ANNOTATED

AGENDA

CITY OF ANTIOCH PLANNING COMMISSION

ANTIOCH COUNCIL CHAMBERS 200 "H" STREET

WEDNESDAY, JULY 19, 2017

6:30 P.M.

NO PUBLIC HEARINGS WILL BEGIN AFTER 10:00 P.M. UNLESS THERE IS A VOTE OF THE PLANNING COMMISSION

TO HEAR THE MATTER

<u>APPEAL</u>

All items that can be appealed under 9-5.2509 of the Antioch Municipal Code must be appealed within five (5) working days of the date of the decision. The final appeal date of decisions made at this meeting is 5:00 p.m. on **WEDNESDAY**, **JULY 26**, **2017**.

If you wish to speak, either during "public comments" or during an agenda item, fill out a Speaker Request Form and place in the Speaker Card Tray. This will enable us to call upon you to speak. Each speaker is limited to not more than 3 minutes. During public hearings, each side is entitled to one "main presenter" who may have not more than 10 minutes. These time limits may be modified depending on the number of speakers, number of items on the agenda or circumstances. No one may speak more than once on an agenda item or during "public comments". Groups who are here regarding an item may identify themselves by raising their hands at the appropriate time to show support for one of their speakers.

ROLL CALL

6:30 P.M.

Commissioners

Zacharatos, Chair **(absent)** Parsons, Vice Chair Motts Mason Turnage Husary Conley

PLEDGE OF ALLEGIANCE

PUBLIC COMMENTS

CONSENT CALENDAR

All matters listed under Consent Calendar are considered routine and are recommended for approval by the staff. There will be one motion approving the items listed. There will be no separate discussion of these items unless members of the Commission, staff or the public request specific items to be removed from the Consent Calendar for separate action.

- 1.APPROVAL OF MINUTES:May 17, 2017APPROVED
 - * * * END OF CONSENT CALENDAR *

NEW PUBLIC HEARING

2. General Plan Land Use Element Update: Sand Creek Focus Area – The City of Antioch is proposing amendments to the Land Use Element of the General Plan affecting the Sand Creek Focus Area. The amendments include, but are not limited to, changes to land use designations, density allowances, conceptual circulation, land use policies, hillside protection policies, and open space designations. An addendum to the original 2003 General Plan Environmental Impact Report (EIR) has been prepared. The proposed changes ultimately require City Council approval and the Planning Commission will serve as an advisory board, providing a recommendation to the City Council on the matter.

CONTINUED TO 8/2/17

ORAL COMMUNICATIONS

STAFF REPORT

STAFF REPORT

WRITTEN COMMUNICATIONS

COMMITTEE REPORTS

ADJOURNMENT 7:16 PM

Notice of Availability of Reports

This agenda is a summary of the discussion items and actions proposed to be taken by the Planning Commission. For almost every agenda item, materials have been prepared by the City staff for the Planning Commission's consideration. These materials include staff reports which explain in detail the item before the Commission and the reason for the recommendation. The materials may also include resolutions or ordinances which are proposed to be adopted. Other materials, such as maps and diagrams, may also be included. All of these materials are available at the Community Development Department located on the 2nd floor of City Hall, 200 "H" Street, Antioch, California, 94509, between the hours of 8:00 a.m. and 11:30 a.m. or by appointment only between 1:00 p.m. and 5:00 p.m. Monday through Friday for inspection and copying (for a fee). Copies are also made available at the Antioch Public Library for inspection. Questions on these materials may be directed to the staff member who prepared them, or to the Community Development Department Department, who will refer you to the appropriate person.

Notice of Opportunity to Address the Planning Commission

The public has the opportunity to address the Planning Commission on each agenda item. You may be requested to complete a yellow Speaker Request form. Comments regarding matters not on this Agenda may be addressed during the "Public Comment" section on the agenda.

Accessibility The meetings are accessible to those with disabilities. Auxiliary aids will be made available for persons with hearing or vision disabilities upon request in advance at (925) 779-7009 or TDD (925) 779-7081.

CITY OF ANTIOCH PLANNING COMMISSION

Regular Meeting 6:30 p.m.

May 17, 2017 City Council Chambers

Chair Zacharatos called the meeting to order at 6:30 P.M. on Wednesday, May 17, 2017 in the City Council Chambers. She stated that all items that can be appealed under 9-5.2509 of the Antioch Municipal Code must be appealed within five (5) working days of the date of the decision. The final appeal date of decisions made at this meeting is 5:00 P.M. on Wednesday, May 24, 2017.

ROLL CALL

Present:	Commissioners Husary, Motts, Mason, Turnage, Conley and Chair
	Zacharatos
Absent:	Vice Chair Parsons
Staff:	Director of Community Development, Forrest Ebbs
	Assistant City Engineer, Lynne Filson
	Associate Planner, Kevin Scudero
	Interim City Attorney, Samantha Chen
	Acting Captain, Tony Morefield
	Minutes Clerk, Kitty Eiden

PLEDGE OF ALLEGIANCE

PUBLIC COMMENTS

None.

CONSENT CALENDAR

1. Approval of Minutes: April 5, 2017

On motion by Commissioner Conley, seconded by Commissioner Turnage, the Planning Commission approved the minutes of April 5, 2017, as presented. The motion carried the following vote:

AYES:	Mason, Turnage, Conley and Zacharatos
NOES:	None
ABSTAIN:	Husary, Motts
ABSENT:	Parsons

<u>1</u> 7-19-17

CONTINUED PUBLIC HEARING

2. Z-17-01 – Tobacco Ordinance Amendment – The City of Antioch is proposing text amendments to Chapter 16: Drug Paraphernalia, Section 6-8.14-Tobacco Retailer License, Section 9-5.203-Definitions and Section 9-5.3843 Tobacco and Paraphernalia Retailers of the Antioch Municipal Code. The amendments include, but are not limited to, changes to definitions related to tobacco and paraphernalia retailers, the display of tobacco paraphernalia, licenses required for retail tobacco sales, and the prohibition of tobacco and paraphernalia retailers. The proposed ordinance would be applicable city-wide. This project is exempt from the California Environmental Quality Act.

Director of Community Development Ebbs presented the staff report dated May 12, 2017, recommending that the Planning Commission approve the attached resolution recommending that the City Council adopt the ordinance amending City regulations regarding tobacco and paraphernalia retailers by prohibiting new tobacco and paraphernalia retailer businesses, subject to certain exceptions, and establishing legal non-conforming use procedures for established Tobacco and Paraphernalia Retailer businesses.

Commissioner Turnage questioned if an individual would be prohibited from selling their business after 2023 even if they owned it prior to the ordinance being passed and if so would that create an ex post facto issue.

In response to Commissioner Turnage, Director of Community Development Ebbs stated the ordinance would prevent owners from selling their business after 2023 and explained the entire ordinance was developed in partnership with a land use attorney who was careful it would not expose the City to litigation.

Commissioner Turnage expressed concern for applying an ordinance to an existing business noting that their intent may be to sell the business as part of their retirement.

In response to Commissioner Conley, Director of Community Development Ebbs added that if the intent was for the business owner to pass the business to successors, they had 5 years to add them to the corporation or create a trust.

In response to Commissioner Mason, Director of Community Development Ebbs reported notification of this evenings meeting was sent to all the current Tobacco and Paraphernalia Retail operators in the City.

In response to Chair Zacharatos, Director of Community Development Ebbs explained Council directed staff to develop an ordinance that addressed existing tobacco retailers and they felt the ordinance before the Planning Commission this evening was a reasonable solution. Chair Zacharatos opened the closed the public hearing with no speakers requesting to speak.

RESOLUTION NO. 2017-11

On motion by Commissioner Conley, seconded by Commissioner Motts, the Planning Commission members present unanimously approved the resolution recommending that the City Council adopt the ordinance amending tobacco and paraphernalia retailer regulations by repealing Antioch City Code Sections 5-16.01 and 6-8.14 and repealing and replacing sections 9-5.203 and 9-5.3843. The motion carried the following vote:

AYES:	Husary, Motts, Mason, Conley and Zacharatos
NOES:	Turnage
ABSTAIN:	None
ABSENT:	Parsons

NEW ITEMS

3. AR-16-15, AUP-16-26 - Tri-Delta - Tri Delta Transit is requesting approval of an administrative use permit and design review for the design and construction of a new park and ride lot. The project is located at the northeast corner of Auto Center Drive and West Sixth Street (APN 074-130-081).

Associate Planner Scudero presented the staff report dated May 12, 2017, recommending the Planning Commission approve the design review and administrative use permit request subject to the conditions contained in the staff report's attached resolution.

Chair Zacharatos opened the public hearing.

Steve Ponte, Eastern Contra Costa Transit Authority, clarified they did not own the parcel to the south. He stated this project would assist BART, the City of Antioch and commuters. He requested project specific condition A4 be amended to extend the approval to three years which would allow additional time to seek federal and/or state funding. He stated they were agreeable to all other conditions of approval. He reported they would poll users to determine the preferred design for bicycle racks.

In response to Commissioner Motts, Mr. Ponte stated with the minimal amount of parking spaces at BART, they expected this lot would be full.

Commissioner Motts stated that historically he had felt this location would be optimal for high density housing.

In response to Commissioner Mason, Shawn O'Keefe Project Architect/Engineer reported handicapped parking for the project was calculated based on ADA guidelines.

In response to Chair Zacharatos, Director of Community Development Ebbs explained that the approval for 2 years was the code requirement unless modified by the Planning Commission.

In response to Commissioner Conley, Mr. Ponte stated the cost to complete the project was \$3.2M and they were looking at funding from the state and federal governments. He clarified that they would not be seeking funding from the City. He noted their goal was to make the project shovel ready for grant consideration.

In response to Commissioner Motts, Mr. Ponte stated there would be no charge for parking at the lot.

In response to Chair Zacharatos, Mr. Ponte stated they would have no issue with extended parking.

Chair Zacharatos closed the public hearing.

Commissioner Turnage stated he would support the extension of approval to 3 years.

Commissioner Motts agreed and stated he supported the additional condition regarding security camera requirements.

Commissioner Husary stated with the growing amount of commuters, she felt this lot would be helpful.

Chair Zacharatos stated she felt the project would be a nice addition to Antioch.

RESOLUTION NO. 2017-12

On motion by Commissioner Conley, seconded by Commissioner Turnage, the Planning Commission members present unanimously approved the design review and administrative use permit request subject to the conditions contained in the staff report's attached resolution.

Amending project specific condition #A4 to read:

A4 – This approval expires three years from the date of approval (expires May 17, 2020), unless a building permit has been issued and construction has diligently commenced thereon and has not expired, or an extension has been approved by the Zoning Administrator. Requests for extensions must be received in writing with the appropriate fees prior to the expiration of this approval. No more than one one-year extension shall be granted.

And with the addition of project specific condition J17 to read:

J17 - Security cameras shall be installed on site and the footage from the security cameras shall be made available to the Antioch Police Department. The location, number of cameras, and other details shall be provided concurrent with the Building Permit submittal and shall be subject to the review and approval by the Antioch Police Department.

The motion carried the following vote:

AYES:	Husary, Motts, Mason, Turnage, Conley and Zacharatos
NOES:	None
ABSTAIN:	None
ABSENT:	Parsons

4. Planning Commission Rules, Bylaws, and Handbooks – Staff will present options for developing rules for the Planning Commission, pursuant to Antioch Municipal Code Section 2-5.301.

Director of Community Development Ebbs presented the staff report dated May 12, 2017, recommending the Planning Commission review the examples of rules, bylaws, and handbooks and provide direction to staff.

Following discussion, the Commission directed staff to bring back for Planning Commission consideration, a draft document similar but not as extensive as the Planning Commission Handbook for the City of San Mateo, that included a practice to rotate Chair and Vice Chair based on seniority.

Commissioner Turnage suggested training be included in the handbook.

Commissioner Mason suggested absentees and terms be defined in the handbook. He recommended the Planning Commission hold periodic informational community meetings for upcoming projects.

Commissioner Conley suggested the handbook be required reading for applicants prior to their interviews.

Commissioner Motts stated he would support additional Planning Commissioner training sessions in a meeting format.

In response to Commissioner Motts, Director of Community Development Ebbs explained City's Municipal Code dictated the requirements for attendance and to change that would require Council action.

Chair Zacharatos stated she felt it would be advantageous to have a conversation regarding considerations for excused absences.

