15	4.35E-03	5.32E-02
683	590337.87	4182097.01	Worker	0.17	4.91E-03	5.63E-02
684	590362.86	4182097.68	Worker	0.19	5.62E-03	6.52E-02
685	590387.85	4182098.34	Worker	0.22	6.49E-03	7.27E-02
686	590412.83	4182099.01	Worker	0.25	7.55E-03	7.28E-02
687	590437.82	4182099.68	Worker	0.30	8.81E-03	9.16E-02
688	590462.80	4182100.35	Worker	0.34	1.02E-02	1.02E-01
689	590487.79	4182101.01	Worker	0.39	1.16E-02	1.01E-01
690	590512.77	4182101.68	Worker	0.45	1.32E-02	1.09E-01
691	590537.76	4182102.35	Worker	0.50	1.45E-02	1.02E-01
692	590612.71	4182104.35	Worker	0.50	1.44E-02	7.76E-02
693	590637.70	4182105.02	Worker	0.46	1.32E-02	7.56E-02
694	590687.67	4182106.36	Worker	0.36	1.04E-02	6.32E-02
695	590712.66	4182107.02	Worker	0.31	9.04E-03	5.24E-02
696	590737.64	4182107.69	Worker	0.27	7.97E-03	4.67E-02
697	590762.63	4182108.36	Worker	0.24	7.08E-03	4.54E-02
698	590787.61	4182109.03	Worker	0.22	6.33E-03	4.07E-02
699	590812.60	4182109.70	Worker	0.20	5.68E-03	3.78E-02
700	590837.58	4182110.36	Worker	0.18	5.12E-03	3.39E-02

Table E-1. Health Risk Assessment Results for All Receptors
Danville Costco Fuel Station
Contra Costa County, California

Receptor ID	X-Coordinate (m)	Y-Coordinate (m)	Receptor Type	Cancer Risk (in a million)	Chronic Hazard Index	Acute Hazard Index
701	590862.57	4182111.03	Worker	0.16	4.64E-03	3.24E-02
702	590887.55	4182111.70	Worker	0.15	4.21E-03	3.02E-02
703	590912.54	4182112.37	Worker	0.13	3.85E-03	2.68E-02
704	590937.52	4182113.04	Worker	0.12	3.53E-03	2.48E-02
705	590962.51	4182113.70	Worker	0.11	3.25E-03	2.33E-02
706	590987.50	4182114.37	Worker	0.10	3.00E-03	2.16E-02
707	590087.35	4182115.31	Worker	0.05	1.58E-03	2.19E-02
708	590112.34	4182115.98	Worker	0.06	1.71E-03	2.26E-02
709	590137.32	4182116.65	Worker	0.06	1.86E-03	2.49E-02
710	590162.31	4182117.32	Worker	0.07	2.04E-03	2.86E-02
711	590187.29	4182117.99	Worker	0.08	2.24E-03	3.07E-02
712	590212.28	4182118.65	Worker	0.08	2.48E-03	3.15E-02
713	590237.27	4182119.32	Worker	0.09	2.75E-03	3.70E-02
714	590262.25	4182119.99	Worker	0.10	3.08E-03	4.17E-02
715	590312.22	4182121.33	Worker	0.13	3.87E-03	4.73E-02
716	590337.21	4182121.99	Worker	0.15	4.32E-03	5.34E-02
717	590362.19	4182122.66	Worker	0.16	4.86E-03	5.91E-02
718	590387.18	4182123.33	Worker	0.18	5.51E-03	5.66E-02
719	590412.16	4182124.00	Worker	0.21	6.28E-03	7.35E-02
720	590437.15	4182124.66	Worker	0.24	7.13E-03	8.21E-02
721	590462.13	4182125.33	Worker	0.27	7.99E-03	9.14E-02
722	590487.12	4182126.00	Worker	0.30	8.87E-03	8.63E-02
723	590512.10	4182126.67	Worker	0.33	9.82E-03	9.05E-02
724	590537.09	4182127.34	Worker	0.36	1.06E-02	8.31E-02
725	590562.08	4182128.00	Worker	0.38	1.10E-02	7.04E-02
726	590587.06	4182128.67	Worker	0.38	1.12E-02	6.73E-02
727	590662.02	4182130.67	Worker	0.34	9.79E-03	5.95E-02
728	590687.00	4182131.34	Worker	0.30	8.64E-03	5.74E-02
729	590711.99	4182132.01	Worker	0.26	7.68E-03	5.22E-02
730	590736.97	4182132.68	Worker	0.24	6.86E-03	4.39E-02
731	590761.96	4182133.35	Worker	0.21	6.17E-03	4.10E-02
732	590786.94	4182134.01	Worker	0.19	5.58E-03	3.80E-02
733	590811.93	4182134.68	Worker	0.17	5.07E-03	3.54E-02
734	590836.92	4182135.35	Worker	0.16	4.62E-03	3.21E-02
735	590861.90	4182136.02	Worker	0.15	4.22E-03	3.04E-02
736	590886.89	4182136.68	Worker	0.13	3.86E-03	2.80E-02
737	590911.87	4182137.35	Worker	0.12	3.55E-03	2.58E-02
738	590936.86	4182138.02	Worker	0.11	3.28E-03	2.57E-02
739	590961.84	4182138.69	Worker	0.10	3.03E-03	2.33E-02
740	590986.83	4182139.36	Worker	0.10	2.82E-03	2.11E-02
741	591011.81	4182140.02	Worker	0.09	2.62E-03	1.98E-02
742	590061.70	4182139.63	Worker	0.05	1.39E-03	1.93E-02
743	590086.68	4182140.30	Worker	0.05	1.50E-03	2.18E-02
744	590111.67	4182140.97	Worker	0.06	1.63E-03	2.43E-02
745	590136.66	4182141.64	Worker	0.06	1.77E-03	2.54E-02
746	590161.64	4182142.30	Worker	0.07	1.93E-03	2.59E-02
747	590186.63	4182142.97	Worker	0.07	2.11E-03	2.98E-02
748	590211.61	4182143.64	Worker	0.08	2.31E-03	3.33E-02
749	590236.60	4182144.31	Worker	0.09	2.55E-03	3.55E-02
750	590261.58	4182144.97	Worker	0.10	2.83E-03	3.72E-02
751	590286.57	4182145.64	Worker	0.11	3.16E-03	4.14E-02
752	590311.55	4182146.31	Worker	0.12	3.45E-03	4.47E-02
753	590336.54	4182146.98	Worker	0.13	3.81E-03	4.95E-02
754	590361.52	4182147.65	Worker	0.14	4.23E-03	4.69E-02
755	590386.51	4182148.31	Worker	0.16	4.73E-03	5.71E-02
756	590411.50	4182148.98	Worker	0.18	5.29E-03	6.43E-02
757	590436.48	4182149.65	Worker	0.19	5.87E-03	6.93E-02
758	590461.47	4182150.32	Worker	0.21	6.44E-03	7.10E-02
759	590486.45	4182150.99	Worker	0.23	7.03E-03	7.36E-02
760	590511.44	4182151.65	Worker	0.26	7.66E-03	7.66E-02
761	590536.42	4182152.32	Worker	0.28	8.16E-03	6.98E-02
762	590561.41	4182152.99	Worker	0.29	8.44E-03	5.91E-02
763	590586.39	4182153.66	Worker	0.29	8.54E-03	5.21E-02
764	590611.38	4182154.32	Worker	0.29	8.48E-03	5.57E-02
765	590636.36	4182154.99	Residential	2.27	8.25E-03	5.36E-02
766	590686.33	4182156.33	Worker	0.25	7.25E-03	4.73E-02
767	590711.32	4182157.00	Worker	0.23	6.59E-03	4.74E-02
768	590736.31	4182157.66	Worker	0.20	5.97E-03	4.40E-02
769	590761.29	4182158.33	Worker	0.19	5.42E-03	3.84E-02
770	590786.28	4182159.00	Worker	0.17	4.94E-03	3.50E-02

Table E-1. Health Risk Assessment Results for All Receptors
Danville Costco Fuel Station
Contra Costa County, California

Receptor ID	X-Coordinate (m)	Y-Coordinate (m)	Receptor Type	Cancer Risk (in a million)	Chronic Hazard Index	Acute Hazard Index
771	590811.26	4182159.67	Worker	0.16	4.53E-03	3.12E-02
772	590836.25	4182160.33	Worker	0.14	4.16E-03	3.12E-02
773	590861.23	4182161.00	Worker	0.13	3.83E-03	2.84E-02
774	590886.22	4182161.67	Worker	0.12	3.54E-03	2.62E-02
775	590911.20	4182162.34	Worker	0.11	3.27E-03	2.52E-02
776	590936.19	4182163.01	Worker	0.10	3.04E-03	2.37E-02
777	590961.17	4182163.67	Worker	0.10	2.83E-03	2.16E-02
778	590986.16	4182164.34	Worker	0.09	2.64E-03	2.17E-02
779	591011.15	4182165.01	Worker	0.09	2.47E-03	2.08E-02
780	591036.13	4182165.68	Worker	0.08	2.31E-03	1.89E-02
781	590061.03	4182164.62	Worker	0.05	1.33E-03	2.09E-02
782	590086.02	4182165.29	Worker	0.05	1.44E-03	2.15E-02
783	590111.00	4182165.95	Worker	0.05	1.55E-03	2.19E-02
784	590135.99	4182166.62	Worker	0.06	1.68E-03	2.45E-02
785	590160.97	4182167.29	Worker	0.06	1.82E-03	2.75E-02
786	590185.96	4182167.96	Worker	0.07	1.98E-03	2.98E-02
787	590210.94	4182168.62	Worker	0.07	2.15E-03	3.01E-02
788	590235.93	4182169.29	Worker	0.08	2.35E-03	3.24E-02
789	590285.90	4182170.63	Worker	0.10	2.84E-03	3.81E-02
790	590310.89	4182171.30	Worker	0.10	3.08E-03	4.23E-02
791	590335.87	4182171.96	Worker	0.11	3.38E-03	4.00E-02
792	590360.86	4182172.63	Worker	0.12	3.72E-03	4.72E-02
793	590385.84	4182173.30	Worker	0.14	4.10E-03	5.27E-02
794	590410.83	4182173.97	Worker	0.15	4.50E-03	6.15E-02
795	590435.81	4182174.63	Worker	0.16	4.90E-03	6.36E-02
796	590460.80	4182175.30	Worker	0.18	5.30E-03	5.75E-02
797	590485.78	4182175.97	Worker	0.19	5.73E-03	5.99E-02
798	590510.77	4182176.64	Worker	0.21	6.17E-03	6.54E-02
799	590535.75	4182177.31	Worker	0.22	6.51E-03	5.97E-02
800	590560.74	4182177.97	Worker	0.23	6.71E-03	4.96E-02
801	590585.73	4182178.64	Worker	0.23	6.80E-03	4.33E-02
802	590610.71	4182179.31	Worker	0.23	6.79E-03	4.93E-02
803	590635.70	4182179.98	Residential	1.82	6.67E-03	4.44E-02
804	590660.68	4182180.65	Residential	1.76	6.44E-03	4.41E-02
805	590685.67	4182181.31	Residential	1.67	6.11E-03	4.54E-02
806	590735.64	4182182.65	Worker	0.18	5.25E-03	3.99E-02
807	590760.62	4182183.32	Worker	0.16	4.80E-03	3.75E-02
808	590785.61	4182183.98	Worker	0.15	4.41E-03	3.40E-02
809	590810.59	4182184.65	Worker	0.14	4.06E-03	2.97E-02
810	590835.58	4182185.32	Worker	0.13	3.75E-03	2.86E-02
811	590860.56	4182185.99	Worker	0.12	3.48E-03	2.65E-02
812	590885.55	4182186.66	Worker	0.11	3.24E-03	2.60E-02
813	590910.54	4182187.32	Worker	0.10	3.01E-03	2.36E-02
814	590935.52	4182187.99	Worker	0.10	2.81E-03	2.18E-02
815	590960.51	4182188.66	Worker	0.09	2.63E-03	2.13E-02
816	590985.49	4182189.33	Worker	0.08	2.48E-03	2.05E-02
817	591010.48	4182189.99	Worker	0.08	2.32E-03	1.86E-02
818	591035.46	4182190.66	Worker	0.07	2.16E-03	1.82E-02
819	590035.38	4182188.94	Worker	0.04	1.19E-03	1.85E-02
820	590060.36	4182189.60	Worker	0.04	1.28E-03	1.87E-02
821	590085.35	4182190.27	Worker	0.05	1.37E-03	2.05E-02
822	590110.33	4182190.94	Worker	0.05	1.47E-03	2.36E-02
823	590135.32	4182191.61	Worker	0.05	1.58E-03	2.52E-02
824	590160.31	4182192.27	Worker	0.06	1.71E-03	2.57E-02
825	590185.29	4182192.94	Worker	0.06	1.84E-03	2.68E-02
826	590210.28	4182193.61	Worker	0.07	2.00E-03	2.90E-02
827	590235.26	4182194.28	Worker	0.07	2.18E-03	3.22E-02
828	590260.25	4182194.95	Worker	0.08	2.41E-03	3.40E-02
829	590285.23	4182195.61	Worker	0.09	2.56E-03	3.68E-02
830	590310.22	4182196.28	Worker	0.09	2.77E-03	3.47E-02
831	590335.20	4182196.95	Worker	0.10	3.01E-03	3.93E-02
832	590360.19	4182197.62	Worker	0.11	3.28E-03	4.69E-02
833	590385.17	4182198.28	Worker	0.12	3.57E-03	4.83E-02
834	590410.16	4182198.95	Worker	0.13	3.87E-03	5.09E-02
835	590435.14	4182199.62	Worker	0.14	4.16E-03	5.72E-02
836	590460.13	4182200.29	Worker	0.15	4.45E-03	5.23E-02
837	590485.12	4182200.96	Worker	0.16	4.77E-03	5.00E-02
838	590510.10	4182201.62	Worker	0.17	5.09E-03	5.64E-02
839	590535.09	4182202.29	Worker	0.18	5.34E-03	5.19E-02
840	590560.07	4182202.96	Worker	0.18	5.49E-03	4.42E-02

Table E-1. Health Risk Assessment Results for All Receptors
Danville Costco Fuel Station
Contra Costa County, California

Receptor ID	X-Coordinate (m)	Y-Coordinate (m)	Receptor Type	Cancer Risk (in a million)	Chronic Hazard Index	Acute Hazard Index
841	590585.06	4182203.63	Worker	0.19	5.56E-03	3.97E-02
842	590610.04	4182204.30	Residential	1.51	5.58E-03	4.04E-02
843	590635.03	4182204.96	Residential	1.50	5.52E-03	4.00E-02
844	590660.01	4182205.63	Residential	1.47	5.38E-03	3.81E-02
845	590685.00	4182206.30	Residential	1.42	5.19E-03	3.74E-02
846	590709.98	4182206.97	Residential	1.35	4.93E-03	3.76E-02
847	590734.97	4182207.63	Residential	1.26	4.62E-03	3.42E-02
848	590784.94	4182208.97	Worker	0.14	3.97E-03	3.22E-02
849	590809.93	4182209.64	Worker	0.13	3.67E-03	3.03E-02
850	590834.91	4182210.31	Worker	0.12	3.40E-03	2.57E-02
851	590859.90	4182210.97	Worker	0.11	3.17E-03	2.56E-02
852	590884.88	4182211.64	Worker	0.10	2.96E-03	2.29E-02
853	590909.87	4182212.31	Worker	0.09	2.77E-03	2.30E-02
854	590934.85	4182212.98	Worker	0.09	2.60E-03	2.20E-02
855	590959.84	4182213.64	Worker	0.08	2.45E-03	2.01E-02
856	590984.82	4182214.31	Worker	0.08	2.32E-03	1.87E-02
857	591009.81	4182214.98	Worker	0.07	2.17E-03	1.85E-02
858	591034.80	4182215.65	Worker	0.07	1.95E-03	2.06E-02
859	591059.78	4182216.32	Worker	0.06	1.70E-03	2.27E-02
860	590034.71	4182213.92	Worker	0.04	1.14E-03	1.74E-02
861	590059.70	4182214.59	Worker	0.04	1.22E-03	2.03E-02
862	590084.68	4182215.26	Worker	0.04	1.30E-03	2.16E-02
863	590109.67	4182215.92	Worker	0.05	1.39E-03	2.27E-02
864	590134.65	4182216.59	Worker	0.05	1.49E-03	2.25E-02
865	590159.64	4182217.26	Worker	0.05	1.60E-03	2.38E-02
866	590184.62	4182217.93	Worker	0.06	1.72E-03	2.62E-02
867	590209.61	4182218.60	Worker	0.06	1.86E-03	2.84E-02
868	590259.58	4182219.93	Worker	0.07	2.18E-03	3.24E-02
869	590284.56	4182220.60	Worker	0.08	2.32E-03	3.05E-02
870	590309.55	4182221.27	Worker	0.08	2.50E-03	3.28E-02
871	590334.54	4182221.93	Worker	0.09	2.70E-03	3.96E-02
872	590359.52	4182222.60	Worker	0.10	2.91E-03	4.11E-02
873	590384.51	4182223.27	Worker	0.10	3.13E-03	4.80E-02
874	590409.49	4182223.94	Worker	0.11	3.35E-03	4.82E-02
875	590434.48	4182224.61	Worker	0.12	3.57E-03	4.47E-02
876	590459.46	4182225.27	Worker	0.13	3.80E-03	4.80E-02
877	590484.45	4182225.94	Worker	0.13	4.05E-03	4.54E-02
878	590509.43	4182226.61	Worker	0.14	4.29E-03	4.90E-02
879	590534.42	4182227.28	Worker	0.15	4.47E-03	4.57E-02
880	590559.40	4182227.94	Worker	0.15	4.58E-03	3.96E-02
881	590584.39	4182228.61	Residential	1.25	4.65E-03	3.66E-02
882	590609.37	4182229.28	Residential	1.26	4.67E-03	3.35E-02
883	590634.36	4182229.95	Residential	1.26	4.64E-03	3.68E-02
884	590659.35	4182230.62	Residential	1.24	4.56E-03	3.27E-02
885	590684.33	4182231.28	Residential	1.21	4.44E-03	3.34E-02
886	590709.32	4182231.95	Residential	1.17	4.28E-03	3.41E-02
887	590734.30	4182232.62	Residential	1.11	4.07E-03	3.15E-02
888	590759.29	4182233.29	Residential	1.04	3.83E-03	3.02E-02
889	590784.27	4182233.96	Residential	0.97	3.57E-03	2.97E-02
890	590809.26	4182234.62	Worker	0.11	3.33E-03	2.79E-02
891	590834.24	4182235.29	Worker	0.11	3.11E-03	2.71E-02
892	590859.23	4182235.96	Worker	0.10	2.90E-03	2.37E-02
893	590884.21	4182236.63	Worker	0.09	2.72E-03	2.26E-02
894	590909.20	4182237.29	Worker	0.09	2.55E-03	2.15E-02
895	590934.19	4182237.96	Worker	0.08	2.41E-03	1.98E-02
896	590959.17	4182238.63	Worker	0.08	2.28E-03	2.01E-02
897	590984.16	4182239.30	Worker	0.07	2.16E-03	1.89E-02
898	591009.14	4182239.97	Worker	0.07	1.98E-03	1.98E-02
899	591034.13	4182240.63	Worker	0.06	1.74E-03	2.21E-02
900	591059.11	4182241.30	Worker	0.05	1.50E-03	2.38E-02
901	590034.04	4182238.91	Worker	0.04	1.09E-03	1.85E-02
902	590059.03	4182239.57	Worker	0.04	1.16E-03	1.99E-02
903	590084.01	4182240.24	Worker	0.04	1.23E-03	1.97E-02
904	590109.00	4182240.91	Worker	0.04	1.31E-03	2.05E-02
905	590133.98	4182241.58	Worker	0.05	1.40E-03	2.18E-02
906	590158.97	4182242.25	Worker	0.05	1.49E-03	2.40E-02
907	590183.96	4182242.91	Worker	0.05	1.60E-03	2.52E-02
908	590208.94	4182243.58	Worker	0.06	1.74E-03	2.74E-02
909	590233.93	4182244.25	Worker	0.07	1.90E-03	2.90E-02
910	590258.91	4182244.92	Worker	0.07	1.98E-03	2.72E-02

Table E-1. Health Risk Assessment Results for All Receptors
Danville Costco Fuel Station
Contra Costa County, California

Receptor ID	X-Coordinate (m)	Y-Coordinate (m)	Receptor Type	Cancer Risk (in a million)	Chronic Hazard Index	Acute Hazard Index
911	590283.90	4182245.58	Worker	0.07	2.11E-03	2.77E-02
912	590308.88	4182246.25	Worker	0.07	2.26E-03	3.30E-02
913	590333.87	4182246.92	Worker	0.08	2.42E-03	3.54E-02
914	590358.85	4182247.59	Worker	0.09	2.60E-03	3.80E-02
915	590383.84	4182248.26	Worker	0.09	2.77E-03	3.94E-02
916	590408.82	4182248.92	Worker	0.10	2.93E-03	4.57E-02
917	590433.81	4182249.59	Worker	0.10	3.10E-03	3.82E-02
918	590458.79	4182250.26	Worker	0.11	3.28E-03	4.29E-02
919	590483.78	4182250.93	Worker	0.12	3.48E-03	4.08E-02
920	590508.77	4182251.59	Worker	0.12	3.67E-03	4.31E-02
921	590533.75	4182252.26	Worker	0.13	3.81E-03	4.07E-02
922	590558.74	4182252.93	Residential	1.05	3.90E-03	3.57E-02
923	590583.72	4182253.60	Residential	1.06	3.95E-03	3.33E-02
924	590608.71	4182254.27	Residential	1.07	3.97E-03	2.94E-02
925	590633.69	4182254.93	Residential	1.07	3.96E-03	3.24E-02
926	590658.68	4182255.60	Residential	1.06	3.92E-03	3.01E-02
927	590683.66	4182256.27	Residential	1.04	3.84E-03	2.92E-02
928	590708.65	4182256.94	Residential	1.01	3.73E-03	2.87E-02
929	590733.63	4182257.61	Residential	0.98	3.60E-03	3.05E-02
930	590758.62	4182258.27	Residential	0.93	3.43E-03	2.75E-02
931	590783.61	4182258.94	Residential	0.88	3.23E-03	2.69E-02
932	590808.59	4182259.61	Residential	0.83	3.03E-03	2.61E-02
933	590833.58	4182260.28	Residential	0.77	2.84E-03	2.44E-02
934	590858.56	4182260.94	Residential	0.73	2.67E-03	2.43E-02
935	590883.55	4182261.61	Worker	0.09	2.51E-03	2.18E-02
936	590908.53	4182262.28	Worker	0.08	2.36E-03	1.97E-02
937	590933.52	4182262.95	Worker	0.08	2.23E-03	1.97E-02
938	590958.50	4182263.62	Worker	0.07	2.12E-03	1.79E-02
939	590983.49	4182264.28	Worker	0.07	2.01E-03	1.80E-02
940	591008.47	4182264.95	Worker	0.06	1.81E-03	2.11E-02
941	591033.46	4182265.62	Worker	0.05	1.56E-03	2.31E-02
942	591058.45	4182266.29	Worker	0.05	1.36E-03	2.39E-02
943	590008.39	4182263.22	Worker	0.03	9.85E-04	1.75E-02
944	590033.38	4182263.89	Worker	0.03	1.04E-03	1.79E-02
945	590058.36	4182264.56	Worker	0.04	1.10E-03	1.77E-02
946	590083.35	4182265.23	Worker	0.04	1.16E-03	1.85E-02
947	590108.33	4182265.89	Worker	0.04	1.23E-03	2.01E-02
948	590133.32	4182266.56	Worker	0.04	1.31E-03	2.18E-02
949	590158.30	4182267.23	Worker	0.05	1.39E-03	2.24E-02
950	590183.29	4182267.90	Worker	0.05	1.49E-03	2.47E-02
951	590233.26	4182269.23	Worker	0.06	1.72E-03	2.45E-02
952	590258.24	4182269.90	Worker	0.06	1.81E-03	2.39E-02
953	590283.23	4182270.57	Worker	0.06	1.92E-03	2.88E-02
954	590308.21	4182271.24	Worker	0.07	2.05E-03	3.30E-02
955	590333.20	4182271.91	Worker	0.07	2.19E-03	3.34E-02
956	590358.19	4182272.57	Worker	0.08	2.32E-03	3.87E-02
957	590383.17	4182273.24	Worker	0.08	2.46E-03	3.80E-02
958	590408.16	4182273.91	Worker	0.09	2.59E-03	3.81E-02
959	590433.14	4182274.58	Worker	0.09	2.72E-03	3.63E-02
960	590483.11	4182275.91	Worker	0.10	3.03E-03	3.65E-02
961	590508.10	4182276.58	Residential	0.85	3.17E-03	3.87E-02
962	590533.08	4182277.25	Residential	0.88	3.29E-03	3.64E-02
963	590558.07	4182277.92	Residential	0.90	3.36E-03	3.24E-02
964	590583.05	4182278.58	Residential	0.91	3.40E-03	3.03E-02
965	590608.04	4182279.25	Residential	0.92	3.42E-03	2.54E-02
966	590633.02	4182279.92	Residential	0.92	3.42E-03	2.70E-02
967	590658.01	4182280.59	Residential	0.92	3.39E-03	2.87E-02
968	590683.00	4182281.25	Residential	0.91	3.34E-03	2.56E-02
969	590707.98	4182281.92	Residential	0.89	3.27E-03	2.62E-02
970	590732.97	4182282.59	Residential	0.86	3.18E-03	2.53E-02
971	590757.95	4182283.26	Residential	0.83	3.07E-03	2.68E-02
972	590782.94	4182283.93	Residential	0.80	2.93E-03	2.40E-02
973	590807.92	4182284.59	Residential	0.75	2.77E-03	2.41E-02
974	590832.91	4182285.26	Residential	0.71	2.61E-03	2.32E-02
975	590857.89	4182285.93	Residential	0.67	2.46E-03	2.20E-02
976	590882.88	4182286.60	Worker	0.08	2.32E-03	2.22E-02
977	590907.86	4182287.27	Worker	0.07	2.19E-03	2.00E-02
978	590932.85	4182287.93	Worker	0.07	2.07E-03	1.72E-02
979	590957.84	4182288.60	Worker	0.07	1.98E-03	1.80E-02
980	590982.82	4182289.27	Worker	0.06	1.87E-03	1.70E-02

Table E-1. Health Risk Assessment Results for All Receptors
Danville Costco Fuel Station
Contra Costa County, California

Receptor ID	X-Coordinate (m)	Y-Coordinate (m)	Receptor Type	Cancer Risk (in a million)	Chronic Hazard Index	Acute Hazard Index
981	591007.81	4182289.94	Worker	0.06	1.69E-03	1.90E-02
982	591032.79	4182290.60	Worker	0.05	1.49E-03	2.14E-02
983	591057.78	4182291.27	Residential	0.36	1.31E-03	2.33E-02
984	590007.72	4182288.21	Worker	0.03	9.36E-04	1.58E-02
985	590032.71	4182288.88	Worker	0.03	9.88E-04	1.64E-02
986	590057.69	4182289.54	Worker	0.03	1.04E-03	1.73E-02
987	590082.68	4182290.21	Worker	0.04	1.10E-03	1.85E-02
988	590107.66	4182290.88	Worker	0.04	1.16E-03	2.00E-02
989	590132.65	4182291.55	Worker	0.04	1.23E-03	2.02E-02
990	590157.63	4182292.22	Worker	0.04	1.30E-03	2.25E-02
991	590182.62	4182292.88	Worker	0.05	1.38E-03	2.35E-02
992	590207.60	4182293.55	Residential	0.39	1.47E-03	2.23E-02
993	590232.59	4182294.22	Residential	0.41	1.56E-03	2.13E-02
994	590257.58	4182294.89	Residential	0.44	1.66E-03	2.54E-02
995	590282.56	4182295.55	Residential	0.47	1.76E-03	2.95E-02
996	590307.55	4182296.22	Residential	0.49	1.87E-03	2.91E-02
997	590332.53	4182296.89	Residential	0.52	1.98E-03	3.23E-02
998	590357.52	4182297.56	Residential	0.55	2.09E-03	3.15E-02
999	590382.50	4182298.23	Residential	0.58	2.19E-03	3.67E-02
1000	590407.49	4182298.89	Residential	0.61	2.30E-03	3.13E-02
1001	590532.42	4182302.23	Residential	0.77	2.87E-03	3.28E-02
1002	590557.40	4182302.90	Residential	0.78	2.93E-03	2.93E-02
1003	590582.39	4182303.57	Residential	0.79	2.96E-03	2.72E-02
1004	590607.37	4182304.24	Residential	0.80	2.98E-03	2.40E-02
1005	590632.36	4182304.90	Residential	0.80	2.98E-03	2.35E-02
1006	590657.34	4182305.57	Residential	0.80	2.97E-03	2.62E-02
1007	590682.33	4182306.24	Residential	0.79	2.94E-03	2.36E-02
1008	590707.31	4182306.91	Residential	0.78	2.89E-03	2.32E-02
1009	590732.30	4182307.58	Residential	0.77	2.83E-03	2.36E-02
1010	590757.28	4182308.24	Residential	0.75	2.75E-03	2.38E-02
1011	590782.27	4182308.91	Residential	0.72	2.65E-03	2.35E-02
1012	590807.25	4182309.58	Residential	0.69	2.53E-03	2.11E-02
1013	590832.24	4182310.25	Residential	0.65	2.41E-03	2.18E-02
1014	590857.23	4182310.92	Residential	0.62	2.28E-03	2.08E-02
1015	590882.21	4182311.58	Worker	0.07	2.15E-03	1.99E-02
1016	590907.20	4182312.25	Worker	0.07	2.04E-03	2.03E-02
1017	590932.18	4182312.92	Worker	0.07	1.93E-03	1.86E-02
1018	590957.17	4182313.59	Worker	0.06	1.85E-03	1.64E-02
1019	590982.15	4182314.25	Worker	0.06	1.76E-03	1.62E-02
1020	591007.14	4182314.92	Worker	0.06	1.67E-03	1.59E-02
1021	591032.12	4182315.59	Residential	0.41	1.47E-03	1.87E-02
1022	591057.11	4182316.26	Residential	0.35	1.27E-03	2.17E-02
1023	590032.04	4182313.86	Worker	0.03	9.37E-04	1.61E-02
1024	590057.02	4182314.53	Worker	0.03	9.87E-04	1.74E-02
1025	590082.01	4182315.20	Worker	0.03	1.04E-03	1.84E-02
1026	590107.00	4182315.87	Worker	0.04	1.10E-03	1.84E-02
1027	590131.98	4182316.53	Worker	0.04	1.16E-03	2.06E-02
1028	590156.97	4182317.20	Worker	0.04	1.22E-03	2.13E-02
1029	590181.95	4182317.87	Worker	0.04	1.29E-03	2.03E-02
1030	590206.94	4182318.54	Residential	0.36	1.36E-03	1.95E-02
1031	590231.92	4182319.20	Residential	0.38	1.44E-03	2.24E-02
1032	590256.91	4182319.87	Residential	0.40	1.53E-03	2.57E-02
1033	590281.89	4182320.54	Residential	0.43	1.62E-03	2.60E-02
1034	590306.88	4182321.21	Residential	0.45	1.71E-03	2.75E-02
1035	590331.86	4182321.88	Residential	0.47	1.80E-03	3.18E-02
1036	590356.85	4182322.54	Residential	0.50	1.89E-03	3.07E-02
1037	590381.84	4182323.21	Residential	0.52	1.97E-03	3.33E-02
1038	590406.82	4182323.88	Residential	0.54	2.05E-03	2.75E-02
1039	590581.72	4182328.55	Residential	0.70	2.60E-03	2.43E-02
1040	590606.70	4182329.22	Residential	0.70	2.62E-03	2.28E-02
1041	590631.69	4182329.89	Residential	0.71	2.63E-03	2.14E-02
1042	590656.67	4182330.56	Residential	0.71	2.62E-03	2.30E-02
1043	590681.66	4182331.23	Residential	0.70	2.60E-03	2.32E-02
1044	590706.65	4182331.89	Residential	0.70	2.57E-03	2.09E-02
1045	590731.63	4182332.56	Residential	0.68	2.53E-03	2.13E-02
1046	590756.62	4182333.23	Residential	0.67	2.47E-03	2.07E-02
1047	590781.60	4182333.90	Residential	0.65	2.40E-03	2.21E-02
1048	590806.59	4182334.56	Residential	0.63	2.31E-03	2.06E-02
1049	590831.57	4182335.23	Residential	0.60	2.22E-03	1.91E-02
1050	590856.56	4182335.90	Worker	0.07	2.11E-03	1.98E-02

Table E-1. Health Risk Assessment Results for All Receptors
Danville Costco Fuel Station
Contra Costa County, California

Receptor ID	X-Coordinate (m)	Y-Coordinate (m)	Receptor Type	Cancer Risk (in a million)	Chronic Hazard Index	Acute Hazard Index
1051	590881.54	4182336.57	Worker	0.07	2.01E-03	1.88E-02
1052	590906.53	4182337.24	Worker	0.06	1.91E-03	1.82E-02
1053	590931.51	4182337.90	Worker	0.06	1.82E-03	1.87E-02
1054	590956.50	4182338.57	Worker	0.06	1.74E-03	1.74E-02
1055	590981.49	4182339.24	Worker	0.06	1.64E-03	1.55E-02
1056	591006.47	4182339.91	Worker	0.05	1.57E-03	1.43E-02
1057	591031.46	4182340.58	Residential	0.39	1.43E-03	1.77E-02
1058	591056.44	4182341.24	Residential	0.34	1.24E-03	1.93E-02
1059	590031.37	4182338.85	Worker	0.03	8.90E-04	1.61E-02
1060	590056.36	4182339.52	Worker	0.03	9.37E-04	1.68E-02
1061	590081.34	4182340.18	Worker	0.03	9.84E-04	1.69E-02
1062	590106.33	4182340.85	Worker	0.03	1.04E-03	1.89E-02
1063	590131.31	4182341.52	Worker	0.04	1.09E-03	1.95E-02
1064	590156.30	4182342.19	Worker	0.04	1.15E-03	1.85E-02
1065	590181.28	4182342.85	Residential	0.32	1.21E-03	1.79E-02
1066	590206.27	4182343.52	Residential	0.34	1.27E-03	1.97E-02
1067	590231.25	4182344.19	Residential	0.35	1.34E-03	2.22E-02
1068	590256.24	4182344.86	Residential	0.37	1.42E-03	2.47E-02
1069	590281.23	4182345.53	Residential	0.39	1.49E-03	2.49E-02
1070	590306.21	4182346.19	Residential	0.41	1.57E-03	2.80E-02
1071	590331.20	4182346.86	Residential	0.43	1.64E-03	2.60E-02
1072	590356.18	4182347.53	Residential	0.45	1.71E-03	2.97E-02
1073	590381.17	4182348.20	Residential	0.47	1.78E-03	2.72E-02
1074	590631.02	4182354.88	Residential	0.63	2.33E-03	1.90E-02
1075	590656.01	4182355.54	Residential	0.63	2.33E-03	1.96E-02
1076	590680.99	4182356.21	Residential	0.63	2.32E-03	2.17E-02
1077	590705.98	4182356.88	Residential	0.62	2.30E-03	1.91E-02
1078	590730.96	4182357.55	Residential	0.61	2.27E-03	1.91E-02
1079	590755.95	4182358.21	Residential	0.60	2.23E-03	1.97E-02
1080	590780.93	4182358.88	Residential	0.59	2.18E-03	1.85E-02
1081	590805.92	4182359.55	Residential	0.57	2.11E-03	2.02E-02
1082	590830.90	4182360.22	Residential	0.55	2.04E-03	1.84E-02
1083	590855.89	4182360.89	Worker	0.07	1.96E-03	1.74E-02
1084	590880.88	4182361.55	Worker	0.06	1.87E-03	1.82E-02
1085	590905.86	4182362.22	Worker	0.06	1.79E-03	1.71E-02
1086	590930.85	4182362.89	Worker	0.06	1.71E-03	1.68E-02
1087	590955.83	4182363.56	Worker	0.05	1.62E-03	1.71E-02
1088	590980.82	4182364.23	Worker	0.05	1.48E-03	1.90E-02
1089	591005.80	4182364.89	Worker	0.05	1.36E-03	1.79E-02
1090	591030.79	4182365.56	Worker	0.04	1.27E-03	1.65E-02
1091	590030.70	4182363.83	Worker	0.03	8.48E-04	1.54E-02
1092	590055.69	4182364.50	Worker	0.03	8.90E-04	1.58E-02
1093	590080.67	4182365.17	Worker	0.03	9.34E-04	1.74E-02
1094	590105.66	4182365.84	Worker	0.03	9.79E-04	1.79E-02
1095	590130.65	4182366.50	Worker	0.03	1.03E-03	1.70E-02
1096	590155.63	4182367.17	Worker	0.04	1.08E-03	1.65E-02
1097	590180.62	4182367.84	Residential	0.30	1.13E-03	1.76E-02
1098	590205.60	4182368.51	Residential	0.31	1.19E-03	2.00E-02
1099	590230.59	4182369.18	Residential	0.33	1.25E-03	2.30E-02
1100	590255.57	4182369.84	Residential	0.35	1.32E-03	2.22E-02
1101	590280.56	4182370.51	Residential	0.36	1.38E-03	2.30E-02
1102	590305.54	4182371.18	Residential	0.38	1.44E-03	2.68E-02
1103	590330.53	4182371.85	Residential	0.40	1.50E-03	2.55E-02
1104	590355.51	4182372.51	Residential	0.41	1.56E-03	2.87E-02
1105	590380.50	4182373.18	Residential	0.43	1.62E-03	2.33E-02
1106	590680.32	4182381.20	Residential	0.56	2.08E-03	1.98E-02
1107	590705.31	4182381.86	Residential	0.56	2.07E-03	1.92E-02
1108	590730.30	4182382.53	Residential	0.55	2.05E-03	1.74E-02
1109	590755.28	4182383.20	Residential	0.55	2.02E-03	1.78E-02
1110	590780.27	4182383.87	Residential	0.54	1.98E-03	1.78E-02
1111	590805.25	4182384.54	Residential	0.52	1.93E-03	1.78E-02
1112	590830.24	4182385.20	Residential	0.51	1.88E-03	1.83E-02
1113	590855.22	4182385.87	Residential	0.49	1.82E-03	1.68E-02
1114	590880.21	4182386.54	Residential	0.47	1.75E-03	1.60E-02
1115	590905.19	4182387.21	Residential	0.45	1.68E-03	1.67E-02
1116	590930.18	4182387.87	Worker	0.05	1.61E-03	1.58E-02
1117	590955.16	4182388.54	Worker	0.05	1.53E-03	1.54E-02
1118	590980.15	4182389.21	Worker	0.05	1.39E-03	1.94E-02
1119	591005.13	4182389.88	Worker	0.04	1.29E-03	1.87E-02
1120	590055.02	4182389.49	Residential	0.22	8.47E-04	1.61E-02