Director of Community Development Ebbs stated based on the Planning Commission's direction this evening; he would work on an Antioch Specific Handbook, similar to but a lighter version of, the City of San Mateo model.

ORAL COMMUNICATIONS

In response to Commissioner Conley, Director of Community Development Ebbs stated that he was not part of closed session items regarding Humphreys; however, he was aware that there were discussions occurring regarding a new tenant.

In response to Chair Zacharatos, Director of Community Development Ebbs reported the City Clerk or City Attorney would schedule Brown Act Training.

Director of Community Development Ebbs gave a brief update on the status of the Downtown Specific Plan, General Plan Land Use Element Update, Sand Creek Focus Area and Zoning Ordinance Update.

In response to Commissioner Mason, Associate Planner Kevin Scudero stated staff had received one application for an accessory dwelling unit that would not have qualified under the previous code. With regards to existing studios not permitted, he noted many factors would determine if the unit could be legalized.

In response to Commissioner Mason, Director of Community Development Ebbs stated he would be happy to discuss the hillside grading restrictions for the Sand Creek Focus Area with him.

WRITTEN COMMUNICATIONS

None.

COMMITTEE REPORTS

Commissioner Motts reported the last TRANSPLAN meeting had been cancelled.

ADJOURNMENT

Chair Zacharatos adjourned the Planning Commission at 7:30 P.M. to the next regularly scheduled meeting to be held on June 7, 2017.

Respectfully Submitted, Kitty Eiden

STAFF REPORT TO THE PLANNING COMMISSION FOR CONSIDERATION AT THE MEETING OF JULY 19, 2017

Submitted by: Forrest Ebbs, Community Development Director

Date: July 11, 2017

Subject: General Plan Land Use Element Update: Sand Creek Focus Area

RECOMMENDATION

It is recommended that the Planning Commission take the following actions:

- 1. Adopt the resolution recommending City Council approval of the Addendum to the 2003 General Plan Environmental Impact Report.
- 2. Adopt the resolution recommending City Council approval of a General Plan Amendment amending portions of the Land Use Element affecting the Sand Creek Focus Area.

BACKGROUND

In 2014, the City Council initiated a comprehensive update of the Land Use Element of the General Plan concurrent with the development of a new Downtown Specific Plan. The purpose of this undertaking was to update this critical component of the General Plan to reflect current conditions and policies regarding the development and use of land throughout the City of Antioch. The current General Plan language was adopted in November 2003 and was subsequently amended in 2006 in response to Measure K (Roddy Ranch) and, more recently in 2015 as part of the approval of the Vineyards at Sand Creek residential project. Following the approvals of the Aviano project and the Vineyards at Sand Creek project, staff and the Planning Commission decided to pursue a separate update of the policies, text and map affecting the Sand Creek Focus Area (SCFA).

Since initiating this separate effort, staff and the Planning Commission have conducted the following meetings specific to the SCFA:

- January 20, 2016 public workshop
- March 16, 2016 Planning Commission meeting
- May 18, 2016 Planning Commission meeting
- November 16, 2016 Planning Commission meeting and discussion
- January 18, 2017 Planning Commission meeting and discussion
- February 14, 2017 City Council receipt of Administrative Draft

PUBLIC NOTIFICATION

The Planning Commission is asked to make a formal recommendation on the update of the General Plan. This action requires a public hearing and the requisite notification of the public. To comport with State law and City requirements, the City posted a Public Hearing Notice in the East County Times beginning on July 7, 2017. In addition, the City mailed the Public Hearing Notice to owners of property within the SCFA and the owners of property within 300' of the SCFA, including owners of homes to the north of the SCFA. In addition, the City sent an email notification to interested parties who had signed up at past meetings and/or had asked to be notified of upcoming meetings. This notification approach far exceeds the minimum required by law.

PURPOSE

The overall purpose of the update to the SCFA policies is not to fundamentally change the development policies or the City's position on development of this area. Rather, it is intended to modernize the policies to reflect current and anticipated market conditions, to reflect and account for the two recent project approvals, and to ensure that the broader development capacity policies remain achievable.

The current General Plan language suggests a 4,000-unit maximum, a golf course, very large lots, vast commercial areas, and, initially, a large business park. With the City Council approval of the General Plan amendment for the Vineyards at Sand Creek project, the business park component was removed and with the approval of the Vineyards at Sand Creek and Aviano projects, the City Council consented to significantly smaller lots in non-senior neighborhoods. Further, the residential densities allowed for these two projects, if applied throughout the SCFA, would far exceed the 4,000-unit maximum. Given that the General Plan language is at least 14 years old and no residential project has been built under its exact guidance, it was agreed that the policies should be updated to reflect current expectations. At the same time, the Planning Commission and City Council wanted to preserve much of the policy language that remains relevant and usable, including the 4,000-unit maximum, the preservation of hillsides and open space, and the pursuit of a unique and desirable neighborhood. The proposed General Plan Land Use Element Update replaces Section 4.4.6.7 Sand Creek in its entirety.

MAXIMUM RESIDENTIAL DENSITY

Maximum residential density is a valuable planning tool that allows for predictable growth and the right-sizing of infrastructure. The proposed SCFA policies use a gross density calculation where the entire acreage of the property is used to calculate the maximum development yield; the density multiplied by the acreage equals the maximum development yield. This calculation intentionally ignores physical, topographical, biological, and similar land-based development constraints, but only within the Residential designations. Areas designated Open Space do not contribute to the density yield.

The purpose of this density calculation is simply to generate the maximum unit count for the entire project site. Once this figure is developed, the project designer can begin to lay out the project based on the minimum lot size standards, environmental areas, roadway locations, and other factors. Except for the lot size standards, these constraints are not generally available or identified until a project-level analysis is completed as part of the development application. As stated above, the density calculation is a planning tool and should not be viewed as an entitlement or right of the property or its owner. This position is emphasized in the current General Plan and is restated in the proposed language for the SCFA.

PROPOSED GENERAL PLAN CONTENTS

The following summary provides a basic overview of the contents of the proposed General Plan policies for the SCFA.

a. Purpose and Primary Issues. The policies acknowledge the unique natural and scenic resources of the area and the opportunities to maintain regional linkages for wildlife. This section restates much of the direction in the current Land Use Element.

b. Policy Direction. This section states that the policies are intended to provide clear direction for the development of the area, including those areas set aside for preservation. It also restates the intention of providing housing opportunities in the SCFA.

b.1. Development Yield. This section restates the maximum development yield of 4,000 units in the SCFA and provides the methodology that is to be used to develop the maximum yield for individual projects. This section is intended to provide a fair and predicable direction for the distribution of the remaining units. The unique approach to the Zeka Ranch property is described elsewhere in this report.

b.2. Land Use Designation. This section applies land use designations to the various areas within the SCFA. The proposed draft uses natural and logical barriers such as Sand Creek and major roadways to dictate development potential. With the exception of the SC-ZR designation, each of these land use designations has an assigned density that will yield the development potential for the underlying area and, cumulatively, for the project site. These densities are described in Table A, as follows:

TABLE A: TOTAL DEVELOPMENT YIELD			
Land Use Designation	Acres	Units	Density
Sand Creek – Vineyards (SC-V)	138	533	3.9
Sand Creek – Aviano (SC-AV)	108	641	5.9
Sand Creek – Medium Density (SC-MD)	54	324	6.0
Sand Creek - Medium Density – Hillside (SC-MD-H)	190	570	3.0
Sand Creek- Low Density (SC-LD)	93	140	1.5
Sand Creek- Low Density Hillside (SC-LD-H)	696	1,392	2.0
Sand Creek – Zeka Ranch (SC-ZR)	201	201	1.0
Sand Creek – Mixed Use (SC-MU)	206	To be determined with project-specific analysis	1.0-2.0
Sand Creek – Medical (SC-MED)	83	0	0.0
Sand Creek – Open Space (SC-OS)	958	0	0.0
Sand Creek – Open Space – Hillside (SC-OS)	56	0	0.0
Total	2,783	4,000 max.	1.4

The Land Use Designations are described in Table B, which is provided as follows:

TABLE B: LAND USE DESIGNATIONS			
Land Use Designation	Description		
Sand Creek – Vineyards (SC-V)	The Vineyards at Sand Creek project was approved in 2016 and is designated as approved. Any changes to the project will require a General Plan amendment.		
Sand Creek – Aviano (SC-AV)	The Aviano project was approved in 2015 and is designated as approved. Any changes to the project will require a General Plan amendment.		
Sand Creek – Medium Density (SC-MD) Sand Creek - Medium Density –	These designations are intended for the development of single-family neighborhoods on mid-size lots with opportunities for clustering or condominium-style		
Hillside (SC-MD-H) Sand Creek- Low Density (SC-LD)	development. These designations are intended for the development of		
Sand Creek- Low Density Hillside (SC-LD-H)	 single-family neighborhoods on large lots with associated suburban neighborhood amenities. 		
Sand Creek – Zeka Ranch (SC-ZR)	The Zeka Ranch property is intended for development of single-family neighborhoods on relatively larger lots for estate or executive-style properties.		
Sand Creek – Mixed Use (SC-MU)	This designation allows for development of commercial and residential uses in a Town Center environment. Residential uses should occupy no more than 50% of the site, but may be built as attached condominiums, apartments, or similar higher density housing.		
Sand Creek – Medical (SC-MED)	This designation reflects the existing Kaiser Permanent Antioch Medical Center and the adjacent medical high school.		
Sand Creek – Open Space (SC-OS)	These designations identify the various open space and protected natural areas, including the Sand Creek		
Sand Creek – Open Space – Hillside (SC-OS)	corridor, the sensitive habitat at the southwest corner of the site, the large drainage basin and future regional park, and protected hilltops.		

There are also provisions for the transfer of development rights between properties should there be surplus units on a single project. In addition, senior housing is strongly encouraged through various policies and permitted throughout the Sand Creek Focus Area along with alternative senior housing such as assisted living facilities. This section relates these policies to the Density Bonus process.

b.3. Financial Analysis. The proposed policies restate the requirement for the submittal of a financial analysis or other evidence that a project will be financially independent of the City and will not require subsidy in the short or long term.

b.4. Open Space and Recreation. The current General Plan calls for a total of 25% of the land area in the Sand Creek Focus Area to be dedicated to open space, exclusive of the golf course. This amendment strengthens that goal to 30%; the actual land use designations result in 36% of the land designated as Open Space, excluding the creation of additional parks or other project-specific open spaces. Additional policies relate to the type and style of open space, their amenities, including a trail system and the natural experience desired along Sand Creek. The Sand Creek Basin Master Plan is also referenced and supported.

b.5. Circulation. This section states the policies regarding circulation throughout the Focus Area including the exclusive use of Empire Mine Road for emergency vehicles and pedestrians/cyclists, the expectations for separated bike paths along major roadways, and the desired connections over Sand Creek and throughout the Focus Area. The roadways on the Land Use Map are intended only to be conceptual roadways that show desired connections. They are not intended to replace the contents of the Circulation Element are show an exact alignment.

b.6. Community Design. The Sand Creek Focus Area is acknowledged as a unique opportunity for an exceptional community. This section states the general policies for exterior neighborhood treatments, common areas, open spaces, and landscaping.

b.7. Hillsides and Hilltops. The current language calls for the general preservation or conservation of hillsides, but does not provide clear and executable language to ensure that these policies are met in a consistent manner between policies. The Planning Commission spent considerable time refining these policies to achieve the goals of the General Plan in a usable and effective way. In short, the upper 25% of each hill was identified and set aside for preservation. The remainder of the hill was designated as a hillside and remains available for limited development with an emphasis on sensitive and natural design through landform grading.

b.8. Other. This section provides very clear statements about the process for project review within the SCFA, the limits of the maps and the intent for further project-specific analysis. It also states that the General Plan is not a guarantee of development rights, but is intended to provide general guidance for future growth.

Land Use Map. A land use map is provided that describes the Land Use Designations for the entire SCFA. This map identifies all of the Open Space as a unique designation, which includes protected hilltops, the Sand Creek Corridor, and other previously-designated open space area.

ZEKA RANCH

The Zeka Ranch property is located at the far western side of the SCFA and consists of a combination of grasslands, hillsides, and varying topography. In the current General Plan, approximately 2/3 of the property is currently designated as Open Space and the

remaining 1/3 of the property is designated as a combination of "Hillside and Estate Residential", allowing for 1.0 unit per acre and 2.0 units per acre, respectively. The delineating line between these two districts is intended to be "determined as part of the project-level entitlement process" [4.4.6.7.b.u.].