Table E-1. Health Risk Assessment Results for All Receptors
Danville Costco Fuel Station
Contra Costa County, California

Receptor ID	X-Coordinate (m)	Y-Coordinate (m)	Receptor Type	Cancer Risk (in a million)	Chronic Hazard Index	Acute Hazard Index
1121	590080.01	4182390.15	Residential	0.23	8.86E-04	1.65E-02
1122	590104.99	4182390.82	Residential	0.24	9.26E-04	1.57E-02
1123	590129.98	4182391.49	Worker	0.03	9.69E-04	1.51E-02
1124	590154.96	4182392.16	Worker	0.03	1.01E-03	1.58E-02
1125	590179.95	4182392.83	Residential	0.28	1.06E-03	1.82E-02
1126	590204.93	4182393.49	Residential	0.29	1.12E-03	2.08E-02
1127	590229.92	4182394.16	Residential	0.31	1.17E-03	2.01E-02
1128	590254.90	4182394.83	Residential	0.32	1.22E-03	2.13E-02
1129	590279.89	4182395.50	Residential	0.34	1.28E-03	2.44E-02
1130	590304.88	4182396.16	Residential	0.35	1.33E-03	2.19E-02
1131	590329.86	4182396.83	Residential	0.36	1.38E-03	2.48E-02
1132	590354.85	4182397.50	Residential	0.38	1.43E-03	2.48E-02
1133	590729.63	4182407.52	Residential	0.50	1.86E-03	1.61E-02
1134	590754.61	4182408.19	Residential	0.50	1.83E-03	1.61E-02
1135	590779.60	4182408.85	Residential	0.49	1.80E-03	1.65E-02
1136	590804.58	4182409.52	Residential	0.48	1.77E-03	1.58E-02
1137	590829.57	4182410.19	Residential	0.47	1.73E-03	1.69E-02
1138	590854.55	4182410.86	Residential	0.46	1.69E-03	1.66E-02
1139	590879.54	4182411.52	Residential	0.44	1.63E-03	1.54E-02
1140	590904.53	4182412.19	Residential	0.43	1.58E-03	1.49E-02
1141	590929.51	4182412.86	Residential	0.41	1.52E-03	1.56E-02
1142	590954.50	4182413.53	Residential	0.39	1.44E-03	1.45E-02
1143	590979.48	4182414.20	Worker	0.04	1.29E-03	1.71E-02
1144	590079.34	4182415.14	Residential	0.22	8.41E-04	1.45E-02
1145	590104.32	4182415.81	Residential	0.23	8.77E-04	1.40E-02
1146	590129.31	4182416.47	Residential	0.24	9.16E-04	1.43E-02
1147	590154.30	4182417.14	Residential	0.25	9.57E-04	1.65E-02
1148	590179.28	4182417.81	Residential	0.26	1.00E-03	1.84E-02
1149	590204.27	4182418.48	Residential	0.28	1.05E-03	1.93E-02
1150	590229.25	4182419.15	Residential	0.29	1.09E-03	1.94E-02
1151	590254.24	4182419.81	Residential	0.30	1.14E-03	2.06E-02
1152	590279.22	4182420.48	Residential	0.31	1.19E-03	2.29E-02
1153	590304.21	4182421.15	Residential	0.32	1.23E-03	2.15E-02
1154	590329.19	4182421.82	Residential	0.34	1.27E-03	2.46E-02
1155	590778.93	4182433.84	Residential	0.45	1.65E-03	1.52E-02
1156	590803.92	4182434.51	Residential	0.44	1.62E-03	1.54E-02
1157	590828.90	4182435.17	Residential	0.43	1.60E-03	1.43E-02
1158	590853.89	4182435.84	Residential	0.42	1.56E-03	1.59E-02
1159	590878.87	4182436.51	Residential	0.41	1.52E-03	1.50E-02
1160	590903.86	4182437.18	Residential	0.40	1.48E-03	1.41E-02
1161	590928.84	4182437.85	Residential	0.39	1.42E-03	1.38E-02
1162	590953.83	4182438.51	Residential	0.36	1.31E-03	1.52E-02
1163	590103.66	4182440.79	Residential	0.22	8.32E-04	1.29E-02
1164	590128.64	4182441.46	Residential	0.23	8.67E-04	1.49E-02
1165	590153.63	4182442.13	Residential	0.24	9.06E-04	1.63E-02
1166	590178.61	4182442.80	Residential	0.25	9.45E-04	1.84E-02
1167	590203.60	4182443.46	Residential	0.26	9.85E-04	1.77E-02
1168	590228.58	4182444.13	Residential	0.27	1.03E-03	1.83E-02
1169	590253.57	4182444.80	Residential	0.28	1.07E-03	2.14E-02
1170	590278.55	4182445.47	Residential	0.29	1.10E-03	1.88E-02
1171	590303.54	4182446.14	Residential	0.30	1.14E-03	2.13E-02
1172	590853.22	4182460.83	Residential	0.39	1.45E-03	1.40E-02
1173	590878.20	4182461.50	Residential	0.38	1.42E-03	1.48E-02
1174	590152.96	4182467.11	Residential	0.23	8.58E-04	1.71E-02
1175	590177.94	4182467.78	Residential	0.23	8.92E-04	1.62E-02
1176	590202.93	4182468.45	Residential	0.24	9.27E-04	1.71E-02
1177	590227.92	4182469.12	Residential	0.25	9.62E-04	1.84E-02
1178	590252.90	4182469.78	Residential	0.26	9.96E-04	1.98E-02
1179	590457.18	4181375.10	Worker	0.03	8.82E-04	1.24E-02
1180	590507.15	4181376.43	Worker	0.03	9.79E-04	1.32E-02
1181	590557.12	4181377.77	Worker	0.03	9.84E-04	1.25E-02
1182	590607.09	4181379.11	Worker	0.03	9.76E-04	1.37E-02
1183	590657.06	4181380.44	Worker	0.03	9.63E-04	1.31E-02
1184	590707.03	4181381.78	Worker	0.03	9.43E-04	1.46E-02
1185	590355.90	4181422.40	Worker	0.03	9.53E-04	1.66E-02
1186	590405.87	4181423.73	Worker	0.03	9.87E-04	1.55E-02
1187	590455.84	4181425.07	Worker	0.04	1.11E-03	1.32E-02
1188	590505.81	4181426.40	Worker	0.04	1.14E-03	1.51E-02
1189	590555.79	4181427.74	Worker	0.04	1.15E-03	1.41E-02
1190	590605.76	4181429.08	Worker	0.04	1.14E-03	1.51E-02

Table E-1. Health Risk Assessment Results for All Receptors
Danville Costco Fuel Station
Contra Costa County, California

Receptor ID	X-Coordinate (m)	Y-Coordinate (m)	Receptor Type	Cancer Risk (in a million)	Chronic Hazard Index	Acute Hazard Index
1191	590655.73	4181430.41	Worker	0.04	1.12E-03	1.49E-02
1192	590705.70	4181431.75	Worker	0.04	1.09E-03	1.62E-02
1193	590755.67	4181433.08	Worker	0.03	1.05E-03	1.37E-02
1194	590805.64	4181434.42	Worker	0.03	1.01E-03	1.45E-02
1195	590304.60	4181471.03	Worker	0.04	1.11E-03	1.90E-02
1196	590354.57	4181472.37	Worker	0.04	1.14E-03	1.84E-02
1197	590404.54	4181473.70	Worker	0.04	1.26E-03	1.56E-02
1198	590454.51	4181475.04	Worker	0.04	1.31E-03	1.52E-02
1199	590504.48	4181476.38	Worker	0.04	1.34E-03	1.74E-02
1200	590554.45	4181477.71	Worker	0.04	1.35E-03	1.63E-02
1201	590604.42	4181479.05	Worker	0.04	1.34E-03	1.71E-02
1202	590654.39	4181480.38	Worker	0.04	1.31E-03	1.69E-02
1203	590704.36	4181481.72	Worker	0.04	1.27E-03	1.77E-02
1204	590754.33	4181483.05	Worker	0.04	1.22E-03	1.66E-02
1205	590804.30	4181484.39	Worker	0.04	1.19E-03	1.66E-02
1206	590854.28	4181485.72	Worker	0.04	1.19E-03	1.48E-02
1207	590904.25	4181487.06	Worker	0.04	1.23E-03	1.48E-02
1208	589953.46	4181511.66	Worker	0.05	1.51E-03	1.20E-02
1209	590003.44	4181512.99	Worker	0.05	1.52E-03	1.35E-02
1210	590053.41	4181514.33	Worker	0.05	1.46E-03	1.41E-02
1211	590103.38	4181515.66	Worker	0.05	1.39E-03	1.56E-02
1212	590153.35	4181517.00	Worker	0.05	1.33E-03	1.58E-02
1213	590203.32	4181518.33	Worker	0.04	1.29E-03	1.54E-02
1214	590253.29	4181519.67	Worker	0.04	1.30E-03	1.85E-02
1215	590303.26	4181521.00	Worker	0.05	1.33E-03	2.08E-02
1216	590353.23	4181522.34	Worker	0.05	1.45E-03	1.89E-02
1217	590403.20	4181523.68	Worker	0.05	1.50E-03	1.81E-02
1218	590453.17	4181525.01	Worker	0.05	1.56E-03	1.82E-02
1219	590503.14	4181526.35	Worker	0.05	1.61E-03	2.01E-02
1220	590553.11	4181527.68	Worker	0.05	1.63E-03	1.90E-02
1221	590603.09	4181529.02	Worker	0.05	1.61E-03	1.96E-02
1222	590653.06	4181530.35	Worker	0.05	1.57E-03	2.11E-02
1223	590703.03	4181531.69	Worker	0.05	1.51E-03	1.98E-02
1224	590753.00	4181533.02	Worker	0.05	1.45E-03	1.94E-02
1225	590802.97	4181534.36	Worker	0.05	1.44E-03	1.93E-02
1226	590852.94	4181535.70	Worker	0.05	1.47E-03	1.68E-02
1227	590902.91	4181537.03	Worker	0.05	1.53E-03	1.53E-02
1228	590952.88	4181538.37	Worker	0.05	1.61E-03	1.52E-02
1229	591002.85	4181539.70	Worker	0.06	1.68E-03	1.41E-02
1230	589902.16	4181560.29	Worker	0.06	1.55E-03	1.08E-02
1231	589952.13	4181561.63	Worker	0.06	1.78E-03	1.37E-02
1232	590002.10	4181562.96	Worker	0.07	1.90E-03	1.50E-02
1233	590052.07	4181564.30	Worker	0.06	1.86E-03	1.54E-02
1234	590102.04	4181565.63	Worker	0.06	1.79E-03	1.60E-02
1235	590152.01	4181566.97	Worker	0.06	1.71E-03	1.79E-02
1236	590201.98	4181568.30	Worker	0.06	1.64E-03	1.85E-02
1237	590251.95	4181569.64	Worker	0.05	1.60E-03	1.94E-02
1238	590301.92	4181570.97	Worker	0.06	1.68E-03	1.89E-02
1239	590351.90	4181572.31	Worker	0.06	1.75E-03	2.20E-02
1240	590401.87	4181573.65	Worker	0.06	1.83E-03	2.13E-02
1241	590451.84	4181574.98	Worker	0.06	1.91E-03	2.19E-02
1242	590701.69	4181581.66	Worker	0.06	1.83E-03	2.17E-02
1243	590751.66	4181583.00	Worker	0.06	1.78E-03	2.24E-02
1244	590801.63	4181584.33	Worker	0.06	1.80E-03	1.84E-02
1245	590851.60	4181585.67	Worker	0.06	1.88E-03	1.84E-02
1246	590901.57	4181587.00	Worker	0.07	1.98E-03	1.78E-02
1247	590951.55	4181588.34	Worker	0.07	2.08E-03	1.65E-02
1248	591001.52	4181589.67	Worker	0.07	2.13E-03	1.52E-02
1249	591051.49	4181591.01	Worker	0.07	2.12E-03	1.31E-02
1250	589800.88	4181607.59	Worker	0.06	1.81E-03	1.27E-02
1251	589850.85	4181608.93	Worker	0.06	1.63E-03	1.10E-02
1252	589900.82	4181610.26	Worker	0.06	1.76E-03	1.19E-02
1253	589950.79	4181611.60	Worker	0.07	1.88E-03	1.24E-02
1254	590000.76	4181612.93	Worker	0.08	2.35E-03	1.63E-02
1255	590050.73	4181614.27	Worker	0.08	2.37E-03	1.79E-02
1256	590100.71	4181615.60	Worker	0.08	2.32E-03	1.70E-02
1257	590150.68	4181616.94	Worker	0.08	2.25E-03	1.85E-02
1258	590200.65	4181618.27	Worker	0.07	2.16E-03	2.06E-02
1259	590250.62	4181619.61	Worker	0.07	2.07E-03	1.92E-02
1260	590300.59	4181620.95	Worker	0.07	2.09E-03	2.25E-02

Table E-1. Health Risk Assessment Results for All Receptors
Danville Costco Fuel Station
Contra Costa County, California

Receptor ID	X-Coordinate (m)	Y-Coordinate (m)	Receptor Type	Cancer Risk (in a million)	Chronic Hazard Index	Acute Hazard Index
1261	590350.56	4181622.28	Worker	0.07	2.17E-03	2.50E-02
1262	590400.53	4181623.62	Worker	0.08	2.28E-03	2.61E-02
1263	590750.33	4181632.97	Worker	0.08	2.28E-03	2.59E-02
1264	590800.30	4181634.30	Worker	0.08	2.37E-03	2.37E-02
1265	590850.27	4181635.64	Worker	0.09	2.51E-03	2.18E-02
1266	590900.24	4181636.97	Worker	0.09	2.64E-03	1.96E-02
1267	590950.21	4181638.31	Worker	0.09	2.70E-03	1.81E-02
1268	591000.18	4181639.64	Worker	0.09	2.67E-03	1.51E-02
1269	591050.15	4181640.98	Worker	0.09	2.57E-03	1.41E-02
1270	591100.12	4181642.32	Worker	0.08	2.44E-03	1.34E-02
1271	589799.55	4181657.56	Worker	0.07	2.00E-03	1.41E-02
1272	589849.52	4181658.90	Worker	0.07	2.03E-03	1.55E-02
1273	589899.49	4181660.23	Worker	0.07	1.92E-03	1.30E-02
1274	589949.46	4181661.57	Worker	0.08	2.12E-03	1.37E-02
1275	589999.43	4181662.90	Worker	0.10	2.81E-03	1.72E-02
1276	590049.40	4181664.24	Worker	0.10	2.92E-03	1.75E-02
1277	590099.37	4181665.57	Worker	0.10	2.99E-03	2.08E-02
1278	590149.34	4181666.91	Worker	0.10	2.98E-03	2.04E-02
1279	590199.31	4181668.25	Worker	0.10	2.79E-03	2.02E-02
1280	590249.28	4181669.58	Worker	0.10	2.77E-03	2.23E-02
1281	590299.25	4181670.92	Worker	0.09	2.75E-03	2.43E-02
1282	590349.22	4181672.25	Worker	0.09	2.79E-03	2.78E-02
1283	590898.90	4181686.94	Worker	0.12	3.55E-03	2.18E-02
1284	590948.87	4181688.28	Worker	0.12	3.46E-03	1.81E-02
1285	590998.85	4181689.61	Worker	0.11	3.28E-03	1.72E-02
1286	591048.82	4181690.95	Worker	0.11	3.05E-03	1.57E-02
1287	591098.79	4181692.29	Worker	0.10	2.80E-03	1.52E-02
1288	591148.76	4181693.62	Worker	0.09	2.54E-03	1.34E-02
1289	589748.24	4181706.20	Worker	0.07	1.89E-03	1.40E-02
1290	589798.21	4181707.53	Worker	0.07	2.01E-03	1.48E-02
1291	589848.18	4181708.87	Worker	0.07	2.09E-03	1.48E-02
1292	589898.15	4181710.20	Worker	0.07	2.00E-03	1.35E-02
1293	589948.12	4181711.54	Worker	0.08	2.27E-03	1.58E-02
1294	590297.92	4181720.89	Worker	0.14	3.87E-03	2.86E-02
1295	590947.54	4181738.25	Worker	0.15	4.32E-03	2.10E-02
1296	590997.51	4181739.59	Worker	0.14	3.90E-03	1.96E-02
1297	591047.48	4181740.92	Worker	0.12	3.48E-03	1.73E-02
1298	591097.45	4181742.26	Worker	0.11	3.09E-03	1.55E-02
1299	591147.42	4181743.59	Worker	0.10	2.74E-03	1.40E-02
1300	589746.90	4181756.17	Worker	0.06	1.79E-03	1.47E-02
1301	589796.87	4181757.50	Worker	0.07	1.93E-03	1.45E-02
1302	589846.85	4181758.84	Worker	0.07	2.07E-03	1.53E-02
1303	589896.82	4181760.17	Worker	0.08	2.21E-03	1.60E-02
1304	590996.17	4181789.56	Worker	0.15	4.41E-03	2.05E-02
1305	591046.15	4181790.89	Worker	0.13	3.80E-03	1.86E-02
1306	591096.12	4181792.23	Worker	0.11	3.28E-03	1.65E-02
1307	591146.09	4181793.56	Worker	0.10	2.86E-03	1.45E-02
1308	589745.57	4181806.14	Worker	0.06	1.57E-03	1.53E-02
1309	589795.54	4181807.47	Worker	0.06	1.75E-03	1.52E-02
1310	589845.51	4181808.81	Worker	0.07	1.90E-03	1.48E-02
1311	589895.48	4181810.14	Worker	0.07	2.10E-03	1.54E-02
1312	590994.84	4181839.53	Worker	0.16	4.70E-03	2.12E-02
1313	591044.81	4181840.86	Worker	0.14	3.94E-03	1.93E-02
1314	591094.78	4181842.20	Worker	0.12	3.35E-03	1.64E-02
1315	591144.75	4181843.53	Worker	0.10	2.89E-03	1.36E-02
1316	589694.26	4181854.77	Worker	0.04	1.15E-03	1.59E-02
1317	589744.23	4181856.11	Worker	0.05	1.30E-03	1.64E-02
1318	589794.20	4181857.44	Worker	0.05	1.47E-03	1.64E-02
1319	589844.17	4181858.78	Worker	0.06	1.63E-03	1.70E-02
1320	590993.50	4181889.50	Worker	0.16	4.72E-03	2.11E-02
1321	591043.47	4181890.83	Worker	0.14	3.91E-03	1.88E-02
1322	591093.44	4181892.17	Worker	0.11	3.30E-03	1.66E-02
1323	591143.42	4181893.51	Worker	0.10	2.82E-03	1.45E-02
1324	589692.93	4181904.74	Worker	0.03	9.68E-04	1.58E-02
1325	589742.90	4181906.08	Worker	0.04	1.08E-03	1.63E-02
1326	589792.87	4181907.41	Worker	0.04	1.21E-03	1.66E-02
1327	589842.84	4181908.75	Worker	0.05	1.35E-03	1.75E-02
1328	589892.81	4181910.09	Worker	0.05	1.51E-03	1.92E-02
1329	590992.17	4181939.47	Worker	0.16	4.46E-03	2.12E-02
1330	591042.14	4181940.80	Worker	0.13	3.69E-03	1.88E-02

Table E-1. Health Risk Assessment Results for All Receptors
Danville Costco Fuel Station
Contra Costa County, California

Receptor ID	X-Coordinate (m)	Y-Coordinate (m)	Receptor Type	Cancer Risk (in a million)	Chronic Hazard Index	Acute Hazard Index
1331	591092.11	4181942.14	Worker	0.11	3.11E-03	1.68E-02
1332	591142.08	4181943.48	Worker	0.09	2.66E-03	1.50E-02
1333	589741.56	4181956.05	Worker	0.03	9.13E-04	1.59E-02
1334	589791.53	4181957.39	Worker	0.04	1.01E-03	1.62E-02
1335	589841.50	4181958.72	Worker	0.04	1.13E-03	1.64E-02
1336	589891.47	4181960.06	Worker	0.04	1.26E-03	1.64E-02
1337	590990.83	4181989.44	Worker	0.14	4.03E-03	2.27E-02
1338	591040.80	4181990.78	Worker	0.12	3.36E-03	1.97E-02
1339	591090.77	4181992.11	Worker	0.10	2.85E-03	1.74E-02
1340	591140.74	4181993.45	Worker	0.09	2.45E-03	1.54E-02
1341	589740.23	4182006.02	Worker	0.03	7.81E-04	1.55E-02
1342	589790.20	4182007.36	Worker	0.03	8.68E-04	1.59E-02
1343	589840.17	4182008.69	Worker	0.03	9.66E-04	1.70E-02
1344	589890.14	4182010.03	Worker	0.04	1.08E-03	1.84E-02
1345	590939.53	4182038.08	Worker	0.15	4.33E-03	2.68E-02
1346	590989.50	4182039.41	Worker	0.12	3.58E-03	2.33E-02
1347	591039.47	4182040.75	Worker	0.10	3.02E-03	2.08E-02
1348	591089.44	4182042.08	Worker	0.09	2.59E-03	1.86E-02
1349	591139.41	4182043.42	Worker	0.08	2.25E-03	1.67E-02
1350	591189.38	4182044.75	Worker	0.07	1.94E-03	1.79E-02
1351	589738.89	4182055.99	Worker	0.02	6.86E-04	1.55E-02
1352	589788.86	4182057.33	Worker	0.03	7.60E-04	1.63E-02
1353	589838.83	4182058.66	Worker	0.03	8.48E-04	1.73E-02
1354	589888.80	4182060.00	Worker	0.03	9.61E-04	1.83E-02
1355	589938.77	4182061.33	Worker	0.04	1.12E-03	1.69E-02
1356	589988.74	4182062.67	Worker	0.04	1.28E-03	1.82E-02
1357	590988.16	4182089.38	Worker	0.11	3.18E-03	2.19E-02
1358	591038.13	4182090.72	Worker	0.09	2.71E-03	1.80E-02
1359	591088.10	4182092.05	Worker	0.08	2.35E-03	1.63E-02
1360	591138.07	4182093.39	Worker	0.07	2.01E-03	1.67E-02
1361	591188.04	4182094.72	Worker	0.06	1.68E-03	1.86E-02
1362	591238.01	4182096.06	Worker	0.05	1.44E-03	1.84E-02
1363	589787.53	4182107.30	Worker	0.02	6.77E-04	1.56E-02
1364	589837.50	4182108.63	Worker	0.03	7.63E-04	1.70E-02
1365	589887.47	4182109.97	Worker	0.03	8.80E-04	1.61E-02
1366	589937.44	4182111.30	Worker	0.04	1.03E-03	1.68E-02
1367	589987.41	4182112.64	Worker	0.04	1.17E-03	1.83E-02
1368	590037.38	4182113.98	Worker	0.05	1.35E-03	2.08E-02
1369	591036.80	4182140.69	Worker	0.08	2.45E-03	1.89E-02
1370	591086.77	4182142.02	Worker	0.07	2.12E-03	1.65E-02
1371	591136.74	4182143.36	Worker	0.06	1.70E-03	2.04E-02
1372	591186.71	4182144.70	Worker	0.05	1.38E-03	2.09E-02
1373	591236.68	4182146.03	Worker	0.04	1.16E-03	2.02E-02
1374	589836.16	4182158.60	Worker	0.02	7.12E-04	1.58E-02
1375	589886.13	4182159.94	Worker	0.03	8.52E-04	1.46E-02
1376	589936.10	4182161.28	Worker	0.03	9.59E-04	1.54E-02
1377	589986.07	4182162.61	Worker	0.04	1.09E-03	1.59E-02
1378	590036.04	4182163.95	Worker	0.04	1.24E-03	1.93E-02
1379	591085.43	4182192.00	Worker	0.06	1.69E-03	2.25E-02
1380	591135.40	4182193.33	Residential	0.38	1.36E-03	2.31E-02
1381	591185.37	4182194.67	Residential	0.30	1.08E-03	2.20E-02
1382	591235.34	4182196.00	Residential	0.25	8.96E-04	1.93E-02
1383	589834.82	4182208.57	Worker	0.02	6.73E-04	1.38E-02
1384	589884.80	4182209.91	Worker	0.03	7.99E-04	1.23E-02
1385	589934.77	4182211.25	Worker	0.03	8.94E-04	1.53E-02
1386	589984.74	4182212.58	Worker	0.03	1.01E-03	1.61E-02
1387	591084.10	4182241.97	Residential	0.37	1.34E-03	2.42E-02
1388	591134.07	4182243.30	Residential	0.29	1.05E-03	2.19E-02
1389	591184.04	4182244.64	Residential	0.24	8.70E-04	1.95E-02
1390	591234.01	4182245.97	Residential	0.23	8.21E-04	1.87E-02
1391	589833.49	4182258.55	Worker	0.02	6.39E-04	1.42E-02
1392	589883.46	4182259.88	Worker	0.03	7.51E-04	1.25E-02
1393	589933.43	4182261.22	Worker	0.03	8.36E-04	1.35E-02
1394	589983.40	4182262.55	Worker	0.03	9.33E-04	1.65E-02
1395	591082.76	4182291.94	Residential	0.34	1.23E-03	2.21E-02
1396	591132.73	4182293.27	Residential	0.30	1.07E-03	2.12E-02
1397	591182.70	4182294.61	Residential	0.24	8.81E-04	2.00E-02
1398	591232.67	4182295.94	Residential	0.23	8.36E-04	1.86E-02
1399	589832.15	4182308.52	Worker	0.02	6.41E-04	1.09E-02
1400	589882.12	4182309.85	Worker	0.02	7.06E-04	1.33E-02

Table E-1. Health Risk Assessment Results for All Receptors
Danville Costco Fuel Station
Contra Costa County, California

Receptor ID	X-Coordinate (m)	Y-Coordinate (m)	Receptor Type	Cancer Risk (in a million)	Chronic Hazard Index	Acute Hazard Index
1401	589932.09	4182311.19	Worker	0.03	7.77E-04	1.45E-02
1402	589982.07	4182312.52	Worker	0.03	8.52E-04	1.44E-02
1403	590431.80	4182324.54	Residential	0.57	2.15E-03	3.17E-02
1404	590481.77	4182325.88	Residential	0.63	2.36E-03	3.12E-02
1405	590531.74	4182327.22	Residential	0.67	2.52E-03	2.97E-02
1406	591081.42	4182341.91	Residential	0.32	1.16E-03	1.97E-02
1407	591131.39	4182343.24	Residential	0.30	1.07E-03	1.91E-02
1408	591181.37	4182344.58	Residential	0.27	9.91E-04	1.78E-02
1409	591231.34	4182345.91	Residential	0.25	8.95E-04	1.73E-02
1410	589830.82	4182358.49	Worker	0.02	6.05E-04	1.18E-02
1411	589880.79	4182359.82	Worker	0.02	6.57E-04	1.21E-02
1412	589930.76	4182361.16	Worker	0.02	7.14E-04	1.25E-02
1413	589980.73	4182362.49	Worker	0.03	7.75E-04	1.40E-02
1414	590430.47	4182374.51	Residential	0.46	1.74E-03	2.62E-02
1415	590480.44	4182375.85	Residential	0.50	1.89E-03	2.67E-02
1416	590530.41	4182377.19	Residential	0.54	2.01E-03	2.48E-02
1417	590580.38	4182378.52	Residential	0.55	2.06E-03	2.04E-02
1418	590630.35	4182379.86	Residential	0.56	2.09E-03	1.72E-02
1419	591030.12	4182390.54	Residential	0.32	1.17E-03	1.81E-02
1420	591080.09	4182391.88	Residential	0.27	9.81E-04	1.85E-02
1421	591130.06	4182393.21	Residential	0.25	9.06E-04	1.84E-02
1422	591180.03	4182394.55	Residential	0.24	8.60E-04	1.77E-02
1423	591230.00	4182395.89	Residential	0.23	8.19E-04	1.67E-02
1424	589829.48	4182408.46	Worker	0.02	5.64E-04	1.03E-02
1425	589879.45	4182409.79	Worker	0.02	6.07E-04	1.12E-02
1426	589929.42	4182411.13	Worker	0.02	6.55E-04	1.26E-02
1427	589979.39	4182412.46	Worker	0.02	7.08E-04	1.29E-02
1428	590029.36	4182413.80	Residential	0.20	7.72E-04	1.49E-02
1429	590379.16	4182423.15	Residential	0.36	1.36E-03	2.08E-02
1430	590429.13	4182424.49	Residential	0.38	1.45E-03	2.03E-02
1431	590479.10	4182425.82	Residential	0.42	1.56E-03	2.31E-02
1432	590529.07	4182427.16	Residential	0.44	1.64E-03	2.11E-02
1433	590579.04	4182428.49	Residential	0.45	1.68E-03	1.80E-02
1434	590629.01	4182429.83	Residential	0.46	1.70E-03	1.58E-02
1435	590678.99	4182431.16	Residential	0.46	1.71E-03	1.51E-02
1436	590728.96	4182432.50	Residential	0.46	1.69E-03	1.62E-02
1437	590978.81	4182439.18	Residential	0.33	1.22E-03	1.56E-02
1438	591028.78	4182440.51	Residential	0.29	1.06E-03	1.72E-02
1439	591078.75	4182441.85	Residential	0.25	8.92E-04	1.76E-02
1440	591128.72	4182443.19	Residential	0.22	7.93E-04	1.77E-02
1441	591178.69	4182444.52	Residential	0.21	7.55E-04	1.69E-02
1442	591228.67	4182445.86	Residential	0.20	7.26E-04	1.58E-02
1443	589878.12	4182459.76	Worker	0.02	5.62E-04	1.12E-02
1444	589928.09	4182461.10	Worker	0.02	6.03E-04	1.12E-02
1445	589978.06	4182462.44	Residential	0.17	6.52E-04	1.30E-02
1446	590028.03	4182463.77	Residential	0.19	7.04E-04	1.27E-02
1447	590078.00	4182465.11	Residential	0.20	7.59E-04	1.19E-02
1448	590127.97	4182466.44	Residential	0.22	8.23E-04	1.49E-02
1449	590277.88	4182470.45	Residential	0.27	1.03E-03	1.85E-02
1450	590327.85	4182471.79	Residential	0.29	1.09E-03	1.90E-02
1451	590377.82	4182473.12	Residential	0.30	1.16E-03	1.91E-02
1452	590427.80	4182474.46	Residential	0.33	1.23E-03	1.74E-02
1453	590477.77	4182475.79	Residential	0.35	1.31E-03	2.00E-02
1454	590527.74	4182477.13	Residential	0.37	1.37E-03	1.81E-02
1455	590577.71	4182478.46	Residential	0.38	1.41E-03	1.61E-02
1456	590627.68	4182479.80	Residential	0.38	1.42E-03	1.46E-02
1457	590677.65	4182481.14	Residential	0.38	1.42E-03	1.33E-02
1458	590727.62	4182482.47	Residential	0.38	1.42E-03	1.48E-02
1459	590777.59	4182483.81	Residential	0.38	1.39E-03	1.28E-02
1460	590827.56	4182485.14	Residential	0.37	1.37E-03	1.34E-02
1461	590877.53	4182486.48	Residential	0.36	1.32E-03	1.35E-02
1462	590927.50	4182487.81	Residential	0.34	1.26E-03	1.27E-02
1463	590977.48	4182489.15	Residential	0.31	1.14E-03	1.26E-02
1464	591027.45	4182490.48	Residential	0.28	1.04E-03	1.30E-02
1465	591077.42	4182491.82	Residential	0.26	9.52E-04	1.46E-02
1466	591127.39	4182493.16	Residential	0.23	8.54E-04	1.41E-02
1467	591177.36	4182494.49	Residential	0.22	7.85E-04	1.26E-02
1468	589926.75	4182511.07	Residential	0.15	5.57E-04	1.13E-02
1469	589976.72	4182512.41	Residential	0.16	6.00E-04	1.12E-02
1470	590026.69	4182513.74	Residential	0.17	6.42E-04	1.06E-02

Table E-1. Health Risk Assessment Results for All Receptors
Danville Costco Fuel Station
Contra Costa County, California

Receptor ID	X-Coordinate (m)	Y-Coordinate (m)	Receptor Type	Cancer Risk (in a million)	Chronic Hazard Index	Acute Hazard Index
1471	590076.66	4182515.08	Residential	0.18	6.90E-04	1.28E-02
1472	590126.64	4182516.41	Residential	0.20	7.44E-04	1.51E-02
1473	590176.61	4182517.75	Residential	0.21	7.98E-04	1.51E-02
1474	590226.58	4182519.08	Residential	0.22	8.51E-04	1.73E-02
1475	590276.55	4182520.42	Residential	0.24	9.02E-04	1.82E-02
1476	590326.52	4182521.76	Residential	0.25	9.49E-04	1.48E-02
1477	590376.49	4182523.09	Residential	0.26	1.00E-03	1.78E-02
1478	590426.46	4182524.43	Residential	0.28	1.06E-03	1.61E-02
1479	590476.43	4182525.76	Residential	0.30	1.12E-03	1.75E-02
1480	590526.40	4182527.10	Residential	0.31	1.17E-03	1.59E-02
1481	590576.37	4182528.43	Residential	0.32	1.19E-03	1.43E-02
1482	590626.34	4182529.77	Residential	0.32	1.20E-03	1.33E-02
1483	590676.31	4182531.11	Residential	0.32	1.21E-03	1.13E-02
1484	590726.29	4182532.44	Residential	0.32	1.21E-03	1.25E-02
1485	590776.26	4182533.78	Residential	0.32	1.20E-03	1.19E-02
1486	590826.23	4182535.11	Residential	0.32	1.18E-03	1.16E-02
1487	590876.20	4182536.45	Residential	0.31	1.16E-03	1.15E-02
1488	590926.17	4182537.78	Residential	0.30	1.12E-03	1.23E-02
1489	590976.14	4182539.12	Residential	0.29	1.07E-03	1.10E-02
1490	591026.11	4182540.46	Residential	0.27	1.00E-03	1.08E-02
1491	591076.08	4182541.79	Residential	0.25	9.39E-04	1.03E-02
1492	591126.05	4182543.13	Residential	0.24	8.75E-04	9.99E-03
1493	589925.42	4182561.04	Residential	0.14	5.18E-04	9.95E-03
1494	589975.39	4182562.38	Residential	0.15	5.52E-04	9.52E-03
1495	590025.36	4182563.71	Residential	0.15	5.89E-04	1.08E-02
1496	590075.33	4182565.05	Residential	0.17	6.31E-04	1.33E-02
1497	590125.30	4182566.38	Residential	0.18	6.74E-04	1.29E-02
1498	590175.27	4182567.72	Residential	0.19	7.16E-04	1.53E-02
1499	590225.24	4182569.06	Residential	0.20	7.57E-04	1.41E-02
1500	590275.21	4182570.39	Residential	0.21	7.96E-04	1.66E-02
1501	590325.18	4182571.73	Residential	0.22	8.32E-04	1.37E-02
1502	590375.15	4182573.06	Residential	0.23	8.73E-04	1.56E-02
1503	590425.12	4182574.40	Residential	0.24	9.22E-04	1.45E-02
1504	590475.10	4182575.73	Residential	0.26	9.71E-04	1.53E-02
1505	590625.01	4182579.74	Residential	0.28	1.04E-03	1.19E-02
1506	590674.98	4182581.08	Residential	0.28	1.04E-03	9.92E-03
1507	590724.95	4182582.41	Residential	0.28	1.04E-03	1.00E-02
1508	590774.92	4182583.75	Residential	0.28	1.04E-03	1.16E-02
1509	590824.89	4182585.08	Residential	0.28	1.03E-03	1.00E-02
1510	590874.86	4182586.42	Residential	0.27	1.01E-03	1.04E-02
1511	590924.83	4182587.76	Residential	0.27	9.86E-04	9.66E-03
1512	590974.80	4182589.09	Residential	0.26	9.54E-04	1.07E-02
1513	591024.77	4182590.43	Residential	0.25	9.13E-04	9.53E-03
1514	591074.75	4182591.76	Residential	0.23	8.59E-04	9.66E-03
1515	590024.02	4182613.68	Residential	0.14	5.43E-04	1.11E-02
1516	590073.99	4182615.02	Residential	0.15	5.78E-04	1.14E-02
1517	590123.96	4182616.35	Residential	0.16	6.12E-04	1.19E-02
1518	590173.93	4182617.69	Residential	0.17	6.45E-04	1.36E-02
1519	590223.91	4182619.03	Residential	0.18	6.78E-04	1.41E-02
1520	590273.88	4182620.36	Residential	0.19	7.08E-04	1.29E-02
1521	590323.85	4182621.70	Residential	0.19	7.37E-04	1.33E-02
1522	590373.82	4182623.03	Residential	0.20	7.72E-04	1.32E-02
1523	590723.61	4182632.38	Residential	0.24	9.13E-04	9.29E-03
1524	590773.58	4182633.72	Residential	0.25	9.13E-04	1.04E-02
1525	590823.56	4182635.05	Residential	0.24	9.02E-04	9.26E-03
1526	590873.53	4182636.39	Residential	0.24	8.85E-04	9.07E-03
1527	590923.50	4182637.73	Residential	0.23	8.67E-04	9.38E-03
1528	590973.47	4182639.06	Residential	0.23	8.53E-04	9.29E-03
1529	590122.63	4182666.33	Residential	0.15	5.58E-04	1.28E-02
1530	590172.60	4182667.66	Residential	0.15	5.84E-04	1.13E-02
1531	590222.57	4182669.00	Residential	0.16	6.10E-04	1.39E-02
1532	590272.54	4182670.33	Residential	0.17	6.34E-04	1.05E-02

EXHIBIT B.

Biological Assessment

Costco Service Station
(AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001)
CEQA In-Fill Project Analysis

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

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09/18/2020

memorandum

date September 17, 2020

to Sean Anderson, AICP, Barghausen Consulting Engineers

from Liza Ryan, Wildlife Biologist, ESA

subject Costco Fuels San Ramon Biological Assessment

Introduction

Costco plans installation of a new fuel station at the present location of Office Depot in San Ramon, California. The project includes an 11,486-square-foot fuel canopy, the installation of sixteen (16) new multi-product dispensers (MPDs), three (3) 40,000-gallon underground storage tanks (USTs), one (1) 1,500-gallon UST, a controller enclosure, vapor processer unit, and associated site improvements. Site improvements include modifications to the site circulation and landscaping within the 129 existing parking stalls. As part of its authorized scope of work, ESA was asked to conduct a biological evaluation of the Project for purposes of CEQA analysis. Accordingly, we have prepared this memorandum to present the findings of the biological reconnaissance survey and records analysis.

Project Site and Vicinity

The approximately 2.9-acre project site is owned by Costco and is located on Fostoria Way across from Danville Costco, in the City of San Ramon, in Contra Costa County. The site is level and consists of an existing Office Depot store and 129 asphalt parking spaces with borders and medians consisting of ornamental plantings (see Photo 1 below). The site is bordered to the north by Fostoria Way (across from Costco), to the west by PetCo, to the east by an Extended Stay America hotel, and to the south by a restaurant. The site is located approximately ¼-mile from Interstate 680 to the west. There are no natural communities within or bordering the Project site. Sycamore Valley Open Space is located approximately 4 miles east.

Methods

Prior to visiting the site, the California Natural Diversity Database (CNDDB), California Native Plant Society California Rare Plant Ranking (CRPR), and U.S. Fish and Wildlife Service (USFWS) iPac (Information for Planning and Conservation) database were reviewed to generate lists of special-status species with potential to occur on or near the site, critical habitats, and sensitive habitats, including the potential presence of wetlands or waters. A reconnaissance survey of the Project site was conducted on September 9, 2020. Site trees and other vegetation were inspected to evaluate their potential to support nesting birds.

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Survey

ESA biologist Liza Ryan surveyed the site Wednesday, September 9 from 11 am to 1:30 pm. Weather was overcast and impacted by smoke from regional wildfires, with winds 0-5 mph and temperature approximately 65 degrees. No birds or other wildlife were observed on the Project site during the survey. The Project site consisted of a structure containing an Office Depot store, asphalt parking spaces, and ornamental median and border plantings. Shrubs in the median and borders included rosemary (*Salvia rosmarinus*), evergreen spindle (*Euonymus japonicus*), and bamboo (*Nandina domestica*). Median and border trees included crepe-myrtle (*Lagerstroemia indica*), olive trees (*Olea europaea*), California sycamore (*Platanus racemosa*), pittosporum (*Pittosporum* sp.), coast live oak (*Quercus agrifolia*), valley oak (*Quercus lobata*), and coast redwood (*Sequoia sempervirens*). Several large star jasmine (*Trachelospermum jasminoides*) vines were growing along the sides of the Office Depot building.

Findings

The Project site has plant growth only on parking lot medians and borders; surrounding these areas are asphalt parking lots and roadways and occupied commercial properties. Common terrestrial wildlife species such as tree squirrels (*Sciurus griseus*) and field mice (*Mus musculus*) may use the site. However, the highly developed and disturbed land cover has no potential for special-status plants or wildlife to occur on the project site nor in its immediate vicinity. The nearest undeveloped areas providing habitat for special-status wildlife, including the threatened Alameda whipsnake, are in the hills westward in the Las Trampas Regional Wilderness, or eastward in the Shelburne Hills.

No natural communities, wetlands, or other waters are present on the Project site. There are no wildlife corridors at the site nor in the immediate vicinity.

Nesting Birds

The Project site and vicinity contains numerous trees and shrubs suitable for nesting migratory birds (see Photos 2 and 3 below). Bird species including Anna's hummingbird (*Calypte anna*), California towhee (*Melozone crissalis*), oak titmouse (*Baeolophus inornatus*), or dark-eyed junco (*Junco hyemalis*) may use mature trees and shrubs on the site for nesting. Nesting migratory birds are protected under the Migratory Bird Treaty Act and California Fish and Game Code. ESA's reconnaissance survey was performed outside of the active nesting season, which generally spans from February 1 through August 31; therefore, no active nests were observed.

While it is ideal for tree or shrub removal to occur prior to February 1 to avoid potential impacts to nesting birds, Costco has indicated that tree or shrub trimming or removal may occur during the nesting season identified above. Such activities have the potential to result in nest destruction, disturbance or abandonment of young. However, Costco has proposed as part of its project to engage a qualified biologist to conduct a nesting bird survey and, as warranted, determine an appropriate buffer and monitor nests during construction, adhering to the protocols outlined in the mitigation measure (set forth below in full) adopted by the City in connection with the City of San Ramon North Camino Ramon Specific Plan. This protocol (both proposed by Costco and required to be implemented by virtue of the Specific Plan) would ensure that impacts to nesting birds would be less than significant if construction activities occur during the bird nesting season.

MM BIO-1: If suitable avian nesting habitat is intended to be removed during the nesting season (February 1 through August 31), a qualified biologist shall conduct a nesting bird survey to identify any potential nesting activity. If passerine birds are found to be nesting, or there is evidence of nesting behavior within 250 feet of the impact area, the biologist shall determine an appropriate buffer that shall be required around the nests. No vegetation removal or ground disturbance would occur within this buffer. For raptor species—birds of prey such as hawks and owls—this buffer would generally be 500 feet. A qualified biologist shall monitor the nests closely until it is determined that the nests are no longer active, at which time construction activities may commence within the buffer area. Construction activity may encroach into the buffer area at the discretion of the biological monitor. Tree or vegetation removal activities that occur outside of the nesting season (September 1 through January 31) are not subject to the requirements of this mitigation measure.

Photo 1. Overview of site from the northwest

Photo 2. Valley oak and crepe-myrtle trees on northern border of site

Photo 3. Coast live oak trees at SE corner of structure onsite

References

California Department of Fish and Wildlife (CDFW), 2020. California Natural Diversity Database Rarefind and Spotted Owl Observations Databases, at https://wildlife.ca.gov/Data/CNDDB/Maps-and-Data.

California Native Plant Society (CNPS). 2020. Inventory or Rare, Threatened and Endangered Plants of California, 2020. Available online at http://www.rareplants.cnps.org/.

City of San Ramon. 2012. North Camino Ramon Specific Plan. July 24. https://www.sanramon.ca.gov/our_city/departments_and_divisions/community_development/planning_services/specific_plans/north_camino_ramon_specific_plan

U.S. Fish and Wildlife Service (USFWS), iPac Information for Planning and Conservation. Online database powered by ECOS Environmental Conservation Online System, 2020. Available online at https://ecos.fws.gov/ipac/.

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EXHIBIT C.

Noise Technical Memorandum

Costco Service Station
(AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001)
CEQA In-Fill Project Analysis

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09/18/2020

memorandum

date September 17, 2020

to Sean Anderson, Senior Planner, Barghausen Consulting Engineers

cc

from Chris Sanchez, Senior Technical Associate, ESA

subject Noise Technical Memorandum—Costco San Ramon Fueling Station Project

At your request, this technical memorandum provides an acoustical assessment of the potential effects on noise and vibration levels from operation of the proposed Costco Gasoline Sales Addition on Fostoria Way in San Ramon, California. Specifically, ESA understands that the City may require that noise issues be addressed as part of the CEQA documentation for the proposed self-service gasoline station addition. It is further understood that the CEQA document being prepared is a categorical exemption and that these studies would be used to inform the preparation of this CEQA document.

1. Project Description

The project site is located at 3111 Fostoria Way in San Ramon, California, and is a 2.9-acre parcel presently developed with an office supply store and parking lot. The proposed project would develop a gasoline fueling station across the street from an existing Costco warehouse. The proposed project includes an 11,486-square-foot fuel canopy, the installation of 16 new multi-product dispensers, three 40,000-gallon underground storage tanks, one 1,500-gallon underground storage tank, a controller enclosure, a vapor processor unit, and associated site improvements. Specifically, the site improvements include modifications to site circulation and landscaping within the 129 existing parking stalls. Proposed hours of operation would be daily from 5:30 a.m. to 10:00 p.m.

2. Characteristics of Noise and Vibration

2.1 Noise Principles and Descriptors

Sound is mechanical energy transmitted by pressure waves through a medium such as air. *Noise* is defined as unwanted sound. The *sound pressure level* has become the most common descriptor used to characterize the loudness of an ambient sound level. Sound pressure level is measured in decibels (dB), with 0 dB corresponding roughly to the threshold of human hearing, and 120–140 dB corresponding to the threshold of pain. Because

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sound pressure can vary greatly within the range of human hearing, a logarithmic loudness scale is used to keep sound intensity numbers at a convenient and manageable level.

Sound pressure fluctuations can be measured in units of hertz (Hz), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but rather a broad band of frequencies varying in levels of magnitude (sound power). When all audible frequencies of a sound are measured, a sound spectrum is plotted consisting of a range of frequency spanning 20–20,000 Hz.

The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. In assessments of potential noise impacts, sound is measured using an electronic filter that deemphasizes frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the human ear's decreased sensitivity to low and extremely high frequencies. This method of frequency weighting is referred to as *A-weighting* and is expressed in units of A-weighted decibels (dBA).[1] Frequency A-weighting is typically applied to community noise measurements. All noise levels presented in this report are A-weighted unless otherwise stated.

2.2 Noise Exposure and Community Noise

An individual's noise exposure is a measure of noise over a period of time. A noise level is a measure of noise at a given period of time. Community noise varies continuously over a period of time with respect to the contributing sound sources of the community noise environment. Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise exposure, with the individual contributors unidentifiable. The background noise level changes throughout a typical day, but does so gradually, corresponding to the addition and subtraction of distant noise sources such as traffic. What makes community noise variable throughout a day, besides the slowly changing background noise, is the addition of short-duration, single-event noise sources (e.g., aircraft flyovers, motor vehicles, sirens), which are readily identifiable to the individual.

These successive additions of sound to the community noise environment change the community noise level from instant to instant, requiring the measurement of noise exposure over a period of time to legitimately characterize a community noise environment and evaluate cumulative noise effects. This time-varying characteristic of environmental noise is described using statistical noise descriptors. The following are the most frequently used noise descriptors:

L_{eq}: The equivalent sound level, used to describe noise over a specified period of time in terms of a single numerical value. The L_{eq} of a time-varying signal and that of a steady signal are the same if they deliver the same acoustic energy over a given time. The L_{eq} may also be referred to as the *average sound level*.

L_{dn}: The average A-weighted noise level during a 24-hour day, obtained after adding 10 dB to noise levels measured between 10:00 p.m. and 7:00 a.m. to account for greater nighttime noise sensitivity. Also termed the *day-night average noise level* (DNL).

CNEL: The community noise equivalent level, or the average A-weighted noise level during a 24-hour day that is obtained after adding 5 dB to noise levels measured between 7:00 p.m. and 10:00 p.m. and adding

[1] All noise levels reported herein reflect A-weighted decibels unless otherwise stated.

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10 dB to noise levels between 10:00 p.m. and 7:00 a.m. to account for greater noise sensitivity in the evening and nighttime, respectively.

2.3 Effects of Noise on People

Noise is generally loud, unpleasant, unexpected, or undesired sound typically associated with human activity that is a nuisance or disruptive. The effects of noise on people include subjective effects (e.g., dissatisfaction, annoyance), interference (e.g., communication, sleep, and learning interference), physiological effects (e.g., startle response), and physical effects (e.g., hearing loss). With regard to increases in A-weighted noise levels, the following relationships generally occur:

- Except in carefully controlled laboratory experiments, a change of 1 dB cannot be perceived.
- Outside of the laboratory, a 3 dB change in noise levels is considered to be a barely perceivable difference.
- A change in noise levels of 5 dB is considered to be a readily perceivable difference.
- A change in noise levels of 10 dB is subjectively heard as doubling of the perceived loudness.

These relationships occur in part because of the logarithmic nature of sound and the decibel system. The human ear perceives sound in a non-linear fashion; hence the decibel scale was developed. Because the decibel scale is based on logarithms, two noise sources combine not in a simple additive fashion, but rather, logarithmically. For example, if two identical noise sources were to produce noise levels of 50 dB, the combined sound level would be 53 dB, not 100 dB.

2.4 Fundamentals of Vibration

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Several different methods are used to quantify vibration. *Peak particle velocity* (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe physical vibration effects on buildings. Typically, groundborne vibration generated by human activities attenuates rapidly with distance from the source of the vibration. Sensitive receptors to vibration include structures (especially older masonry structures), people (especially residents, the elderly, and sick people), and vibration-sensitive equipment.

Another useful vibration descriptor is known as *vibration decibels*, abbreviated as VdB. The term VdB is generally used when evaluating the human response to vibration, as opposed to structural effects (for which PPV is the more commonly used descriptor). Vibration decibels are established relative to a reference quantity, typically 1×10^{-6} inches per second (in/sec).[2]

The effects of groundborne vibration include movement of building floors, rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. In extreme cases, vibration can damage buildings. Building damage is not a factor for most projects, with the occasional exception of blasting and pile driving during construction. Vibration often causes annoyance when vibration levels exceed the threshold of perception by only a small margin. A vibration level that causes annoyance will be well below the damage threshold for normal

[2] Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, May 2018.

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buildings. The Federal Transit Administration's measure of the threshold for architectural damage of conventional sensitive structures is 0.2 in/sec PPV.[3]

For many people, a vibration velocity level of 75 VdB is considered the approximate dividing line between barely perceptible and distinctly perceptible.

3. Environmental Setting

3.1 Existing Ambient Noise Levels

The project site is located along a section of Fostoria Way developed with retail commercial land uses. The project site is located across the street from an existing Costco warehouse. Existing noise sources in the area include traffic noise along Fostoria Way, Camino Ramon, and the Interstate 680 freeway, which is approximately 1,200 feet west of the project site (see **Figure 1, Project Noise Monitoring Locations**). In addition, truck noise is generated within the project site associated with the neighboring property owner accessing an existing trash pick-up area.

To characterize the existing noise environment, a long-term sound level measurement was conducted at the nearest residential land use to the project site, approximately 520 feet to the west on Fostoria Way. The location of the measurement is presented in Figure 1. The sound level survey was conducted using a Larson Davis LxT2 sound level meter that was calibrated before use and operated according to the manufacturer's specifications. **Table 1, Existing Noise Environment in the Project Site Vicinity,** shows the measured sound levels and the sources of sound monitored.

TABLE 1
EXISTING NOISE ENVIRONMENT IN THE PROJECT SITE VICINITY

Location	Date and Time Period	Daytime[a] L_{eq} dB	L_{dn}	Noise Sources
LT-1 Fostoria Terrace Townhomes	09/11/20 24-hour measurement	63	64	Vehicle traffic on Fostoria Way and Costco entrance, car wash at service station.

Notes:
dB = decibels; L_{dn} = average A-weighted noise level during a 24-hour day; L_{eq} = equivalent (average) sound level

a. Daytime hours are 7 a.m. to 10 p.m.

b. Nighttime hours are 10 p.m. to 7 a.m.

Source: Data compiled by Environmental Science Associates in 2020

[3] Ibid.

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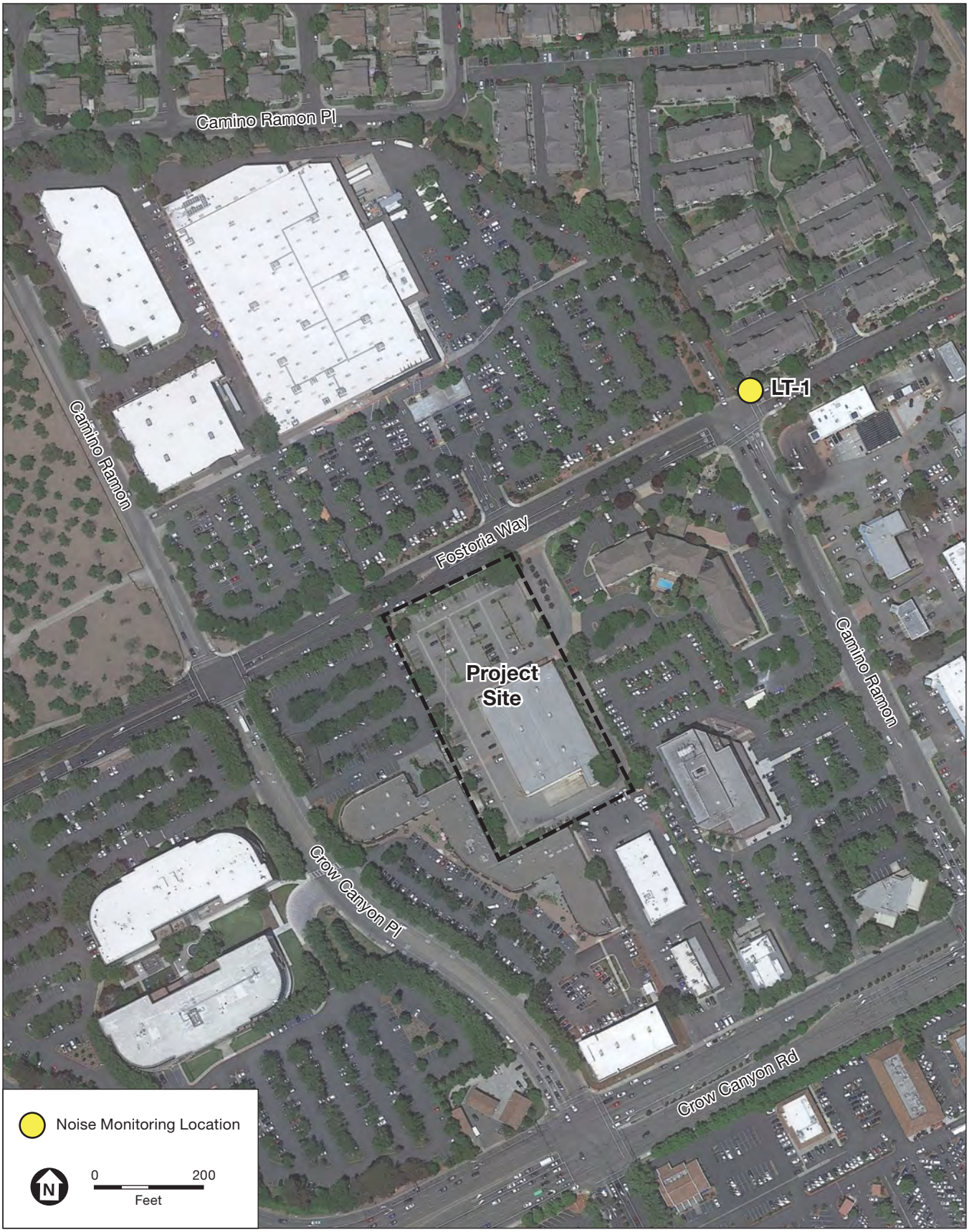

SOURCE: ESA, 2020; Google Earth, 2020

Costco San Ramon Technical Noise Study

Figure 1
Project Location

ESA

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3.2 Existing Groundborne Vibration Levels

There are no stationary sources of vibration adjacent to the project site. The only source of groundborne vibration in the project vicinity is travel by heavy-duty vehicles (e.g., refuse trucks, haul trucks) on local roadways. At a distance of 50 feet, traveling trucks typically generate groundborne vibration velocity levels of around 63 VdB (approximately 0.006 in/sec PPV); these levels could reach 72 VdB (approximately 0.016 in/sec PPV) where trucks pass over discontinuities in the roadway.[4]

3.3 Sensitive Receptors

Some land uses are more sensitive than others to noise because of the types of activities typically associated with the uses. Residences, hotels, schools, senior care facilities, and hospitals are generally more sensitive to noise than commercial and industrial land uses. Currently, the nearest sensitive receptors to the project site are the townhomes of the Fostoria Terrace development, approximately 520 feet east of the project site (Figure 1).

There is an adjacent hotel on the parcel to the east, which is a commercial land use; the General Plan Noise Element (see Section 4.4 below) does not identify commercial uses as sensitive receptors, nor are they identified as a sensitive receptor for noise in the *State of California General Plan Guidelines*.[5] The California Building Code requires exterior-to-interior insulation sufficient to maintain an interior noise level of 45 dBA. Additionally, guests are not present long enough to experience changes in ambient noise levels from a new development. However, as a use where people would be reasonably expected to sleep, the hotel use is considered in the following impact assessment as a potential receptor during the nighttime hours.

4. Regulatory Setting

4.1 Federal Noise Standards

No federal noise standards directly regulate environmental noise related to the construction or operation of the proposed project. With regard to noise exposure and workers, U.S. Occupational Safety and Health Administration regulations safeguard the hearing of workers exposed to occupational noise. Federal regulations also establish noise limits for medium and heavy trucks (more than 4.5 tons, gross vehicle weight rating) under Code of Federal Regulations Title 40, Part 205, Subpart B. The federal truck pass-by noise standard is 80 dB at 15 meters from the vehicle pathway centerline. These controls are implemented through regulatory controls on truck manufacturers.

4.2 California Noise Standards

The State of California also establishes noise limits for vehicles licensed to operate on public roads. For heavy trucks, the state pass-by standard is consistent with the federal limit of 80 dB. The state pass-by standard for light trucks and passenger cars (less than 4.5 tons, gross vehicle rating) is also 80 dB at 15 meters from the centerline. These standards are implemented through controls on vehicle manufacturers and by legal sanction of vehicle operators by state and local law enforcement officials.

[4] Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, May 2018.
[5] Governor's Office of Planning and Research, *State of California General Plan Guidelines*, 2017, page 134.

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The State of California updated its building code requirements with respect to sound transmission, effective July 2015. California Building Code Section 1207 (California Code of Regulations Title 24) establishes material requirements in terms of a sound transmission class[6] of 50 for all common interior walls and floor/ceiling assemblies between adjacent dwelling units or between dwelling units and adjacent public areas. It also sets an interior performance standard of 45 dBA from exterior noise sources.

4.3 State Vibration Standards

There are no state vibration standards that are applicable to the proposed project. Moreover, according to the California Department of Transportation's (Caltrans) *Transportation and Construction Vibration Guidance Manual* (2013), Caltrans has no official standards for vibration. However, this manual provides guidelines for assessing the potential for vibration damage to various types of buildings, ranging from 0.08–0.12 in/sec PPV for extremely fragile historic buildings, ruins, and ancient monuments to 0.50–2.0 in/sec PPV for modern industrial/commercial buildings.

4.4 San Ramon General Plan

The purpose of the San Ramon General Plan's Noise Element is to set forth policies that regulate the ambient noise environment and protect residents from exposure to unacceptable noise levels. The Noise Element contains a number of implementing policies to achieve an acceptable noise environment for present and future residents of San Ramon. The following policies are identified as potentially relevant to the proposed Project.

Policy 10.1.I.1: Minimize vehicular and stationary noise sources and noise emanating from intermittent activities. The City's regulations restrict the hours of operation for a variety of noise sources, and State laws limit the noise levels of motor vehicles and some activities at industrial plants. The City's Residential Traffic Calming Program reduces vehicular noise through promoting alternative modes of transportation and implementing traffic-calming measures.

Policy 10.1.I.2: All projects that are exposed to noise greater than "normally acceptable" levels indicated in Figure 10-2 [of the Noise Element] shall be required to submit a noise analysis. Applicable noise attenuation measures shall be implemented with the DNL reduced to 45 dB in all habitable rooms. Noise attenuation measures may consist of conventional construction practices, open space and landscaping, building orientation and design, or other measures that buffer or mask sound. The City applies the standards of Title 24, Part II of the California Code of Regulations to all housing, thereby requiring an acoustical study if a proposed development will be located in an area exposed to a DNL (Day-Night Average Sound Level) in excess of 60 dB.

Policy 10.1-I-3: Acoustical and vibration studies shall be prepared by qualified professionals in accordance with industry-accepted methodology. All applicable and feasible vibration reduction measures shall be incorporated into project plans. Industry-accepted methodology means guidance issued by public agencies or private organizations. Examples include Caltrans, the Federal Highway Administration, and the Institute of Noise Control Engineering.

6 The sound transmission class is used as a measure of a material's ability to reduce sound. The sound transmission class is equal to the number of decibels by which a sound is reduced as it passes through a material.

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Policy 10.1-I-4: Alternatives to sound walls such as building orientation and landscaped buffers shall be considered during the design process. If deemed appropriate, sound walls shall be well-designed and appropriately sited. Factors that should be considered in the design and siting of sound walls include height, decorative features, graffiti resistance, pedestrian mobility, and sight distances.

Policy 10.1.I.5: New development shall minimize their noise impacts on adjacent properties through appropriate means, including, but not limited to, the following actions:

- Screen and control noise sources, such as parking and loading facilities, outdoor activities and mechanical equipment.
- Increase setbacks for noise sources from adjacent dwellings.
- Retain or install fences, walls, and landscaping that serve as noise buffers.
- Use soundproofing materials and other building practices or materials.
- Encourage the use of commute alternatives.
- Control hours of operation, including deliveries and trash pickup, to minimize noise impacts.
- Buffer noise along highways and arterial roadways through natural noise buffers and if necessary, install sound walls when compatible with neighborhood aesthetics and character.

Policy 10.1-I-6: Protect especially sensitive receptors such as schools, hospitals, and senior care uses, from excessive noise. New development that may adversely impact sensitive receptors will be required to implement noise attenuation measures to limit excessive noise.

Policy 10.1-I-7: Implement the City's noise control standards to ensure appropriate regulation of common residential, commercial, and industrial noise sources.

Policy 10.1-I-8: Require new noise sources to use best available and practical control technology to minimize noise from all sources.

Policy 10.1-I-9: Continue to enforce the City's Noise Ordinance to reduce noise impacts.

Policy 10.1-I-12: Designate local truck routes to minimize truck traffic in noise-sensitive land use areas.

Policy 10.1-I-13: Encourage mixed-use and commercial developments to locate noise generating components such as loading areas, parking lots, driveways, trash enclosures, mechanical equipment, and other noisier components away from residential development. Noise impacts can be reduced by identifying noise-generating components and by locating and/or screening them to minimize impacts to residential development.

Policy 10.1-I-17: For purposes of city analyses of noise impacts, and for determining appropriate noise mitigation, a significant increase in ambient noise levels is assumed if the project causes ambient noise levels to exceed the following:

- The ambient noise level is less than 60 dB L_{dn} and the project increases noise levels by 5 dB or more.
- The ambient noise level is 60-65 dB L_{dn} and the project increases noise levels by 3 dB or more.
- The ambient noise level is greater than 65 dB L_{dn} and the project increases noise levels by 1.5 dB or more.

4.5 San Ramon Noise Ordinance

Noise standards are codified in the San Ramon Municipal Code under Chapter V, Article 1 Division B6. The noise ordinance does not contain quantitative standards, but rather prohibits a person from willfully making or causing loud, unnecessary, or unusual noise that disturbs the peace or quiet of a neighborhood, or that causes discomfort or annoyance to a reasonable person residing in the area. The standards considered in identifying a violation of the noise ordinance include but are not limited to the following:

A. Volume of the noise
B. Whether the nature of the noise is usual or unusual
C. Proximity of the noise to residential sleeping facilities
D. Nature and zoning of the area within which the noise emanates
E. Time of day or night the noise occurs
F. Duration of the noise
G. Whether the noise is recurrent, intermittent or constant
H. Whether the noise is produced by a commercial or noncommercial activity

5. Methodology and Analysis

5.1 Methodology

Based on the CEQA Guidelines, a project impact related to noise and/or groundborne vibration would be significant if implementing the proposed project would:

- Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Generate excessive groundborne vibration or groundborne noise levels; or
- For a project located within the vicinity of a private airstrip or an airport land use plan area or, where such a plan has not been adopted, in an area within two miles of a public airport or public use airport, expose people residing or working in the area to excessive noise levels.

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Operational Roadway Noise Levels

Roadway noise levels were calculated for selected study roadway segments near the project site based on information provided by the transportation consultant.[7] The street segments selected for analysis are expected to be the segments most directly affected by project-related traffic, which, for the purpose of this analysis, include the streets nearest to the project site that also run in front of the identified noise-sensitive receptors (i.e., residences near the project site). These streets, when compared to roadways farther from the project site, would experience the greatest percentage increase in traffic generated by the proposed project. The noise levels were calculated using the algorithms of the Federal Highway Administration's (FHWA's) Highway Traffic Noise Prediction Model (FHWA-RD-77-108). Increases in roadway noise levels were assessed against the threshold increases specified in Implementing Policy 10.1.I.17 of the San Ramon General Plan's Noise Element. Because the existing noise level in the project vicinity was monitored to be 64 dBA L_{dn}, an increase of 3 dBA or more would be significant.

On-Site Operational Stationary Source Noise Levels

The proposed project would generate on-site noise from vehicles queuing for access to the gasoline pumps. This noise would include closing of doors and the starting and starting of engines. Additionally, approximately four to six fuel truck deliveries per day would occur, involving operation of the trucks' diesel engines and the coupling of transfer hoses to the underground storage tanks.

Noise from on-site operations was estimated by monitoring an existing Costco fueling facility in Vallejo, California, on September 10, 2020. The 45-minute monitoring period captured vehicles queuing for access to the gasoline pumps and included closing of doors and starting of engines. The monitoring period also captured egress of a gasoline tanker truck and the decoupling of transfer hoses. Noise increases at the nearest sensitive receptors were assessed against the threshold increases specified in Implementing Policy 10.1.I.17 of the San Ramon General Plan's Noise Element.

Impacts during limited proposed nighttime hour operations (5:30 a.m. to 7:00 a.m.) were assessed with respect to the L_{dn} metric, which applies a penalty to nighttime noise during these hours.

Groundborne Vibration Levels and Criteria

The project would not include any sources of groundborne vibration. Tanker trucks would access the site four to six times daily; however, these trucks have independent suspension and generally generate very low vibration levels, barring discontinuities in the roadway. Trucks traveling at a distance of 50 feet typically generate very low groundborne vibration velocity levels of around 63 VdB (approximately 0.006 in/sec PPV), which are levels typically experienced in suburban commercial areas.[8] Therefore, the proposed project would not result in the generation of excessive groundborne vibration or groundborne noise levels and this potential impact is not discussed further herein.

[7] Kittleson and Associates, e-mail to ESA, September 9, 2020.

[8] Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, 2018.

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Exposure Impacts from Private Airstrips or an Airport Land Use Plan

The project site is not located within an airport land use plan area, within two miles of a public airport, or within the vicinity of a private airstrip. Therefore, no impact would occur with respect to the exposure of people residing or working in the area to excessive noise levels from an airport or airfield, and this topic is not discussed further.

5.2 Project Noise Analysis

On-Site Operational Noise

Daytime Operations

The proposed project would generate on-site noise from vehicles queuing for access to the gasoline pumps and daily fuel truck deliveries. These sources were monitored at an existing Costco fueling facility in Vallejo, California. The monitoring indicated an average noise level over the 45-minute monitoring period of 55 dBA at a distance of 100 feet. The monitoring event also included the uncoupling and departure of a tanker truck. The proposed project would differ from the existing facility in Vallejo because it would have 16 pumps, compared to the eight pumps at the existing Vallejo station. To account for the fact that the proposed facility would have twice as many pumps as the facility monitored, a doubling of sound energy was conservatively applied to the monitored value, resulting in the addition of 3 dBA to the predicted noise level of the proposed facility. Consequently, the proposed facility can be expected to generate a noise level of 58 dBA at 100 feet. The nearest residential receptor is the townhouses of the Fostoria Terrace development, 520 feet from the project site. At this distance, noise from the proposed fueling facility would be attenuated to 44 dBA.

Table 2, Modeled On-Site Daytime Operational Noise Levels at Nearby Receptors, presents the predicted contribution and resultant noise level increase at the nearest residential receptor during daytime hours. As shown in the table, the proposed project would not measurably contribute to an increase in daytime noise levels at the nearest residential receptors. Therefore, daytime on-site operations of the proposed fueling facility would have a less-than-significant impact with respect to increased noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards.

TABLE 2
MODELED ON-SITE DAYTIME OPERATIONAL NOISE LEVELS AT NEARBY RECEPTORS

Receptor Location	Existing Daytime L_{eq}	Project Operational Contribution	Resultant Noise Level (Project plus Existing)	Increase over Existing (dBA)	Significant Increase?
Fostoria Terrace Residence	63	44	63	<1	No

Notes: dBA = A-weighted decibels; L_{eq} = equivalent (average) sound level
Source: Data compiled by Environmental Science Associates in 2020

Nighttime Operations

In addition to daytime (7:00 a.m. to 10:00 p.m.) operations, the project proposes to operate for 1½ hours during the nighttime period as defined with respect to noise (5:30 a.m. to 7:00 a.m.). For the assessment of nighttime noise impacts, this analysis applied the L_{dn} metric, which penalizes noise contributions to nighttime hours by 5 dBA. However, because only 1½ hours of the total of 9 nighttime hours would be affected, the results of this

penalization are limited. **Table 3, Modeled On-Site Nighttime Operational Noise Levels at Nearby Receptors,** presents the L_{dn} noise levels with and without the project, at both the nearest residential receptor and the adjacent hotel, which would be set back approximately 150 feet from the nearest pump island. As shown from project operations (Table 3), including nighttime operations would not result in an increase of 3 dBA or greater. Therefore, on-site operations of the proposed fueling facility, including operations during nighttime hours, would have a less-than-significant impact with respect to increased noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards.

TABLE 3
MODELED ON-SITE NIGHTTIME OPERATIONAL NOISE LEVELS AT NEARBY RECEPTORS

Receptor Location	Existing L_{dn}	Resultant Noise Level (Project plus Existing)	Increase over Existing (dBA)	Significant Increase?
Fostoria Terrace Residence	64	64	<1	No
Extended Stay America	64	64	<1	No

Notes: dBA = A-weighted decibels; L_{dn} = average A-weighted noise level during a 24-hour day
Source: Data compiled by Environmental Science Associates in 2020

Traffic Noise

The increase in traffic noise resulting from implementation of the proposed project would increase the ambient noise levels at sensitive uses near the project site. Based on the trip distribution estimates conducted as part of the transportation analysis, roadside noise levels were forecasted using the FHWA model to determine whether the project's vehicular traffic on local roadways would result in an adverse impact at noise-sensitive receptor locations located near the project site.

Table 4, Peak-Hour Traffic Noise Levels in the Project Vicinity, shows the roadway segments analyzed and the results of the noise increases resulting from modeling.

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TABLE 4
PEAK-HOUR TRAFFIC NOISE LEVELS IN THE PROJECT VICINITY

Roadway Segment[a,b]	Receptor Land Use Type	Existing (dBA, L_{eq})	Applicable Significance Threshold	Existing plus Project (dBA, L_{eq})	Difference between Existing plus Project and Existing (dBA)
Camino Ramon from Crow Canyon Pkwy to Fostoria Way	Transient Lodging	63	3 dBA increase in an area >60 dBA L_{dn}	65	2
Fostoria Way from Silverwood Court to Camino Ramon	Residential	57	5 dBA increase in an area <60 dBA L_{dn}	57	<1
Fostoria Way from Camino Ramon to Crow Canyon Place	Transient Lodging	62	3 dBA increase in an area >60 dBA L_{dn}	64	2
Crow Canyon Place Crow Canyon Pkwy to Fostoria Way	Commercial	65	3 dBA increase in an area >60 dBA L_{dn}	66	1
Crow Canyon Place from Fostoria Way to Franciscan Drive	Residential	63	3 dBA increase in an area >60 dBA L_{dn}	64	1

Notes: dBA = A-weighted decibels; L_{dn} = average A-weighted noise level during a 24-hour day; L_{eq} = equivalent (average) sound level
Source: Data compiled by Environmental Science Associates in 2020

As shown in Table 4, traffic noise increases would range from 0 to 2 dBA and would be less than 3 dBA higher with implementation of the proposed project along all five roadway segments analyzed. Overall, project-related traffic noise at all analyzed roadway segments in the project vicinity would not exceed the identified threshold for a significant impact. Therefore, increases in roadside noise resulting from project traffic would have a less-than-significant impact with respect to increased noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards.