To date, no formal application has been submitted for the development of Zeka Ranch and, as a result, the City does not have access to the topographical information necessary to determine where the boundary between the two districts occurs. A conceptual plan was submitted in 2006 for the purpose of evaluating General Plan consistency. The City Council received the plan, but no formal action was taken on the plan.

The current General Plan policies repeatedly note the unique qualities of this land, referring, through various policies, to its "varied and complex topography" and "oak woodland and savanna community". Due to these unique qualities and the uncertainty of the site topography and other constraints, the proposed General Plan language continues the policies of the current General Plan by deferring the delineation of the relatively flat and hilled areas of the property to a project-specific analysis. The proposed densities of 1.0 to 2.0 units per acre are similarly consistent with the current language and policies. In short, the proposed policies replicate the existing policies in terms of both process and density; they do not increase nor diminish the development capacity of the site. It should be noted that a development application may be submitted at any time for this site.

ENVIRONMENTAL

In accordance with CEQA, an addendum to the 2003 General Plan Environmental Impact Report (EIR) has been prepared. The addendum finds that the proposed changes to the General Plan do not create any new significant impacts when compared to the baseline condition of the current General Plan.

SUMMARY

In summary, the proposed changes to the Sand Creek Focus Area policies in the Land Use Element of the General Plan will serve their intended purpose of clarifying and modernizing the City's position on the intensity and character of development in the Sand Creek Focus Area. They provide a reliable method of predicting density and growth, restate continuously-held positions on important natural and scenic resources, reaffirm the maximum development yield of 4,000 units, and allow for new opportunities for development in our current environment, while hopefully avoiding the necessity of project-specific General Plan amendments in the future. Staff therefore recommends that the Planning Commission recommend approval of the changes to the City Council.

Documents related to this project are available for review Monday through Friday between the hours of 8:00 a.m. and 11:30 a.m., and between the hours of 1:00 p.m. and

5:00 p.m. by appointment only, at the City of Antioch City Hall, Community Development Department, 200 H Street, and online at: <u>http://ci.antioch.ca.us/CityGov/CommDev/PlanningDivision/</u>.

ATTACHMENT

A: Existing General Plan Language

ATTACHMENT "A"

4.4.6.7 Sand Creek. The Sand Creek Focus Area encompasses approximately 2,712 acres in the southern portion of the City of Antioch (Figure 4.8).

This Focus Area is bounded by existing residential neighborhoods to the north, Black Diamond Mines Regional Preserve to the west, the city limits to the south, and the City of Brentwood to the east. Empire Mine Road and Deer Valley Road run in a general northsouth direction through the Focus Area, dividing it roughly into thirds.

a. Purpose and Primary Issues. The Sand Creek Focus Area combines two existing policy and planning areas identified in the previous General Plan: the southern portion of "Focused Policy Area 18" and the entirety of Future Urban Area 1." Previous General Plan policy tied the timing of development within this Focus Area to progressive build out of the land immediately to the north (the area generally known as Southeast Antioch), and to agreement on an alignment for the SR-4 bypass.

Through the 1990s, build out of Southeast Antioch was largely completed, an alignment for the SR-4 bypass was selected, and financing for construction of the bypass was developed. As a result, the City stepped up its planning efforts for the Sand Creek Focus Area with area landowners. Because of the multiple ownerships within the Sand Creek Focus Area, detailed coordination of access and infrastructure, along with the establishment of workable financing mechanisms was necessary in addition to land use planning.

Sand Creek, as well as natural hillsides and canvons within the Sand Creek Focus Area. contain habitats for sensitive plant and animal species, as well as habitat linkages and movement corridors. Overall, the western portion of the Focus Area is more environmentally sensitive than the eastern portion in terms of steep topography, biological habitats and linkages, the existence of abandoned coal mines, and proximity to public open space at Black Diamond Mines Regional Preserve. The west end of the Sand Creek Focus Area serves as a linkage between two regionally significant blocks of grassland. Decades of urban and agricultural use have greatly reduced the width of this linkage, substantially increasing the ecological importance of the remaining linkage within the Sand Creek Focus Area. Land has been preserved in regional parks and permanent open space, primarily in extensive grassland to the immediate west and northwest, as well as south of the Sand Creek Focus Area. These preserves represent a significant investment of public resources, and are a valued public asset.

Stream and riparian communities occupy a small portion of the Focus Area, but are widely distributed. Because of their high biotic value, stream and riparian communities within the Focus Area are considered to be a sensitive resource. The Focus Area also includes an oak woodland and savanna community, which, because of its high wildlife value, is considered to be a sensitive resource.

Figure 4.8: Sand Creek







b. Policy Direction. The environmental sensitivity of portions of the Sand Creek Focus Area was recognized in the City's previous General Plan; however, policy direction was very general. As an example, the previous General Plan did not provide any indication of the maximum allowable development intensity for Future Urban Area 1. The previous General Plan also stated that while the area between Contra Loma Boulevard and Empire Mine Road was designated Estate Residential, "the actual density should be based on a development plan that ensures that the special characteristics of the area, including steep slopes, riparian habitat, and other environmental constraints, are accommodated.

The following policy discussion and policies for the Sand Creek Focus Area are intended to provide clear direction for the future development and environmental management of the area.

The Sand Creek Focus Area is intended to function as a large-scale planned community. providing needed housing and employment opportunities. This Focus Area is also intended to provide substantial employment opportunities. Up to approximately 280 acres are to be devoted to retail and employment-generating uses, which will result in the creation of up to 6,500 jobs at build out. Residential development within the Sand Creek Focus Area will provide for a range of housing types. including upper income estate housing, golf course-oriented age-restricted housing for seniors, suburban single-family detached housing for families or seniors, and multifamily development.

The following policies apply to development within the Sand Creek Focus Area.

a. Prior to or concurrent with approvals of any development applications other than major employment-generating uses (including, but not limited to a medical facility on the Kaiser property), a specific plan or alternative planning process as determined by the City Council, shall be prepared and approved for the Sand Creek Focus Area. Such specific plan or alternative planning process shall identify and provide for project for project-related land uses, financing of required public services and facilities, open space preservation, community design, recreational amenities, and community improvements within the area proposed for development.

- b. Sand Creek Focus Area development shall make a substantial commitment to employment-generating uses. Up to 180 acres are to be devoted to employmentgenerating uses within the areas shown for Commercial/Open Space, in addition to the area shown as Mixed Use Medical Facility. Appropriate primary land uses within employment-generating areas include:
 - Administrative and Professional Offices
 - Research and Development
 - Light Manufacturing and Assembly
 - Hospital and related medical uses
- c. Secondary, support and ancillary uses within employment-generating areas include:
 - Banks and Financial Services
 - Business Support Services
 - Eating and Drinking Establishments
 - Health Clubs and Spas
 - Lodging and Visitor Services
 - Storage and Distribution Light
 - Civic Administration
 - Cultural Facilities
 - Day Care Centers
- d. The maximum development intensity for employment-generating lands shall be an overall FAR of 0.5.
- a. A maximum of 95 acres of retail commercial uses designed to service the local community may be developed within the areas shown for Commercial/Open Space, with a maximum overall development intensity of a 0.3 FAR.



- f. Up to 1.24 million square feet of retail commercial uses may be constructed. Within areas designated for retail use (areas shown for Commercial/Open Space), office development may be developed at a maximum FAR of 0.5.
- g. Appropriate uses within the retail portions of this Focus Area include:
 - Administrative and Professional Offices
 - Automotive Uses
 - Banks and Financial Services
 - Business Support Services
 - Eating and Drinking Establishments
 - Food and Beverage Sales
 - General Merchandise
 - Health Clubs and Spas
 - Personal Services
 - Personal Instruction
 - Theaters
 - Civic Administration
 - Cultural Facilities
 - Day Care Centers
 - Residential development as part of a mixed-use medical facility
- h. Commercial areas shall be designed as cohesive centers, and not in narrow corridors or commercial strips.
- i. Each commercial center shall establish an identifiable architectural theme, including buildings, signage and landscaping.
- j. Commercial and employment-generating developments shall be designed to accommodate public transit and non-motorized forms of transportation.
- k. A maximum of 4,000 dwelling units may be constructed within the Sand Creek Focus Area. Appropriate density bonuses may be granted for development of agerestricted housing for seniors; however, such density bonuses may not exceed the total maximum of 4,000 dwelling units for the Sand Creek Focus Area.

- Ι. It is recognized that although the ultimate development yield for the Focus Area may be no higher than the 4,000 dwelling unit maximum, the actual development vield is not guaranteed by the General Plan, and could be substantially lower. The actual residential development yield of the Sand Creek Focus Area will depend on the nature and severity of biological, geologic, and other environmental constraints present within the Focus Area, including, but not limited to constraints posed by slopes and abandoned mines present within portions of the Focus Area: on appropriate design responses to such constraints, and on General Plan policies. Such policies include, and but are not limited to, identification of appropriate residential development types, public services and facilities performance standards, environmental policies aimed at protection of natural topography and environmental resources, policies intended to protect public health and safety, and implementation of the Resource Management Plan called for in Policy "t," below.
- m. As a means of expanding the range of housing choices available within Antioch, three types of "upscale" housing are to be provided, including Hillside Estate Housing, Executive Estate Housing, and Golf Course-Oriented Housing.

Hillside Estate Housing consists of residential development within the hilly portions of the Focus Area that are designated for residential development. Appropriate land use types include Large Lot Residential. Within these areas, typical flat land roadway standards may be modified (e.g., narrower street sections, slower design speeds) to minimize required grading. Mass grading would not be permitted within this residential type. Rough grading would be limited to streets and building pad areas. Residential densities within Hillside Estate Areas are to be limited to one dwelling unit per gross developable acre (1 du/ac), with typical lot sizes ranging upward from 20,000 square feet. The anticipated population density for this land use type is up to four persons per developed acre. Included in this category is

custom home development, wherein semiimproved lots are sold to individuals for construction of custom homes. Approximately 20 percent of Hillside Estate Housing should be devoted to custom home sites.

Executive Estate Housing consists of large lot suburban subdivisions within the flatter portions of the Focus Area. Appropriate land use types include Large Lot Residential. Densities of Executive Housing areas would typically be 2 du/ac, with lot sizes ranging upward from 12,000 square feet. The anticipated population density for this land use type is up to eight persons per developed acre.

Golf Course-Oriented Housing consists of residential dwelling units fronting on a golf course to be constructed within the portion of the Focus Area identified as Golf Course/Senior Housing/Open Space in Figure 4.8. Appropriate land use types include Single Family Detached and Small Lot Single Family detached for lots fronting on the golf course. Maximum densities for golf course-oriented housing would typically be 4 du/ac, with lot sizes as small as 5,000 square feet for lots actually fronting on the golf course. Given the significant environmental topographic constraints in the portion of the focus area west of Empire Mine Road, the minimum lot size for executive estate housing within this area shall be a minimum of 10.000 square feet. This would allow additional development flexibility in situations where executive estate housing needs to be clustered in order to preserve existing natural features. In no case shall the 10,000 square foot minimum lot size constitute more than 20 percent of the total number of executive estate housing units in the area west of Empire Mine Road. The anticipated population density for this land use type is up to eight to twelve persons per acre developed with residential uses. Should the Citv determine as part of the development review process that development of a golf course within the area having this designation would be infeasible, provision of an alternative open space program may

be permitted, provided, however, that the overall density of lands designated Golf Course/Senior Housing/Open Space not be greater than would have occurred with development of a golf course.

- n. Single-Family Detached housing within suburban-style subdivisions with lot sizes ranging from 7,000 square feet to 10,000 square feet may also be developed within the Sand Creek Focus Area within areas shown as Residential and Low Density Residential in Figure 4.8. The anticipated population density for this land use type is up to eight to twelve persons per acre developed with residential uses.
- o. Small Lot Single Family Detached housing within the Vineyard at Sand Creek planned development with lots small than 7,000 square feet may be developed in the Sand Creek Focus Area within the areas shown as Medium Low Density Residential in Figure 4.8. The anticipated population density for this land use type is fourteen to eighteen persons per acre developed with residential uses.
- p. A total of 25 to 35 acres is to be reserved for multi-family housing to a maximum density of 20 du/ac. Areas devoted to multi-family housing should be located adjacent to the main transportation routes within the Focus Area, and in close proximity to retail commercial areas. The anticipated population density for this land use type is up to forty persons per acre developed with residential uses.
- Age-restricted senior housing should be q. developed within the Focus Area as a means of expanding the range of housing choice within Antioch, while reducing the Focus Area's overall traffic and school impacts. Such senior housing may consist of Single Family Detached, Small Lot Single Family Detached, of Multi-Family Attached Housing, and may be developed in any of the residential areas of the Sand Creek Focus Area. Within areas identified in Figure 4.8 specifically for senior housing, limited areas of non-senior housing may be permitted where environmental or topographic constraints would limit development densities to a



range more compatible with estate housing than with senior housing.