Enclosures:

Attachment A: Noise Modeling Output

Exhibit A—Traffic Noise Modeling Output
Exhibit B—Noise Monitoring Summaries and Output

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Attachment A. Noise Modeling Output

San Ramon Costco Fueling Station Project
Roadway Noise Analysis

Existing

ROAD SEGMENT			TOTAL # VEHICLES	VEHICLE TYPE % Auto		MT		HT		VEHICLE SPEED Auto	k/h	MT	k/h	HT	k/h	NOISE LEVEL (dBA) Auto	MT	HT	CALCULATED NOISE LEVEL 15 meters from	Receptor Dist. from Roadway	Adjusted Noise Level	Distance from Roadway to 65 dBA	Distance from Roadway to 65 dBA
Calveno Peak																							
	from:	to:		%	Auto	%	MT	%	HT										roadway center)	Center (m.)	(dBA)	(m.)	(ft)
Camino Ramon	Crow Cyn Pkwy	Fostoria	342	95	324.9	3	10.26	2	6.84	35	56	35	56	35	56	59.4	54.1	59.1	62.9	31	59.7	9.2	30.3
Fostoria	Siverwood	Camino Ramon	109	95	103.55	3	3.27	2	2.18	30	48	30	48	30	48	52.5	48.1	53.5	56.7	31	53.6	2.2	7.3
Fostoria	Camino Ramon	Crow Cyn Pl	381	95	361.95	3	11.43	2	7.62	30	48	30	48	30	48	58.0	53.6	58.9	62.1	31	59.0	7.8	25.5
Crow Cyn Pl	Crow Cyn Pkwy	Fostoria	594	95	564.3	3	17.82	2	11.88	35	56	35	56	35	56	61.8	56.5	61.5	65.3	31	62.1	16.0	52.6
Crow Cyn Pl	Fostoria	Francsican	501	97	485.97	2	10.02	1	5.01	35	56	35	56	35	56	61.2	54.0	57.7	63.3	31	60.2	10.2	33.6

Assumptions: AM peak hour traffic data from Kittleson

Existing + Project

ROAD SEGMENT			TOTAL # VEHICLES	VEHICLE TYPE % Auto		MT		HT		VEHICLE SPEED Auto	k/h	MT	k/h	HT	k/h	NOISE LEVEL (dBA) Auto	MT	HT	CALCULATED NOISE LEVEL 15 meters from	Receptor Dist. from Roadway	Adjusted Noise Level	Distance from Roadway to 65 dBA	Distance from Roadway to 65 dBA	
Calveno Peak																								
	from:			%	Auto	%	MT	%	HT										roadway center)	Center (m.)	(dBA)	(m.)	(ft)	
Camino Ramon	Crow Cyn Pkwy	Fostoria	546	95	518.7	3	16.38	2	10.92	35	56	35	56	35	56	61.5	56.2	61.1	64.9	31	61.8	14.8	48.4	2.0
Fostoria	Siverwood	Camino Ramon	113	95	107.35	3	3.39	2	2.26	30	48	30	48	30	48	52.7	48.3	53.7	56.9	31	53.7	2.3	7.6	0.2
Fostoria	Camino Ramon	Crow Cyn Pl	589	95	559.55	3	17.67	2	11.78	30	48	30	48	30	48	59.9	55.5	60.8	64.0	31	60.9	12.0	39.4	1.9
Crow Cyn Pl	Crow Cyn Pkwy	Fostoria	628	95	596.6	3	18.84	2	12.56	35	56	35	56	35	56	62.1	56.8	61.7	65.5	31	62.4	17.0	55.7	0.2
Crow Cyn Pl	Fostoria	Francsican	541	97	524.77	2	10.82	1	5.41	35	56	35	56	35	56	61.5	54.4	58.1	63.7	31	60.5	11.1	36.3	

Assumptions: AM peak hour traffic data from Kittleson

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

Calculated Ldn from long-term noise monitoring data

		TIME	dBA	Remove LOG	10 dBA Penalized Values	5 dBA Penalized Values
9/12/2020	Midnight	0 / 24	50.9	123047	1230473	389110
	am 1:00	100	54.8	298959	2989593	945392
	2:00	200	53.1	203367	2033672	643104
	3:00	300	53.8	240728	2407282	761249
	4:00	400	51.0	127282	1272823	402502
	5:00	500	58.0	630957	6309573	1995262
	6:00	600	58.0	630957	6309573	1995262
	7:00	700	57.0	497758	4977577	1574048
	8:00	800	62.4	1757458	17574582	5557571
	9:00	900	62.5	1769506	17695058	5595669
	10:00	1000	64.4	2736989	27369887	8655118
9/11/2020	11:00	1100	65.1	3200324	32003244	10120314
	12:00	1200	64.9	3082492	30824923	9747697
	pm 1:00	1300	64.4	2784883	27848833	8806574
	2:00	1400	63.0	2009097	20090974	6353324
	3:00	1500	65.8	3778209	37782092	11947747
	4:00	1600	64.3	2670583	26705825	8445123
	5:00	1700	63.0	1996797	19967974	6314428
	6:00	1800	61.8	1523849	15238492	4818834
	7:00	1900	62.2	1672507	16725072	5288932
	8:00	2000	57.1	508768	5087682	1608866
	9:00	2100	56.1	411694	4116944	1301892
	10:00	2200	55.5	352053	3520530	1113289
	pm 11:00	2300	52.9	193872	1938715	613076

Leq Morning Peak Hour 7:00-10:00 a.m.
61 dBA

Leq Evening Peak Hour 4:00-8:00 p.m.
63 dBA

Leq Nighttime 10:00 pm-7:00 a.m. (not penalized)
55 dBA

Leq Daytime 7:00 am-10:00 p.m.
63 dBA

Leq 24-Hour
61 dBA

Ldn: 10 dBA penalty for noise between 10:00 p.m. and 7:00 a.m.
64 dBA

CNEL: 5 dBA penalty for noise between 7:00p.m. and 10:00 p.m., and 10 dBA penalty for noise between 10:00 p.m. and 7:00 a.m.
64 dBA

CNEL - Ldn 0.39804167

Calculated Ldn with addition of Project 6:30 am to 10:00 pm at Hotel

		TIME		dBA	Remove LOG	10 dBA Penalized Values	5 dBA Penalized Values
9/12/2020	Midnight		0 / 24	50.9	123047	1230473	389110
	am	1:00	100	54.8	298959	2989593	945392
		2:00	200	53.1	203367	2033672	643104
		3:00	300	53.8	240728	2407282	761249
		4:00	400	51.0	127282	1272823	402502
		5:00	500	59.5	882146	8821460	2789591
		6:00	600	59.5	882146	8821460	2789591
		7:00	700	58.7	748946	7489464	2368376
		8:00	800	63.0	2008647	20086468	6351899
		9:00	900	63.1	2020694	20206945	6389997
		10:00	1000	64.8	2988177	29881773	9449446
9/11/2020		11:00	1100	65.4	3451513	34515130	10914643
		12:00	1200	65.2	3333681	33336809	10542025
	pm	1:00	1300	64.8	3036072	30360719	9600902
		2:00	1400	63.5	2260286	22602861	7147652
		3:00	1500	66.1	4029398	40293978	12742075
		4:00	1600	64.7	2921771	29217712	9239452
		5:00	1700	63.5	2247986	22479860	7108756
		6:00	1800	62.5	1775038	17750379	5613163
		7:00	1900	62.8	1923696	19236959	6083260
		8:00	2000	58.8	759957	7599569	2403195
		9:00	2100	58.2	662883	6628831	2096220
		10:00	2200	55.5	352053	3520530	1113289
	pm	11:00	2300	52.9	193872	1938715	613076

Project contribution = 54 251189

Leq Morning Peak Hour 7:00-10:00 a.m.
62 dBA

Leq Evening Peak Hour 4:00-8:00 p.m.
63 dBA

Leq Nighttime 10:00 pm-7:00 a.m. (not penalized)
56 dBA

Leq Daytime 7:00 am-10:00 p.m.
64 dBA

Leq 24-Hour
62 dBA

Ldn: 10 dBA penalty for noise between 10:00 p.m. and 7:00 a.m.
64 dBA

CNEL: 5 dBA penalty for noise between 7:00p.m. and 10:00 p.m., and 10 dBA penalty for noise between 10:00 p.m. and 7:00 a.m.
65 dBA

CNEL - Ldr 0.44411583

Summary

File Name on Meter	LxT_Data.062
File Name on PC	SLM_0004337_LxT_Data_062.00.ldbin
Serial Number	0004337
Model	SoundTrack LxT®
Firmware Version	2.402
User	C. Sanchez
Location	3000 block Fostoria Way
Job Description	San Ramon Costco Fuel Station
Note	

Measurement

Description	
Start	2020-09-11 11:00:00
Stop	2020-09-13 08:34:18
Duration	45:34:18.594
Run Time	45:34:18.594
Pause	00:00:00.0
Pre Calibration	2020-09-11 08:13:40
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting			
Peak Weight	Z Weighting			
Detector	Slow			
Preamp	PRMLxT2B			
Microphone Correction	Off			
Integration Method	Exponential			
Overload	143.0 dB			
	A	**C**	**Z**	
Under Range Peak	99.3	96.3	**101.3**	dB
Under Range Limit	**37.6**	37.2	43.9	dB
Noise Floor	28.5	28.0	34.8	dB

Results

LASeq	61.0	
LASE	113.1	
EAS	22.860 mPa²h	
EAS8	4.013 mPa²h	
EAS40	20.065 mPa²h	
LZSpeak (max)	2020-09-12 13:24:41	119.3 dB
LASmax	2020-09-11 15:36:33	91.9 dB
LASmin	2020-09-12 02:50:04	41.3 dB
SEA	-99.9 dB	
LAS > 85.0 dB (Exceedance Counts / Duration)	6	18.4 s
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZSpeak > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZSpeak > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZSpeak > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s
LCSeq	70.8 dB	
LASeq	61.0 dB	
LCSeq - LASeq	9.8 dB	
LAIeq	62.8 dB	
LAeq	61.0 dB	
LAIeq - LAeq	1.8 dB	

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Record #	Record Type	Date	Time	LASeq	LZpeak	LASmax	LASmin	OVLD	Marker
1	Run	2020-09-11	11:00:00						
2		2020-09-11	11:00:00	65.1	102.5	84.9	51.8	No	
3		2020-09-11	12:00:00	64.9	105.0	86.3	50.8	No	
4		2020-09-11	13:00:00	64.4	106.1	89.5	50.2	No	
5		2020-09-11	14:00:00	63.0	103.4	80.1	48.8	No	
6		2020-09-11	15:00:00	65.8	109.1	91.9	51.3	No	
7		2020-09-11	16:00:00	64.3	106.0	84.8	52.7	No	
8		2020-09-11	17:00:00	63.0	103.8	80.3	55.4	No	
9		2020-09-11	18:00:00	61.8	105.0	81.1	56.0	No	
10		2020-09-11	19:00:00	62.2	110.6	86.6	54.3	No	
11		2020-09-11	20:00:00	57.1	101.8	77.3	49.9	No	
12		2020-09-11	21:00:00	56.1	101.2	77.9	50.4	No	
13		2020-09-11	22:00:00	55.5	99.3	80.0	49.6	No	
14		2020-09-11	23:00:00	52.9	95.9	75.2	44.6	No	
15		2020-09-12	0:00:00	50.9	85.5	62.9	43.4	No	
16		2020-09-12	1:00:00	54.8	103.6	75.1	42.5	No	
17		2020-09-12	2:00:00	53.1	101.6	74.6	41.3	No	
18		2020-09-12	3:00:00	53.8	103.8	76.2	41.6	No	
19		2020-09-12	4:00:00	51.0	101.2	73.4	42.1	No	
20		2020-09-12	5:00:00	52.6	109.3	78.3	42.7	No	
21		2020-09-12	6:00:00	52.3	99.3	74.4	45.5	No	
22		2020-09-12	7:00:00	57.0	112.4	75.7	46.4	No	
23		2020-09-12	8:00:00	62.4	106.2	82.8	46.9	No	
24		2020-09-12	9:00:00	62.5	104.0	77.2	47.9	No	
25		2020-09-12	10:00:00	64.4	107.8	83.4	51.3	No	
26		2020-09-12	11:00:00	64.4	102.1	79.7	50.7	No	
27		2020-09-12	12:00:00	63.6	111.6	80.5	51.6	No	
28		2020-09-12	13:00:00	66.1	119.3	87.8	52.0	No	
29		2020-09-12	14:00:00	65.1	105.8	83.4	53.3	No	
30		2020-09-12	15:00:00	64.6	109.0	84.3	51.3	No	
31		2020-09-12	16:00:00	63.1	98.1	79.3	53.0	No	
32		2020-09-12	17:00:00	62.8	103.6	81.1	52.5	No	
33		2020-09-12	18:00:00	59.2	102.9	79.7	51.2	No	
34		2020-09-12	19:00:00	57.7	92.7	69.7	50.5	No	
35		2020-09-12	20:00:00	56.5	100.6	76.0	50.9	No	
36		2020-09-12	21:00:00	55.4	99.7	76.9	46.9	No	
37		2020-09-12	22:00:00	54.8	96.6	72.3	48.9	No	
38		2020-09-12	23:00:00	54.9	99.4	78.9	49.3	No	
39		2020-09-13	0:00:00	52.0	87.3	63.5	48.9	No	
40		2020-09-13	1:00:00	53.8	101.3	74.2	48.4	No	
41		2020-09-13	2:00:00	54.7	101.5	73.0	43.4	No	
42		2020-09-13	3:00:00	54.0	105.1	74.9	41.6	No	
43		2020-09-13	4:00:00	52.7	100.4	80.2	43.4	No	
44		2020-09-13	5:00:00	52.1	96.9	73.4	43.1	No	
45		2020-09-13	6:00:00	54.4	105.4	77.7	43.6	No	
46		2020-09-13	7:00:00	53.4	97.2	67.8	45.7	No	
47		2020-09-13	8:00:00	62.5	104.5	80.3	49.6	No	
48	Stop	2020-09-13	8:34:18						

Summary

File Name on Meter	LxT_Data.072
File Name on PC	SLM_0004435_LxT_Data_072.00.ldbin
Serial Number	0004435
Model	SoundTrack LxT®
Firmware Version	2.402
User	C. Sanchez
Location	Costco Gasoline Facility - Vallejo
Job Description	San Ramon Costco Gasoline Facility Analysis
Note	

Measurement

Description	
Start	2020-09-10 09:26:58
Stop	2020-09-10 10:12:06
Duration	00:45:07.7
Run Time	00:44:59.1
Pause	00:00:08.6
Pre Calibration	2020-09-10 09:19:02
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting			
Peak Weight	Z Weighting			
Detector	Slow			
Preamp	PRMLxT2B			
Microphone Correction	Off			
Integration Method	Exponential			
Overload	143.4	dB		
	A		**C**	**Z**
Under Range Peak	99.6		96.6	**101.6** dB
Under Range Limit	**37.9**		37.5	44.3 dB
Noise Floor	28.8		28.4	35.1 dB

Results

LAseq	55.1			
LASE	89.4			
EAS	97.349	µPa²h		
EAS8	1.039	mPa²h		
EAS40	5.194	mPa²h		
LZSpeak (max)	2020-09-10 09:47:17		104.7	dB
LASmax	2020-09-10 09:50:31		75.7	dB
LASmin	2020-09-10 09:46:07		46.9	dB
SEA	-99.9	dB		
LAS > 85.0 dB (Exceedance Counts / Duration)	0		0.0	s
LAS > 115.0 dB (Exceedance Counts / Duration)	0		0.0	s
LZSpeak > 135.0 dB (Exceedance Counts / Duration)	0		0.0	s
LZSpeak > 137.0 dB (Exceedance Counts / Duration)	0		0.0	s
LZSpeak > 140.0 dB (Exceedance Counts / Duration)	0		0.0	s
LCSeq	70.1	dB		
LASeq	55.1	dB		
LCSeq - LASeq	15.0	dB		
LAIeq	58.5	dB		
LAeq	55.1	dB		
LAIeq - LAeq	3.4	dB		

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Record #	Record Type	Date	Time	LASeq	LZpeak	LASmax	LASmin	OVLD	Marker
1	Run	2020-09-10	9:26:58						
2		2020-09-10	9:26:58	50.7	87.7	55.2	48.0	No	
3		2020-09-10	9:27:58	51.0	85.6	55.5	48.2	No	
4		2020-09-10	9:28:58	53.5	86.9	59.1	49.2	No	
5		2020-09-10	9:29:58	51.7	95.6	59.2	49.4	No	
6		2020-09-10	9:30:58	49.8	84.7	54.4	48.5	No	
7		2020-09-10	9:31:58	51.8	87.4	61.7	49.0	No	
8		2020-09-10	9:32:58	50.8	85.9	57.5	48.2	No	
9		2020-09-10	9:33:58	52.8	98.7	61.2	49.0	No	
10		2020-09-10	9:34:58	52.6	89.2	58.3	48.3	No	
11		2020-09-10	9:35:58	51.9	87.8	56.8	49.4	No	
12		2020-09-10	9:36:58	51.8	87.4	56.3	49.9	No	
13		2020-09-10	9:37:58	51.7	88.4	55.8	49.1	No	
14		2020-09-10	9:38:58	54.9	85.9	59.4	50.7	No	
15		2020-09-10	9:39:58	55.4	90.9	61.2	51.7	No	
16		2020-09-10	9:40:58	54.3	98.5	63.5	49.8	No	
17		2020-09-10	9:41:58	50.4	84.9	55.0	48.7	No	
18		2020-09-10	9:42:58	51.4	87.1	59.0	48.5	No	
19		2020-09-10	9:43:58	51.9	89.4	58.5	48.5	No	
20		2020-09-10	9:44:58	49.8	86.3	52.6	48.0	No	
21		2020-09-10	9:45:58	48.2	87.4	49.8	46.9	No	
22	Pause	2020-09-10	9:46:16						
23	Resume	2020-09-10	9:46:24						
24		2020-09-10	9:46:24	55.1	104.7	70.0	48.5	No	
25		2020-09-10	9:47:24	52.5	91.0	61.2	47.2	No	
26		2020-09-10	9:48:24	54.2	97.4	61.6	48.8	No	
27		2020-09-10	9:49:24	52.2	93.6	58.1	48.1	No	
28		2020-09-10	9:50:24	63.0	97.9	75.7	50.9	No	
29		2020-09-10	9:51:24	51.3	86.6	56.9	48.5	No	
30		2020-09-10	9:52:24	51.4	86.7	54.7	48.6	No	
31		2020-09-10	9:53:24	55.0	88.0	62.9	49.3	No	
32		2020-09-10	9:54:24	54.6	90.5	64.0	49.7	No	
33		2020-09-10	9:55:24	52.5	89.4	57.9	48.5	No	
34		2020-09-10	9:56:24	62.6	93.4	66.3	48.9	No	
35		2020-09-10	9:57:24	62.4	89.6	69.4	50.7	No	
36		2020-09-10	9:58:24	56.6	88.4	63.6	51.2	No	
37		2020-09-10	9:59:24	58.3	94.7	67.8	51.6	No	
38		2020-09-10	10:00:24	51.3	87.1	54.0	49.4	No	
39		2020-09-10	10:01:24	53.2	89.6	55.0	50.5	No	
40		2020-09-10	10:02:24	53.9	90.6	56.9	51.4	No	
41		2020-09-10	10:03:24	52.3	89.8	55.1	49.9	No	
42		2020-09-10	10:04:24	53.8	91.1	59.6	50.5	No	
43		2020-09-10	10:05:24	56.2	93.5	62.0	51.5	No	
44		2020-09-10	10:06:24	54.7	90.1	60.6	50.5	No	
45		2020-09-10	10:07:24	53.9	89.6	58.2	49.9	No	
46		2020-09-10	10:08:24	51.1	87.9	54.8	48.5	No	
47		2020-09-10	10:09:24	52.4	86.8	58.2	49.9	No	
48		2020-09-10	10:10:24	53.8	87.8	57.8	49.7	No	
49		2020-09-10	10:11:24	53.1	88.2	57.4	49.5	No	
50	Stop	2020-09-10	10:12:06						

EXHIBIT D.

Traffic Impact Analysis

Costco Service Station
(AR 20-200-015, DP 20-300-002, MUP 20-501-003, and MSP 20-700-001)
CEQA In-Fill Project Analysis

Transportation Impact Analysis

Costco Gasoline Fuel Station Addition

San Ramon, California

October 2020

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Transportation Impact Analysis

Costco Gasoline Fuel Station Addition

San Ramon, California

Prepared For:
Costco Wholesale
999 Lake Drive
Issaquah, Washington 98207
(425) 313-6052

Prepared By:
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Project No. 25059

October 2020

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APPENDICES

Appendix A Traffic Count Data

Appendix B Year 2020 Existing Conditions Level-of-Service Worksheets

Appendix C Year 2020 Existing plus Project Conditions Level-of-Service Worksheets

Appendix D Year 2020 Existing plus Project Conditions with Proposed Improvements Level-of-Service Worksheets

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

INTRODUCTION

This report summarizes the transportation impacts associated with the operation of a new Costco Gasoline fuel station at 3111 Fostoria Way, San Ramon, CA. The fuel station would be located across the street from the existing Costco warehouse (warehouse) located at 3150 Fostoria Way, Danville, CA.

PROJECT DESCRIPTION

Costco Wholesale is proposing to build a Costco Gasoline fuel station with 32 fueling positions at 3111 Fostoria Way, San Ramon, CA (Project), across the street from the existing Costco warehouse located on Fostoria Way in Danville, CA. The site for the fuel station is currently an Office Depot store (to be demolished). The city limits for Danville and San Ramon are aligned with Fostoria Way. Therefore, while the warehouse is in Danville, the proposed fuel station will be located in San Ramon.

SCOPE OF THE REPORT

The analyses performed for this study determine the expected transportation-related effects of the Project on the local transportation network. The scope of the report was developed in coordination with the City of San Ramon and Costco Wholesale.

Kittelson performed analyses to establish consistency with the City of San Ramon General Plan and to comply with the California Environmental Quality Act (CEQA). An analysis based on automobile delay, i.e., level of service (LOS), can no longer be used for assessing CEQA impacts. Therefore, the LOS evaluation is not assigned significance levels and is presented in this report regarding consistency with the general plan as a factor for consideration by the decision-makers in acting on the Project.

This report evaluates the following transportation issues:

- General Plan Consistency
    - Existing (2020) conditions within the site vicinity during the weekday AM and weekday PM peak hours
    - Trip generation and distribution estimates for the Project
    - Existing conditions during the weekday peak hours with the addition of Project-related traffic
- CEQA Compliance
    - Change in regional daily vehicle-miles traveled (VMT) as a result of the Project
    - Consistency with existing programs, plans, ordinances, or policies
    - Transit, pedestrian, and bicyclist access to and near the Project site
    - Emergency access around and near the Project site
    - Queue lengths at the study intersections and personal vehicle queuing at the Project site

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Project Vicinity Map
San Ramon, CA

Figure
1

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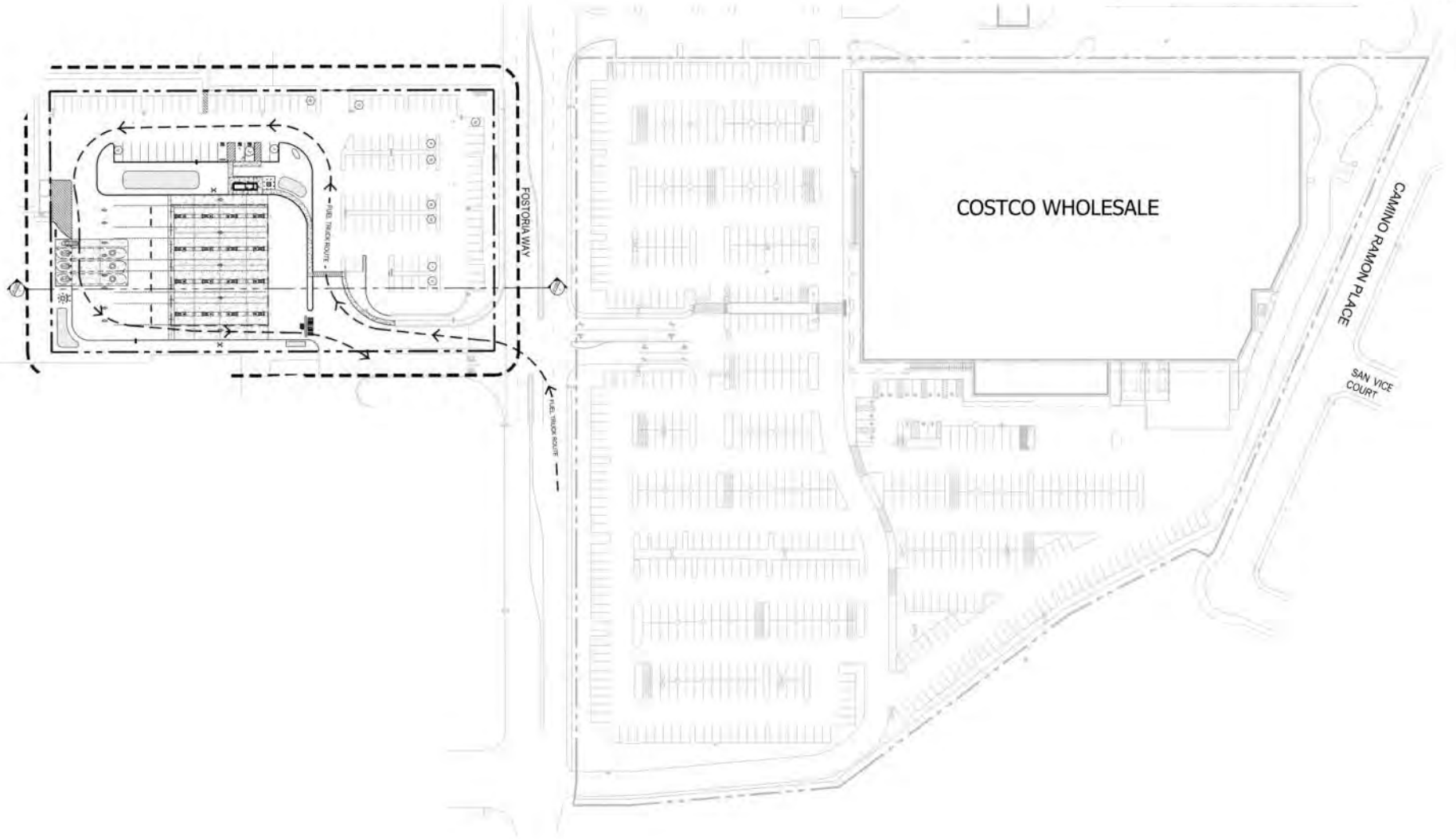
H:\25\25059 - Danville Costco Gas Addition\report\figs\CAD\25059_figs.dwg Aug 13, 2020 - 2:59pm - bkoshy Layout Tab: Fig 1_Project_vicinity



Proposed Site Plan
San Ramon, CA

Figure
2

KITTELSON & ASSOCIATES

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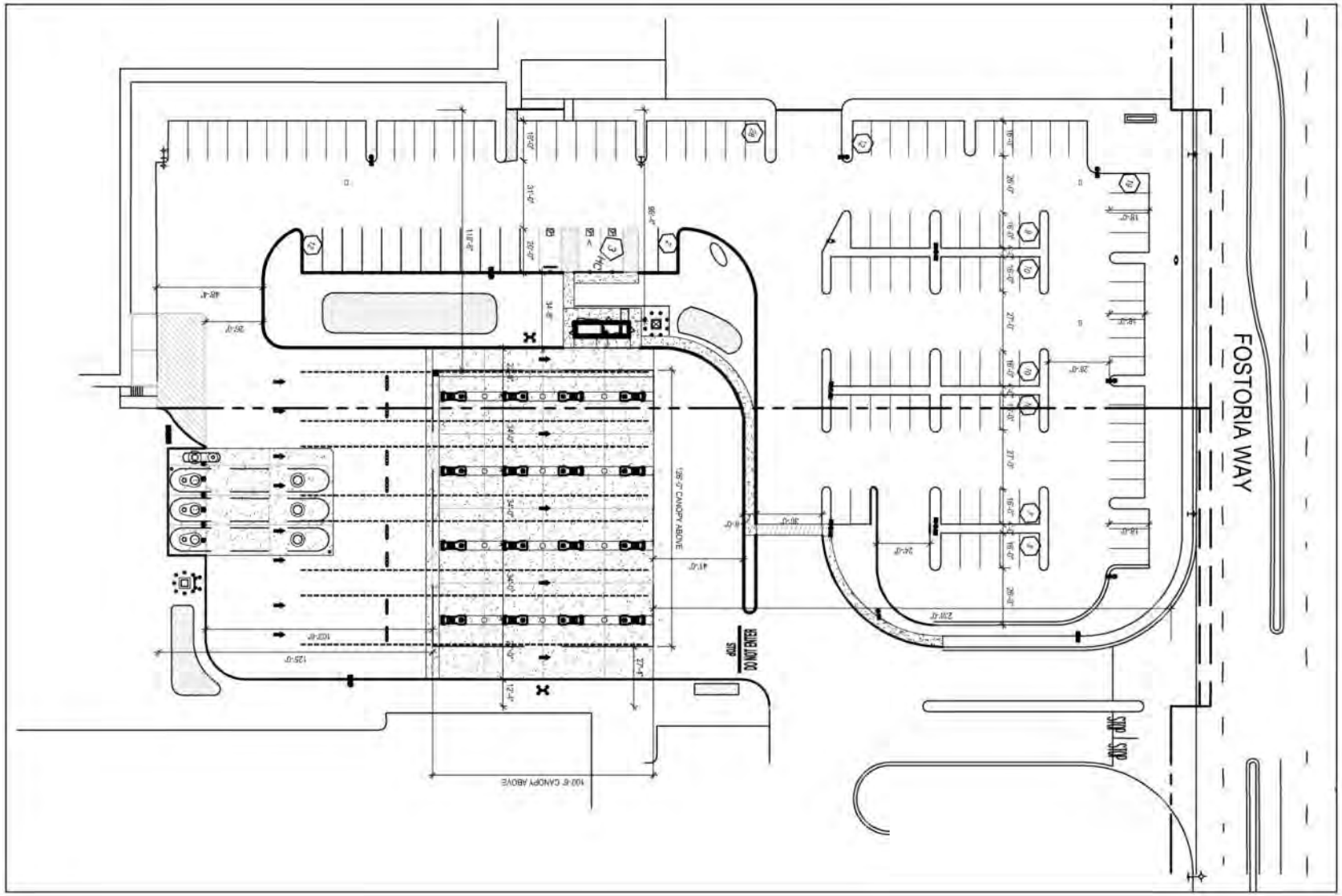

Costco Fuel Station Detail
San Ramon, CA

Figure
3

H:\25\25059 - Danville Costco Gas Addition\dwgs\25059_figures_siteplan_20200726.dwg Jul 26, 2020 - 11:34am - ccasey Layout Tab: Fig2

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GENERAL PLAN CONSISTENCY ASSESSMENT

The non-CEQA section of this report includes the following analyses:

- Existing (2020) conditions within the site vicinity during the weekday AM and weekday PM peak hours
- Trip generation and distribution estimates for the Project
- Existing conditions during the weekday peak hours with the addition of Project-related traffic

The following four study intersections were selected based on land use and circulation conditions near the Project site and access to the existing Costco warehouse:

1. Fostoria Way & Crow Canyon Place
2. Fostoria Way & Magnolia Square driveway (right-in/right-out restricted)
3. Fostoria Way & Costco All-Access driveway
4. Fostoria Way & Camino Ramon – Costco driveway

EXISTING CONDITIONS

The existing conditions analysis identifies the site conditions and current operational and geometric characteristics of the study intersections as well as transit services, bicyclist, and pedestrian facilities near the Project site.

Roadway Network

Fostoria Way is an east-west collector street on the border of San Ramon and Danville, CA. It starts east of the Iron Horse Regional Trail and extends west to San Ramon Valley Boulevard. At the western end, it continues as Deerwood Road. The speed limit on Fostoria Way is 30 miles per hour (mph). Within the study area, it is a four-lane roadway with a center median and sidewalks on both sides.

Camino Ramon is a north-south collector street in Danville and San Ramon. In Danville and to the north of Fostoria Way, it is located on the west side of the shopping center that includes the Costco warehouse. In San Ramon, Camino Ramon shifts one block east and continues south from Fostoria Way at the southeast corner of the warehouse parking lot. The speed limit on Camino Ramon is 25 mph. In San Ramon, Camino Ramon is a five-lane roadway with sidewalks on both sides. In nearby Danville, Camino Ramon is a two-lane roadway with sidewalks on the east side.

Crow Canyon Place is a four-lane collector street in San Ramon with a two-way left turn lane in the center. It has sidewalks on both sides. The speed limit on Crow Canyon Place is 25 mph. This street begins in the north at Fostoria Way and ends south of Crow Canyon Road at Crow Canyon Commons,

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

a retail complex with various businesses. This road provides access to several office buildings and retail facilities as well.

Crow Canyon Road is an 8-lane, east-west arterial in San Ramon and is designated as a Route of Regional Significance in the 2017 Tri-Valley Transportation and Action Plan Update.[1] The speed limit varies along the roadway and is 45 mph near the Project site. The roadway has a median and sidewalks on both sides. Near the study area, Crow Canyon Road provides access to retail and commercial developments as well as Interstate 680 (I-680), a north-south freeway that runs from San Jose to Fairfield through the east San Francisco Bay Area. The I-680 interchange is less than 0.5 miles from the site.

San Ramon Valley Boulevard is a four-lane, north-south arterial in Danville and San Ramon and is designated as a Route of Regional Significance in the 2017 Tri-Valley Action Plan. The speed limit varies along the roadway and is 35 mph near the Project site. The roadway has sidewalks on both sides and intermittent medians and center two-way left turn lane. San Ramon Valley Boulevard intersects Fostoria Way just west of I-680. Near the study area, San Ramon Valley Boulevard provides access to retail and light industrial uses.

I-680 is an interstate in Northern California. It begins at US-101 in San Jose, where it serves as a continuation of I-280, passing through San Ramon and Dublin, along the Benicia-Martinez toll bridge, and ending in Fairfield where it meets I-80. Through the study area, I-680 runs north-south and is a ten-lane freeway including two HOV 2+ lanes (one northbound, one southbound). The closest interchange to the study project is located at Crow Canyon Road. The speed limit on I-680 is 65 mph.

Pedestrian Facilities

Sidewalks are present on both sides Fostoria Way, which provides direct pedestrian access to the Project site and the Costco warehouse. Direct pedestrian access across Fostoria Way between the Project site and the warehouse does not exist today. At present, individuals walking between the Project site and the warehouse would walk approximately 500’ out of their way along Fostoria Way to the signalized intersection at Camino Ramon (west)-Crow Canyon Place or approximately 400’ out of their way to the all-way stop controlled intersection of Camino Ramon (east)-Costco driveway to cross Fostoria Way, and then double back in the opposite direction to the Project site or warehouse.

[1] Tri-Valley Transportation Plan and Action Plan for Routes of Regional Significance, September 2017. https://ccta.net/wp-content/uploads/2018/10/59cd5be5a55a2.pdf

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Bicycle Facilities

Bicycle facilities are defined by the following three classes in Chapter 1000 of California Department of Transportation's (Caltrans) *Highway Design Manual* and *Design Information Bulletin 89*:

- **Class I bikeway (bike path)** – Provides a completely separated facility designed for the exclusive use of bicyclists and pedestrians with crossing points minimized.
- **Class II bikeway (bike lane)** – Provides a restricted right-of-way lane for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and cross-flows by pedestrians and motorists permitted.
- **Class III bikeway (bike route)** – Provides a right-of-way designated by signs or permanent markings and shared with pedestrians and motorists.
- **Class IV bikeway (cycle track)** – This is a dedicated, separated and protected on-street lane for bicyclists. Cycle tracks (or protected bike lanes) typically are used along streets with high traffic volumes and high speeds, providing additional protection for bicyclists using vertical separation, such as concrete curb or safe-hit posts.

A Class II bikeway is present on Fostoria Way between San Ramon Valley Boulevard and Camino Ramon (west)-Crow Canyon Place. The Iron Horse Trail is about 0.25 mile from the site. The San Ramon Bike Master Plan includes the following bicycle improvements in the study area:

- Class II bikeway on Fostoria Way connecting the existing bike lanes to the Iron Horse Trail
- Class II bikeway on Camino Ramon (east) between Fostoria Way and Crow Canyon Road

Transit Service

County Connection provides bus service along Fostoria Way. Four bus stops are within 0.25 mile of the Project site: three on Fostoria Way between Camino Ramon (west)-Crow Canyon Place and Camino Ramon (east) and one on Camino Ramon (east). All four stops serve the 21 and 321 lines. The routes serve Danville along San Ramon Valley Boulevard to the north, east-west on Fostoria Way, and south into San Ramon on Camino Ramon (east). Table 1 summarizes bus service in the area.

Table 1: Transit Routes Near the Project Site

Route	From/To	Operation Time	Frequency
21	Walnut Creek BART – San Ramon Transit Center	Weekdays, 5:30 AM to 10:30 PM	Every 30 min peak Every 60 min off-peak
321	Walnut Creek BART – San Ramon Transit Center	Weekends, 7:30 AM to 10:30 PM	Every 60 min

Source: https://countyconnection.com/routes/ Accessed July 2020

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Existing Traffic Conditions

At the time of this analysis (summer 2020), businesses were partially or fully closed due to the COVID-19 pandemic. Therefore, traffic patterns were irregular and traffic volumes did not represent typical traffic conditions. Kittelson used a combination of historical data, Costco Warehouse transaction data, and the Institute of Transportation Engineers (ITE) trip generation rates to develop existing traffic volumes at the study intersections. Data used to develop existing volumes are:

- 2015 traffic counts at Fostoria Way/Camino Ramon-Crow Canyon Place (Intersection 1)
    - These counts established a base volume at Intersection 1, grown by 2% each year (2015 to 2020).
    - The eastbound and westbound volumes informed through volumes on Fostoria Way.
- Costco warehouse transaction data
    - Costco provided warehouse transaction data over the period May – June 2019.
    - Kittelson used these data to calculate the total volumes entering and exiting the warehouse site at the three Fostoria Way driveways.
- June 2020 traffic counts at Costco warehouse driveways
    - Kittelson contracted with a data collection consultant to collect traffic volumes on Wednesday, June 10th, 2020 in the PM Peak Period (4:00 PM to 7:00 PM).
    - Kittelson used these counts to develop the distribution of inbound/outbound trips across the three Fostoria Way driveways.
    - Appendix A includes these traffic counts.
- ITE *Trip Generation* manual rates
    - Trip generation calculations were performed for uses on the south side of Fostoria Way to develop driveway counts along Fostoria Way at Intersections 3 and 4.

Figure 4 presents where the data were calculated and/or applied. Figure 5 presents the calculated Existing peak hour volumes.

The system peak hours were selected based on the 2015 historical data count at Camino Ramon/ Crow Canyon Place and Fostoria Way:

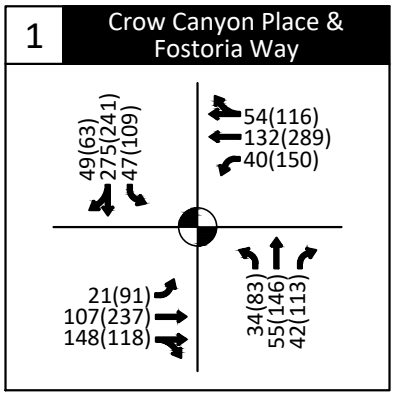
- AM peak hour: 8:00 to 9:00 AM
- PM peak hour: 5:00 to 6:00 PM

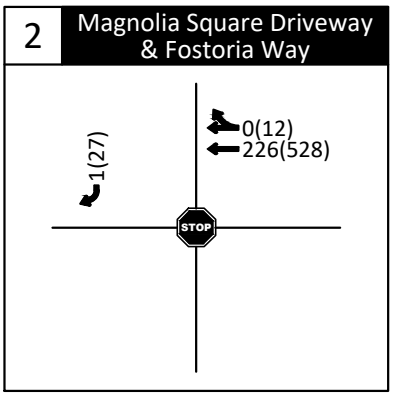
Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

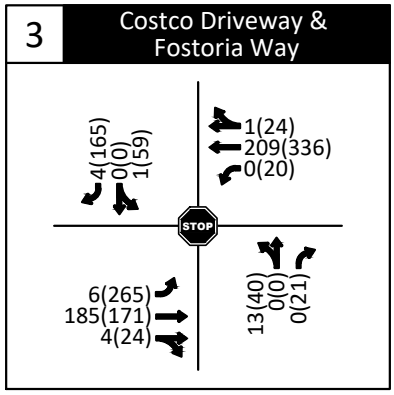
Figure 4: Existing Volume Development

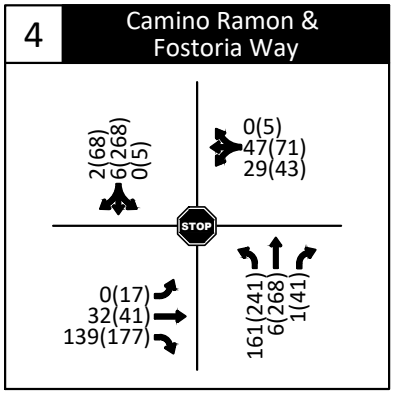
1 Study Intersection
Historical Data from City
Costco-related Data
Non-Costco Trip Generation Data

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,









AM(PM) - Traffic Volume

STOP - Stop Controlled

- Traffic Signal

Existing Peak Hour Volumes
San Ramon, CA

Figure
5

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KITTELSON & ASSOCIATES

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Intersection Operations Analysis Methodologies and Level of Service Standards

"Level of service" describes the operating conditions experienced by users of a facility. Level of service (LOS) is a qualitative measure of the effect of a number of factors, including speed, travel time, traffic interruptions, freedom to maneuver, driving comfort and convenience. Levels of service are designated A through F from best to worst, which cover the entire range of traffic operations that might occur. LOS A through E generally represent traffic volumes at less than roadway capacity while LOS F represents over capacity or forced flow conditions. In general, LOS D or better is considered acceptable while LOS E and LOS F are not.

All intersection level of service evaluations used the peak 15-minute flow rate during the weekday AM and PM peak hours. Using the peak 15-minute flow rate ensures that this analysis is based on a reasonable worst-case scenario. For this reason, the analysis reflects conditions that are only likely to occur for 15 minutes out of each average peak hour. During all other periods, the transportation system likely will operate under conditions better than the conditions described in this report.

Analysis Methodologies

LOS is a quantitative stratification of a performance measure or measures representing quality of service. The measures used to determine LOS for transportation system elements are called service measures. The Highway Capacity Manual (HCM) defines six levels of service, ranging from A to F, for each service measure or combination of service measures. The service measures to define the LOS of intersections are control delay and volume over capacity (V/C) ratio. Control delay alone is used to characterize LOS for the entire intersection or an approach. Control delay and volume-to-capacity ratio are used to characterize LOS for a lane group. The HCM 6th Edition procedure calculates a weighted average control delay in seconds per vehicle at an intersection and assigns a level of service designation based on the delay.

Intersection analysis was conducted using the operational methodology outlined in the *Highway Capacity Manual* (HCM) 6th Edition (Transportation Research Board, Washington, D.C., 2016) at all intersections, as operationalized by Vistro 2020. Table 2 and Table 3 present the relationship of average delay to level of service for signalized intersections and all-way stop intersections, respectively.

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Table 2: Signalized Intersection Level of Service Definitions

Average Delay Per Vehicle (Seconds)	LOS	Description of Traffic Conditions
≤10.0	A	This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable, or the cycle length is very short.
>10.0 and ≤20.0	B	This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable, or the cycle length is short. More vehicles stop than with LOS A.
>20.0 and ≤35.0	C	This level is typically assigned when progression is favorable, or the cycle length is moderate. Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.
>35.0 and ≤55.0	D	This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective, or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.
>55.0 and ≤80.0	E	This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.
≤80.0	F	This level is typically assigned when the volume-to-capacity ratio is very high (greater than 1.0), progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.

Source: Transportation Research Board, *Highway Capacity Manual 6th Edition*, Washington, D.C., 2016.

Table 3: All-Way Stop-Controlled Intersection Level of Service Definitions

Average Delay Per Vehicle (Seconds)	LOS
≤10.0	A
>10.0 and ≤15.0	B
>15.0 and ≤25.0	C
>25.0 and ≤35.0	D
>35.0 and ≤50.0	E
>50.0	F

Source: Transportation Research Board, *Highway Capacity Manual 6th Edition*, Washington, D.C., 2016.

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Intersection Level of Service Standard

The City of San Ramon General Plan has established a level of service standard of LOS D for all intersections.[2] The City of San Ramon requires intersection operations analysis to assess the effects of a project on street network operations.

Kittelson performed an intersection operations analysis for weekday AM and PM peak hours using PTV Vistro software to apply the HCM 6th Edition methodology. The existing operations at the study intersections are shown in Table 4. The results indicate that all study intersections are operating at LOS C or better for all peak hours, except Intersection 3 which operates at LOS F in the PM peak hour.

Appendix B includes the Vistro output reports for Existing Conditions.

Table 4: Existing Conditions Intersection Operations

No.	Location	Control	Peak Hour	LOS Standard	Existing	
					Delay	LOS
1	Crow Canyon Place/ Fostoria Way	Signal	AM	D	17.6	B
			PM		22.2	C
2	Costco Right-in Right-out Driveway/ Fostoria Way	TWSC	AM	D	9.0	A
			PM		10.5	B
3	Costco All-Access Driveway/ Fostoria Way	TWSC	AM	D	11.2	B
			PM		**68.2**	**F**
4	Camino Ramon/ Fostoria Way	AWSC	AM	D	9.3	A
			PM		21.6	C

Source: Kittelson & Associates, 2020

Note:
- Vistro 2020 and HCM 6th methodology were used.
- **Bold** indicates intersection operates beyond the standard.
- Existing year is 2020.
- AWSC: All-Way Stop Control
- TWSC: Two-Way Stop Control
- Average delay in seconds is presented for signalized and stop control intersections.

PROJECT ANALYSIS

The Project is a new Costco Gasoline fuel station with 32 fueling positions and on-site queue storage. As shown previously in Figure 1, the Project is located at 3111 Fostoria Way, San Ramon, CA, where there is an existing Office Depot store.

[2] San Ramon General Plan 2035, Implementing Policy 5.1-I-1.

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

The number of new trips and rerouted trips estimated to be generated by the Project, as well as how these trips would be distributed onto the transportation network, are discussed in this section.

Trip Generation

This section discusses the data used to develop trip generation estimates for the Project.

Costco Trip Generation Database

For the past 18 years, Kittelson has maintained a database of traffic data and travel characteristics for Costco Wholesale. The database is updated periodically when new Costco traffic counts or other travel information become available to Kittelson. The database contains a large quantity of data related to Costco Gasoline fuel stations. It includes trip generation rates and trip type information for more than 35 Costco Gasoline facilities located throughout the U.S. Costco has invested significant effort into developing this use-specific trip generation database for both its warehouses and its fuel stations because of the unique characteristics of Costco member travel patterns that exist due to membership requirements and the nature of Costco sales. These unique elements apply to the trip generation for Costco warehouses, Costco Gasoline fuel stations, and the interaction of trips between the two. Costco does not build stand-alone fuel stations (i.e., with no warehouse nearby).

To best evaluate the anticipated transportation characteristics of the proposed Costco Gasoline fuel station, Kittelson selected data for sites with 24+ fueling positions. These sites are considered representative of the Project site based on population size in the surrounding area and geographic location. Table 5 lists the seven representative gas station sites and the trip generation observed at each site. Kittelson developed an average trip rate for the total number of trips to estimate the number of total trips (inbound + outbound) the Project would generate.

The Costco-specific trip generation data presented herein follows nationally accepted practices for trip generation data collection as recommended by the Institute of Transportation Engineers (ITE) and presents a robust dataset upon which to confidently and accurately predict the trip generation of the fuel station.

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Table 5: Project Trip Generation

Location	Fueling Positions	Weekday A.M. Peak Trips	Weekday P.M. Peak Trips
		Total Trip Ends (in+out)	Total Trip Ends (in+out)
Concord, CA	24	158	550
Cypress, CA	24	598	654
NE San Jose, CA	24	520	458
Portland, OR	24	164	404
Rancho Del Ray, CA	24		676
Rohnert Park, CA	24	234	498
Temecula, CA	30	639	793
Average		**386**	**576**

Source: Kittelson & Associates, Inc., 2020

Costco Gasoline Fuel Station Trip Type Estimate

In developing a trip generation estimate for a new fuel station addition, it is important to recognize that the total number of trips generated will include:

- Net new "gas-only" trips, of which the destination is the new gas station alone. These trips do not exist on the roadway network today.
- Internal capture trips account for those members who patronize both the warehouse and the fuel station during a single visit to the Costco site. As such, although they account for a trip to both the warehouse and the fuel station, they only account for one overall set of inbound/outbound trips to the vicinity of the warehouse and fuel station and therefore account for one round trip on the surrounding transportation system. These trips already existing on the roadway network today and are accounted for at the access between the warehouse and the fuel station.
- Pass-by trips represent members (and trips) that are currently traveling on the surrounding street network for some other primary purpose (such as a trip from work to home) and stop into the site en route during their normal travel. As such, pass-by trips do not result in a net increase in traffic on the surrounding transportation system and their only effect occurs at the immediate intersections and site access driveways where they become turning movements.
- Diverted trips are similar to pass-by trips in that they represent members (and trips) that are currently traveling on the surrounding street network for some other primary travel purpose and travel around the block to access the site while en route to their primary destination. These trips exist on the roadway network today and, as the name indicates, divert from the

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

primary roadways that members take to their primary destination and result in changes in through and turn movement volumes at intersections in the vicinity of the Costco site.

The unique nature of Costco operations and its membership requirements result in different trip characteristics than those observed at typical fuel stations summarized in the standard reference *Trip Generation*, published by the Institute of Transportation Engineers (ITE). The percentages of pass-by at Costco Gasoline fuel stations is considerably lower than those quoted in the ITE *Trip Generation* manual for typical fuel stations. Correspondingly, membership requirements also have a significant effect on trip internalization (or sharing of trips) between the warehouse and the fuel station. Fewer people exclusively visit a Costco Gasoline fuel station (in comparison to a typical standalone fuel station) because they have another primary purpose for visiting the site (that being a trip to the warehouse).

Table 6 presents the estimated trip generation for each trip type based on the Costco trip generation database. The additional fueling positions are estimated to generate approximately 93 net new weekday AM peak hour trip ends (or 47 total additional vehicles) and 35 net new weekday PM peak hour trip ends (or 18 total additional vehicles). Again, the estimate accounts for the documented internalization (sharing) of trips between the proposed fuel station and the existing Costco warehouse, as well as pass-by and diverted trips to the fuel station from traffic already on adjacent roadways.

Table 6: Trip Generation Estimates by Trip Type

Costco Gasoline Fuel Station	Daily Trips	Weekday A.M. Peak Hour Trips	Weekday P.M. Peak Hour Trips
Total Trips	6,870	386	576
Warehouse + Gas Trips *(33% PM)*	*(2,250)*	*0*	*(190)*
Total Gas-Only Trips	4,620	386	386
Pass-By Trips *(35% AM, 36% PM)*	*(1,655)*	*(135)*	*(139)*
Diverted Trips *(41% AM, 34% PM)*	*(1,560)*	*(158)*	*(131)*
Existing Use Credit *Office Supply Superstore (ITE LU 867)*	*(1,060)*	*0*	*(81)*
Net New Gas-Only Trips	***345***	***93***	***35***

Source: Kittelson & Associates, Inc. 2020

Note:
- Percentages of warehouse + gas "shard" trips, pass-by trips, and diverted trips are estimated based on Costco Trip Generation Database using historical data collection.

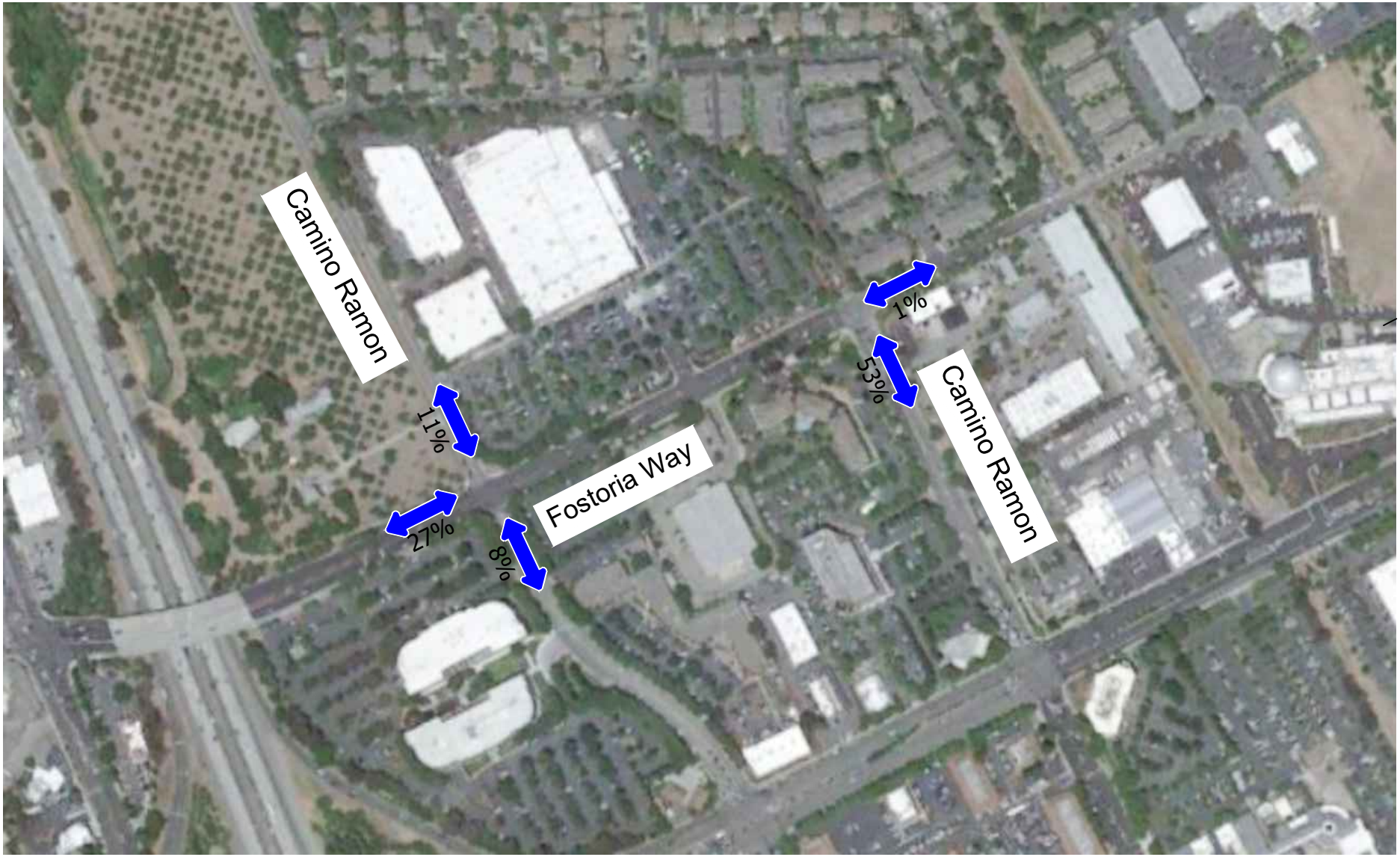
Fostoria Way to the east of the warehouse and fuel station does not provide through access. Instead, people traveling in this area of the city would use Crow Canyon Way, one block to the south, for east/west through access. Therefore, Kittelson assumed the share of fuel station trips typically assigned as pass-by trips instead would be diverted trips in this local street network. Therefore, operational analysis involves distribution of the pass-by plus diverted trips to the full study area as diverted trips.

Trip Distribution

Based on traffic data at other Costco Gasoline fuel stations, the number of inbound/outbound trips for the proposed Costco Gasoline fuel station are estimated as a 50%/50% split of the total trip ends shown in Table 6. The warehouse + gas trips involve members driving both to the fuel station and the warehouse. Transaction data from other Costco sites with the fuel station located off-site demonstrated a 68%/32% split between members buying fuel first vs. shopping at the warehouse first. This split is reflected in how trips were assigned at Intersection 3.

All trips are distributed eastbound/westbound along Fostoria Way based on existing traffic volumes and movement shifts for warehouse + gas trips (i.e., trips by members going to the fuel station and the warehouse) at Intersection 3. Figure 6 and Figure 7 show the trip distribution percentages on the roadway within the study area for AM and PM peak hours, respectively. Figure 8 displays the Project trips at the study intersections resulting from the trip distribution.

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,



XX% - Net new gas trips (external trips)

AM Proposed Trip Distribution
San Ramon, CA

Figure
6

KITTELSON & ASSOCIATES

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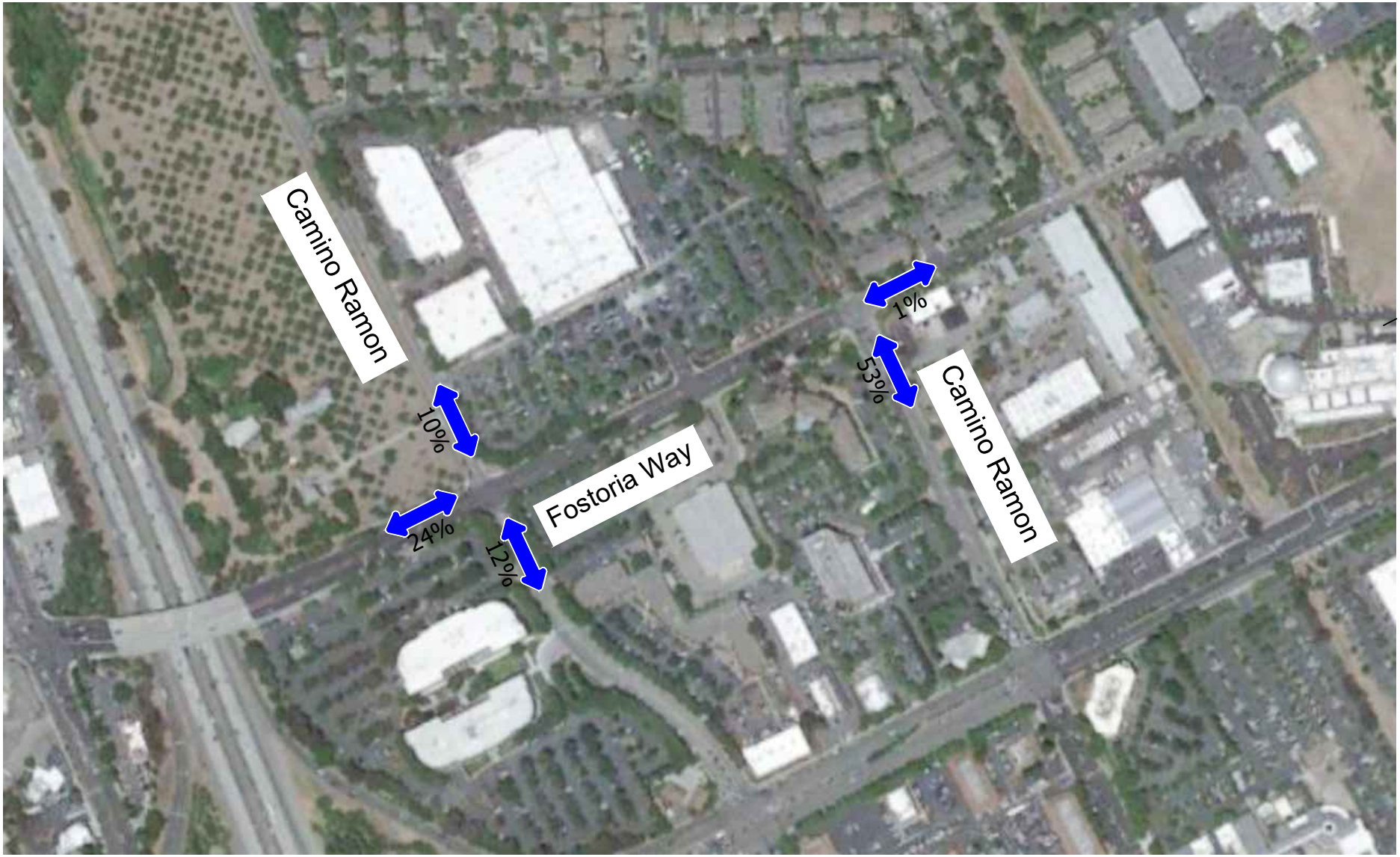

XX% - Net new gas trips (external trips)

PM Proposed Trip Distribution
San Ramon, CA

Figure
7

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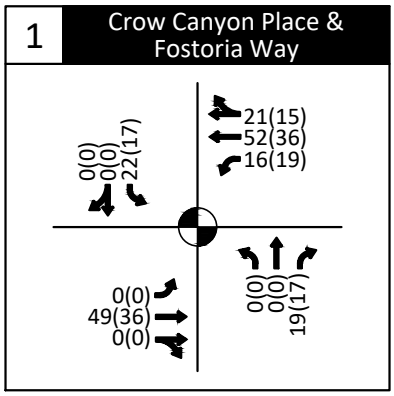

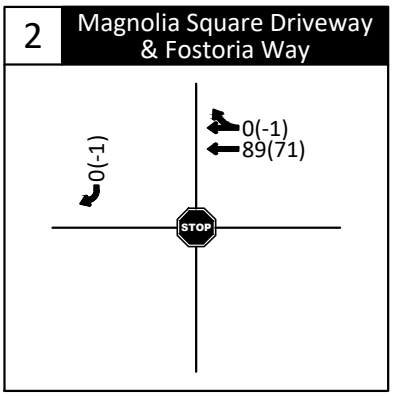

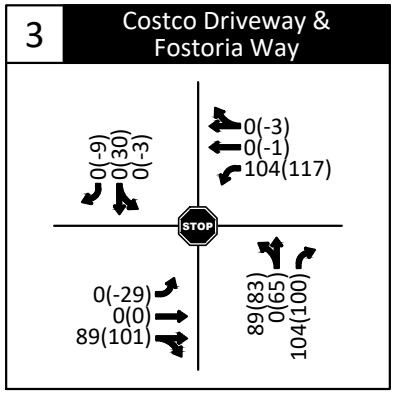

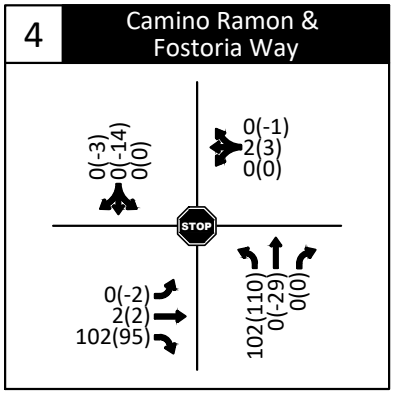

AM(PM) - Traffic Volume

STOP - Stop Controlled

- Traffic Signal

Project Trip - Peak Hour Volumes
San Ramon, CA

Figure
8

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Existing Plus Project Conditions

The potential effects of the Project on existing operations at the study intersections are discussed in this section. Other impacts, such as those associated with pedestrian and bicycle facilities as well as site access and circulation are discussed in the Non-Auto Mode of Travel Assessment section.

Intersection Operations

Kittelson developed traffic volumes for Existing plus Project conditions using an additive approach. Kittelson estimated vehicle trips generated by the Project and added these trips to existing volumes on the roadway network to develop the volumes for the Existing plus Project conditions. Existing plus Project turning movement volumes are presented in Figure 9.

As shown in Table 7, all study intersections operate acceptably at LOS D or better under Existing plus Project conditions, except Intersection 3, which would operate at LOS F in the PM peak hour. Intersection 3 would exceed the City's standard of LOS D.

Appendix C includes Vistro LOS output reports for Existing plus Project conditions.

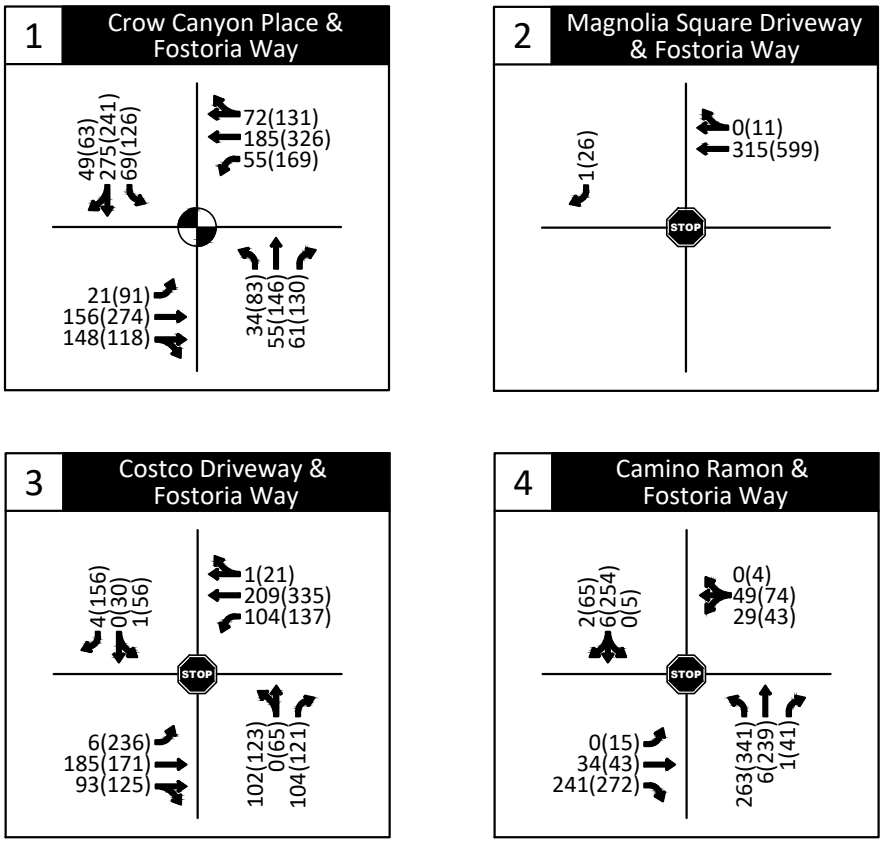
Table 7: Existing Plus Project Conditions Intersection Operations

No.	Location	Control	Peak Hour	LOS Standard	Existing + Project	
					Delay	LOS
1	Crow Canyon Place/ Fostoria Way	Signal	AM	D	18.1	B
			PM		23.1	C
2	Costco Right-in Right-out Driveway/ Fostoria Way	TWSC	AM	D	9.3	A
			PM		10.8	B
3	Costco All-Access Driveway/ Fostoria Way	TWSC	AM	D	19.8	C
			PM		**>100**	**F**
4	Camino Ramon/ Fostoria Way	AWSC	AM	D	11.8	B
			PM		33.3	D

Source: Kittelson & Associates, 2020

Note:
- Vistro 2020 and HCM 6th methodology were used.
- **Bold** indicates intersection operates beyond the standard.
- Existing year is 2020.
- AWSC: All-Way Stop Control
- TWSC: Two-Way Stop Control
- Average delay in seconds is presented for signalized and stop control intersections.

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,



AM(PM) - Traffic Volume

STOP - Stop Controlled

- Traffic Signal

Existing plus Project Peak Hour Volumes
San Ramon, CA

Figure
9

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Recommended Improvements

Intersection 3 (Fostoria Way and Costco All-Access Driveway) would operate beyond the City's standard of LOS D. While this intersection already operates beyond the standard under Existing conditions, the Project would exacerbate the deficiency and thus the following improvement is recommended to bring operations within the standard.

> **Improvement:** Construct a traffic signal at the intersection of Fostoria Way and Costco All-Access Driveway.

Implementation of this improvement would improve the operation of this intersection to LOS B during the AM peak hour and LOS C during the PM peak hour. Table 8 shows the Existing plus Project AM and PM peak hour operations if the recommended improvement is implemented.

Appendix D includes Vistro LOS output reports for Existing plus Project conditions with improvements.

Table 8: Existing Plus Project with Improvements Intersection Operations

No.	Location	Control	Peak Hour	LOS Standard	Existing + Project		Existing + Project with Improvements	
					Delay	LOS	Delay	LOS
3	Costco All-Access Driveway/ Fostoria Way	TWSC	AM	D	19.8	C	12.9	B
			PM		**>100**	**F**	21.3	C

Source: Kittelson & Associates, 2020

Note:
- Vistro 2020 and HCM 6th methodology were used.
- **Bold** indicates intersection operates beyond the standard.
- Existing year is 2020.
- AWSC: All-Way Stop Control
- TWSC: Two-Way Stop Control
- Average delay in seconds is presented for signalized and stop control intersections.

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

CEQA COMPLIANCE ASSESSMENT

The CEQA section of this report includes the following analyses:

- Change in regional daily vehicle-miles traveled (VMT) as a result of the Project
- Consistency with existing programs, plans, ordinances, or policies
- Transit, pedestrian, and bicyclist access to and near the Project site
- Emergency access around and near the Project site
- Queue lengths at the study intersections and personal vehicle queuing at the Project site

CEQA SIGNIFICANCE CRITERIA

The Project's impact is not considered to be significant unless it would:

a. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

b. Conflict or be inconsistent with CEQA Guideline section 15064.3, subdivision (b).

c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

d. Result in inadequate emergency access.

CONSISTENCY WITH PLANS AND PROGRAMS

The following plans and programs were reviewed to determine any potential conflicts the Project would cause.

Tri-Valley Transportation Plan and Action Plan for Routes of Regional Significance

The Tri-Valley Transportation Council (TVTC) – made up of the Cities of Dublin, Livermore, Pleasanton, and San Ramon, the Town of Danville, and the Counties of Alameda and Contra Costa – adopted its first Tri-Valley Transportation Plan/Action Plan (the TVTC Plan) in 1995 as a guide for transportation planning throughout the Tri-Valley. The TVTC plan has since been updated several times, most recently in 2014. The plan establishes a vision with goals and policies to help guide decisions regarding investments, program development, and development approvals are based on these policies. It also establishes Routes of Regional Significance. These routes are roadways or other transportation facilities that are considered to be important from a regional perspective, providing regional mobility and connecting multiple jurisdictions.

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Routes of Regional Significance in the study area are Crow Canyon Road and San Ramon Valley Boulevard. As demonstrated by the trip generation by trip type in Table 6, less than 100 new trips would be added to the regional network during the AM peak hour, and less than 50 new trips would be added during the PM peak hour. Therefore, the Project would not interfere with safety or capacity improvements planned for these roadways.

San Ramon General Plan 2035 – Traffic and Circulation Element

The City of San Ramon adopted the San Ramon General Plan 2035 in April 2015. The General Plan 2035 largely builds off of land use patterns and growth strategies set forth by the General Plan 2020. Within the General Plan 2035, the Traffic and Circulation Element is intended to ensure the safe and efficient operation of San Ramon's circulation system.

The Traffic and Circulation Element identifies a planned Class III bikeway along Fostoria Way from Crow Canyon Place to Iron Horse Trail. This goes along the portion of Fostoria Way where the Project is located. The General Plan does not identify any other planned facilities near the Project. The Project with recommended improvements would include construction of a traffic signal at the Fostoria Way/Costco All-Access Driveway intersection. The Project would not interfere with the ability to construct a bikeway along Fostoria Way.

City of San Ramon Bicycle Master Plan

The Bicycle Master Plan was adopted in April 2018. This is the first plan focused exclusively on bicycling in San Ramon. It develops a comprehensive bicycle network that provides a vision for bikeway facilities and supportive programs and infrastructure.

The Bicycle Master Plan identifies a planned Class II bike lanes along Fostoria Way from Crow Canyon Place to Iron Horse Trail, superseding the Class III bikeway identified in the general plan. The Bicycle Master Plan also identifies a planned Class II bikeway along Crow Canyon Place from Fostoria Way to Crow Canyon Road. The Project with recommended improvements would include construction of a traffic signal at the Fostoria Way/Costco All-Access Driveway intersection. The Project would not interfere with the ability to construct a bikeway along Fostoria Way or Crow Canyon Place.

North Camino Ramon Specific Plan

The North Camino Ramon Specific Plan (NCRSP), adopted in July 2012, covers an area of approximately 295 acres. The specific plan area is bounded by the city limits to the north (Fostoria Way and Crow Canyon Road), Executive Parkway to the south, Highway 680 to the west, and Alcosta Boulevard to the east. The NCRSP provides guidance and encourages property owners to redevelop their property to achieve a coordinated community vision. The NCRSP is for a mixed-use district with a blend of retail, service retail, and workforce housing.

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

The Project is located within development Block B of the NCRSP area, which has land use designation Commercial Mixed Use. The Project would conform to the development requirements set forth in the plan for Block B.

Non-Auto Mode of Travel Assessment

The Project is a new fuel station providing for the sale of gasoline and no other goods or services. Due to the nature of this land use, the Project is expected to generate vehicle trips and not generate a substantive amount of pedestrian, bicycle, or transit trips. The fuel station itself likely will not generate pedestrian activity since the only service provided is the sale of gasoline; Costco fuel stations do not have a convenience store. Pedestrian activity generated by the Project would be associated with the warehouse employees walking between the existing parking stalls on the site (see Figure 3), which would be prioritized as employee parking, and the employee staffing the fuel station to manage the flow of vehicles in the queue storage area. Employees would walk between the Project site and the warehouse at a new signalized intersection that would be constructed as part of the Project (see Recommended Improvements section). The existing sidewalks on Fostoria Way and this new signalized intersection would provide sufficient pedestrian access for the Project.

Impact Finding

The Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Therefore, the impact of the Project would be ***less than significant***.

VEHICLE MILES TRAVELED (VMT)

CEQA Significance criterion "b" is related to the implementation of vehicle-miles traveled (VMT) as a transportation system performance metric. The City of San Ramon has not yet adopted a VMT standard of significance. Kittelson coordinated with the City to identify a standard of significance adopted by another jurisdiction with land use patterns and a transportation network similar to those of San Ramon. Kittelson and the City jointly identified the City of San Jose's standard of significance for this transportation impact analysis. Table 9 presents San Jose's standard.

Table 9: City of San Jose VMT Standard of Significance

Project Types	Significance Criteria	Current Level	Threshold
Retail/ Hotel/ School Uses	Net increase in existing regional total VMT	Regional Total VMT	Net Increase (≤0)

Source: San Jose Transportation Analysis Handbook, April 2018

Kittelson and the City also reviewed the Contra Costa County Transportation Analysis Guidelines published in June 2020. These guidelines only provide VMT thresholds for regional retail projects that are greater than 50,000 square feet (sq.ft.). The fuel station canopy covers an area of 12,663 sq.ft., well under the 50,000 sq.ft. criterion. Therefore, the City of San Jose's standards are applied for this study.

Kittelson performed an analysis of VMT to examine how the Project would affect four different sources of VMT: net new gas-only trips, gas-only diverted trips, warehouse + gas trips, and trips shifting from existing Costco fuel station in region .

Analysis Methodologies and Data

To perform a VMT analysis, the Contra Costa County Transportation Analysis Guidelines state[3]:

> VMT should be estimated using the CCTA model to generate estimates of both partial and total VMT for the project. It is recommended that average trip length information and estimated VMT for a proposed project be obtained for each trip purpose by either:
>
> - Inserting the proposed project into the CCTA Countywide Model. Using the CCTA model to determine both trip generation and trip lengths allows consistent analysis methodology; or,
> - Utilizing existing average trip length data of similar Traffic Analysis Zones ("TAZ") that contain similar mixes of land uses.

A fuel station, and specifically a Costco fuel station, is a land use with trip making characteristics that are not accurately represented by the general land uses in the CCTA model. Therefore, the City and Kittelson worked together to develop a VMT analysis methodology that would more accurately assess trip making and travel distances associated with a Costco fuel station to evaluate VMT for the Project.

To perform the VMT analysis, Kittelson obtained fuel transaction and member data from Costco for the month of April 2019. Costco provided data for fuel transactions made at the Livermore, Concord, and Hayward Costco fuel stations by members whose ZIP codes are in the Danville and San Ramon area. To protect members' confidentiality, Costco consolidated members locations into 1-square-mile zones.

Kittelson used the software ArcGIS Online to analyze the data. Kittelson used the "Driving Distance" function to calculate miles traveled from these 1-square-mile zones to Livermore, Concord, and Hayward Costco fuel stations, non-Costco fuel stations in the area, and the proposed Costco fuel station.

[3] Contra Costa County Transportation Analysis Guidelines (June 2020), VMT Forecasting, p.14.

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The trip generation numbers presented in Table 6 are based on PM peak hour trips. However, VMT was analyzed based on daily VMT. Kittelson computed the ratio of PM peak hour transactions to daily transactions at the existing Costco fuel stations to develop daily VMT.

Net New Gas-Only Trips

As discussed in the Trip Generation section, a portion of Project trips are "gas-only" trips, of which the destination is only the new gas station and not the warehouse. Due to the nature of fuel stations, members who would purchase fuel at the new Costco fuel station already are purchasing gas somewhere today. Therefore, this analysis calculates VMT on the street system attributed to the difference between VMT from Costco member's homes to the new fuel station and VMT from Costco member's homes to an existing fuel station nearest their home.

Figure 10 and Figure 11 show the spatial results of this analysis. Kittelson mapped existing fuel stations closest to members' homes. The analysis assumes members would choose the existing fuel station with the shortest driving distance to make a gas-only trip today. Kittelson calculated VMT using the average distance that a person would make from their home to a nearby gas station multiplied by the number of estimated gas-only trips. Table 10 presents an increase in total VMT of 838 vehicle-miles resulting from 345 daily net new gas-only trips.

Table 10: VMT for Net New Gas-Only Trips

Gas-Only Trips by Fuel Station Destination	Daily Trips	Daily VMT
Existing Gas-Only Trips Made to Members' Closest Fuel Station*	345	827
Project Gas-Only Trips to Costco Fuel Station		1,665
Project Net VMT		**838**

Source: Kittelson & Associates, Inc., 2020

*Members who would make gas-only trip to the Costco fuel station in the future when it is in operation currently buy their gas somewhere. This line assumes members purchase gas today at the fuel station closest to their home.