- r. Areas identified as Public/Quasi Public and School in Figure 4.8 are intended to identify locations for new public and institutional uses to serve the future development of the Sand Creek Focus Area. Development within these areas is to be consistent with the provisions of the Public/Institutional land use category described in Section 4.4.1.4 of the Land Use Element.
- s. Sand Creek, ridgelines, hilltops, stands of oak trees, and significant landforms shall be preserved in their natural condition. Overall, a minimum of 25 percent of the Sand Creek Focus Area shall be preserved in open space, exclusive of lands developed for golf course use.
- Adequate buffer areas adjacent to the top t. of banks along Sand Creek to protect sensitive plant and amphibian habitats and water quality shall be provided. Adequate buffer areas shall also be provided along the edge of existing areas of permanently preserved open space adjacent to the Sand Creek Focus Area, including but not limited to the Black Diamond Mines Regional Park. Buffers established adjacent to existing open space areas shall be of an adequate width to minimize light/glare, noise, fire safety, public safety, habitat, public access impacts within the existing open space areas, consistent with the provisions of Section 10.5. Open Space Transitions and Buffers Policies of the General Plan.
- u. Because of the sensitivity of the habitat areas within the Sand Creek Focus Area, and to provide for mitigation of biological resources impacts on lands in natural open space, as well as for the long-term management of natural open space, a project-specific Resource Management Plan based on the Framework Resource Management Plan attached as Appendix A to this General Plan shall be prepared and approved prior to development of the Sand Creek Focus Area properties.

- v. A viable, continuous grassland corridor between Black Diamond Mines Regional Preserve and Cowell Ranch State Park shall be retained using linkages in the southwestern portion of the Lone Tree Valley (within the Sand Creek drainage area), Horse Valley, and the intervening ridge. The primary goal of preserving such a corridor is to allow for wildlife movement between Black Diamond Mines Regional Preserve and Cowell Ranch State Park. Completion of such a corridor is contingent upon the cooperation with the City of Brentwood and Contra Costa County, each of whom may have land use jurisdiction over portions of this corridor.
 - To preserve this corridor and in view of other significant development constraints, certain lands in the southwestern portion of the Focus Area shall be designated as "Open Space," as depicted in Figure 4.8. Limited future adjustments to the boundaries of this "Open Space" area may occur as part of the Specific Plan and/or project level environmental review processes, provided that such adjustments: (a) are consistent with the goals and policies outlined in the Framework for Resource Management set forth in Appendix A; (b) are based upon subsequently developed information and data relating to environmental conditions or public health and safety that is available at the Specific Plan stage, the projectlevel development plan stage, or during the permitting processes with federal, state or regional regulatory agencies; and (c) would not cause the "Open Space" area west of Empire Mine Road to be less than 65 percent of the total lands west of Empire Mine Road. Any open space and otherwise undeveloped areas west of Empire Mine Road that are within the area designated as "Hillside and Estate Residential" shall not count towards meeting this 65 percent minimum "Open Space" requirement.
 - All areas designated as "Open Space" within the Focus Area may be utilized

for mitigation for loss of grassland and other project-level impacts by projects within the Focus Area.

- Due to the varied and complex topography west of Empire Mine Road the exact boundary between the "Hillside Estate" residential area and "Estate" residential area shall be determined as part of the project-level entitlement process.
- It is anticipated that there will be only minor adjustments to the boundary between the open space area and the hillside and estate residential area shown in Figure 4.8. Minor adjustments may be made to this boundary provided that such adjustments shall not create islands of residential development within the area designated open space in Figure 4.8..
- In order to ensure adequate buffering of the Black Diamond Mines Regional Park from development in the Sand Creek Focus Area, no residential development shall be allowed north of the Sand Creek channel between the area designated "Hillside and Estate Residential" in Figure 4.8 west of Empire Mine Road and the existing Black Diamond Mines Regional Park boundary.
- w. The construction of facilities necessary to ensure adequate public access across Sand Creek west of Empire Mine Road, including the bridging of Sand Creek, an appropriately sized parking lot and staging area, and any trails needed to ensure public access to Black Diamond Mines Regional Park shall be implemented as an infrastructure component of development in the Focus Area.
- x. To mitigate the impacts of habitat that will be lost to future development within the Focus Area, an appropriate amount of habitat shall be preserved on- or off-site per the compensatory provisions of the Framework Resource Management Plan prepared for the Sand Creek Focus Area

(attached as Appendix A of the General Plan).

- y. Ponds, wetlands, and alkali grassland associated with upper Horse Creek shall be retained in natural open space, along with an appropriate buffer area to protect sensitive plant and amphibian habitats and water quality. If impacts on the Horse Creek stream and riparian downstream are unavoidable to accommodate infrastructure, appropriate compensatory mitigation shall be required off-site per the provisions of the Resource Management Plan attached as Appendix A to this General Plan.
- z. Chaparral, scrub, and rock outcrop community within the western portion of the Focus Area (west of Empire Mine Road), as well as adjacent grassland community that is suitable habitat for the Alameda whipsnake (*masticophis lateralis euryxanthus*) shall be retained in natural open space. Within other portions of the Focus Area, the chaparral, scrub, and rock outcrop shall be retained in natural open space contiguous to the required grassland linkage to function as a buffer and protect the grassland linkage south of the chaparral, scrub, and outcrop community.
- aa. Within the western portion of the Focus Area (west of Empire Mine Road), the oak woodland and savanna community shall be preserved in natural open space.
 Within other portions of the Focus Area, the oak woodland and savanna community shall be preserved in natural open space where it overlaps the rock outcrop community.
- bb. As appropriate and necessary to protect public health and safety, abandoned mines shall be included within required natural open space areas, along with appropriate buffer areas and measures to prevent unauthorized entry.
- cc. Mass grading within the steeper portions or the Focus Area (generally exceeding 25 percent slopes) is to be avoided.
- dd. Impacts of residential development on the Antioch Unified School District and

Brentwood school districts will be mitigated pursuant to a developer agreement with the District.

- ee. Project entry, streetscape, and landscape design elements are to be designed to create and maintain a strong identification of the Sand Creek Focus Area as an identifiable "community" distinct from Southeast Antioch.
- ff. The Sand Creek Focus Area is intended to be "transit-friendly," including appropriate provisions for public transit and nonmotorized forms of transportation.
- gg. subject to its financial feasibility (see Policy "m"), a golf course shall be provided within the Focus Area, designed in such a way as to maximize frontage for residential dwellings. The golf course may also be designed to serve as a buffer between development and open space areas set aside to mitigate the impacts of development.

The golf course shall be designed to retain the existing trail within Sand Creek.

The golf course and Sand Creek corridor shall function as a visual amenity from the primary access road within the Focus Area (Dallas Ranch Road/Sand Creek Road). As part of the golf course clubhouse, banquet and conference facilities shall be provided.

hh. A park program, providing active and passive recreational opportunities is to be provided. In addition to a golf course and preservation of natural open space within Sand Creek and the steeper portions of the Focus Area, the development shall meet the City's established park standards. A sports complex is to be developed.

A sports complex is to be developed. The sports complex is intended to be located within the Flood Control District's detention basin.

Neighborhood park facilities may be privately maintained for the exclusive use of project residents. The sports complex within the Sand Creek Detention Basin will be maintained by the City.

Development of an appropriate level of ii pedestrian and bicycle circulation throughout the community is to be provided, including pathways connecting the residential neighborhoods, as well as non-residential and recreational components of the community. Sand Creek Focus Area development should also provide recreational trail systems for jogging and bicycling, including areas for hiking and mountain biking. Trails along Sand Creek and Horse Valley Creek shall be designed so as to avoid impacting sensitive plant and amphibian habitats, as well as water quality.

PLANNING COMMISSION RESOLUTION NO. 2017-**

RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF ANTIOCH RECOMMENDING THAT THE CITY COUNCIL ADOPT THE ADDENDUM TO THE ENVIRONMENTAL IMPACT REPORT FOR THE 2003 GENERAL PLAN FOR AN UPDATE TO THE LAND USE ELEMENT AFFECTING THE SAND CREEK FOCUS AREA

WHEREAS, the City initiated an update to the 2003 General Plan Land Use Element for the policies affecting the Sand Creek Focus Area; and,

WHEREAS, the City prepared an Addendum to the Environmental Impact Report for the 2003 General Plan to evaluate the potential environmental impacts of the Project in conformance with Section 15063 of Title 14 of the California Code of Regulations (the "CEQA Guidelines"); and,

WHEREAS, the Addendum to the Environmental Impact Report for the 2003 General Plan is appropriate because, although the proposed project could have a significant effect on the environment, all potentially significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project. Further, the proposed project does not include new information of impacts beyond what has been previously analyzed and,

WHEREAS, as demonstrated in the Addendum, all potential environmental impacts that could occur as a result of project implementation would be less than or similar to impacts previously identified in the 2003 General Plan EIR. Thus, build out of the Sand Creek Focus Area with urban uses was considered in the cumulative analysis of City build out of the General Plan. When viewed in conjunction with other closely related past, present, or reasonably foreseeable future projects, the project's cumulative impact would be less than or similar to impacts previously identified in the 2003 General Plan EIR; and,

WHEREAS, the Addendum was made available to the public on the City of Antioch website and at the Community Development Department for a period of 10 days prior to the public hearing, from July 9 to July 19, 2017; and,

WHEREAS, the Planning Commission has reviewed the Addendum to the Environmental Impact Report for the 2003 General Plan for this Project and the comments received during the comment period; and,

WHEREAS, the Planning Commission gave notice of public hearing as required by law; and,

WHEREAS, on July 19, 2017, the Planning Commission duly held a public hearing on the matter, and received and considered evidence, both oral and

RESOLUTION NO. 2017-** July 19, 2017 Page 2

documentary and recommended adoption to the City Council of the Addendum to the Environmental Impact Report for the 2003 General Plan; and,

WHEREAS, the custodian of the Addendum to the Environmental Impact Report is the Community Development Department and the Addendum to the Environmental Impact Report is available for public review on the second floor of City Hall in the Community Development Department, Monday - Friday 8:00 am - 11:30 am and it is attached as Exhibit A to this Resolution.

NOW, THEREFORE, BE IT RESOLVED AND DETERMINED, as follows:

- 1. The foregoing recitals are true and correct.
- 2. The Planning Commission of the City of Antioch hereby FINDS, on the basis of the whole record before it (including the Initial Study and all comments received) that:
 - a. The City of Antioch exercised overall control and direction over the CEQA review for the Project, including the preparation of the Addendum to the Environmental Impact Report, and independently reviewed the Addendum to the Environmental Impact Report; and,
 - b. There is no substantial evidence that the Project will have a significant effect on the environment once mitigation measures have been followed and assuming approval of the Zoning Ordinance amendment; and,
 - c. The Addendum to the Environmental Impact Report reflects the City's independent judgment and analysis.
- 3. The Planning Commission hereby RECOMMENDS that the City Council of the City of Antioch APROVE AND ADOPT the Addendum to the Environmental Impact Report for the Project.

* * * * * * * *

I HEREBY CERTIFY that the foregoing resolution was adopted by the Planning Commission of the City of Antioch at a regular meeting thereof held on the 19th day of July, 2017, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

FORREST EBBS Secretary to the Planning Commission

<u>EXHIBIT A</u>

Addendum to the EIR with appendix

CITY OF ANTIOCH COMMUNITY DEVELOPMENT DEPARTMENT



Sand Creek Focus Area

Addendum to the Antioch General Plan Update Environmental Impact Report

June 2017



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Appendix

Air Quality and Greenhouse Gas Modeling Results

A. INTRODUCTION

The proposed project consists of a General Plan Amendment (GPA) to the City of Antioch General Plan. Specifically, the GPA is intended to address new policy direction and land use trends associated with the Sand Creek Focus Area identified in the General Plan.