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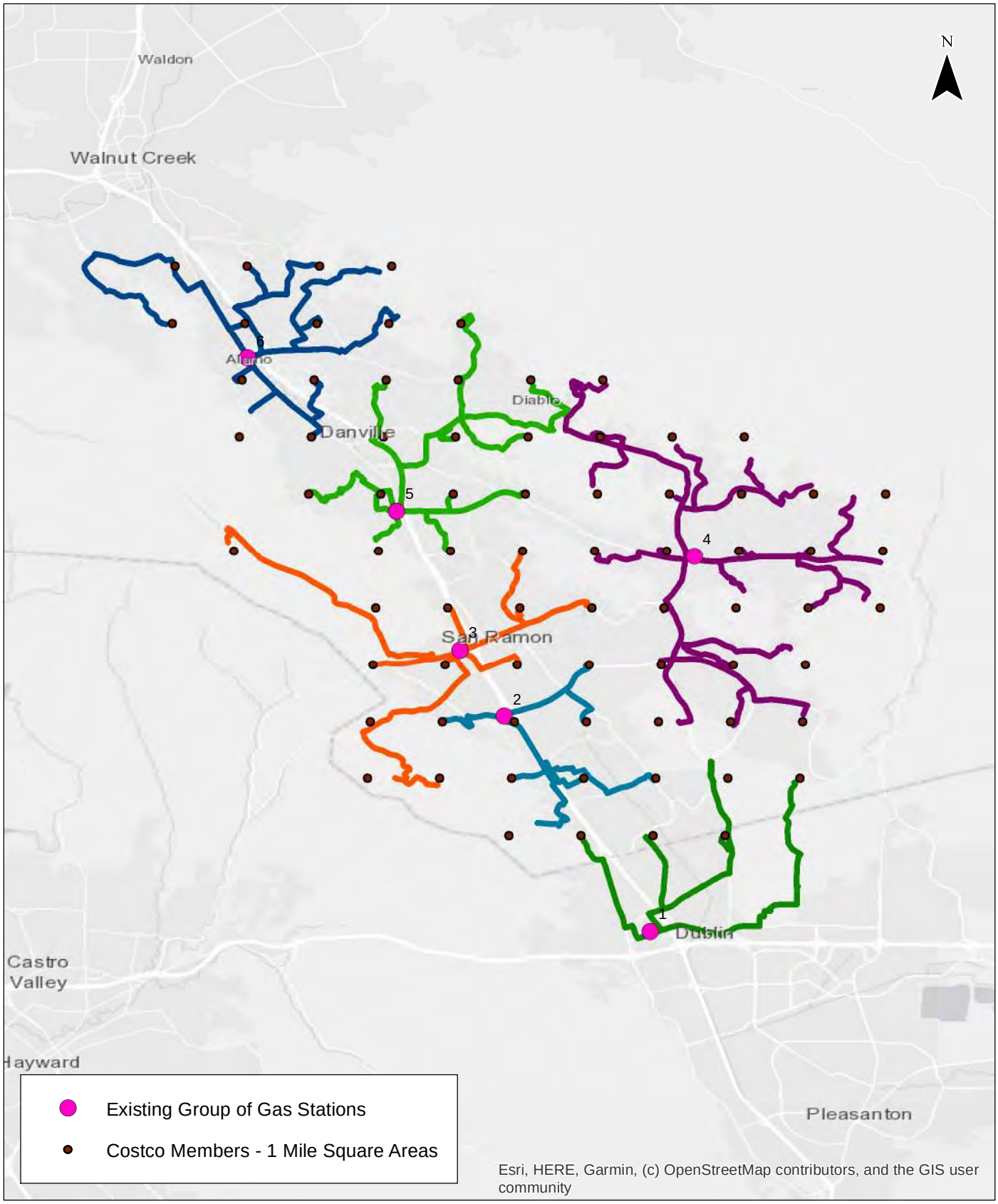


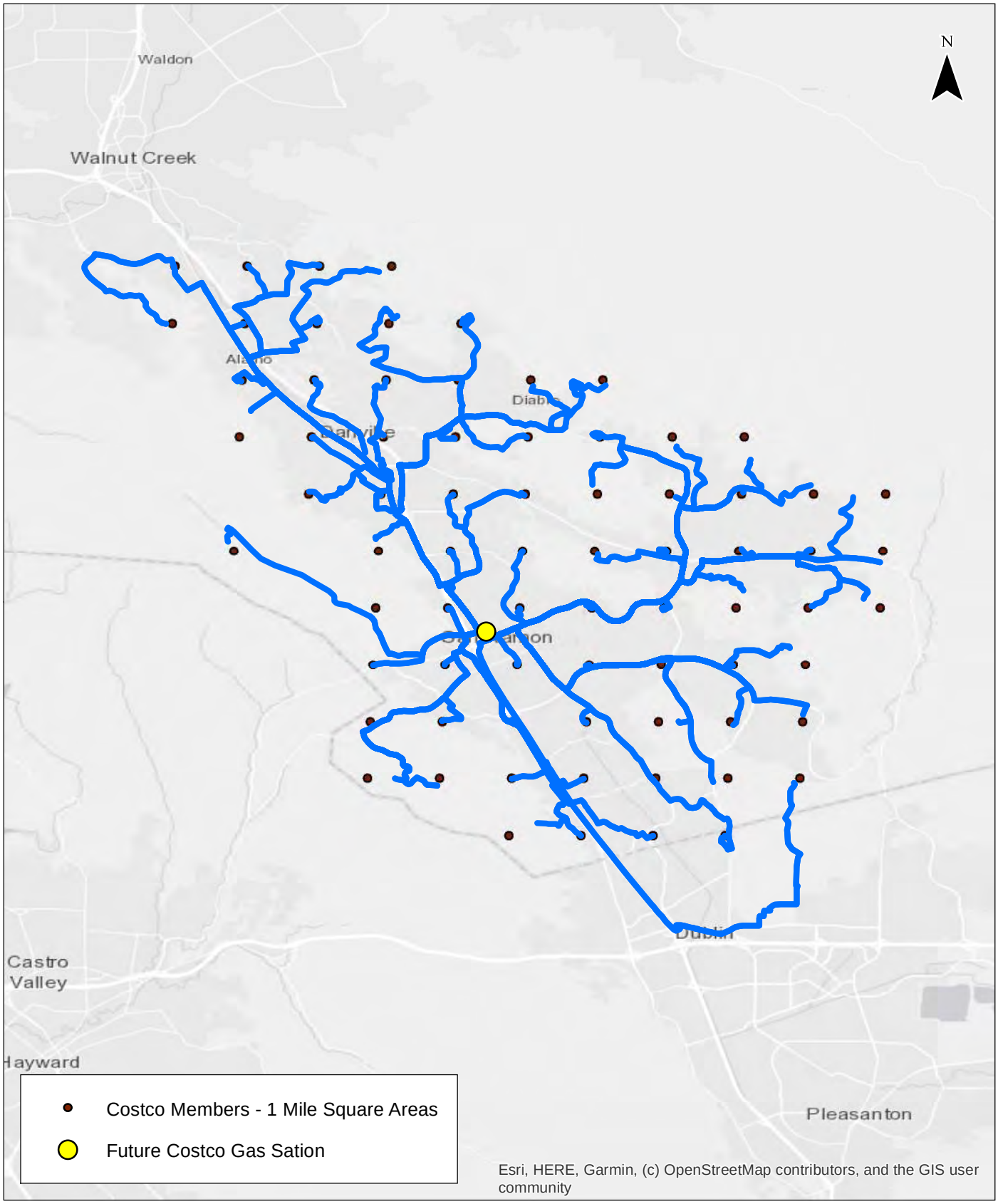
Existing Net New Gas-Only Trip VMT

Figure **10**

H:\25\25059 - Danville Costco Gas Addition\GIS\VMT_MinRoutes_NonCostco.mxd - ccasey - 10:27 AM 10/5/2020

KITTELSON & ASSOCIATES

Coordinate System: GCS WGS 1984
Data Source: Delete if there isn't one.



Future Net New Gas-Only Trip VMT

Figure **11**

KITTELSON & ASSOCIATES

Coordinate System: GCS WGS 1984
Data Source: Delete if there isn't one.

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Gas-Only Diverted Trips

A portion of Project trips are diverted trips associated with members who are currently traveling on the surrounding street network for some other primary purpose and stop by the Project site during that trip. To calculate VMT for gas-only diverted trips, diversion distances were calculated based on existing gas stations in the area. Kittelson worked with City staff to identify the five following typical routes from which Costco members would divert to buy gas today:

- I-680
- San Ramon Valley Boulevard
- Camino Ramon (previously diverted to the group of gas stations west of I-680)
- Camino Ramon (previously diverted to other existing fuel stations on Camino Ramon)
- Crow Canyon Road

Figure 12 to Figure 15 show the paths and relative distances of gas-only diverted trips for five diversion paths. Table 11 presents an increase in total VMT of 729 vehicle-miles resulting from 3,215 daily gas-only diverted trips.

Table 11: VMT for Gas-Only Diverted Trips

Route	% Traveling along Route	Daily Trips along Diversion Route	Diverted Distance to Fuel Station (mi.)		Daily VMT	
			Existing	Project	Existing	Project
680 Diverted	25.0%	804	0	1.04	0	418
NB/SB on San Ramon Valley	25.0%	804	0	0.66	0	265
NB/SB on Camino Ramon to West Gas Stations	12.5%	402	0.73	0.03	147	6
NB/SB on Camino Ramon to Existing Fuel Station	12.5%	402	0	0.03	0	6
EB/WB Diverted	25.0%	803	0	0.45	0	181
Average Distance Diverted				*0.09*		
Subtotal		3,215			147	876
Project Net VMT						**729**

Source: Kittelson & Associates, Inc. 2020

*Diverted trips include gas-only pass-by trips (1,655) and gas-only diverted drips (1,560).

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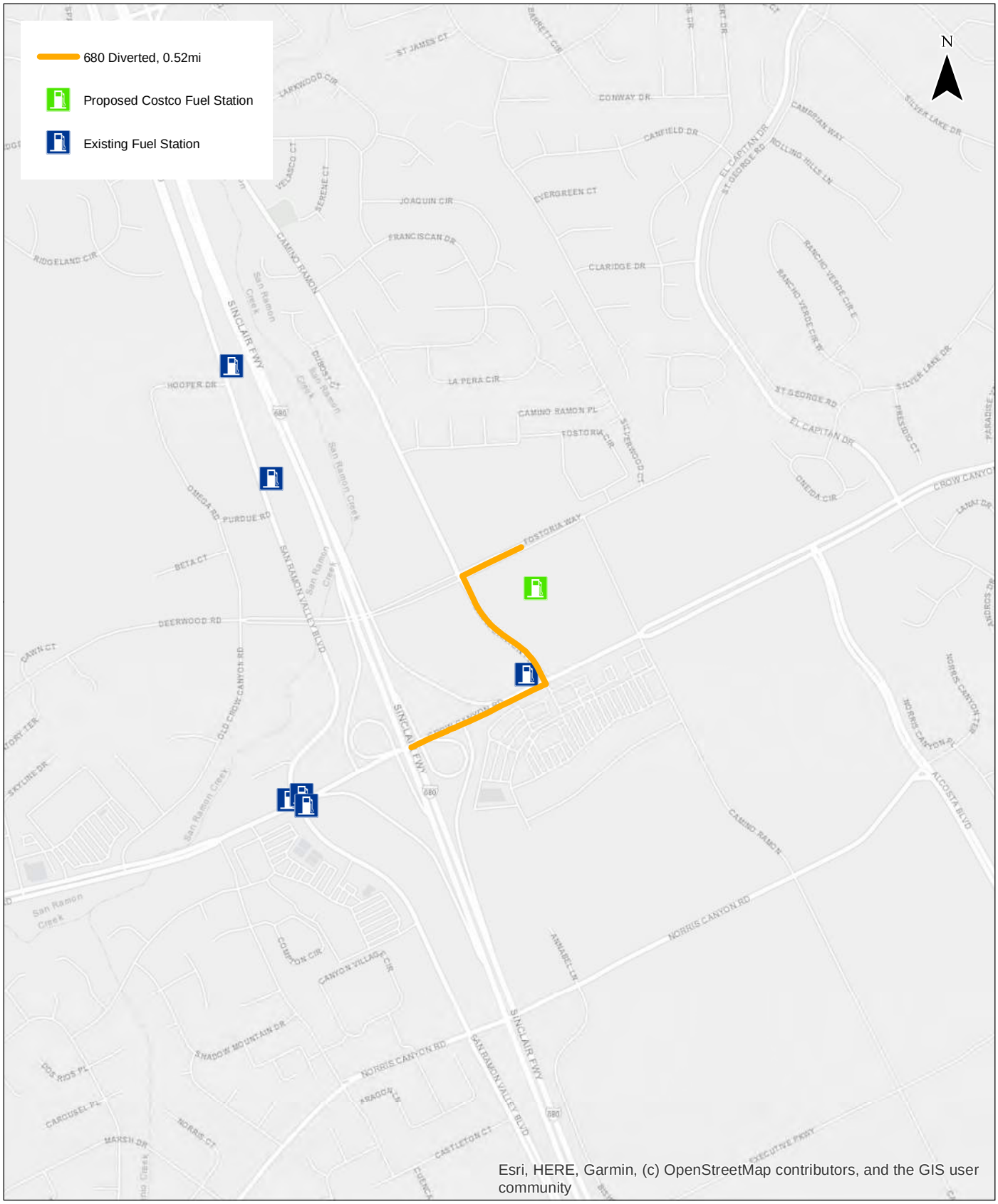
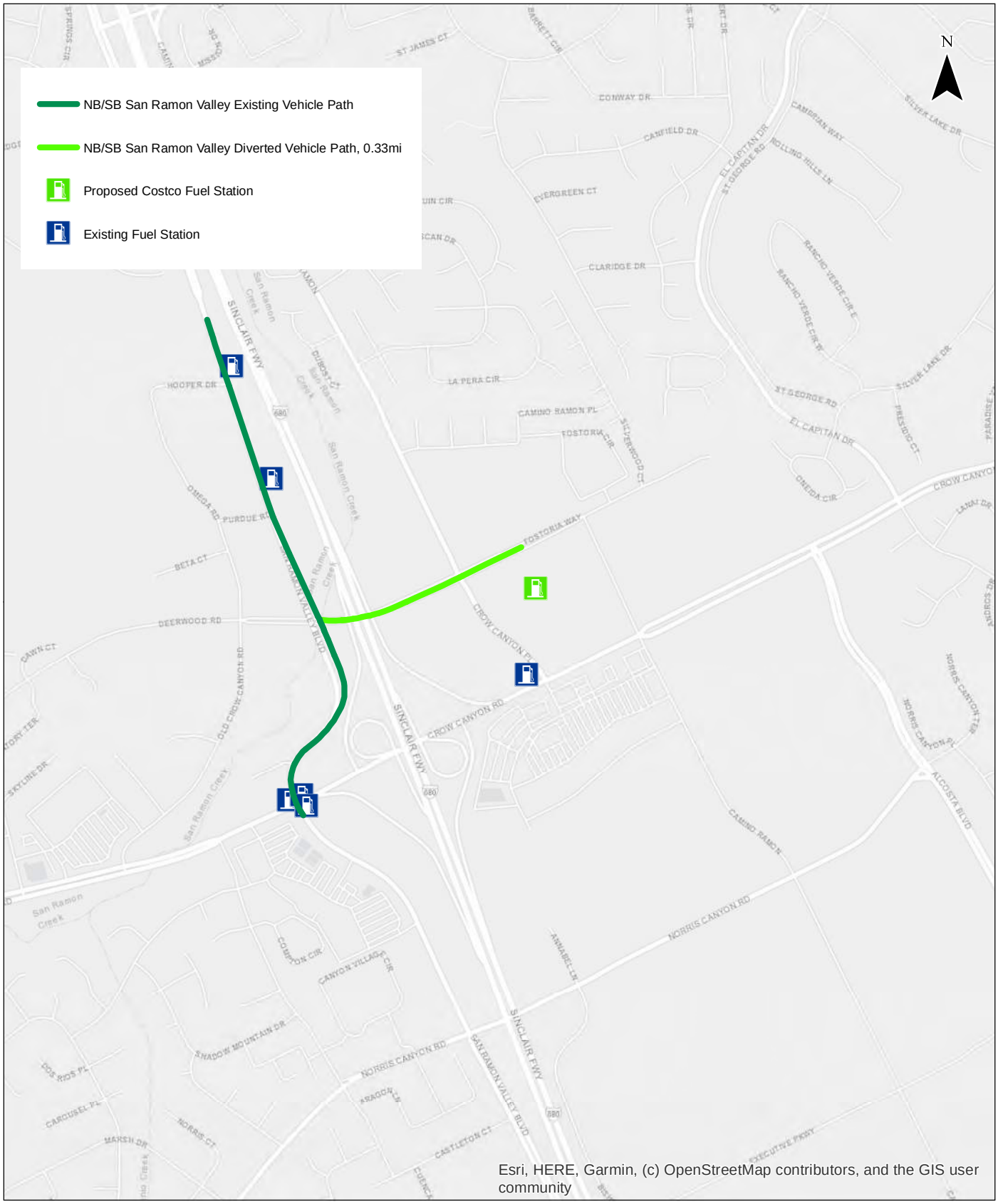


Gas-Only Diverted Trips
680 Vehicles

Figure
12

KITTELSON & ASSOCIATES

Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet

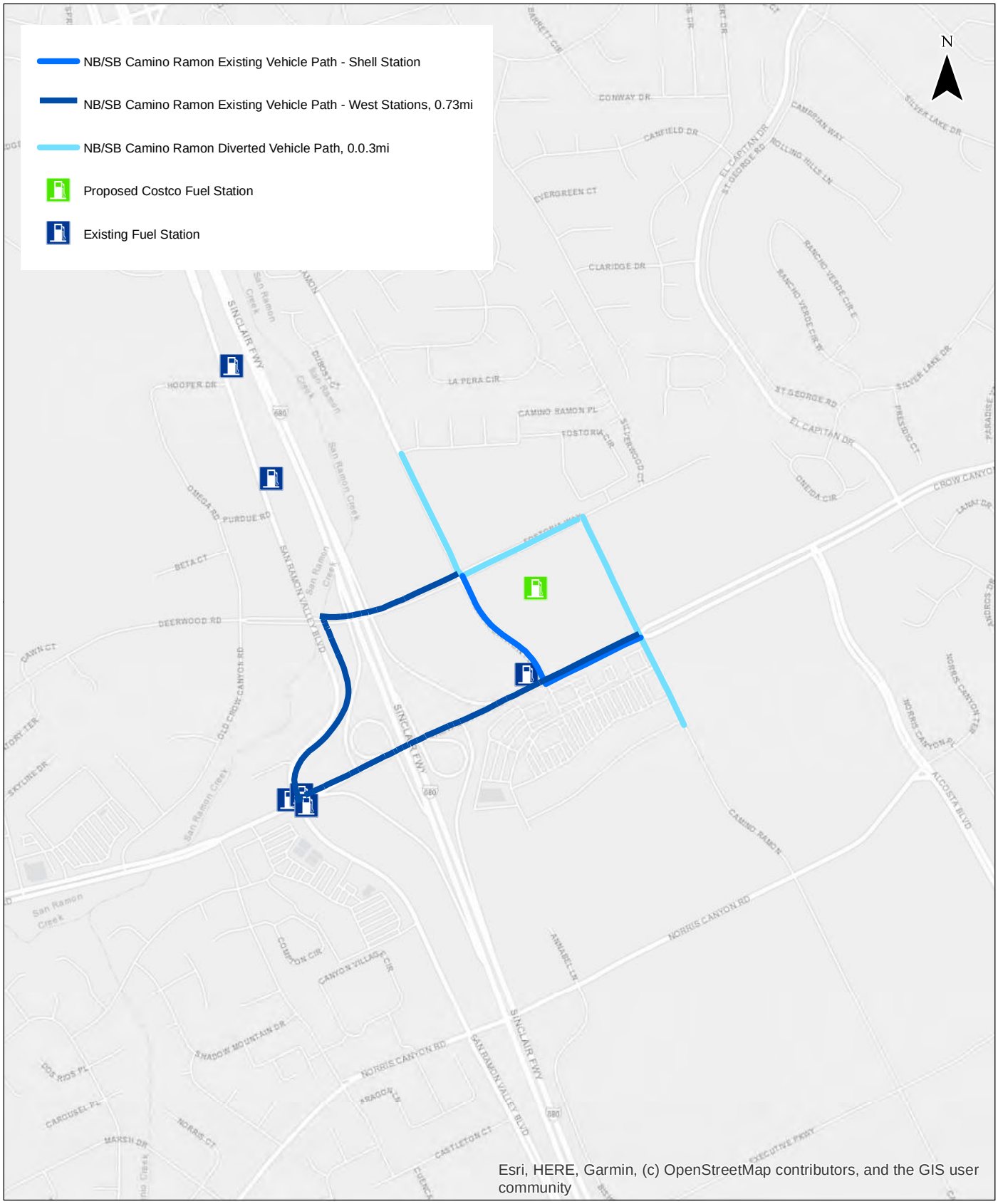


Gas-Only Diverted Trips
Northbound/Southbound Vehicles on San Ramon Valley

Figure
13

KITTELSON & ASSOCIATES

Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet

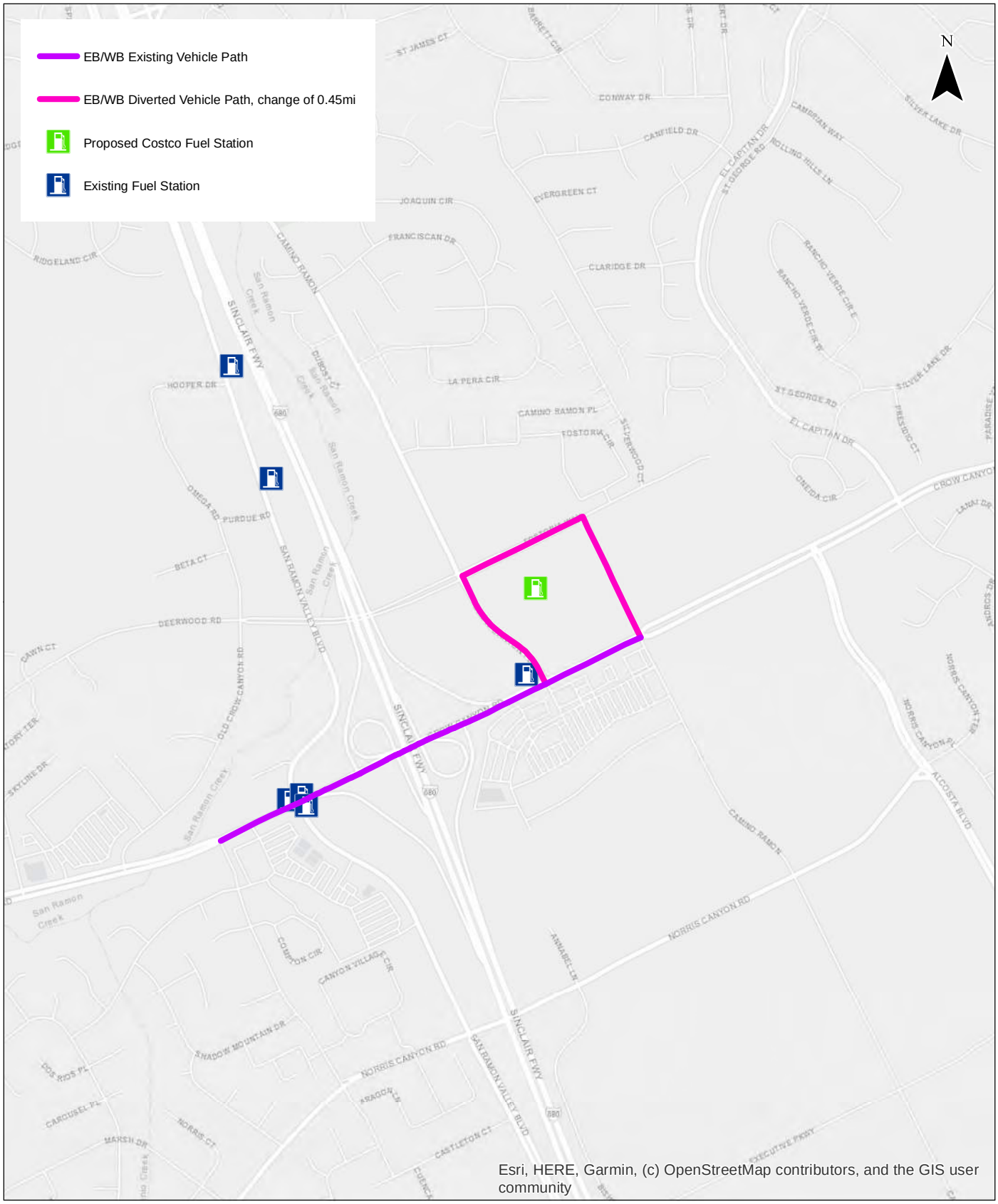


Gas-Only Diverted Trips
Northbound/Southbound Vehicles on Camino Ramon

Figure
14

KITTELSON & ASSOCIATES

Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet



Gas-Only Diverted Trips
Eastbound/Westbound Vehicles

Figure
15

KITTELSON & ASSOCIATES

Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet

Warehouse + Gas Trips

A share of Project trips are shared between the warehouse and fuel station when members shop at the warehouse and buy gas during a single visit to the Costco site. As such, although they account for a trip to both the warehouse and the fuel station, these trips to the Project site are on the street network today since members already shop at the warehouse.

As previously stated, Costco members who would purchase fuel at the proposed Costco fuel station already buy gas somewhere today. Therefore, the share of trips that would be future shared trips (i.e., warehouse + gas trips) would result in a decrease in total VMT on the system. Members would be able to combine two existing trips into one: a gas purchase trip currently routed elsewhere in the area would be combined with a member's existing trip to the warehouse. Therefore, combining trips would yield a VMT credit to the Project.

Kittelson assumes Costco members making a new warehouse + gas trip previously made the same type of trip as the data show for the PM peak hour (i.e., the same ratio of diverted, pass-by, and net new gas-only trips relative to total gas-only trips). While the proposed Costco fuel station is assumed to have no pass-by trips, some gas trips members make today to other fuel stations would have been pass-by trips, so no VMT reduction was given for these trips. Reductions were calculated for trips diverting to existing fuel stations and home-based trips to existing fuel stations, which are on the street network today. Home-based trip distances were calculated using similar methodology to the net new gas-only trips. Instead of driving to another gas station in Danville, some members will combine their gas trips with warehouse trips. The average distance from each point to the closest gas station (as shown in Figure 10) is credited to the project. An average diverted distance was calculated using the existing diversion distances in Table 11. Table 12 presents a decrease in total VMT of 1,711 vehicle-miles resulting from 2,250 daily new warehouse + gas trips.

Table 12: VMT for Warehouse + Gas Trips

Present-Day Trip Type	Percent of Warehouse + Gas Trips	Number of Daily Warehouse + Gas Trips	Average Miles to Existing Fuel Station	Daily VMT	
				Existing	Project
Diverting to Existing Fuel Stations	36%	806	0.09	37	0
Pass-by to Existing Fuel Stations	34%	760	0.09	0	0
Home-Based Trips to Existing Fuel Stations	30%	684	*	1,639	0
Subtotal		2,250		1,676	0
Project Net VMT					**-1,676**

Source: Kittelson & Associates, Inc. 2020
*Average distance not applied to home-based trips. Calculation uses spatial analysis to assign home-based trips along the shortest route to the nearest fuel station.

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VMT Credit for Shifting from Existing Costco Fuel Station in Region

Fuel transaction data from the Costco Gasoline fuel stations in Livermore, Concord, and Hayward demonstrate that some members living in the Danville and San Ramon area purchase fuel at these existing Costco fuel stations, referred to as a "regional fuel trip" for this discussion. It is expected that many of the regional fuel trips to those existing Costco fuel stations are made as trips of convenience by members when they already are in those areas for another purpose. However, some of those regional fuel trips are expected to be home-based trips made to the distant Costco sites for the purpose of members shopping at the warehouse and buying gas. These regional fuel trips are expected to shift from the distant Costco sites to the San Ramon location. This shift in regional fuel trips would result in a reduction in vehicle-miles traveled for each relocated regional fuel trip. Therefore, this shift in regional fuel trips would yield a VMT credit to the Project.

The three nearest Costco warehouses with fuel stations are in Livermore, Concord, and Hayward. Kittelson calculated the distance from each square-mile zone to these three warehouses to develop total daily VMT for each location. Project trip generation (Table 6) shows 30% of gas-only trips are net new trips (i.e., home-based trips). This demonstrates the propensity of Costco members to make a primary trip to buy Costco gas. Therefore, the analysis assumes 30% of the total fuel purchases currently occurring at the existing Costco fuel stations instead would occur at the San Ramon location. The analysis assumes the share of these purchases (and therefore the share of trips) that would shift to San Ramon would be commensurate to the share of fuel purchases currently made across the three existing locations. Table 13 presents a decrease in total VMT of 2,643 vehicle-miles resulting from 165 daily regional fuel trips.

Table 13: VMT for Warehouse + Gas Trips: 30% Shifting from Existing Warehouses

Existing Warehouse	Average Daily Regional Fuel Trips*	30% of Average Daily Regional Fuel Trips	Range of Roundtrip Distances Traveled (mi.)	Daily VMT	
				Existing	Project
Livermore	367	110	16-49	1,460	0
Concord	155	47	15-52	909	0
Hayward	28	8	30-62	274	0
Subtotal	550	165		2,643	0
Project Net VMT					**-2,643**

Source: Kittelson & Associates, Inc. 2020

* Based on Costco fuel station transaction data for Livermore, Concord, and Hayward in April 2019.

Overall Change in Regional Daily VMT

The overall change in regional daily VMT resulting from the Project is presented in Table 14. With construction and operation of the proposed Costco fuel station, regional daily VMT is estimated to

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decrease by 2,787 vehicle-miles. Therefore, the Project would not conflict or be inconsistent with CEQA Guideline section 15064.3, subdivision (b), and Project impacts would be ***less than significant***.

Table 14: Overall Project VMT

Trip Type	Costco Members' Existing Fuel-Related Daily VMT	Total Project Daily VMT	Net Project VMT
Net New Gas-Only Trips	827	1,665	838
Gas-Only Diverted Trips	147	876	729
Warehouse + Gas Trips	1,676	0	-1,676
Change in Costco Member Fuel Station	2,643	0	-2,643
Overall Net Project VMT	**5,293**	**2,541**	**-2,752**

Source: Kittelson & Associates, Inc. 2020

POTENTIAL HAZARDS RESULTING FROM QUEUES

This section discusses 95th percentile queue estimates at the study intersections and on-site queuing behind the fuel pumps.

95th Percentile Queue Lengths

An analysis of 95th percentile queue lengths was performed using Synchro software version 10. Queue lengths presented in Table 15 and Table 16 for the Existing AM and PM peak hours, respectively. The study intersections were found to mostly have sufficient storage to contain the 95th percentile queue lengths. At Intersection #3 (Fostoria Way at the Project and Costco warehouse driveways) with the recommended traffic signal, the 95th percentile queue for the eastbound left-turn movement is estimated to exceed the capacity of the existing turn lane by less than one car length during the PM peak hour. This means for about 5% of the time during the busiest period of the weekday, the eastbound left-turn queue would extend beyond the turn lane by less than one vehicle length. During the remainder of the PM peak hour, the queue would be contained within the turn lane.

Appendices B through D contain queue length summary reports for the different scenarios.

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Table 15: 95th Percentile Queues for Existing AM Peak Hour

#	Intersection	Scenario	Northbound			Southbound			Eastbound			Westbound		
			Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
1	Crow Canyon Place/ Fostoria Way	Storage	100	950		140	1,000		190	1,000		220	220	
		Existing AM	16	18		23	144		11	67		18	35	
		Existing + Project AM	16	22		34	150		11	71		26	51	
2	Costco R-in R-out Driveway/ Fostoria Way	Storage					60						290	
		Existing AM					0						0	
		Existing + Project AM					0						0	
3	Costco All-Access Driveway/ Fostoria Way	Storage		150	150		120	120	120	310		120	370	
		Existing AM		2	0		0	0	0	0		0	0	
		Existing + Project AM		33	11		0	0	0	0		7	0	
		Existing + Project AM with Improvements		29	31		3	4	5	33		30	18	
4	Camino Ramon/ Fostoria Way	Storage	280	920			360		120	370			900	
		Existing AM	28	1			1		0	17			11	
		Existing + Project AM	65	1			1		0	41			13	

Source: Kittelson & Associates, Inc. 2020
Intersections analyzed using HCM 6 methodologies
Queue lengths reported in feet

Table 16: 95th Percentile Queues for Existing PM Peak Hour

#	Intersection	Scenario	Northbound			Southbound			Eastbound			Westbound		
			Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
1	Crow Canyon Place/ Fostoria Way	Storage	100	950		140	1,000		190	1,000		220	220	
		Existing PM	56	79		66	172		52	105		86	113	
		Existing + Project PM	59	85		80	180		55	122		101	132	
2	Costco R-in R-out Driveway/ Fostoria Way	Storage					60						290	
		Existing PM					4						0	
		Existing + Project PM					4						0	
3	Costco All-Access Driveway/ Fostoria Way	Storage		150	150		120	120	120	310		120	370	
		Existing PM		43	2		68	23	26	0		1	0	
		Existing + Project PM		593	15		324	21	23	0		11	0	
		Existing + Project PM with Improvements		75	89		36	105	127	67		81	94	
4	Camino Ramon/ Fostoria Way	Storage	280	920			360		120	370			900	
		Existing PM	85	92			187		3	47			35	
		Existing + Project PM	242	88			218		3	115			42	

Source: Kittelson & Associates, Inc. 2020
Intersections analyzed using HCM 6 methodologies
Queue lengths reported in feet
Intersections shaded in gray represent locations where queue lengths would exceed storage.

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Vehicle Queues at Fuel Pumps

As shown in Figure 3, the proposed site plan locates the fuel station where the Office Depot building currently exists. The existing parking lot on the site largely would remain as is, with modifications to the southeast corner of the lot to accommodate fuel delivery truck maneuvers on the site. Members would access the queue area by entering the site from Fostoria Way and traveling around the fuel station to queue at the rear. Members departing would proceed out of the fueling exit area and exit the site onto Fostoria Way. This orientation provides queue storage throughout the site, minimizing the likelihood that a vehicle queue would spill out to Fostoria Way.

To forecast the anticipated maximum queue at the fuel station, Kittelson identified the following seven Costco fuel stations that have 24+ fueling positions as comparable sites:

- Concord, California
- Cypress, California
- NE San Jose, California
- Portland, Oregon
- Rohnert Park, California
- Wilsonville, Oregon
- Temecula, California

Queuing data were collected at each of the sites between 2016 and 2018 for weekday PM peak hour and Saturday midday peak hour. Observed peak hour queues from the Kittelson database are summarized in Table 17. Maximum queues represent the queue length recorded for the longest one-minute period during the peak hour.

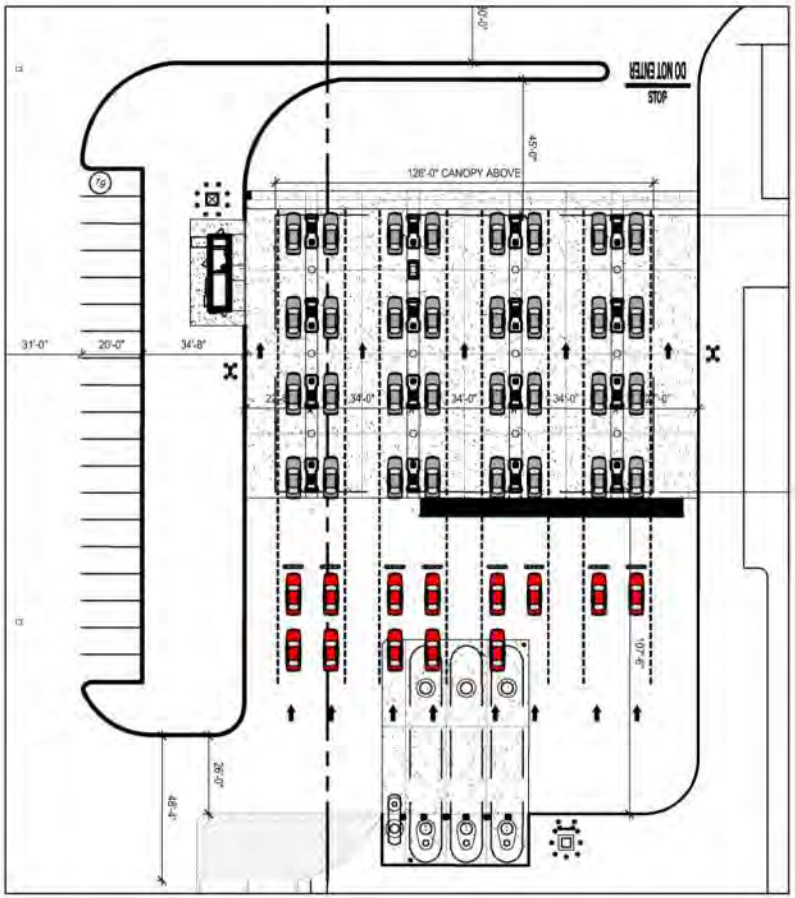
Table 17: Existing Queues during Peak Hours

	Fueling Positions	Maximum Weekday P.M. Peak Hour Queue	Maximum Saturday Midday Peak Hour Queue
Concord, CA	24	10	32
Cypress, CA	24	17	19
NE San Jose, CA	24	6	31
Portland, OR	24	12	20
Rohnert Park, CA	24	8	22
Wilsonville, OR	24	16	18
Temecula, CA	30	24	26
Average		**13**	**24**

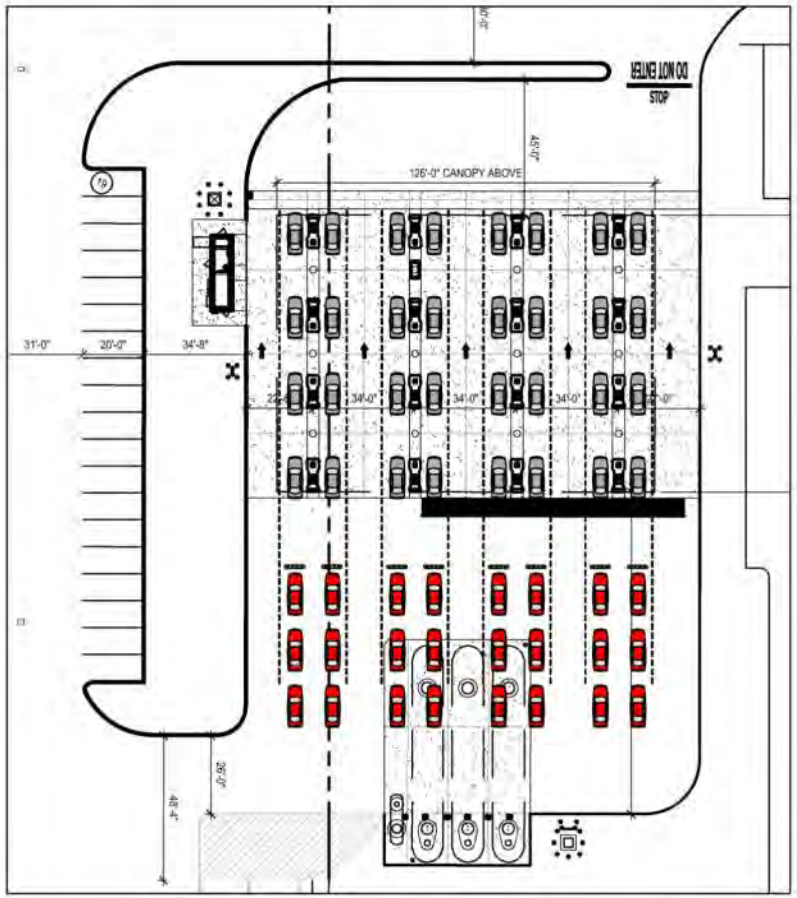
Source: Kittelson & Associates, Inc. 2020

Note: The queue refers to vehicles waiting in line behind the pumps; it does not include vehicles at fueling positions.

As shown in Table 17, the maximum queue for the proposed fuel station is anticipated to be 13 vehicles during the weekday PM peak hour and 24 vehicles during the Saturday midday peak hour based on observed data. The fuel station would provide approximately 100 feet of storage behind the first row of dispensers. Figure 16 illustrates the projected maximum queues at the fuel station, with queues being contained within available storage and not spilling onto the local street.



WEEKDAY PM PEAK HOUR



SATURDAY MIDDAY PEAK HOUR

VEHICLE AT FUELING POSITION

VEHICLE IN QUEUE

Projected Maximum Queues
San Ramon, CA

Figure
16

KITTELSON & ASSOCIATES

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Impact Finding

95th percentile queues on local streets generally would remain within the existing storage areas at the study intersections and would not create a hazardous condition on the roadway network. On-site queues behind the pumps would be contained within available storage and would not spill onto the local street. Therefore, the Project would not substantially increase hazards due to a geometric design or incompatible uses, and Project impacts would be ***less than significant***.

EMERGENCY ACCESS

Kittelson reviewed the site plan for emergency vehicle access. Emergency vehicle access to the Project site is accommodated at the existing shared driveway on Fostoria Way, within the development via an existing easement with adjacent properties, and within the drive aisle to the queue storage area of the fuel station.

Impact Finding

The Project provides emergency access to and within the site via the existing driveway on Fostoria Way, existing on-site easements, and on-site drive aisles. Therefore, the Project would not result in inadequate emergency access, and the impact of the Project on emergency access would ***be less than significant***.

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CONCLUSIONS

The results of the traffic impact analysis indicate that the proposed Costco Gasoline fuel station can be accommodated within San Ramon while not increasing regional daily VMT and maintaining acceptable levels of service on the surrounding transportation system with proposed improvements in place. The findings of the transportation impact analysis are summarized, and recommended Project-related improvements to the transportation network are discussed in this section.

RECOMMENDED IMPROVEMENTS

The Project would result in Intersection 3 (Fostoria Way and Costco All-Access Driveway) operating below LOS D, the standard set by the City of San Ramon, during the PM peak hour. While this intersection already operates below the standard in the existing condition, the Project would result in a substantial increase in vehicular traffic and pedestrian crossings across Fostoria Way as members go between the Project site and the Costco warehouse. Therefore, Kittelson recommends the following improvement to improve operations at the intersection.