The Sand Creek Focus Area is located within the southern portion of the Antioch city limits, and is bounded by existing residential neighborhoods to the north, Black Diamond Mines Regional Preserve to the west, the city limits to the south, and the City of Brentwood to the east (see Figure 1, Regional Location). Empire Mine Road and Deer Valley Road run in a general north-south direction through the Focus Area, dividing it roughly into thirds (see Figure 2, Project Vicinity Map). The Focus Area includes a total of 2,783 acres. With the exception of the Kaiser Permanente Antioch Medical Center and the Dozier-Libbey Medical High School, the vast majority of the Sand Creek Focus Area is currently vacant and undeveloped.

According to the City's General Plan, including all amendments to date, the Sand Creek Focus Area includes the following land use designations:

- Open Space;
- Hillside and Estate Residential;
- Golf Course/Senior Housing/Open Space;
- Estate and Executive Residential/Open Space;
- Mixed Use Medical Facility, Commercial/Open Space;
- Low Density Residential;
- School;
- Multiple Family;
- Hillside, Estate, and Executive Residential/Open Space;
- Medium Low Density Residential;
- Public/Quasi Public; and
- Open Space/Senior Housing.

B. HISTORY OF ENVIRONMENTAL REVIEW AND PROEJCT APPROVAL

The following section includes a discussion of environmental documents preceding the proposed GPA, including the General Plan EIR and various other EIRs within the Sand Creek Focus Area. Such documents establish a baseline of previous CEQA analysis related to the Focus Area.

Antioch General Plan EIR

A General Plan EIR was prepared for the City of Antioch in July 2003 and certified in November 2003 (SCH #2003072140). The EIR assessed the physical environmental impacts of the General Plan, including all policies and implementing programs, in accordance with the California Environmental Quality Act (CEQA) Guidelines.





The Final EIR (FEIR) was certified by the City Council on November 24, 2003 (City Council Resolution No. 2003/134). The certified EIR consists of the following volumes:

- Antioch General Plan Update Environmental Impact Report (EIR); July 2003; and
- Antioch General Plan Update FEIR/Response to Comments to the Draft EIR; November 2003.

The certified EIR (including the DEIR, FEIR, and subsequent addendum and amendments) assesses environmental impacts of the General Plan development projections through 2030 (cumulative). The certified EIR serves as a program-level environmental document for subsequent City actions that are consistent with the General Plan. Further, the certified EIR was prepared and determined to be legally sufficient to serve as a project-level environmental document for subsequent actions such as re-zonings, pre-zonings, annexations and revisions to the Antioch Municipal Code and regulations, as deemed necessary or recommended to implement provisions of the General Plan.

Potential environmental impacts and policies/mitigation measures were identified in the General Plan EIR for aesthetics, air quality, biological resources, cultural resources, geologic and seismic hazards, hazardous materials, hydrology and water quality, land use, noise, population and housing, public services, utilities, and transportation/traffic. For each potential impact, policies/mitigation measures were recommended to reduce the level of significance of the impact. With the exception of air quality and transportation/traffic, such policies/mitigation measures to less-than-significant levels.

Impacts related to air quality and transportation/traffic were considered significant unavoidable adverse impacts that would result from implementation of the General Plan. Therefore, the City adopted a statement of overriding considerations, which balances the merits of approving the Plan despite the significant and unavoidable environmental effects identified in the General Plan EIR which are:

- The rate of increase in vehicle miles traveled (VMT) is higher than the rate of increase in population in Contra Costa County (1.5 percent per year) and in the Bay Area (1% per year). The rates of population increase for the County and region are averages of the cities within each area. Cities such as Antioch would be expected to be higher in VMT than the average, due to the proximity of the City to employment centers and that the vacant land within the City allows for expansion.
- Generation of NOx emissions that would exceed the project level operations threshold established by the Bay Area Air Quality Management District (BAAQMD).
- Stationary and mobile source air pollutant emissions associated with land uses within the City. Although some of the future pollutant emissions will occur as a result of previously approved development projects, there will also be pollutant emissions occurring as a result of additional development allowed by the General Plan beyond that which currently exists or is approved.
- Increases in traffic on area freeways and roadways. Certain roadways outside of the City of Antioch will operate at unacceptable levels of service.

The General Plan and General Plan EIR, and addendum are available for review at the City of Antioch Community Development Department, located at 3rd and "H" Streets in the City of Antioch, California. The General Plan is also available on the City's website, which can be accessed at: http://www.ci.antioch.ca.us/CityGov/CommDev/PlanningDivision/.

Recent EIRs

EIRs have been certified for two projects within the Sand Creek Focus Area: The Vineyards at Sand Creek project and the Aviano project. The Vineyards at Sand Creek project included a residential development on 141.6 acres, including up to 650 single-family residential units on 127.5 acres. The Aviano project was an active adult residential development that included 535 adult single-family units on approximately 93 acres, as well as a 4.8-acre recreational facility, 24 acres of parks and landscaped areas, and various other improvements. Both projects included GPAs to change the land use designations within the respective project boundaries. In 2014, an Addendum to the Aviano project EIR was prepared to remove the "age-restriction" component of the project.

C. PROJECT DESCRIPTION

Section 4.4.6.7 of the City of Antioch General Plan includes an overview of the Sand Creek Focus Area, a Land Use Map, and policy direction intended to provide clear direction for future development and environmental management of the Area. The proposed project consists of an amendment of the Land Use Map included in the General Plan (see Figure 3). The project also includes amendment to Section 4.4.6.7 of the General Plan to reflect recent development trends within the Sand Creek Focus Area. The proposed changes are discussed in detail below.

Land Use Map

The proposed project includes amendment of the Antioch General Plan Sand Creek Focus Area Map (Land Use Map) to reflect recent development within the Sand Creek Focus Area and current expectations for future development. As such, the updated Land Use Map includes SC-V and SC-AV land use designations to reflect the recently-approved Vineyards at Sand Creek and Aviano projects. In addition, the planned golf course area (Golf Course/Senior Housing/Open Space) shown on the existing land use map would be removed, as a golf course is no longer anticipated nor viable for the Sand Creek Focus Area. The updated Land Use Map also provides for SC-OS and SC-OSH designations along the Sand Creek corridor, a sensitive habitat area on the southwestern portion of the Sand Creek Focus Area, a large drainage basin, a future regional park, and various protected hilltops. An SC-MED land use designation would overlay the existing Kaiser Permanent Antioch Medical Center and the Dozier-Libbey Medical High School. The various land use designations shown on the updated Land Use Map are defined in Table B below and discussed throughout the proposed policies. It should be noted that the updated Land Use Map reflects a total acreage of 2,783, while the adopted General Plan currently reflects a total acreage of 2,712. The discrepancy in acreages is the result of the increased level of detail provided by the proposed land use changes. The revised acreage represents an increase of approximately one percent beyond the acreage currently presented in the City's General Plan.
Figure 3 Proposed Land Use Map for the Sand Creek Focus Area



Policy Changes

Section 4.4.6.7(b) of the General Plan includes a number of policies specific to the Sand Creek Focus Area. The policies guide the planning process for the Area, provide for appropriate land uses within various portions of the Area, define development intensity, and set a maximum of 4,000 total dwelling units to be constructed within the Area. As a means of expanding the range of housing choices within the City, the policies also provide for "upscale" housing, including Hillside Estate Housing, Executive Estate Housing, and Golf Course-Oriented Housing. In addition, the policies provide for buffer areas adjacent to the top of banks along Sand Creek to protect sensitive plant and amphibian habitats and water quality, retention of a continuous grassland corridor between Black Diamond Mines Regional Preserve and Cowell Ranch State Park, construction of a golf course, development of a park program, and development of an appropriate pedestrian and bicycle circulation network.

The proposed GPA would retain the structure and organization of the original General Plan text, but provides substantially revised policies and an updated Land Use map. In particular, the updated text would remove policies related to construction of a golf course within the Sand Creek Focus, and would provide new policies defining Hillside Development Standards, preservation of areas adjacent to Sand Creek, and providing for holding capacities of the properties within the Focus Area. The policy changes included in the proposed GPA are summarized below.

Proposed Policy Direction

The environmental sensitivity of portions of the Sand Creek Focus Area has been recognized in the prior General Plans; however, policy direction was very general. As such, the proposed project includes new policies for the Sand Creek Focus Area that are intended to provide clear direction for the future development and environmental management of the area as a large-scale planned community. Specifically, the total development yield for the Sand Creek Focus Area would be capped at 4,000 dwelling units. Table 1 below contains the approximate acreage and anticipated development yield for the various Land Use Designations for the Sand Creek Focus Area.

	Table 1 Estimated Developme	nt Yield	
Land Use Designation	Approximate Acres	Units	Density
SC-AV	138	533	3.9
SC-V	108	641	5.9
SC-MU	54	324	6.0
SC-MD	190	570	3.0
SC-MD-H	93	140	1.5
SC-LD	696	1,392	2.0
SC-LD-H	201	201	1.0
SC-ZR	206	To be determined with project-specific analysis	1.0-2.0
SC-MED	83	0	0.0
SC-OS	958	0	0.0

Total	2,783	4,000 maximum	1.4
SC-OS-H	56	0	0.0

The figures provide are estimates, and may be evaluated with more precision with a project application. The total development yield for lands designated SC-ZR, located west of Empire Mine Road, would be developed on a project-specific basis through the Planned Development process; however, the density would not be permitted to exceed that of the SC-LD designation (2.0 units per acre).

In addition, the proposed GPA would provide for updated land use designations (see Table 2 below). It should be noted that the Planned Development (PD) process would determine project-specific standard. Any future GPA that increases the total development yield of the site will preclude other development sites from reaching their development potential; as such, the proposed GPA provides for rules describing how a development transfer could occur. The proposed GPA also encourages development of senior housing throughout the Sand Creek Focus Area by providing density bonuses for any projects providing certain minimum amounts of senior housing relative to the total number of proposed units.

	Table 2
San	d Creek Focus Area Land Use Designations
Land Use Designation	Description
SC-V	The Vineyards at Sand Creek project was approved in 2016 and is designated as approved. Any changes to the project will require a General Plan amendment.
SC-AV	The Aviano project was approved in 2015 and is designated as approved. Any changes to the project will require a General Plan amendment.
SC-MD	These designations are intended for the development of single- family neighborhoods on mid size lots with opportunities for
SC-MD-H	clustering or condominium-style development.
SC-LD	These designations are intended for the development of single-
SC-LD-H	neighborhood amenities.
SC-ZR	The Zeka Ranch property west of Empire Mine Road is very exception due to unique topographic, biologic, and similar conditions.
SC-MU	This designation allows for development of commercial and residential uses in a Town Center environment. Residential uses should occupy no more than 50% of the site, but may be built as attached condominiums or apartments.
SC-MED	This designation reflects the existing Kaiser Permanent Antioch Medical Center and the adjacent medical high school.
SC-OS	These designations identify the various open space and protected natural areas, including the Sand Creek corridor, the sensitive
SC-OS-H	habitat at the southwest corner of the site, the large drainage basin and future regional park, and protected hilltops.

aute auter ine proposea aeverop	ment standards are metaded n	
	Table 3	
	Development Standards	
Designation	Minimum Lot Size	Average Lot Size (sf)
SC-V	-	-
SC-AV	-	-
SC-MD	4,000 of	5 000 of
SC-MD-H	4,000 SI	5,000 SI
SC-LD	5,000 of	7,000 of
SC-LD-H	5,000 SI	7,000 SI
SC-ZR	To be determined throu	gh project-specific analysis.
SC-MU	-	-
SC-MED	1 acre	-
SC-OS	-	-
SC-OS-H	-	-
Senior Housing (all districts)	4,000 sf	-

The proposed GPA provides development standards for each of the land use designations in the table above. The proposed development standards are included in Table 3 below.

Included in the proposed GPA are various other provisions related to open space, recreation, circulation, community design, hillsides and hilltops. For example, the policies would include requirements related to construction of a trail system connecting the Sand Creek Focus Area to Black Diamond Mines Regional Preserve, as well as future roadway connections. In addition, the proposed GPA requires that all applications for development within the Sand Creek Focus Area are subject to review through the Planned Development District process, as described in Article 23 of the City's Zoning Ordinance.