> **Proposed Improvement:** Construct a traffic signal at the intersection of Fostoria Way and Costco All-Access Driveway.

Implementation of this improvement would improve the operation of this intersection to LOS C, bringing operations within the standard.

PROJECT IMPACTS

The Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Therefore, the impact of the Project would be ***less than significant***.

The overall change in regional daily VMT resulting from the Project is presented in Table 14. With construction and operation of the proposed Costco fuel station, regional daily VMT is estimated to decrease by 2,787 vehicle-miles. Therefore, the Project would not conflict or be inconsistent with CEQA Guideline section 15064.3, subdivision (b), and Project impacts would be ***less than significant***.

95th percentile queues on local streets generally would remain within the existing storage areas at the study intersections and would not create a hazardous condition on the roadway network. On-site queues behind the pumps would be contained within available storage and would not spill onto the local street. Therefore, the Project would not substantially increase hazards due to a geometric design or incompatible uses, and Project impacts would be ***less than significant***.

The Project provides emergency access to and within the site via the existing driveway on Fostoria Way, existing on-site easements, and on-site drive aisles. Therefore, the Project would not result in inadequate emergency access, and the impact of the Project on emergency access would ***be less than significant***.

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Appendix A Traffic Count Data

Prepared by NDS/ATD

VOLUME

Camino Ramon N/O Fostoria Way

Day: Wednesday
Date: 11/14/2018

City: San Ramon
Project #: CA18_8598_061

DAILY TOTALS	NB	SB	EB	WB	Total
	4,587	4,271	0	0	8,858

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	3		0						3		12:00	100		100						200	
00:15	1		2						3		12:15	103		75						178	
00:30	1		2						3		12:30	82		98						180	
00:45	1	6	0	4					1	10	12:45	104	389	99	372					203	761
01:00	0		0						0		13:00	94		82						176	
01:15	0		2						2		13:15	123		91						214	
01:30	0		1						1		13:30	115		99						214	
01:45	0		1	4					1	4	13:45	104	436	75	347					179	783
02:00	3		1						4		14:00	107		94						201	
02:15	1		0						1		14:15	98		106						204	
02:30	0		0						0		14:30	106		91						197	
02:45	1	5	0	1					1	6	14:45	101	412	107	398					208	810
03:00	0		1						1		15:00	103		83						186	
03:15	0		1						1		15:15	103		88						191	
03:30	0		0						0		15:30	104		101						205	
03:45	0		1	3					1	3	15:45	100	410	79	351					179	761
04:00	0		7						7		16:00	118		92						210	
04:15	0		2						2		16:15	116		81						197	
04:30	3		6						9		16:30	115		76						191	
04:45	0	3	10	25					10	28	16:45	139	488	81	330					220	818
05:00	3		6						9		17:00	142		73						215	
05:15	4		16						20		17:15	152		85						237	
05:30	4		18						22		17:30	127		65						192	
05:45	2	13	16	56					18	69	17:45	117	538	69	292					186	830
06:00	11		22						33		18:00	97		71						168	
06:15	4		20						24		18:15	89		69						158	
06:30	5		36						41		18:30	96		53						149	
06:45	11	31	42	120					53	151	18:45	67	349	42	235					109	584
07:00	14		44						58		19:00	62		51						113	
07:15	18		47						65		19:15	41		38						79	
07:30	16		54						70		19:30	36		37						73	
07:45	23	71	73	218					96	289	19:45	65	204	25	151					90	355
08:00	28		78						106		20:00	40		26						66	
08:15	31		84						115		20:15	34		43						77	
08:30	29		80						109		20:30	33		28						61	
08:45	41	129	69	311					110	440	20:45	22	129	18	115					40	244
09:00	40		62						102		21:00	23		10						33	
09:15	40		59						99		21:15	21		14						35	
09:30	49		47						96		21:30	17		5						22	
09:45	58	187	63	231					121	418	21:45	19	80	10	39					29	119
10:00	68		46						114		22:00	10		8						18	
10:15	60		76						136		22:15	11		3						14	
10:30	59		85						144		22:30	8		7						15	
10:45	77	264	92	299					169	563	22:45	5	34	2	20					7	54
11:00	86		80						166		23:00	4		7						11	
11:15	109		75						184		23:15	5		7						12	
11:30	93		84						177		23:30	0		3						3	
11:45	111	399	92	331					203	730	23:45	1	10	1	18					2	28
TOTALS		1108		1603						2711	TOTALS		3479		2668						614
SPLIT %		40.9%		59.1%						30.6%	SPLIT %		56.6%		43.4%						69.4

DAILY TOTALS	NB	SB	EB	WB	Total
	4,587	4,271	0	0	8,858

AM Peak Hour	11:15	11:45			11:15	PM Peak Hour	16:45	14:00			16:4
AM Pk Volume	413	365			764	PM Pk Volume	560	398			864
Pk Hr Factor	0.930	0.913			0.941	Pk Hr Factor	0.921	0.930			0.91
7 - 9 Volume	200	529	0	0	729	4 - 6 Volume	1026	622	0	0	1648
7 - 9 Peak Hour	08:00	07:45			08:00	4 - 6 Peak Hour	16:45	16:00			16:4
7 - 9 Pk Volume	129	315	0	0	440	4 - 6 Pk Volume	560	330	0	0	864
Pk Hr Factor	0.787	0.938	0.000	0.000	0.957	Pk Hr Factor	0.921	0.897	0.000	0.000	0.91

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Prepared by NDS/ATD

VOLUME

Camino Ramon N/O Fostoria Way

Day: Thursday
Date: 11/15/2018

City: San Ramon
Project #: CA18_8598_061

DAILY TOTALS	NB	SB	EB	WB	Total
	4,611	4,205	0	0	8,816

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	1		0						1		12:00	106		95						201	
00:15	3		0						3		12:15	101		94						195	
00:30	2		1						3		12:30	105		83						188	
00:45	3	9	0	1					3	10	12:45	88	400	95	367					183	767
01:00	0		3						3		13:00	96		122						218	
01:15	1		1						2		13:15	109		86						195	
01:30	0		0						0		13:30	104		65						169	
01:45	0	1	1	5					1	6	13:45	91	400	90	363					181	763
02:00	1		1						2		14:00	91		108						199	
02:15	1		0						1		14:15	114		95						209	
02:30	1		0						1		14:30	113		80						193	
02:45	1	4	0	1					1	5	14:45	106	424	89	372					195	796
03:00	1		2						3		15:00	93		103						196	
03:15	1		0						1		15:15	122		95						217	
03:30	0		0						0		15:30	108		78						186	
03:45	0	2	0	2					0	4	15:45	123	446	69	345					192	791
04:00	0		4						4		16:00	128		93						221	
04:15	2		6						8		16:15	92		79						171	
04:30	2		2						4		16:30	119		84						203	
04:45	0	4	5	17					5	21	16:45	134	473	67	323					201	796
05:00	2		6						8		17:00	120		84						204	
05:15	5		14						19		17:15	145		71						216	
05:30	2		16						18		17:30	133		81						214	
05:45	4	13	21	57					25	70	17:45	138	536	59	295					197	831
06:00	8		15						23		18:00	96		62						158	
06:15	8		33						41		18:15	105		74						179	
06:30	10		32						42		18:30	66		58						124	
06:45	15	41	38	118					53	159	18:45	68	335	58	252					126	587
07:00	15		42						57		19:00	61		62						123	
07:15	19		48						67		19:15	60		40						100	
07:30	19		59						78		19:30	52		55						107	
07:45	18	71	64	213					82	284	19:45	47	220	35	192					82	412
08:00	31		55						86		20:00	43		36						79	
08:15	20		62						82		20:15	46		48						94	
08:30	27		77						104		20:30	32		25						57	
08:45	40	118	82	276					122	394	20:45	37	158	24	133					61	291
09:00	49		73						122		21:00	18		11						29	
09:15	36		56						92		21:15	14		16						30	
09:30	62		51						113		21:30	20		11						31	
09:45	58	205	63	243					121	448	21:45	12	64	8	46					20	110
10:00	52		55						107		22:00	12		14						26	
10:15	78		58						136		22:15	6		2						8	
10:30	79		57						136		22:30	10		7						17	
10:45	69	278	75	245					144	523	22:45	7	35	8	31					15	66
11:00	66		83						149		23:00	10		4						14	
11:15	88		62						150		23:15	7		2						9	
11:30	89		76						165		23:30	4		2						6	
11:45	109	352	78	299					187	651	23:45	1	22	1	9					2	31
TOTALS		1098		1477						2575	TOTALS		3513		2728						624
SPLIT %		42.6%		57.4%						29.2%	SPLIT %		56.3%		43.7%						70.8

DAILY TOTALS	NB	SB	EB	WB	Total
	4,611	4,205	0	0	8,816

AM Peak Hour	11:45	11:45			11:45	PM Peak Hour	17:00	12:15			16:4
AM Pk Volume	421	350			771	PM Pk Volume	536	394			835
Pk Hr Factor	0.966	0.921			0.959	Pk Hr Factor	0.924	0.807			0.96
7 - 9 Volume	189	489	0	0	678	4 - 6 Volume	1009	618	0	0	1627
7 - 9 Peak Hour	08:00	08:00			08:00	4 - 6 Peak Hour	17:00	16:00			16:4
7 - 9 Pk Volume	118	276	0	0	394	4 - 6 Pk Volume	536	323	0	0	835
Pk Hr Factor	0.738	0.841	0.000	0.000	0.807	Pk Hr Factor	0.924	0.868	0.000	0.000	0.96

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

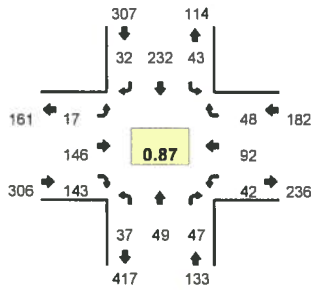
Type of peak hour being reported: Intersection Peak

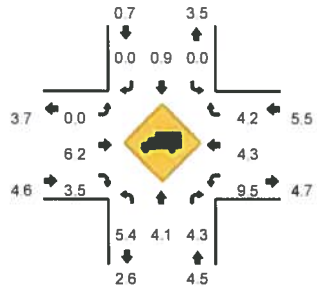
Method for determining peak hour: Total Entering Volume

LOCATION: Crow Canyon Pl -- Fostoria Way
CITY/STATE: San Ramon, CA

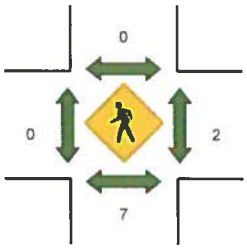
QC JOB #: 13371503
DATE: Tue, Sep 15 2015

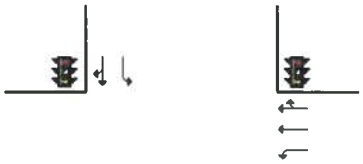
Peak-Hour: 7:55 AM -- 8:55 AM
Peak 15-Min: 7:55 AM -- 8:10 AM

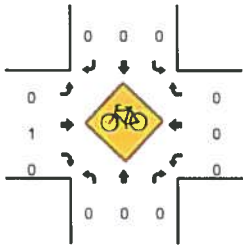


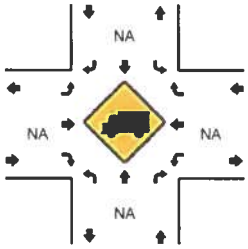


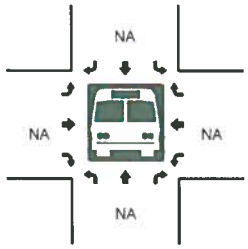
Quality Counts
TRANSPORTATION DATA COLLECTION SERVICES











5-Min Count Period Beginning At	Crow Canyon Pl (Northbound)				Crow Canyon Pl (Southbound)				Fostoria Way (Eastbound)				Fostoria Way (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	2	3	5	0	1	17	0	0	2	5	7	0	3	3	0	0	48	
7:05 AM	1	4	3	0	1	16	3	0	2	7	11	0	2	7	1	0	58	
7:10 AM	1	2	3	0	1	17	1	0	2	6	4	0	3	4	2	0	46	
7:15 AM	4	3	4	0	3	15	0	0	1	9	8	0	3	2	2	0	54	
7:20 AM	3	2	4	0	1	12	4	0	2	8	8	0	6	0	1	0	51	
7:25 AM	2	5	5	0	4	18	2	0	0	9	6	0	5	2	0	0	58	
7:30 AM	1	1	4	0	2	18	4	0	2	10	13	0	1	3	2	0	61	
7:35 AM	3	4	7	0	3	20	2	0	0	5	8	0	6	3	1	0	62	
7:40 AM	1	3	4	0	1	15	3	0	2	13	9	0	2	6	0	0	59	
7:45 AM	2	5	9	0	6	18	3	0	2	16	5	0	0	6	4	0	76	
7:50 AM	5	5	7	0	2	15	1	0	1	24	9	0	5	3	1	0	78	
7:55 AM	5	4	1	0	1	27	3	0	4	11	12	0	4	9	7	0	88	739
8:00 AM	0	2	4	0	6	25	4	0	0	21	12	0	3	11	6	0	94	785
8:05 AM	2	8	6	0	5	19	5	0	2	11	15	0	4	5	4	0	86	813
8:10 AM	3	2	1	0	5	19	2	0	1	11	11	0	4	4	6	0	69	836
8:15 AM	4	6	2	0	3	24	6	0	1	12	16	0	3	9	4	0	90	872
8:20 AM	6	1	4	0	6	17	1	0	1	13	12	0	1	6	3	0	71	892
8:25 AM	2	6	2	0	6	18	1	0	3	12	14	0	3	3	5	0	75	909
8:30 AM	1	3	6	0	2	20	4	0	0	12	11	0	6	8	3	0	76	924
8:35 AM	3	7	8	0	0	13	1	0	0	4	11	0	3	8	2	0	60	922
8:40 AM	3	3	5	0	0	16	2	0	0	12	8	0	2	9	2	0	62	925
8:45 AM	2	3	2	0	5	14	2	0	3	15	12	0	3	12	5	0	78	927
8:50 AM	6	4	6	0	4	20	1	0	2	12	9	0	6	8	1	0	79	928
8:55 AM	5	8	8	0	4	11	4	0	1	13	11	0	3	10	3	0	81	921

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	28	56	44	0	48	284	48	0	24	172	156	0	44	100	68	0	1072
Heavy Trucks	0	4	0		0	0	0		0	4	4		0	0	0		12
Pedestrians		8				0				0				0			8
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 9/25/2015 9:42 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

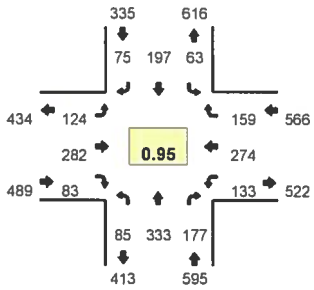
Type of peak hour being reported: Intersection Peak

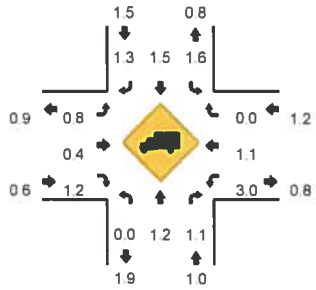
Method for determining peak hour: Total Entering Volume

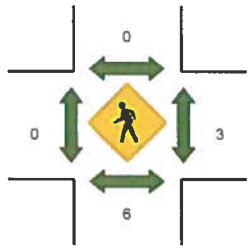
LOCATION: Crow Canyon Pl -- Fostoria Way
CITY/STATE: San Ramon, CA

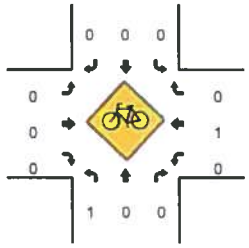
QC JOB #: 13371504
DATE: Tue, Sep 15 2015

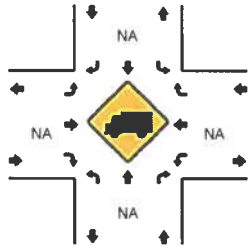
Peak-Hour: 4:55 PM -- 5:55 PM
Peak 15-Min: 5:15 PM -- 5:30 PM

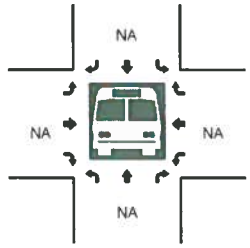












5-Min Count Period Beginning At	Crow Canyon Pl (Northbound)				Crow Canyon Pl (Southbound)				Fostoria Way (Eastbound)				Fostoria Way (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	2	20	19	0	8	13	5	0	18	28	8	0	10	18	6	0	155	
4:05 PM	9	20	16	0	9	15	1	0	8	21	4	0	3	16	6	0	128	
4:10 PM	8	31	16	0	0	14	7	0	6	13	5	0	17	14	14	0	145	
4:15 PM	5	21	16	0	1	17	8	0	11	15	6	0	10	18	12	0	140	
4:20 PM	4	21	17	0	4	12	5	0	6	20	8	0	6	28	12	1	144	
4:25 PM	7	24	11	0	1	11	10	0	11	26	14	0	16	26	13	0	170	
4:30 PM	12	16	16	0	3	7	4	0	6	13	10	0	6	21	11	0	125	
4:35 PM	7	20	16	0	2	15	7	0	11	20	3	0	7	17	10	0	135	
4:40 PM	7	22	12	0	6	11	5	0	14	19	5	0	14	20	18	0	153	
4:45 PM	7	28	16	0	7	13	3	0	13	31	6	0	9	24	13	0	170	
4:50 PM	5	23	6	0	4	10	12	0	13	30	9	0	11	11	13	0	147	
4:55 PM	6	27	13	0	4	14	4	0	13	22	5	0	15	24	10	0	157	1769
5:00 PM	7	24	13	0	3	21	9	0	9	13	2	0	5	19	17	0	142	1756
5:05 PM	10	27	14	0	6	21	7	0	9	20	6	0	13	19	7	0	159	1787
5:10 PM	4	20	13	0	9	13	8	0	12	33	5	0	8	23	22	0	170	1812
5:15 PM	8	30	15	0	8	20	5	0	11	24	7	0	13	29	12	0	182	1854
5:20 PM	4	32	13	0	7	15	5	0	7	23	6	0	9	28	15	0	164	1874
5:25 PM	13	25	16	0	2	11	8	0	8	26	13	0	10	23	20	0	175	1879
5:30 PM	4	27	11	0	9	17	5	0	8	18	6	0	18	22	11	0	154	1908
5:35 PM	6	44	22	0	2	16	7	0	9	15	9	0	7	21	6	0	164	1937
5:40 PM	10	18	18	0	7	15	4	0	11	29	10	0	10	26	14	0	172	1956
5:45 PM	4	27	18	0	4	23	7	0	16	28	6	0	15	21	15	0	184	1970
5:50 PM	9	32	11	0	2	11	6	0	11	31	8	0	12	19	10	0	162	1985
5:55 PM	6	27	11	0	2	11	4	0	8	20	6	0	8	27	12	0	142	1970

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	100	348	176	0	68	184	72	0	104	292	104	0	128	320	188	0	2084
Heavy Trucks	0	0	4		0	0	4		0	4	0		0	4	0		16
Pedestrians		0				0				0				8			8
Bicycles	1	0	0		0	0	0		0	0	0		0	1	0		2
Railroad																	
Stopped Buses																	

Comments:

Report generated on 9/25/2015 9:42 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

PHA Transportation Consultants
510-848-9233

Description 1: San Ramon
Description 2: Fostoria Way West of Crow Canyon Place
Description 3: 15-10-431

Site: 130
Date: 9/2B/2015
Monday

24 Hour Volume

Begin	WB		EB		Combined	
11:00 AM	72	332	136	595	208	927
11:15 AM	B0		151		231	
11:30 AM	86		128		214	
11:45 AM	94		180		274	
12:00 PM	105	401	172	767	277	1168
12:15 PM	100		183		283	
12:30 PM	100		208		308	
12:45 PM	96		204		300	
1:00 PM	80	310	186	836	266	1146
1:15 PM	83		249		332	
1:30 PM	80		187		267	
1:45 PM	67		214		281	
2:00 PM	73	294	187	71B	260	1012
2:15 PM	72		159		231	
2:30 PM	81		186		267	
2:45 PM	68		186		254	
3:00 PM	95	378	150	713	245	1091
3:15 PM	93		166		259	
3:30 PM	97		203		300	
3:45 PM	93		194		287	
4:00 PM	105	396	204	749	309	1145
4:15 PM	105		197		302	
4:30 PM	100		215		315	
4:45 PM	86		133		219	
5:00 PM	119	497	220	971	339	1468
5:15 PM	137		217		354	
5:30 PM	127		294		421	
5:45 PM	114		240		354	
6:00 PM	87	314	192	755	279	1069
6:15 PM	92		200		292	
6:30 PM	67		193		260	
6:45 PM	68		170		238	
7:00 PM	75	224	147	536	222	760
7:15 PM	68		129		197	
7:30 PM	51		152		203	
7:45 PM	30		108		138	
8:00 PM	33	110	97	348	130	45B
8:15 PM	22		67		89	
8:30 PM	33		108		141	
8:45 PM	22		76		98	
9:00 PM	9	37	31	114	40	151
9:15 PM	11		28		39	
9:30 PM	9		35		44	
9:45 PM	8		20		28	
10:00 PM	5	22	12	61	17	B3
10:15 PM	3		20		23	
10:30 PM	5		11		16	
10:45 PM	9		18		27	

Begin		WB		EB		Combined	
	11:00 PM	4	11	0	16	4	27
	11:15 PM	2		3		5	
	11:30 PM	5		12		17	
	11:45 PM	0		1		1	
9/29/2015	12:00 AM	0	1	2	13	2	14
	12:15 AM	0		5		5	
	12:30 AM	1		4		5	
	12:45 AM	0		2		2	
	1:00 AM	0	3	2	5	2	8
	1:15 AM	0		3		3	
	1:30 AM	0		0		0	
	1:45 AM	3		0		3	
	2:00 AM	0	0	2	5	2	5
	2:15 AM	0		0		0	
	2:30 AM	0		3		3	
	2:45 AM	0		0		0	
	3:00 AM	0	2	0	0	0	2
	3:15 AM	0		0		0	
	3:30 AM	0		0		0	
	3:45 AM	2		0		2	
	4:00 AM	0	2	0	6	0	8
	4:15 AM	1		0		1	
	4:30 AM	1		1		2	
	4:45 AM	0		5		5	
	5:00 AM	0	14	11	43	11	57
	5:15 AM	1		12		13	
	5:30 AM	5		7		12	
	5:45 AM	8		13		21	
	6:00 AM	16	60	28	163	44	223
	6:15 AM	4		49		53	
	6:30 AM	18		34		52	
	6:45 AM	22		52		74	
	7:00 AM	29	132	42	370	71	502
	7:15 AM	26		72		98	
	7:30 AM	35		132		167	
	7:45 AM	42		124		166	
	8:00 AM	50	212	121	517	171	729
	8:15 AM	59		119		178	
	8:30 AM	53		123		176	
	8:45 AM	50		154		204	
	9:00 AM	51	187	115	448	166	635
	9:15 AM	47		90		137	
	9:30 AM	40		109		149	
	9:45 AM	49		134		183	
	10:00 AM	60	230	96	435	156	665
	10:15 AM	53		120		173	
	10:30 AM	58		100		158	
	10:45 AM	59		119		178	

	WB	EB	Combined
24 Hour Volume	4169 (31.2%)	9184 (68.8%)	13353

	12:00 AM - 12:00 PM			12:00 PM - 12:00 AM		
	W8	EB	Combined	W8	EB	Combined
Count	1175	2600	3775	2994	6584	9578
	31.1 %	68.9 %		31.3 %	6B.7 %	
Peak Hour	11:00 AM	11:00 AM	11:00 AM	5:00 PM	5:00 PM	5:00 PM
Volume	332	595	927	497	971	1468
Factor	0.B8	0.B3	0.85	0.91	0.83	0.B7

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

PHA Transportation Consultants
510-848-9233

Description 1: San Ramon
Description 2: Fostoria Way West of Crow Canyon Place
Description 3: 15-10-431

Site: 130
Date: 9/29/2015
Tuesday

24 Hour Volume

8egin	W8		EB		Combined	
11:00 AM	53	339	124	495	177	834
11:15 AM	82		106		188	
11:30 AM	100		124		224	
11:45 AM	104		141		245	
12:00 PM	92	373	180	695	272	1068
12:15 PM	96		181		277	
12:30 PM	97		182		279	
12:45 PM	88		152		240	
1:00 PM	71	335	175	737	246	1072
1:15 PM	92		175		267	
1:30 PM	98		163		261	
1:45 PM	74		224		298	
2:00 PM	77	308	171	672	248	980
2:15 PM	60		164		224	
2:30 PM	97		190		287	
2:45 PM	74		147		221	
3:00 PM	104	410	123	719	227	1129
3:15 PM	100		206		306	
3:30 PM	115		175		290	
3:45 PM	91		215		306	
4:00 PM	92	432	230	833	322	1265
4:15 PM	121		178		299	
4:30 PM	105		202		307	
4:45 PM	114		223		337	
5:00 PM	132	537	296	898	428	1435
5:15 PM	142		226		368	
5:30 PM	142		162		304	
5:45 PM	121		214		335	
6:00 PM	88	305	228	676	316	981
6:15 PM	85		158		243	
6:30 PM	73		153		226	
6:45 PM	59		137		196	
7:00 PM	75	214	148	483	223	697
7:15 PM	49		113		162	
7:30 PM	57		131		188	
7:45 PM	33		91		124	
8:00 PM	28	84	127	342	155	426
8:15 PM	17		93		110	
8:30 PM	29		71		100	
8:45 PM	10		51		61	
9:00 PM	26	57	46	141	72	198
9:15 PM	10		31		41	
9:30 PM	14		34		48	
9:45 PM	7		30		37	
10:00 PM	9	24	15	39	24	63
10:15 PM	4		11		15	
10:30 PM	6		5		11	
10:45 PM	5		8		13	

	Begin	W8		EB		Combined	
	11:00 PM	5	12	15	37	20	49
	11:15 PM	3		4		7	
	11:30 PM	4		7		11	
	11:45 PM	0		11		11	
9/30/2015	12:00 AM	2	4	0	12	2	16
	12:15 AM	0		1		1	
	12:30 AM	2		7		9	
	12:45 AM	0		4		4	
	1:00 AM	0	1	5	9	5	10
	1:15 AM	0		3		3	
	1:30 AM	1		1		2	
	1:45 AM	0		0		0	
	2:00 AM	0	1	0	4	0	5
	2:15 AM	0		1		1	
	2:30 AM	0		0		0	
	2:45 AM	1		3		4	
	3:00 AM	0	0	0	5	0	5
	3:15 AM	0		0		0	
	3:30 AM	0		0		0	
	3:45 AM	0		5		5	
	4:00 AM	0	0	0	14	0	14
	4:15 AM	0		1		1	
	4:30 AM	0		0		0	
	4:45 AM	0		13		13	
	5:00 AM	2	18	5	39	7	57
	5:15 AM	3		18		21	
	5:30 AM	6		6		12	
	5:45 AM	7		10		17	
	6:00 AM	7	65	25	171	32	236
	6:15 AM	8		74		82	
	6:30 AM	30		31		61	
	6:45 AM	20		41		61	
	7:00 AM	27	133	32	292	59	425
	7:15 AM	22		72		94	
	7:30 AM	33		84		117	
	7:45 AM	51		104		155	
	8:00 AM	59	209	87	543	146	752
	8:15 AM	37		166		203	
	8:30 AM	57		117		174	
	8:45 AM	56		173		229	
	9:00 AM	52	199	110	408	162	607
	9:15 AM	56		111		167	
	9:30 AM	54		64		118	
	9:45 AM	37		123		160	
	10:00 AM	50	235	81	398	131	633
	10:15 AM	54		112		166	
	10:30 AM	76		95		171	
	10:45 AM	55		110		165	

	WB	E8	Combined
24 Hour Volume	4295 (33.1%)	8662 (66.9%)	12957

	12:00 AM - 12:00 PM			12:00 PM - 12:00 AM		
	W8	E8	Combined	W8	E8	Combined
Count	1204	2390	3594	3091	6272	9363
	33.5 %	66.5 %		33.0 %	67.0 %	
Peak Hour	11:00 AM	8:15 AM	11:00 AM	5:00 PM	4:30 PM	4:30 PM
Volume	339	566	834	537	947	1440
Factor	0.81	0.82	0.85	0.95	0.80	0.84

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Appendix B Year 2020 Existing Conditions Level-of-Service Worksheets

Danville Costco Gas Addition

Vistro File: H:\...\25059_Analysis_20200727.vistro
Report File: H:\...\Existing_AM.pdf

Scenario 1 Existing AM
7/27/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Crow Canyon Place/ Fostoria Way	Signalized	HCM 6th Edition	NB Left	0.478	17.6	B
2	Costco R-in R-out Driveway/ Fostoria Way	Two-way stop	HCM 6th Edition	SB Right	0.001	9.0	A
3	Costco All-Access Driveway/ Fostoria Way	Two-way stop	HCM 6th Edition	NB Left	0.024	11.2	B
4	Camino Ramon/ Fostoria Way	All-way stop	HCM 6th Edition	NB Left	0.277	9.3	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Intersection Level Of Service Report
Intersection 1: Crow Canyon Place/ Fostoria Way

Control Type:	Signalized	Delay (sec / veh):	17.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.478

Intersection Setup

Name	Crow Canyon Pl			Crow Canyon Pl			Fostoria Way			Fostoria Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	140.00	100.00	100.00	190.00	100.00	100.00	220.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Volumes

Name	Crow Canyon Pl			Crow Canyon Pl			Fostoria Way			Fostoria Way		
Base Volume Input [veh/h]	34	55	42	47	275	49	21	107	148	40	132	54
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	34	55	42	47	275	49	21	107	148	40	132	54
Peak Hour Factor	0.9600	0.9600	0.9600	0.8940	0.8940	0.8940	0.8930	0.8930	0.8930	0.9320	0.9320	0.9320
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	14	11	13	77	14	6	30	41	11	35	14
Total Analysis Volume [veh/h]	35	57	44	53	308	55	24	120	166	43	142	58
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	7	0	6	7	0	7	8	0	7	8	0
Maximum Green [s]	30	45	0	30	45	0	30	45	0	30	45	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.4	1.4	0.0	1.4	1.4	0.0	1.4	1.4	0.0	1.4	1.4	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	2.2	3.0	0.0	2.2	3.0	0.0	2.2	3.0	0.0	2.2	3.0	0.0
Walk [s]	0	4	0	0	4	0	0	4	0	0	4	0
Pedestrian Clearance [s]	0	19	0	0	20	0	0	20	0	0	12	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	20.0	20.0	0.0	20.0	20.0	0.0	20.0	20.0	0.0	20.0	20.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	44	44	44	44	44	44	44	44	44	44	44
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	2	10	10	3	11	2	8	8	3	9	9
g / C, Green / Cycle	0.05	0.24	0.24	0.07	0.26	0.04	0.18	0.18	0.07	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.02	0.03	0.03	0.03	0.20	0.01	0.06	0.10	0.02	0.05	0.06
s, saturation flow rate [veh/h]	1781	1870	1589	1781	1821	1781	1870	1589	1781	1870	1693
c, Capacity [veh/h]	86	445	378	117	466	73	330	281	118	377	341
d1, Uniform Delay [s]	20.38	13.20	13.17	19.83	15.26	20.55	15.98	16.70	19.72	14.88	14.93
k, delay calibration	0.06	0.11	0.11	0.06	0.11	0.06	0.11	0.11	0.06	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.66	0.13	0.14	1.46	2.86	1.38	0.67	1.99	1.02	0.38	0.46
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.41	0.13	0.12	0.45	0.78	0.33	0.36	0.59	0.37	0.27	0.29
d, Delay for Lane Group [s/veh]	22.04	13.33	13.30	21.29	18.12	21.93	16.65	18.69	20.74	15.27	15.39
Lane Group LOS	C	B	B	C	B	C	B	B	C	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.35	0.39	0.31	0.51	3.19	0.24	0.98	1.49	0.41	0.78	0.76
50th-Percentile Queue Length [ft/ln]	8.80	9.85	7.64	12.84	79.76	6.08	24.55	37.13	10.23	19.59	18.92
95th-Percentile Queue Length [veh/ln]	0.63	0.71	0.55	0.92	5.74	0.44	1.77	2.67	0.74	1.41	1.36
95th-Percentile Queue Length [ft/ln]	15.84	17.74	13.74	23.11	143.56	10.94	44.18	66.83	18.42	35.27	34.05

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.04	13.33	13.30	21.29	18.12	18.12	21.93	16.65	18.69	20.74	15.30	15.39
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	15.56			18.52			18.15			16.28		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	17.56											
Intersection LOS	B											
Intersection V/C	0.478											

Other Modes

g_Walk,mi, Effective Walk Time [s]	8.0	8.0	8.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	37.36	37.36	37.36	37.36
I_p,int, Pedestrian LOS Score for Intersection	2.293	2.123	2.408	2.392
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1000	1000	1000	1000
d_b, Bicycle Delay [s]	11.25	11.25	11.25	11.25
I_b,int, Bicycle LOS Score for Intersection	1.784	2.246	1.815	1.760
Bicycle LOS	A	B	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Intersection Level Of Service Report
Intersection 2: Costco R-in R-out Driveway/ Fostoria Way

Control Type:	Two-way stop	Delay (sec / veh):	9.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Driveway			Costco R-in/ R-out			Fostoria Way			Fostoria Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Driveway			Costco R-in/ R-out			Fostoria Way			Fostoria Way		
Base Volume Input [veh/h]	0	0	0	0	0	1	0	0	0	0	226	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	1	0	0	0	0	226	0
Peak Hour Factor	1.0000	1.0000	0.9200	1.0000	1.0000	0.9200	1.0000	0.9200	0.9200	1.0000	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	61	0
Total Analysis Volume [veh/h]	0	0	0	0	0	1	0	0	0	0	246	0
Pedestrian Volume [ped/h]	0			0			0			0		

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	8.32	0.00	0.00	8.98	0.00	0.00	0.00	0.00	0.00	0.00
Movement LOS			A			A		A	A		A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.32			8.98			0.00			0.00		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	0.04											
Intersection LOS	A											

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Intersection Level Of Service Report
Intersection 3: Costco All-Access Driveway/ Fostoria Way

Control Type:	Two-way stop	Delay (sec / veh):	11.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.024

Intersection Setup

Name	Office Depot Driveway			Costco All-Access Driveway			Fostoria Way			Fostoria Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	150.00	100.00	100.00	120.00	110.00	100.00	100.00	120.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Office Depot Driveway			Costco All-Access Driveway			Fostoria Way			Fostoria Way		
Base Volume Input [veh/h]	13	0	0	1	0	4	6	185	4	0	209	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	0	0	1	0	4	6	185	4	0	209	1
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	0	0	0	0	1	2	50	1	0	57	0
Total Analysis Volume [veh/h]	14	0	0	1	0	4	7	201	4	0	227	1
Pedestrian Volume [ped/h]	0			0			0			0		

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	11.21	12.29	8.86	11.16	12.17	8.94	7.71	0.00	0.00	7.64	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.07	0.07	0.00	0.01	0.01	0.01	0.02	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.81	1.81	0.00	0.13	0.13	0.33	0.39	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	11.21			9.39			0.25			0.00		
Approach LOS	B			A			A			A		
d_I, Intersection Delay [s/veh]	0.56											
Intersection LOS	B											

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Intersection Level Of Service Report
Intersection 4: Camino Ramon/ Fostoria Way

Control Type:	All-way stop	Delay (sec / veh):	9.3
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.277

Intersection Setup

Name	Camino Ramon			Camino Ramon			Fostoria Way			Fostoria Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	120.00	100.00	100.00	100.00	100.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Camino Ramon			Camino Ramon			Fostoria Way			Fostoria Way		
Base Volume Input [veh/h]	161	6	1	0	6	2	0	32	139	29	47	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	161	6	1	0	6	2	0	32	139	29	47	0
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	44	2	0	0	2	1	0	9	38	8	13	0
Total Analysis Volume [veh/h]	175	7	1	0	7	2	0	35	151	32	51	0
Pedestrian Volume [ped/h]	0			0			0			0		

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	631	692	800	644	695	695	804	645
Degree of Utilization, x	0.28	0.01	0.00	0.01	0.00	0.05	0.19	0.13

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.13	0.03	0.00	0.04	0.00	0.16	0.69	0.44
95th-Percentile Queue Length [ft]	28.21	0.77	0.09	1.06	0.00	3.97	17.21	11.01
Approach Delay [s/veh]	10.46			8.67	8.20			9.41
Approach LOS	B			A	A			A
Intersection Delay [s/veh]	9.32							
Intersection LOS	A							

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Danville Costco Gas Addition

Vistro File: H:\...\25059_Analysis_20200727.vistro
Report File: H:\...\Existing_PM.pdf

Scenario 2 Existing PM
7/27/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Crow Canyon Place/ Fostoria Way	Signalized	HCM 6th Edition	SB Left	0.585	22.2	C
2	Costco R-in R-out Driveway/ Fostoria Way	Two-way stop	HCM 6th Edition	SB Right	0.045	10.5	B
3	Costco All-Access Driveway/ Fostoria Way	Two-way stop	HCM 6th Edition	SB Left	0.561	68.2	F
4	Camino Ramon/ Fostoria Way	All-way stop	HCM 6th Edition	SB Thru	0.804	21.6	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Intersection Level Of Service Report
Intersection 1: Crow Canyon Place/ Fostoria Way

Control Type:	Signalized	Delay (sec / veh):	22.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.585

Intersection Setup

Name	Crow Canyon Pl			Crow Canyon Pl			Fostoria Way			Fostoria Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	140.00	100.00	100.00	190.00	100.00	100.00	220.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Volumes