D. RATIONALE FOR PREPARATION OF THE GENERAL PLAN EIR ADDENDUM

This General Plan EIR Addendum has been prepared in accordance with the standards identified in Section 15164 of the CEQA Guidelines. As discussed herein, the proposed GPA calls for buildout which is generally consistent with the existing policies in the General Plan. The proposed GPA would alter the existing land use designations in the General Plan Land Use Map; however, the existing buildout cap for the Sand Creek Focus Area of 4,000 units would remain unchanged. Thus, the proposed buildout is within the range envisioned by the General Plan and analyzed in the General Plan Update EIR.

In determining whether an addendum is the appropriate document to analyze the modifications to the project and its approval, State CEQA Guidelines Section 15164 (Addendum to an EIR) states:

(a) The lead agency or a responsible agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred.

(b) An addendum to an adopted negative declaration may be prepared if only minor technical changes or additions are necessary or none of the conditions described in Section 15162 calling for the preparation of a subsequent EIR or negative declaration have occurred.

(c) An addendum need not be circulated for public review but can be included in or attached to the final EIR or adopted negative declaration.

(d) The decision-making body shall consider the addendum with the final EIR or adopted negative declaration prior to making a decision on the project.

(e) A brief explanation of the decision not to prepare a subsequent EIR pursuant to Section 15162 should be included in an addendum to an EIR, the lead agency's required findings on the project, or elsewhere in the record. The explanation must be supported by substantial evidence.

New significant effects or other grounds require preparation of a subsequent EIR or supplemental EIR in support of further agency action on a project pursuant to Public Resources Code Section 21166 and State CEQA Guidelines Sections 15162 and 15163. Under the guidelines, a subsequent or supplemental EIR shall be prepared if any of the following criteria are met:

(a) When an EIR has been certified or negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:

(1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

(2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:

(A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;

(B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;

(C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

(D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects

on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

The analysis that follows concludes that none of the conditions identified in CEQA Guidelines Sections 15162 and 15163 apply to the proposed GPA.

This document serves as the Addendum to the EIR prepared for the City of Antioch General Plan Update. The Addendum has been drafted pursuant to Section 15164 of CEQA and provides evidence demonstrating that the proposed GPA is consistent with the certified General Plan Update EIR.

As demonstrated herein, the proposed changes set forth in the GPA do not meet the criteria for requiring preparation of a Subsequent or Supplemental EIR, pursuant to CEQA Sections 15162 and 15163, respectively. The proposed GPA will not result in one or more significant effects not previously discussed in the General Plan Update EIR, nor does the proposed GPA create substantially more severe significant effects than previously examined. Additionally, none of the conditions analyzed under the certified General Plan EIR have substantially changed. Collectively, the policies included in the proposed GPA are consistent with the mitigation measures set forth in the certified General Plan EIR.

The City of Antioch, as the lead agency, supports and recommends an Addendum rather than the preparation of a Subsequent EIR or Supplemental EIR. Therefore, the proposed GPA may be approved as an activity covered within the scope of the 2003 certified General Plan Update EIR.

The purpose of this review is to determine if the project would result in new significant impacts, an increase in the severity of impacts, or new or expanded mitigation measures from those analyzed and determined in the General Plan EIR. The Impacts Summary Table below presents those General Plan Update EIR impacts and recommended mitigation measures that are pertinent to the proposed GPA, and compares the proposed GPA to the impacts and mitigation measures set forth in the General Plan Update EIR.

Table 4 below provides a summary of potential impacts identified in the General Plan EIR, discloses General Plan policies and mitigation measures intended to reduce or offset impacts and demonstrates consistency of the proposed GPA with the General Plan EIR.

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	Table 4	
Consistency of Sar	id Creek Focus Area Addendum with	General Plan EIR
General Plan EIR Impact	General Plan EIR Policies/Mitigation Measure	Relationship of Proposed Project to General Plan EIR
	Aesthetics	
Impact 4.1.1. Affected Views to Scenic Vistas		No change. Future development within the Sand Creek Focus Area would be subject to the
and Scenic Resources. The GP EIR determined that development facilitated by GP would		applicable policies and measures included in the adopted General Plan. as well as existing
increase the development of urban uses, causing a loss of open space and change in aesthetic	Polices: 5.4.2 and 5.4.14	regulations within the City's municipal code. With adherence to existing guidelines and
character. Considered significant before		regulations, as well as the new policies included
mitigation, but less than significant after mitigation.		in the proposed GPA, impacts would be less than or equal to impacts previously identified in the
		2003 General Plan EIR.
	Mitigation Measures 4.1.2A, 4.1.2B,	No change. Future development within the Sand
Impact 4.1.2. Light and Glare. The GP EIR determined that devial minent facilitated by GD	4.1.2C, and 4.1.2D require the City to modify the modify the monomed General Dian to	ureek Focus Area would be subject to the
would increase light and glare that could	incorporate policies to limit sources of	apprease poincies and measures included in the adopted General Plan, as well as existing
adversely affect day or nighttime views of	lighting to the minimum required for	regulations within the City's municipal code.
Antioch. Considered significant before	safety and provide screening for	With adherence to existing guidelines and
mitigation, but less than significant after	commercial and industrial lighting	regulations, as well as the proposed , impacts
mitigation.	adjacent to residential land use	would be less than or equal to impacts previously
	uesignations. Air Quality	
		No change. Given the intensity and type of
Local Carbon Monoxide Hot Spot. The GP EIR		development which could occur under buildout
determined that future ambient CO		of the proposed Land Use Map, as well as
concentrations, with implementation of the promosed General Plan would not violate either	Mitigation not required.	required compliance with existing air quality
the State or Federal CO standards. Impact		development would be less than or equal to
considered less than significant.		impacts previously identified in the 2003 General Plan EIR.
Impact 4.2.1. Construction Impacts. The GP EIR		No change. Given the intensity and type of
determined that development facilitated by GP would result in construction-related impacts on	Policy: 10.5.2.a	development which could occur under buildout of the proposed Land Use Map, as well as
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	Table 4	
Consistency of San	d Creek Focus Area Addendum with	General Plan EIR
General Plan EIR Impact	General Plan EIR Policies/Mitigation Measure	Relationship of Proposed Project to General Plan EIR
air quality. Considered significant before mitigation, but less than significant after mitigation.		required compliance with existing air quality regulations, air quality impacts of future development would be less than or equal to impacts previously identified in the 2003 General Plan EIR.
Impact 4.2.2. Regional Emissions Associated with Vehicular Trips. Development would result in more daily vehicular trips within the Planning Area. Emission factors for the existing (2003) and future build out year (2030) were determined. Future emissions (2030) would be lower when compared to their corresponding existing emissions (2003), except PM 10. NOx emissions would exceed the project level operations threshold established by the BAAQMD. Impacts are considered significant and unavoidable.	Policies: 10.5.2.b and 10.5.2.c.	No change. Given the intensity and type of development which could occur under buildout of the proposed Land Use Map, as well as required compliance with existing air quality regulations, air quality impacts of future development would be less than or equal to impacts previously identified in the 2003 General Plan EIR.
Impact 4.2.3. Consistency With Clean Air Plan Population and VMT Assumptions. The GP EIR determined that the rate of increase in VMT is higher than the rate of increase in population in Contra Costa County (1.5% per year) and in the Bay Area (1% per year). The rates of population increases for the County and region are averages of the cities within each area. Cities such as Antioch would be expected to be higher than the average, due to the proximity of the City to employment centers and that the vacant land within the City allows for expansion. Impacts are considered significant and unavoidable.	Policies: 10.5.2.b and 10.5.2.c.	No change. Given the intensity and type of development which could occur under buildout of the proposed Land Use Map, as well as required compliance with existing air quality regulations, air quality impacts of future development would be less than or equal to impacts previously identified in the 2003 General Plan EIR.
Impact 4.2.4. Stationary Source Emissions. The proposed General Plan would potentially result	Policies: 10.5.2.d, 10.5.2.e, and 10.5.2.f.	No change. Given the intensity and type of development which could occur under buildout

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	Table 4	
Consistency of San	d Creek Focus Area Addendum with	General Plan EIR
General Plan EIR Impact	General Plan EIR Policies/Mitigation Measure	Relationship of Proposed Project to General Plan EIR
in increased stationary sources emissions from nonresidential development, new industries having the potential for emitting toxic air contaminants, and woodburning stoves and fire places. Considered significant before mitigation, but less than significant after mitigation.		of the proposed Land Use Map, as well as required compliance with existing air quality regulations, air quality impacts of future development would be less than or equal to impacts previously identified in the 2003 General Plan EIR.
	Biological Resources	
Impacts 4.3.1 and 4.3.2. Sensitive Species and Sensitive Natural Communities. The GP EIR determined that implementation of the proposed GP may result in impacts to species identified as a candidate, sensitive, or special status species, as well as riparian, wetland or other sensitive natural communities. Considered significant before mitigation, but less than significant after mitigation.	Policy: 10.4.2.	No change. Future development within the Sand Creek Focus Area would be subject to the applicable policies and measures included in the adopted General Plan, as well as the City's Tree Protection Ordinance. With adherence to existing guidelines and regulations, as well as the new policies included in the proposed GPA, impacts would be less than or equal to impacts previously identified in the 2003 General Plan EIR.
Impacts 4.3.3 and 4.3.4. Impacts to Migratory Wildlife Corridors. The GP EIR determined that implementation of the proposed General Plan could interfere with the movement of wildlife species or with migratory wildlife corridors. Considered significant before mitigation, but less than significant after mitigation.	Policies: 10.4.2 and 10.3.2.	No change. The proposed GPA would provide for a wildlife corridor. As such, impacts would be less than or equal to impacts previously identified in the 2003 General Plan EIR.
	Cultural Resources	
Impact 4.4.1. Adverse Change in the Significance of an Historical Resource. The GP EIR determined that development allowed by implementation of the proposed General Plan could cause the destruction of or loss of an historical resource. Considered significant before mitigation, but less than significant after mitigation.	Policies: 5.4.6, 5.4.11, and 10.7.2.	No change. Future development within the Sand Creek Focus Area would be subject to the applicable policies and measures included in the adopted General Plan, as well as existing regulations within the City's municipal code and State guidelines related to protection of cultural resources. With adherence to existing guidelines and regulations, as well as the new policies

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	Table 4	
Consistency of San	id Creek Focus Area Addendum with	General Plan EIR
General Plan EIR Impact	General Plan EIR Policies/Mitigation	Relationship of Proposed Project to General
4	Measure	rlan EIK
		included in the proposed GPA, impacts would be
		less than or equal to impacts previously identified in the 2003 General Plan FIP
		No change. Future development within the Sand
		Creek Focus Area would be subject to the
Amplact 4.4.2. Destruction of a Known Ampleorized Decontrol The CD EID	Policies: 10.7.2a and b Mitigation	applicable policies and measures included in the
Alcliacological Nesource. Ille OF EIN datarmined that deviationment accordiated with the	Measure 4.4.2A requires the City to	adopted General Plan, as well as existing
ucici illinicu ulat ucvelopilielit associateu wiur tile	modify the proposed General Plan to	regulations within the City's municipal code and
proposed Ochicial Fian would require distribution	incorporate a policy with a provision in	State guidelines related to protection of cultural
of known archaeological recources Considered	the event that avoidance and/or	resources. With adherence to existing guidelines
or mover archaeorogical resources. Constructed	preservation in the location of any	and regulations, as well as the new policies
significant ofter mitigation, out less undi	cultural resources is not possible.	included in the proposed GPA, impacts would be
signincant arer muganon.		less than or equal to impacts previously
		identified in the 2003 General Plan EIR.
		No change. Future development within the Sand
Immost 112 Destruction of a Ilnious		Creek Focus Area would be subject to the
Delevatelonical Recource or Site The GD FIR	Policies: 10.7.2a and b Mitigation	applicable policies and measures included in the
determined that development accorded with the	Measure 4.4.3A requires the City to	adopted General Plan, as well as existing
ucterimited mat ucveropinent associated with the	modify the proposed General Plan to	regulations within the City's municipal code and
proposed Usited I fair would require distribution of variant lands and could cause the destriction	incorporate a policy requiring the	State guidelines related to protection of cultural
of a unique valeontological recontre or site	presence of a paleontologist during site	resources. With adherence to existing guidelines
On a unique parconcolgican resource of succ. Considered significant hefore mitigation but less	grading if the site may contain	and regulations, as well as the new policies
Constant a significant octor murganon, out icas than significant after mitigation	paleontological resources.	included in the proposed GPA, impacts would be
utan abruntanta anya mutbanan.		less than or equal to impacts previously identified in the 2003 General Plan EIR.
	Geology and Soils	
Impact 4.5.1. Ground Shaking. The GP EIR	Policies: 11.3.2 and 11.8.2. Mitigation	No change. Future development within the Sand
determined that new development would likely	Measures 4.5.1A and 4.5.1B require the	Creek Focus Area would be subject to the
be subject to some level of seismic ground	City to modify the proposed General	applicable policies and measures included in the
shaking. Considered significant pre mitigation,	Plan to incorporate a policy requiring	adopted General Plan, as well as existing
but less than after mitigation. Impact 4.5.5. Unstable Geologic Conditions The GP FIR	the preparation of a site-specific ground shaking assessment for any proposed	regulations within the City's municipal code and the most recent version of the California
Unamore Ocorogie Continuous, 1110 OL LIN	mandaid fin for manneaseen Summire	110 11091 10001 101010 101 110 California

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	Table 4	
Consistency of San	nd Creek Focus Area Addendum with	General Plan EIR
Concard Dion EID Immont	General Plan EIR Policies/Mitigation	Relationship of Proposed Project to General
General Flan ELK Impact	Measure	Plan EIR
determined that development in certain areas	development in the city.	Building Code (CBC). With adherence to
may become unstable and potentially result in		existing guidelines and regulations, as well as the
landslides, lateral spreading, subsidence,		new policies included in the proposed GPA,
liquefaction, or collapse. Considered significant		impacts would be less than or equal to impacts
before mitigation, but less than significant after mitigation.		previously identified in the 2003 General Plan EIR.
		No change. Future development within the Sand
Imnact A 5.0 I investion The GD FIR		Creek Focus Area would be subject to the
Julipace 7.3.2. Enqueraction. 1.10 OL EJN		applicable policies and measures included in the
development within Antioch would increase the	Policies: 11.3.2-i and k. Mitigation	adopted General Plan, as well as existing
notential for the placement of structures and	Measure 4.5.2A requires the City to	regulations within the City's municipal code, as
facilities in or near areas succentible to	modify the proposed General Plan to	well as the most recent version of the CBC. With
lacinius III or incar areas susception to liquiafaction Considered significant hafore	incorporate a policy regarding	adherence to existing guidelines and regulations,
mitication but less than significant after	liquefaction hazards.	as well as the new policies included in the
muganon, our ross man sigmirount and mitisotion		proposed GPA, impacts would be less than or
IIIII gauoii.		equal to impacts previously identified in the 2003
		General Plan EIR.
		No change. Future development within the Sand
Immost 153 I andelidae Doolfalle and		Creek Focus Area would be subject to the
IIIIpact 4.0.0. Lanushues, NOCKIAIIS, and $E_{\text{massive Soils}}$ and $E_{\text{massive Soils}}$ and $E_{\text{massive Soils}}$		applicable policies and measures included in the
Expansive Solis. The OF EIN lound unat luture		adopted General Plan, as well as existing
City would increase the notential for the	Doliviae: $5 / 1/2$ and $1 - 11 / 2 / 2$	regulations within the City's municipal code, as
City would increase and potential for areas	1 UIUUSS. J.T.17-a and U, 11.J.2-a, S, II, i and i	well as the most recent version of the CBC. With
placement of surctures and facilities in areas suscentible to landelides rochfalls or expansive	t, and j.	adherence to existing guidelines and regulations,
suscepture to failustuces, focularies, of expansive soils Considered significant before mitigation		as well as the new policies included in the
but less than significant after mitiration		proposed GPA, impacts would be less than or
uu icoo man orginiicanii aici muuganon.		equal to impacts previously identified in the 2003
		General Plan EIR.
Impact 4.5.4. Soil Erosion/Loss of Topsoil. The		No change. Future development within the Sand
GP EIR determined that areas exposed during	Policies: 8.7.2 and 10.6.2.	Creek Focus Area would be subject to the
future proposed General Plan development		applicable policies and measures included in the
		auopica Uchelal Flail, as well as Existing

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	Table 4	
Consistency of San	d Creek Focus Area Addendum with	General Plan EIR
General Plan EIR Impact	General Plan EIR Policies/Mitigation Measure	Relationship of Proposed Project to General Plan EIR
loss of topsoil. Considered significant before mitigation but less than significant after		regulations within the City's municipal code, as well as the most recent version of the CBC With
mitigation.		adherence to existing guidelines and regulations,
)		as well as the new policies included in the
		proposed GPA, impacts would be less than or
		equal to impacts previously identified in the 2003 General Plan EIR.
		No change. Future development within the Sand
		Creek Focus Area would be subject to the
Impact 4.5.6. Expansive Soils. The GP EIR		applicable policies and measures included in the
increase the notential for the nlacement of		autopical Octivital Lian, as well as existing remilations within the City's municinal code as
structures and facilities in areas susceptible to	Policies: 11.3.2-a and k.	well as the most recent version of the CBC. With
damage resulting from expansive soils.		adherence to existing guidelines and regulations,
Considered significant before mitigation, but less		as well as the new policies included in the
than significant after mitigation.		proposed GPA, impacts would be less than or
		equal to impacts previously identified in the 2003
		General Plan EIR.
	Hazardous Materials	
		No change. Future development within the Sand
Immact 4.6.1 Hazardon's Materials Use		Creek Focus Area would be subject to the
Generation and Transport. The GP EIR		applicable policies and measures included in the
determined that buildout of the proposed General		adopted General Plan, as well as existing
Plan may result in increased risk of unset		regulations within the City's municipal code and
associated with the routine use. generation. and	Policy: 11.7.2.	various other federal and State guidelines related
transportation of hazardous materials. which may	2	to handling of hazardous materials. With
potentially pose a health or safety hazard.		adherence to existing guidelines and regulations,
Considered significant before mitigation. but less		as well as the new policies included in the
than significant after mitigation.		proposed GPA, impacts would be less than or
0		equal to impacts previously identified in the 2003 General Plan EIR.
Impact 4.6.2. Impair an Emergency Response	Policy: 11.8.2.	No change. The proposed GPA does not include

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	Table 4	
Consistency of San	d Creek Focus Area Addendum with	General Plan EIR
General Plan EIR Impact	General Plan EIR Policies/Mitigation Measure	Relationship of Proposed Project to General Plan EIR
Plan. The GP EIR determined that build out of the proposed General Plan may impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Considered significant before mitigation, but less than significant after mitigation.		land use or policy changes that would interfere with an adopted emergency response plan or evacuation plan. Future development within the Sand Creek Focus Area would be subject to the applicable policies and measures included in the adopted General Plan. With adherence to existing guidelines and regulations, as well as the new policies included in the proposed GPA, impacts would be less than or equal to impacts previously identified in the 2003 General Plan EIR.
Impact 4.6.3. Wildland Fire Hazards. The GP EIR determined that implementation of the proposed General Plan may expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas. Considered significant before mitigation, but less than significant after mitigation.	Policy: 8.10.2.	No change. The proposed GPA does not include land use or policy changes that would increase the risk of wildland fire hazards within the Sand Creek Focus Area. Future development within the Sand Creek Focus Area would be subject to the applicable policies and measures included in the adopted General Plan, as well as existing regulations within the City's municipal code. With adherence to existing guidelines and regulations, as well as the new policies included in the proposed GPA, impacts would be less than or equal to impacts previously identified in the 2003 General Plan EJR.
Impact 4.6.4. Mine Hazards. The GP EIR determined that collapse of historic coal mine tunnels could result in subsidence of lands located above the mines, potentially causing damage to foundations or other improvements. Considered significant before mitigation, but less than significant after mitigation.	Policy: 11.3.2.	No change. The proposed GPA does not include land use or policy changes that would increase mine-related hazards within the Sand Creek Focus Area. Future development within the Sand Creek Focus Area would be subject to the applicable policies and measures included in the adopted General Plan, as well as existing regulations within the City's municipal code. With adherence to existing guidelines and

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	Table 4	
Consistency of San	d Creek Focus Area Addendum with	General Plan EIR
General Plan EIR Impact	General Plan EIR Policies/Mitigation Measure	Relationship of Proposed Project to General Plan EIR
		regulations, as well as the new policies included in the proposed GPA, impacts would be less than or equal to impacts previously identified in the 2003 General Plan EIR.
	Hydrology and Water Quality	
Impacts to Groundwater Supplies. The GP EIR determined that impacts to ground water supplies are less than significant as no municipal water is pumped from groundwater. Impact considered less than significant.	Policies: 3.5.9.2, 3.7.2, 8.7.2, 10.3.2, 10.6.2, and 11.8.2.	No change. The proposed GPA would not increase the total development yield of the Sand Creek Focus Area, and, thus, would not substantially increase demand for ground water supplies beyond what has been previously considered for the area. In addition, future development within the Sand Creek Focus Area would be subject to the applicable policies and measures included in the adopted General Plan, as well as existing regulations within the City's municipal code. With adherence to existing guidelines and regulations, as well as the new policies included in the proposed GPA, impacts would be less than or equal to impacts previously identified in the 2003 General Plan EIR.
Impacts to Water Quality. The GP EIR determined that impacts associated with new development can include erosion and sedimentation associated with groundbreaking and clearing activities. Additionally, stormwater runoff from urban areas contains a variety of pollutants that may reduce the quality of groundwater resources when introduced into groundwater aquifers. Impact considered less than significant.	Policies: 3.5.9.2, 3.7.2, 8.7.2, 10.3.2, 10.6.2, and 11.8.2.	No change. Future development within the Sand Creek Focus Area would be subject to the applicable policies and measures included in the adopted General Plan related to water quality, as well as existing regulations within the City's municipal code. Furthermore, the proposed GPA would not increase the intensity of construction activity that would occur under buildout of the Sand Creek Focus Area. With adherence to existing guidelines and regulations, as well as the new policies included in the proposed GPA, impacts would be less than or equal to impacts

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	Table 4	
Consistency of San	d Creek Focus Area Addendum with	General Plan EIR
General Plan EIR Impact	General Plan EIR Policies/Mitigation Measure	Relationship of Proposed Project to General Plan EIR
		previously identified in the 2003 General Plan EIR.
Risk of Seiche, Tsunami or Mudflows. The GP EIR determined that due to this geographic location, implementation of the proposed GP would not expose people or property to flooding associated with seiches or tsunamis. Additionally, the hillside to the south is generally stable and is not prone to mudflows. Impact considered less than significant.	Policies: 3.5.9.2, 3.7.2, 8.7.2, 10.3.2, 10.6.2, and 11.8.2.	No change. Future development within the Sand Creek Focus Area would be subject to the applicable policies and measures included in the adopted General Plan, as well as existing regulations within the City's municipal code. With adherence to existing guidelines and regulations, as well as the new policies included in the proposed GPA, impacts would be less than or equal to impacts previously identified in the 2003 General Plan EIR.
Risk of Dam Failure. Portions of the City of Antioch are located below the Contra Loma Reservoir and the overall safety classification of the dam is registered as satisfactory. Impact considered less than significant.	Policies: 3.5.9.2, 3.7.2, 8.7.2, 10.3.2, 10.6.2, and 11.8.2.	No change. The Sand Creek Focus Area is not located within the dam inundation zone for the Contra Loma Reservoir. Impacts would be less than or equal to impacts previously identified in the 2003 General Plan EIR.
Impact 4.7.1. Increased Stormwater Runoff. The GP EJR determined that future development would likely result in a net increase in impervious surfaces that would reduce the amount of rainfall that can infiltrate into the subsurface. Considered significant before mitigation, but less than significant after mitigation.	Policy: 11.4.2.	No change. The proposed project would not increase future development intensity within the Sand Creek Focus Area, and the proposed land use and policy changes would not be anticipated to result in an increase in total impervious area from what was previously considered in the 2003 General Plan EIR. Future development within the Sand Creek Focus Area would be subject to the applicable policies and measures included in the adopted General Plan related to stormwater, as well as existing regulations within the City's municipal code. With adherence to existing guidelines and regulations, as well as the new policies included in the proposed GPA, impacts would be less than or equal to impacts previously