Name	Crow Canyon Pl			Crow Canyon Pl			Fostoria Way			Fostoria Way		
Base Volume Input [veh/h]	83	146	113	109	241	63	91	237	118	150	289	116
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	83	146	113	109	241	63	91	237	118	150	289	116
Peak Hour Factor	0.7960	0.7960	0.7960	0.8990	0.8990	0.8990	0.8940	0.8940	0.8940	0.9250	0.9250	0.9250
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	46	35	30	67	18	25	66	33	41	78	31
Total Analysis Volume [veh/h]	104	183	142	121	268	70	102	265	132	162	312	125
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	7	0	6	7	0	7	8	0	7	8	0
Maximum Green [s]	30	45	0	30	45	0	30	45	0	30	45	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.4	1.4	0.0	1.4	1.4	0.0	1.4	1.4	0.0	1.4	1.4	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	2.2	3.0	0.0	2.2	3.0	0.0	2.2	3.0	0.0	2.2	3.0	0.0
Walk [s]	0	4	0	0	4	0	0	4	0	0	4	0
Pedestrian Clearance [s]	0	19	0	0	20	0	0	20	0	0	12	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	20.0	20.0	0.0	20.0	20.0	0.0	20.0	20.0	0.0	20.0	20.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	52	52	52	52	52	52	52	52	52	52	52
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	5	12	12	5	12	5	9	9	6	10	10
g / C, Green / Cycle	0.09	0.23	0.23	0.10	0.23	0.10	0.17	0.17	0.12	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.06	0.10	0.09	0.07	0.19	0.06	0.11	0.11	0.09	0.12	0.12
s, saturation flow rate [veh/h]	1781	1870	1589	1781	1804	1781	1870	1665	1781	1870	1692
c, Capacity [veh/h]	161	430	365	171	425	186	317	282	218	350	317
d1, Uniform Delay [s]	22.97	17.18	17.02	22.92	18.79	22.24	20.27	20.34	22.15	19.65	19.69
k, delay calibration	0.06	0.11	0.11	0.06	0.11	0.06	0.11	0.11	0.06	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.35	0.67	0.67	2.93	3.44	1.36	2.29	2.77	2.74	2.04	2.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.65	0.43	0.39	0.71	0.80	0.55	0.65	0.67	0.74	0.65	0.66
d, Delay for Lane Group [s/veh]	25.33	17.85	17.69	25.85	22.23	23.60	22.56	23.10	24.89	21.69	22.03
Lane Group LOS	C	B	B	C	C	C	C	C	C	C	C
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.24	1.76	1.36	1.46	3.81	1.16	2.33	2.17	1.92	2.50	2.33
50th-Percentile Queue Length [ft/ln]	31.02	43.93	33.95	36.58	95.29	29.02	58.33	54.31	47.89	62.59	58.14
95th-Percentile Queue Length [veh/ln]	2.23	3.16	2.44	2.63	6.86	2.09	4.20	3.91	3.45	4.51	4.19
95th-Percentile Queue Length [ft/ln]	55.84	79.08	61.11	65.84	171.52	52.23	104.99	97.76	86.20	112.66	104.64

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.33	17.85	17.69	25.85	22.23	22.23	23.60	22.68	23.10	24.89	21.78	22.03
Movement LOS	C	B	B	C	C	C	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	19.61			23.19			22.98			22.68		
Approach LOS	B			C			C			C		
d_I, Intersection Delay [s/veh]	22.21											
Intersection LOS	C											
Intersection V/C	0.585											

Other Modes

g_Walk,mi, Effective Walk Time [s]	8.0	8.0	8.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	37.36	37.36	37.36	37.36
I_p,int, Pedestrian LOS Score for Intersection	2.375	2.225	2.494	2.522
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1000	1000	1000	1000
d_b, Bicycle Delay [s]	11.25	11.25	11.25	11.25
I_b,int, Bicycle LOS Score for Intersection	2.267	2.317	1.971	2.054
Bicycle LOS	B	B	A	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Intersection Level Of Service Report
Intersection 2: Costco R-in R-out Driveway/ Fostoria Way

Control Type:	Two-way stop	Delay (sec / veh):	10.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.045

Intersection Setup

Name	Driveway			Costco R-in/ R-out			Fostoria Way			Fostoria Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Driveway			Costco R-in/ R-out			Fostoria Way			Fostoria Way		
Base Volume Input [veh/h]	0	0	0	0	0	27	0	0	0	0	528	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	27	0	0	0	0	528	12
Peak Hour Factor	1.0000	1.0000	0.8800	1.0000	1.0000	0.8800	1.0000	0.8800	0.8800	1.0000	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	8	0	0	0	0	150	3
Total Analysis Volume [veh/h]	0	0	0	0	0	31	0	0	0	0	600	14
Pedestrian Volume [ped/h]	0			0			0			0		

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	8.32	0.00	0.00	10.47	0.00	0.00	0.00	0.00	0.00	0.00
Movement LOS			A			B		A	A		A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	3.53	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.32			10.47			0.00			0.00		
Approach LOS	A			B			A			A		
d_I, Intersection Delay [s/veh]	0.50											
Intersection LOS	B											

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Intersection Level Of Service Report
Intersection 3: Costco All-Access Driveway/ Fostoria Way

Control Type:	Two-way stop	Delay (sec / veh):	68.2
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.561

Intersection Setup

Name	Office Depot Driveway			Costco All-Access Driveway			Fostoria Way			Fostoria Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	150.00	100.00	100.00	120.00	110.00	100.00	100.00	120.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Office Depot Driveway			Costco All-Access Driveway			Fostoria Way			Fostoria Way		
Base Volume Input [veh/h]	40	0	21	59	0	165	265	171	24	20	336	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	0	21	59	0	165	265	171	24	20	336	24
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	0	6	17	0	47	75	49	7	6	95	7
Total Analysis Volume [veh/h]	45	0	24	67	0	188	301	194	27	23	382	27
Pedestrian Volume [ped/h]	0			0			0			0		

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.41	0.00	0.03	0.56	0.00	0.23	0.26	0.00	0.00	0.02	0.00	0.00
d_M, Delay for Movement [s/veh]	58.71	55.54	9.01	68.20	67.59	10.86	9.26	0.00	0.00	7.72	0.00	0.00
Movement LOS	F	F	A	F	F	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.71	1.71	0.08	2.71	2.71	0.91	1.06	0.00	0.00	0.05	0.00	0.00
95th-Percentile Queue Length [ft/ln]	42.87	42.87	2.00	67.83	67.83	22.69	26.44	0.00	0.00	1.30	0.00	0.00
d_A, Approach Delay [s/veh]	41.43			25.92			5.34			0.41		
Approach LOS	E			D			A			A		
d_I, Intersection Delay [s/veh]	9.73											
Intersection LOS	F											

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Intersection Level Of Service Report
Intersection 4: Camino Ramon/ Fostoria Way

Control Type:	All-way stop	Delay (sec / veh):	21.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.804

Intersection Setup

Name	Camino Ramon			Camino Ramon			Fostoria Way			Fostoria Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	120.00	100.00	100.00	100.00	100.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Camino Ramon			Camino Ramon			Fostoria Way			Fostoria Way		
Base Volume Input [veh/h]	241	268	41	5	268	68	17	41	177	43	71	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	241	268	41	5	268	68	17	41	177	43	71	5
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	68	76	12	1	76	19	5	12	50	12	20	1
Total Analysis Volume [veh/h]	274	305	47	6	305	77	19	47	201	49	81	6
Pedestrian Volume [ped/h]	0			0			0			0		

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	487	524	585	483	431	459	505	416
Degree of Utilization, x	0.56	0.58	0.08	0.80	0.04	0.10	0.40	0.33

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	3.41	3.68	0.26	7.51	0.14	0.34	1.89	1.40
95th-Percentile Queue Length [ft]	85.18	92.04	6.53	187.81	3.45	8.50	47.29	35.03
Approach Delay [s/veh]	18.18			34.44	13.73			15.80
Approach LOS	C			D	B			C
Intersection Delay [s/veh]	21.56							
Intersection LOS	C							

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

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Appendix C Year 2020 Existing plus Project Conditions Level-of-Service Worksheets

Danville Costco Gas Addition

Vistro File: H:\...\25059_Analysis_20200727.vistro
Report File: H:\...\Existing_AM+Proj.pdf

Scenario 3 Existing+Proj AM
7/27/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Crow Canyon Place/ Fostoria Way	Signalized	HCM 6th Edition	NB Left	0.485	18.1	B
2	Costco R-in R-out Driveway/ Fostoria Way	Two-way stop	HCM 6th Edition	SB Right	0.001	9.3	A
3	Costco All-Access Driveway/ Fostoria Way	Two-way stop	HCM 6th Edition	NB Left	0.315	19.8	C
4	Camino Ramon/ Fostoria Way	All-way stop	HCM 6th Edition	NB Left	0.480	11.8	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Intersection Level Of Service Report
Intersection 1: Crow Canyon Place/ Fostoria Way

Control Type:	Signalized	Delay (sec / veh):	18.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.485

Intersection Setup

Name	Crow Canyon Pl			Crow Canyon Pl			Fostoria Way			Fostoria Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	140.00	100.00	100.00	190.00	100.00	100.00	220.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Volumes

Name	Crow Canyon Pl			Crow Canyon Pl			Fostoria Way			Fostoria Way		
Base Volume Input [veh/h]	34	55	61	69	275	49	21	156	148	55	185	75
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	34	55	61	69	275	49	21	156	148	55	185	75
Peak Hour Factor	0.9600	0.9600	0.9600	0.8940	0.8940	0.8940	0.8930	0.8930	0.8930	0.9320	0.9320	0.9320
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	14	16	19	77	14	6	44	41	15	50	20
Total Analysis Volume [veh/h]	35	57	64	77	308	55	24	175	166	59	198	80
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	7	0	6	7	0	7	8	0	7	8	0
Maximum Green [s]	30	45	0	30	45	0	30	45	0	30	45	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.4	1.4	0.0	1.4	1.4	0.0	1.4	1.4	0.0	1.4	1.4	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	2.2	3.0	0.0	2.2	3.0	0.0	2.2	3.0	0.0	2.2	3.0	0.0
Walk [s]	0	4	0	0	4	0	0	4	0	0	4	0
Pedestrian Clearance [s]	0	19	0	0	20	0	0	20	0	0	12	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	20.0	20.0	0.0	20.0	20.0	0.0	20.0	20.0	0.0	20.0	20.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	45	45	45	45	45	45	45	45	45	45	45
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	2	10	10	4	11	2	8	8	4	10	10
g / C, Green / Cycle	0.05	0.22	0.22	0.08	0.25	0.04	0.17	0.17	0.08	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.02	0.03	0.04	0.04	0.20	0.01	0.09	0.10	0.03	0.08	0.08
s, saturation flow rate [veh/h]	1781	1870	1589	1781	1821	1781	1870	1589	1781	1870	1693
c, Capacity [veh/h]	85	410	349	148	464	73	326	277	146	403	365
d1, Uniform Delay [s]	20.97	14.25	14.40	19.93	15.74	21.14	17.05	17.25	19.76	15.11	15.16
k, delay calibration	0.06	0.11	0.11	0.06	0.11	0.06	0.11	0.11	0.06	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.69	0.15	0.25	1.52	2.94	1.39	1.37	2.07	0.96	0.53	0.62
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.41	0.14	0.18	0.52	0.78	0.33	0.54	0.60	0.40	0.35	0.37
d, Delay for Lane Group [s/veh]	22.65	14.41	14.65	21.44	18.68	22.53	18.42	19.32	20.73	15.64	15.79
Lane Group LOS	C	B	B	C	B	C	B	B	C	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.36	0.43	0.49	0.76	3.32	0.25	1.57	1.55	0.57	1.14	1.09
50th-Percentile Queue Length [ft/ln]	9.11	10.63	12.17	18.95	83.06	6.28	39.24	38.67	14.18	28.48	27.14
95th-Percentile Queue Length [veh/ln]	0.66	0.77	0.88	1.36	5.98	0.45	2.82	2.78	1.02	2.05	1.95
95th-Percentile Queue Length [ft/ln]	16.39	19.13	21.90	34.10	149.50	11.31	70.62	69.60	25.53	51.26	48.85

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.65	14.41	14.65	21.44	18.68	18.68	22.53	18.42	19.32	20.73	15.68	15.79
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	16.36			19.17			19.10			16.59		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	18.14											
Intersection LOS	B											
Intersection V/C	0.485											

Other Modes

g_Walk,mi, Effective Walk Time [s]	8.0	8.0	8.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	37.36	37.36	37.36	37.36
I_p,int, Pedestrian LOS Score for Intersection	2.302	2.138	2.430	2.430
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1000	1000	1000	1000
d_b, Bicycle Delay [s]	11.25	11.25	11.25	11.25
I_b,int, Bicycle LOS Score for Intersection	1.817	2.286	1.861	1.838
Bicycle LOS	A	B	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Intersection Level Of Service Report
Intersection 2: Costco R-in R-out Driveway/ Fostoria Way

Control Type:	Two-way stop	Delay (sec / veh):	9.3
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Driveway			Costco R-in/ R-out			Fostoria Way			Fostoria Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Driveway			Costco R-in/ R-out			Fostoria Way			Fostoria Way		
Base Volume Input [veh/h]	0	0	0	0	0	1	0	0	0	0	315	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	1	0	0	0	0	315	0
Peak Hour Factor	1.0000	1.0000	0.9200	1.0000	1.0000	0.9200	1.0000	0.9200	0.9200	1.0000	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	86	0
Total Analysis Volume [veh/h]	0	0	0	0	0	1	0	0	0	0	342	0
Pedestrian Volume [ped/h]	0			0			0			0		

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	8.32	0.00	0.00	9.28	0.00	0.00	0.00	0.00	0.00	0.00
Movement LOS			A			A		A	A		A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.32			9.28			0.00			0.00		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	0.03											
Intersection LOS	A											

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Intersection Level Of Service Report
Intersection 3: Costco All-Access Driveway/ Fostoria Way

Control Type:	Two-way stop	Delay (sec / veh):	19.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.315

Intersection Setup

Name	Office Depot Driveway			Costco All-Access Driveway			Fostoria Way			Fostoria Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	150.00	100.00	100.00	120.00	110.00	100.00	100.00	120.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Office Depot Driveway			Costco All-Access Driveway			Fostoria Way			Fostoria Way		
Base Volume Input [veh/h]	102	0	104	1	0	4	6	185	93	104	209	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	102	0	104	1	0	4	6	185	93	104	209	1
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	0	28	0	0	1	2	50	25	28	57	0
Total Analysis Volume [veh/h]	111	0	113	1	0	4	7	201	101	113	227	1
Pedestrian Volume [ped/h]	0			0			0			0		

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.32	0.00	0.13	0.00	0.00	0.00	0.01	0.00	0.00	0.09	0.00	0.00
d_M, Delay for Movement [s/veh]	19.85	20.91	9.77	16.03	17.09	8.94	7.71	0.00	0.00	8.15	0.00	0.00
Movement LOS	C	C	A	C	C	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.32	1.32	0.45	0.01	0.01	0.01	0.02	0.00	0.00	0.30	0.00	0.00
95th-Percentile Queue Length [ft/ln]	33.04	33.04	11.17	0.23	0.23	0.33	0.39	0.00	0.00	7.40	0.00	0.00
d_A, Approach Delay [s/veh]	14.76			10.36			0.17			2.70		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	4.93											
Intersection LOS	C											

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Intersection Level Of Service Report
Intersection 4: Camino Ramon/ Fostoria Way

Control Type:	All-way stop	Delay (sec / veh):	11.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.480

Intersection Setup

Name	Camino Ramon			Camino Ramon			Fostoria Way			Fostoria Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	120.00	100.00	100.00	100.00	100.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Camino Ramon			Camino Ramon			Fostoria Way			Fostoria Way		
Base Volume Input [veh/h]	263	6	1	0	6	2	0	34	241	29	49	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	263	6	1	0	6	2	0	34	241	29	49	0
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	71	2	0	0	2	1	0	9	65	8	13	0
Total Analysis Volume [veh/h]	286	7	1	0	7	2	0	37	262	32	53	0
Pedestrian Volume [ped/h]	0			0			0			0		

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	596	649	744	569	643	643	735	573
Degree of Utilization, x	0.48	0.01	0.00	0.02	0.00	0.06	0.36	0.15

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	2.60	0.03	0.00	0.05	0.00	0.18	1.62	0.52
95th-Percentile Queue Length [ft]	64.95	0.82	0.10	1.20	0.00	4.57	40.47	12.95
Approach Delay [s/veh]	14.04			9.43	10.09			10.37
Approach LOS	B			A	B			B
Intersection Delay [s/veh]	11.81							
Intersection LOS	B							

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Danville Costco Gas Addition

Vistro File: H:\...\25059_Analysis_20200727.vistro
Report File: H:\...\Existing_PM+Proj.pdf

Scenario 4 Existing+Proj PM
7/27/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Crow Canyon Place/ Fostoria Way	Signalized	HCM 6th Edition	SB Left	0.608	23.1	C
2	Costco R-in R-out Driveway/ Fostoria Way	Two-way stop	HCM 6th Edition	SB Right	0.046	10.8	B
3	Costco All-Access Driveway/ Fostoria Way	Two-way stop	HCM 6th Edition	SB Left	5.398	2,733.4	F
4	Camino Ramon/ Fostoria Way	All-way stop	HCM 6th Edition	NB Left	0.898	33.3	D

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Intersection Level Of Service Report
Intersection 1: Crow Canyon Place/ Fostoria Way

Control Type:	Signalized	Delay (sec / veh):	23.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.608

Intersection Setup

Name	Crow Canyon Pl			Crow Canyon Pl			Fostoria Way			Fostoria Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	140.00	100.00	100.00	190.00	100.00	100.00	220.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Volumes

Name	Crow Canyon Pl			Crow Canyon Pl			Fostoria Way			Fostoria Way		
Base Volume Input [veh/h]	83	146	130	126	241	63	91	274	118	169	326	131
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	83	146	130	126	241	63	91	274	118	169	326	131
Peak Hour Factor	0.7960	0.7960	0.7960	0.8990	0.8990	0.8990	0.8940	0.8940	0.8940	0.9250	0.9250	0.9250
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	46	41	35	67	18	25	77	33	46	88	35
Total Analysis Volume [veh/h]	104	183	163	140	268	70	102	306	132	183	352	142
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	7	0	6	7	0	7	8	0	7	8	0
Maximum Green [s]	30	45	0	30	45	0	30	45	0	30	45	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.4	1.4	0.0	1.4	1.4	0.0	1.4	1.4	0.0	1.4	1.4	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	2.2	3.0	0.0	2.2	3.0	0.0	2.2	3.0	0.0	2.2	3.0	0.0
Walk [s]	0	4	0	0	4	0	0	4	0	0	4	0
Pedestrian Clearance [s]	0	19	0	0	20	0	0	20	0	0	12	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	20.0	20.0	0.0	20.0	20.0	0.0	0.0	0.0	0.0	20.0	20.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	54	54	54	54	54	54	54	54	54	54	54
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	5	12	12	6	13	6	9	9	7	11	11
g / C, Green / Cycle	0.09	0.22	0.22	0.10	0.23	0.10	0.17	0.17	0.13	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.06	0.10	0.10	0.08	0.19	0.06	0.12	0.12	0.10	0.14	0.14
s, saturation flow rate [veh/h]	1781	1870	1589	1781	1804	1781	1870	1683	1781	1870	1690
c, Capacity [veh/h]	157	407	346	187	423	182	328	295	239	388	351
d1, Uniform Delay [s]	24.01	18.44	18.54	23.65	19.62	23.26	21.06	21.12	22.70	19.80	19.83
k, delay calibration	0.06	0.11	0.11	0.06	0.11	0.06	0.11	0.11	0.06	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.56	0.78	1.00	3.27	3.54	1.46	2.67	3.16	2.76	1.96	2.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.66	0.45	0.47	0.75	0.80	0.56	0.70	0.71	0.76	0.67	0.67
d, Delay for Lane Group [s/veh]	26.57	19.22	19.54	26.92	23.15	24.72	23.73	24.28	25.46	21.77	22.06
Lane Group LOS	C	B	B	C	C	C	C	C	C	C	C
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.31	1.89	1.71	1.78	4.01	1.22	2.72	2.54	2.25	2.92	2.69
50th-Percentile Queue Length [ft/ln]	32.70	47.25	42.73	44.46	100.24	30.57	68.02	63.51	56.31	73.10	67.35
95th-Percentile Queue Length [veh/ln]	2.35	3.40	3.08	3.20	7.22	2.20	4.90	4.57	4.05	5.26	4.85
95th-Percentile Queue Length [ft/ln]	58.86	85.05	76.92	80.03	180.43	55.03	122.44	114.31	101.35	131.58	121.24

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	26.57	19.22	19.54	26.92	23.15	23.15	24.72	23.87	24.28	25.46	21.85	22.06
Movement LOS	C	B	B	C	C	C	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	21.03			24.26			24.13			22.87		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	23.11											
Intersection LOS	C											
Intersection V/C	0.608											

Other Modes

g_Walk,mi, Effective Walk Time [s]	8.0	8.0	8.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	37.36	37.36	37.36	37.36
I_p,int, Pedestrian LOS Score for Intersection	2.385	2.237	2.510	2.553
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1000	1000	1000	1000
d_b, Bicycle Delay [s]	11.25	11.25	11.25	11.25
I_b,int, Bicycle LOS Score for Intersection	2.302	2.348	2.005	2.118
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Intersection Level Of Service Report
Intersection 2: Costco R-in R-out Driveway/ Fostoria Way

Control Type:	Two-way stop	Delay (sec / veh):	10.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.046

Intersection Setup

Name	Driveway			Costco R-in/ R-out			Fostoria Way			Fostoria Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Driveway			Costco R-in/ R-out			Fostoria Way			Fostoria Way		
Base Volume Input [veh/h]	0	0	0	0	0	26	0	0	0	0	599	11
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	26	0	0	0	0	599	11
Peak Hour Factor	1.0000	1.0000	0.8800	1.0000	1.0000	0.8800	1.0000	0.8800	0.8800	1.0000	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	7	0	0	0	0	170	3
Total Analysis Volume [veh/h]	0	0	0	0	0	30	0	0	0	0	681	13
Pedestrian Volume [ped/h]	0			0			0			0		

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	8.32	0.00	0.00	10.82	0.00	0.00	0.00	0.00	0.00	0.00
Movement LOS			A			B		A	A		A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	3.63	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.32			10.82			0.00			0.00		
Approach LOS	A			B			A			A		
d_I, Intersection Delay [s/veh]	0.45											
Intersection LOS	B											

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Intersection Level Of Service Report
Intersection 3: Costco All-Access Driveway/ Fostoria Way

Control Type:	Two-way stop	Delay (sec / veh):	2,733.4
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	5.398

Intersection Setup

Name	Office Depot Driveway			Costco All-Access Driveway			Fostoria Way			Fostoria Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	150.00	100.00	100.00	120.00	110.00	100.00	100.00	120.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Office Depot Driveway			Costco All-Access Driveway			Fostoria Way			Fostoria Way		
Base Volume Input [veh/h]	123	65	121	56	30	156	236	171	125	137	335	21
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	123	65	121	56	30	156	236	171	125	137	335	21
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	18	34	16	9	44	67	49	36	39	95	6
Total Analysis Volume [veh/h]	140	74	138	64	34	177	268	194	142	156	381	24
Pedestrian Volume [ped/h]	0			0			0			0		

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	3.24	0.94	0.16	5.40	0.47	0.22	0.23	0.00	0.00	0.13	0.00	0.00
d_M, Delay for Movement [s/veh]	1606.60	1568.85	10.08	2733.37	2479.29	10.73	9.08	0.00	0.00	8.38	0.00	0.00
Movement LOS	F	F	B	F	F	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	23.73	23.73	0.58	12.99	12.99	0.84	0.90	0.00	0.00	0.44	0.00	0.00
95th-Percentile Queue Length [ft/ln]	593.31	593.31	14.51	324.77	324.77	20.93	22.60	0.00	0.00	10.96	0.00	0.00
d_A, Approach Delay [s/veh]	972.75			949.57			4.03			2.33		
Approach LOS	F			F			A			A		
d_I, Intersection Delay [s/veh]	338.88											
Intersection LOS	F											

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Intersection Level Of Service Report
Intersection 4: Camino Ramon/ Fostoria Way

Control Type:	All-way stop	Delay (sec / veh):	33.3
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.898

Intersection Setup

Name	Camino Ramon			Camino Ramon			Fostoria Way			Fostoria Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	120.00	100.00	100.00	100.00	100.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Camino Ramon			Camino Ramon			Fostoria Way			Fostoria Way		
Base Volume Input [veh/h]	351	239	41	5	254	65	15	43	272	43	74	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	351	239	41	5	254	65	15	43	272	43	74	4
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	100	68	12	1	72	18	4	12	77	12	21	1
Total Analysis Volume [veh/h]	399	272	47	6	289	74	17	49	309	49	84	5
Pedestrian Volume [ped/h]	0			0			0			0		

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	445	474	524	426	408	433	474	371
Degree of Utilization, x	0.90	0.57	0.09	0.87	0.04	0.11	0.65	0.37

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	9.71	3.54	0.29	8.72	0.13	0.38	4.61	1.68
95th-Percentile Queue Length [ft]	242.81	88.38	7.35	217.94	3.26	9.51	115.18	42.04
Approach Delay [s/veh]	35.70			46.06	21.48			18.36
Approach LOS	E			E	C			C
Intersection Delay [s/veh]	33.26							
Intersection LOS	D							

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

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Appendix D Year 2020 Existing plus Project Conditions with Proposed Improvements Level-of-Service Worksheets

Danville Costco Gas Addition

Vistro File: H:\...\25059_Analysis_20200727.vistro
Report File: H:\...\Existing_AM+Proj_Improv.pdf

Scenario 7 Existing+Proj AM_Improvements
7/27/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
3	Costco All-Access Driveway/ Fostoria Way	Signalized	HCM 6th Edition	SB Left	0.283	12.9	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Intersection Level Of Service Report
Intersection 3: Costco All-Access Driveway/ Fostoria Way

Control Type:	Signalized	Delay (sec / veh):	12.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.283

Intersection Setup

Name	Office Depot Driveway			Costco All-Access Driveway			Fostoria Way			Fostoria Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	150.00	100.00	100.00	120.00	110.00	100.00	100.00	120.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Volumes

Name	Office Depot Driveway			Costco All-Access Driveway			Fostoria Way			Fostoria Way		
Base Volume Input [veh/h]	102	0	104	1	0	4	6	185	93	104	209	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	102	0	104	1	0	4	6	185	93	104	209	1
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	0	28	0	0	1	2	50	25	28	57	0
Total Analysis Volume [veh/h]	111	0	113	1	0	4	7	201	101	113	227	1
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	240
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	5	45	0	5	45	0	5	45	0	5	45	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.4	1.4	0.0	1.4	1.4	0.0	1.4	1.4	0.0	1.4	1.4	0.0
Split [s]	37	33	0	37	33	0	14	102	0	68	156	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	23	0	0	23	0	0	18	0	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.4	2.4	0.0	2.4	2.4	0.0	2.4	2.4	0.0	2.4	2.4	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	20.0	20.0	0.0	20.0	20.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	C
C, Cycle Length [s]	28	28	28	28	28	28	28	28	28	28
L, Total Lost Time per Cycle [s]	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40
g_i, Effective Green Time [s]	3	3	0	0	0	5	5	3	7	7
g / C, Green / Cycle	0.10	0.11	0.00	0.01	0.01	0.16	0.16	0.11	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.06	0.07	0.00	0.00	0.00	0.08	0.09	0.06	0.06	0.06
s, saturation flow rate [veh/h]	1781	1589	1781	1589	1781	1870	1667	1781	1870	1867
c, Capacity [veh/h]	187	175	3	11	18	306	272	189	486	485
d1, Uniform Delay [s]	12.15	12.12	14.19	14.07	14.00	10.86	10.91	12.13	8.30	8.30
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.99	3.95	67.37	20.45	13.77	1.31	1.64	3.01	0.25	0.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.59	0.65	0.37	0.38	0.40	0.51	0.54	0.60	0.23	0.24
d, Delay for Lane Group [s/veh]	15.14	16.07	81.55	34.51	27.77	12.17	12.55	15.14	8.55	8.55
Lane Group LOS	B	B	F	C	C	B	B	B	A	A
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.65	0.69	0.06	0.08	0.10	0.74	0.72	0.66	0.39	0.39
50th-Percentile Queue Length [ft/ln]	16.19	17.33	1.40	2.01	2.55	18.52	17.94	16.47	9.78	9.78
95th-Percentile Queue Length [veh/ln]	1.17	1.25	0.10	0.14	0.18	1.33	1.29	1.19	0.70	0.70
95th-Percentile Queue Length [ft/ln]	29.14	31.20	2.51	3.61	4.59	33.33	32.30	29.64	17.61	17.60

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.14	16.07	16.07	81.55	34.51	34.51	27.77	12.26	12.55	15.14	8.55	8.55
Movement LOS	B	B	B	F	C	C	C	B	B	B	A	A
d_A, Approach Delay [s/veh]	15.61			43.92			12.70			10.73		
Approach LOS	B			D			B			B		
d_I, Intersection Delay [s/veh]	12.86											
Intersection LOS	B											
Intersection V/C	0.283											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	111.17	111.17	111.17	111.17
I_p,int, Pedestrian LOS Score for Intersection	2.129	1.991	2.473	2.474
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	238	238	813	1263
d_b, Bicycle Delay [s]	93.10	93.10	42.25	16.28
I_b,int, Bicycle LOS Score for Intersection	1.929	1.568	1.815	1.841
Bicycle LOS	A	A	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Attachment: G. CEQA Analysis Memo with Technical Reports (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002, MUP 20-501-003,

Danville Costco Gas Addition

Vistro File: H:\...\25059_Analysis_20200727.vistro
Report File: H:\...\Existing_PM+Proj_Improv.pdf

Scenario 6 Existing+Proj PM_Improvements
7/27/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
3	Costco All-Access Driveway/ Fostoria Way	Signalized	HCM 6th Edition	SB Left	0.535	21.3	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

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Intersection Level Of Service Report
Intersection 3: Costco All-Access Driveway/ Fostoria Way

Control Type:	Signalized	Delay (sec / veh):	21.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.535

Intersection Setup

Name	Office Depot Driveway			Costco All-Access Driveway			Fostoria Way			Fostoria Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	150.00	100.00	100.00	120.00	110.00	100.00	100.00	120.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

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Volumes

Name	Office Depot Driveway			Costco All-Access Driveway			Fostoria Way			Fostoria Way		
Base Volume Input [veh/h]	123	65	121	56	30	156	236	171	125	137	335	21
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	123	65	121	56	30	156	236	171	125	137	335	21
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	18	34	16	9	44	67	49	36	39	95	6
Total Analysis Volume [veh/h]	140	74	138	64	34	177	268	194	142	156	381	24
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

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Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	45	45	0	45	45	0	45	45	0	45	45	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.4	1.4	0.0	1.4	1.4	0.0	1.4	1.4	0.0	1.4	1.4	0.0
Split [s]	18	33	0	44	59	0	14	28	0	15	29	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	23	0	0	23	0	0	18	0	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.4	2.4	0.0	2.4	2.4	0.0	2.4	2.4	0.0	2.4	2.4	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	20.0	20.0	0.0	20.0	20.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

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Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	C
C, Cycle Length [s]	48	48	48	48	48	48	48	48	48	48
L, Total Lost Time per Cycle [s]	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40
g_i, Effective Green Time [s]	5	10	3	8	9	11	11	6	8	8
g / C, Green / Cycle	0.11	0.21	0.06	0.17	0.19	0.24	0.24	0.12	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.08	0.13	0.04	0.13	0.15	0.10	0.10	0.09	0.11	0.11
s, saturation flow rate [veh/h]	1781	1677	1781	1629	1781	1870	1613	1781	1870	1831
c, Capacity [veh/h]	190	360	108	274	346	449	387	211	307	301
d1, Uniform Delay [s]	20.80	16.95	22.00	19.08	18.35	15.34	15.37	20.45	18.84	18.84
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.48	1.53	5.17	4.52	3.72	0.57	0.69	5.00	2.48	2.55
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.74	0.59	0.60	0.77	0.77	0.40	0.41	0.74	0.67	0.67
d, Delay for Lane Group [s/veh]	26.28	18.49	27.16	23.60	22.08	15.91	16.06	25.45	21.31	21.40
Lane Group LOS	C	B	C	C	C	B	B	C	C	C
Critical Lane Group	Yes	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.66	1.99	0.79	2.33	2.83	1.50	1.33	1.80	2.10	2.07
50th-Percentile Queue Length [ft/ln]	41.40	49.72	19.80	58.15	70.71	37.46	33.31	45.11	52.45	51.72
95th-Percentile Queue Length [veh/ln]	2.98	3.58	1.43	4.19	5.09	2.70	2.40	3.25	3.78	3.72
95th-Percentile Queue Length [ft/ln]	74.52	89.50	35.64	104.68	127.28	67.44	59.95	81.20	94.40	93.10

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	26.28	18.49	18.49	27.16	23.60	23.60	22.08	15.93	16.06	25.45	21.35	21.40
Movement LOS	C	B	B	C	C	C	C	B	B	C	C	C
d_A, Approach Delay [s/veh]	21.59			24.43			18.69			22.49		
Approach LOS	C			C			B			C		
d_I, Intersection Delay [s/veh]	21.33											
Intersection LOS	C											
Intersection V/C	0.535											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
I_p,int, Pedestrian LOS Score for Intersection	2.178	2.164	2.569	2.502
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	477	910	393	410
d_b, Bicycle Delay [s]	34.81	17.82	38.72	37.92
I_b,int, Bicycle LOS Score for Intersection	2.140	2.013	2.058	2.022
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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CITY OF SAN RAMON

COMMUNITY DEVELOPMENT

COSTCO SERVICE STATION
3111 FOSTORIA WAY
AR 20-200-015, DP 20-300-002, MUP 20-501-003, & MSP 20-700-001

PLANNING COMMISSION PUBLIC HEARING
OCTOBER 20, 2020

Attachment: H. PowerPoint Presentation (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002,

LOCATION:
3111 FOSTORIA WAY

San Ramon
CALIFORNIA

General Plan:

Mixed Use – Commercial

NCRSP:

CMU(Commercial Mixed Use)

Use Classification:

Service Station (allowed w/ MUP)

Attachment: H. PowerPoint Presentation (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002,

SITE DESCRIPTIONS:

- 2.88 acre lot
- 30,000 sq. ft. existing building to be removed
- Site access at three locations with a reciprocal access easement
- Surrounded by a mix of commercial uses
- Nearest residential development (Fostoria Terrace Townhome) 520 ft. to the east

Attachment: H. PowerPoint Presentation (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002,

PROJECT DESCRIPTION:

San Ramon
CALIFORNIA

- A service station consisting of 16 double-faced dispensers, a total of 32 motor vehicle fueling pumps.
- Costco signs on all four sides of the canopy.
- Minor modifications to the existing parking lot with landscape enhancement.
- New landscaping around the proposed service station.

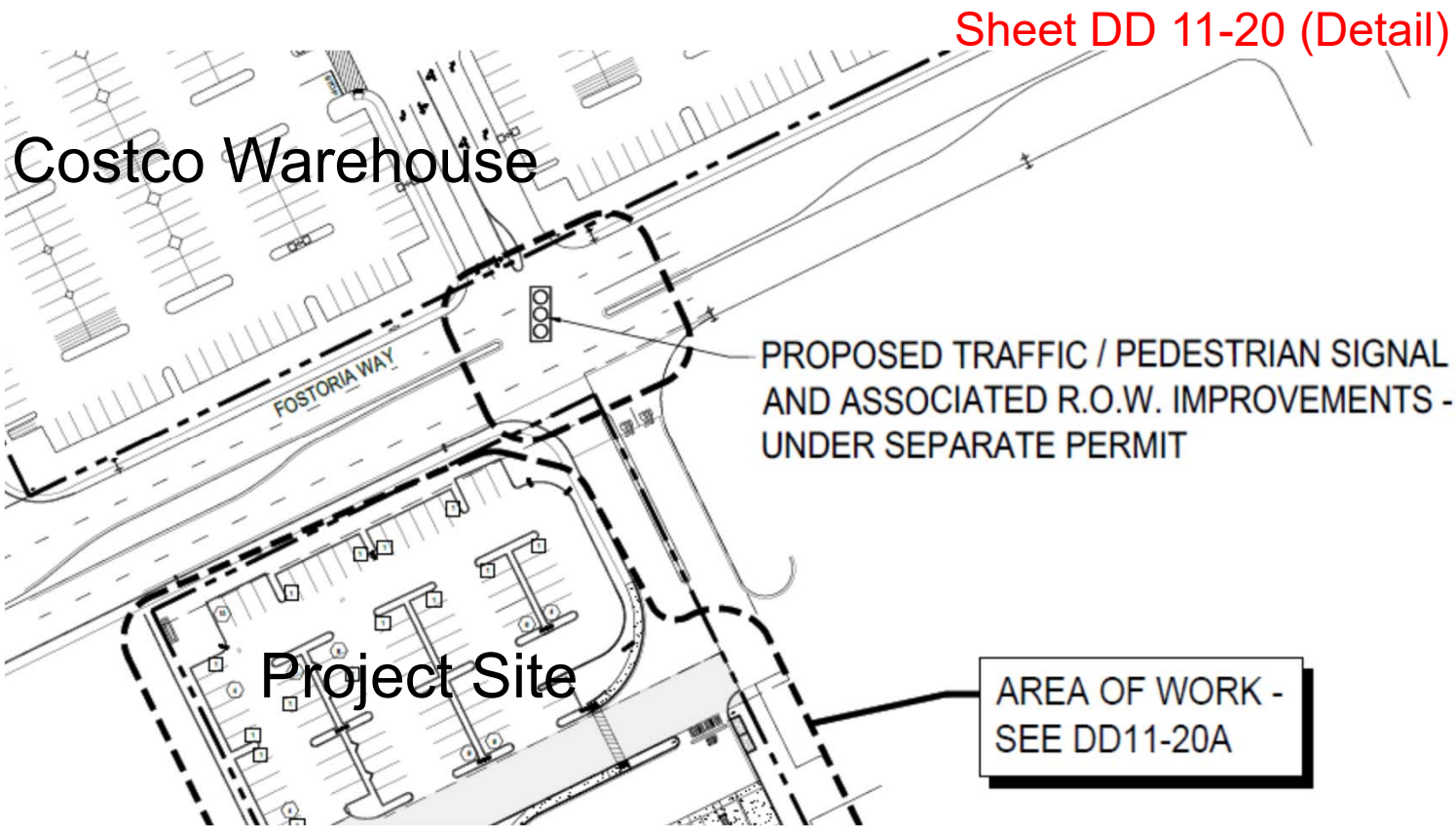
Attachment: H. PowerPoint Presentation (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002,

CANOPY DESIGN & SIGNS

- Canopy: 12,663 sq. ft. in roof area, 3'-0" in thickness, & 14'-6" minimum clearance
- Signs: 20.85 sq. ft. / sign

Attachment: H. PowerPoint Presentation (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002,

INTERSECTION IMPROVEMENT



- Existing intersection to be improved.

  (Signalization required in the Conditions of Approval)

Attachment: H. PowerPoint Presentation (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002,

PUBLIC ART

"The Iron Horse" to remain

Attachment: H. PowerPoint Presentation (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002,

CEQA CLASS 32 IN-FILL EXEMPTION

- The subject property is consistent with the General Plan, NCRSP, & Zoning polices and standards;
- The project site is within the City limit and no larger than 5 acres;
- The project site has no habitat value for endangered, rare or threatened species;
- The proposed project would not result in any significant effects to traffic, noise, air quality, or water quality; and
- The project site is adequately served by all required utilities and public services.

Attachment: H. PowerPoint Presentation (2928 : Costco Service Station (AR 20-200-015, DP 20-300-002,

RECOMMENDATION

- Receive the staff report and a presentation by the Applicant;
- Open the public hearing and take public testimony on the proposed project;
- Close the public hearing, consider the project and deliberate; and
- If appropriate, adopt Resolution No. 18-20 approving the proposed project.

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