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	Table 4	
Consistency of San	d Creek Focus Area Addendum with	General Plan EIR
General Plan EIR Impact	General Plan EIR Policies/Mitigation Measure	Relationship of Proposed Project to General Plan EIR
		identified in the 2003 General Plan EIR.
		No change. Future development within the Sand Creek Focus Area would be subject to the applicable policies and measures included in the
Impact 4.7.2. Flood Hazards. The GP EIR determined that an increase in development		adopted General Plan, as well as existing regulations within the City's municipal code.
within the Orly has the potential to increase the risk of flooding. Considered significant before mitigation, but less than significant after	Policy: 3.5.6.2.	Development would be limited along the Sand Creek corridor. With adherence to existing
mitigation.		policies included in the proposed GPA, impacts would be less than or equal to impacts previously identified in the 2003 General Plan EIR.
	The City shall modify the proposed General Plan to incorporate a policy with the following provision: Prior to or	
Impact 4.7.3. Alteration of the San Joaquin	concurrent with approvals of any development applications, at Rodgers Point a Master Plan for the area shall be	No change. The proposed land use and policy
Kiver. The GP EIK determined that revitalization and development of Rodgers Point may substantially alter a portion of the San Joaquin	prepared and approved by the City. The Master Plan shall provide detailed guidance for environmental review,	changes would not result in alterations to the San Joaquin River, and impacts would be less than or equal to impacts previously identified in the 2003
Kiver. Considered significant before mitigation, but less than significant after mitigation.	project-related land use, provision and financing of required public services	General Plan EIR.
	and facilities, open space preservation, community design, recreational amenities, and community	
Physically Divide an Established Community.		No change. The Sand Creek Focus Area contains
The GP EIR determined that development		a minimal amount of existing residential
facilitated by the GP will not disrupt or divide the physical arrangement of any established	Mitigation not required.	development, and the proposed land use and prolicy changes would not substantially alter the
neighborhood. Impact considered less than		development trends which were previously

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Consistency of Sar	Table 4 Id Creek Forms Area Addendum with	Ceneral Plan FIR
General Plan EIR Impact	General Plan EIR Policies/Mitigation Measure	Relationship of Proposed Project to General Plan EIR
significant.		anticipated for the area in the 2003 General Plan EIR. Impacts would be less than or equal to impacts previously identified in the 2003 General Plan EIR.
Impact 4.8.1. Changes in the Pattern of Land Use. The GP EIR determined that changes in the pattern of land uses would result in the development of structures or facilities within areas that are currently undeveloped. Considered significant before mitigation, but less than significant after mitigation.	Policies: 4.3.2, 4.4.4.2, and 5.4.12.	No change. The proposed land use and policy changes would not substantially alter the development trends which were previously anticipated for the area in the 2003 General Plan EIR. Impacts would be less than or equal to impacts previously identified in the 2003 General Plan EIR.
Impact 4.8.2. Development Outside Urban Limit Line. The GP EIR determined that the proposed urban development within areas that are currently outside of the County's Urban Limit Line might not be consistent with the provisions of the Contra Costa County 65/35 Land Preservation Plan. Considered significant before mitigation, but less than significant after mitigation.	Policy: 4.3.2.	No change. The proposed GPA would enable future development to occur outside the City's established Urban Limit Line. Impacts would be less than or equal to impacts previously identified in the 2003 General Plan EIR.
Impact 4.8.3. Consistency with ABAG Growth Projection. The GP EIR determined that development facilitated by the GP would generate employment in excess of that which is projected by ABAG. Considered significant before mitigation, but less than significant after mitigation.	Policies: 3.8.2, 4.4.4.2, and 4.4.6.5.	No change. The proposed GPA would not increase total development yield of the Sand Creek Focus Area. Overall, the proposed land use and policy changes would not substantially increase the intensity of development previously considered in the 2003 General Plan, and impacts would be less than or equal to impacts previously identified in the 2003 General Plan EIR.
Impact 4.9.1. Short-Term Construction Noise Impacts. The GP EIR determined that construction activities facilitated by the GP	Noise Policy: 11.6.2. Mitigation Measures 4.9.1A and 4.9.1B would require compliance with the City's noise	No change. The proposed GPA would not increase the intensity of construction activity which could occur under buildout of the Sand

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Consistency of Sar	d Creek Focus Area Addendum with	General Plan EIR
General Plan EIR Impact	General Plan EIR Policies/Mitigation Measure	Relationship of Proposed Project to General Plan EIR
would result in potentially significant noise	ordinance construction hours.	Creek Focus Area. Future development within
mitigation but less than significant after		the applicable policies and measures included in
mitigation.		the adopted General Plan, as well as existing
)		regulations within the City's municipal code.
		With adherence to existing guidelines and
		regulations, as well as the new policies included
		in the proposed GPA, impacts would be less than
		or equal to impacts previously identified in the 2003 General Plan EIR.
		No change. The proposed GPA would not
		increase volumes of traffic occurring within the
		Sand Creek Focus Area under buildout
Impact 4.9.2. Long-Term Vehicular Noise		conditions. Future development within the Sand
Impacts. The GP EIR determined that longterm		Creek Focus Area would be subject to the
vehicular noise than could affect sensitive land		applicable policies and measures included in the
uses along the roads, particularly residential uses	Policy: 11.6.2	adopted General Plan, as well as existing
along and adjacent to major transit corridors.		regulations within the City's municipal code.
Considered significant before mitigation, but less		With adherence to existing guidelines and
than significant after mitigation.		regulations, as well as the new policies included
		in the proposed GPA, impacts would be less than
		or equal to impacts previously identified in the
		2003 General Plan ElR.
		No change. Future development within the Sand
Impact 4.9.3. Long-Term Stationary Noise		Creek Focus Area would be subject to the
Impacts. The GP EIR determined that new		applicable policies and measures included in the
development associated with implementation of		adopted General Plan, as well as existing
GP could expose existing and new uses to	Policy: 11.6.2	regulations within the City's municipal code.
stationary noise sources. Considered significant		With adherence to existing guidelines and
before mitigation, but less than significant after		regulations, as well as the new policies included
mitigation.		in the proposed GPA, impacts would be less than
		or equal to impacts previously identified in the

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	Table 4	
Consistency of San	id Creek Focus Area Addendum with	General Plan EIR
General Plan EIR Impact	General Plan EIR Policies/Mitigation Measure	Relationship of Proposed Project to General Plan EIR
		2003 General Plan EIR.
Impact 4.9.4. Long-Term Railroad Noise Impacts. The GP EIR determined that new proposed sensitive land uses along and adjacent to the railroads could be affected by noise levels from railroad operations. Considered significant before mitigation, but less than significant after mitigation.	Policy: 11.6.2	No change. The Sand Creek Focus Area does not contain a railroad. Impacts would be less than or equal to impacts previously identified in the 2003 General Plan EIR.
	Population and Housing	
Impact 4.10.1. Population and Housing Projections are exceeded. The GP EIR determined that implementation of the proposed Housing Element will result in a substantial increase in population and residential and non- residential structures, and associated infrastructure. Considered significant before mitigation, but less than significant after mitigation.	Policy: 3.6.2.	No change. The proposed GPA would not increase the total development yield of the Sand Creek Focus Area. With adherence to existing guidelines and regulations, as well as the new policies included in the proposed GPA, impacts would be less than or equal to impacts previously identified in the 2003 General Plan EIR.
D	Public Services	
Impact 4.11.1. Police Protection. The GP EIR determined that increases in population and employment anticipated with the General Plan would increase the need for police protection and police services. Considered significant before mitigation, but less than significant after mitigation.	Policies: 3.5.3, 3.5.3.1, 3.5.3.2, and 8.11.2.	No change. The proposed GPA would not increase the total development yield of the Sand Creek Focus Area. Future development within the Sand Creek Focus Area would be subject to the applicable policies and measures included in the adopted General Plan related to police protection services, as well as existing regulations within the City's municipal code. With adherence to existing guidelines and regulations, as well as the new policies included in the proposed GPA, impacts would be less than or equal to impacts previously identified in the 2003 General Plan EJR.

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Consistency of Sar	nd Creek Focus Area Addendum with	General Plan EIR
Conouel Dian ETD Immost	General Plan EIR Policies/Mitigation	Relationship of Proposed Project to General
General Flair ELN Juipact	Measure	Plan EIR
		No change. The proposed GPA would not
		increase the total development yield of the Sand
		Creek Focus Area. Future development within
Impact 4.11.2. Fire Protection. The GP EIR		the Sand Creek Focus Area would be subject to
determined that development facilitated by the		the applicable policies and measures included in
GP will result in a substantial increase in		the adopted General Plan related to fire
population and structures, and will require	Policies: 3.5.2.1, 3.5.2.2, and 8.10.2.	protection services, as well as existing
additional on-duty firefighters. Considered		regulations within the City's municipal code.
significant before mitigation, but less than		With adherence to existing guidelines and
significant after mitigation.		regulations, as well as the new policies included
		in the proposed GPA, impacts would be less than
		or equal to impacts previously identified in the
		2003 General Plan EIR.
Immost A 11.2 Schools The CD FID determined		No change. The proposed GPA would not
thipact 4.11.3. Schools. The OF EAN determined		increase the total development yield of the Sand
ind developinent radiitated by the OF will result	Dolivios: 2501 2507 and 007	Creek Focus Area, and, thus, would not increase
The all increased student population unoughout the	FUILCIES. J.J.0.1, J.J.0.2, 4110 0.0.2.	future demand for schools. Impacts would be less
City. Constacted significant before initiation,		than or equal to impacts previously identified in
but less mail significant arter mugation.		the 2003 General Plan EIR.
		No change. The proposed GPA would not
Impact 4.11.4. Parks and Recreation. The GP		increase the total development yield of the Sand
EIR determined that the build out within the City		Creek Focus Area, and, thus, would not increase
of Antioch will result in a substantial increase in		future demand for parks. Future development
population, potentially increasing the use of		within the Sand Creek Focus Area would be
existing parks and recreation facilities. These		subject to the applicable policies and measures
impacts will require the expansion of existing	Policies: 8.4.2 and 10.6.2.	included in the adopted General Plan related to
facilities and recreation programs or the		the provision of parks, as well as existing
construction of new parks and recreational		regulations within the City's municipal code.
facilities. Considered significant before		With adherence to existing guidelines and
mitigation, but less than significant after		regulations, as well as the new policies included
mitigation.		in the proposed GPA, impacts would be less than
		or equal to impacts previously identified in the

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	Table 4	
Consistency of San	d Creek Focus Area Addendum with	General Plan EIR
General Plan EIR Impact	General Plan EIR Policies/Mitigation Measure	Relationship of Proposed Project to General Plan EIR
		2003 General Plan EIR.
	Utilities	
Impact 4.12.1. Water Supply. The GP EIR determined that the population increases projected for the City will increase the demand for water beyond that which currently exists. Considered significant before mitigation, but less than significant after mitigation.	Policies: 8.4.2 and 10.6.2.	No change. The proposed GPA would not increase the total development yield of the Sand Creek Focus Area, and, thus, would not substantially increase demand for water supplies beyond what has been previously considered for the area. In addition, future development within the Sand Creek Focus Area would be subject to the applicable policies and measures included in the adopted General Plan, as well as existing regulations within the City's municipal code. With adherence to existing guidelines and regulations, as well as the new policies included in the proposed GPA, impacts would be less than or equal to impacts previously identified in the 2003 General Plan EJR.
Impact 4.12.2. Water Quality. The GP EIR determined that development facilitated by the GP will result in reliance on a higher percentage of lower quality water from the San Joaquin River and may increase the level of pollutants that occur in water reserves. Considered significant before mitigation, but less than significant after mitigation.	Policy: 10.6.2.	No change. The proposed GPA would not increase the total development yield of the Sand Creek Focus Area, and, thus, would not substantially increase demand for ground water supplies beyond what has been previously considered for the area. In addition, future development within the Sand Creek Focus Area would be subject to the applicable policies and measures included in the adopted General Plan, as well as existing regulations within the City's municipal code. With adherence to existing guidelines and regulations, as well as the new policies included in the proposed GPA, impacts would be less than or equal to impacts previously identified in the 2003 General Plan EJR.

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	Table 4	
Consistency of Sar	id Creek Focus Area Addendum with	General Plan EIR
General Plan EIR Impact	General Plan EIR Policies/Mitigation Measure	Relationship of Proposed Project to General Plan EIR
Impact 4.12.3. Wastewater. The GP EIR determined that increases in population and housing, (in addition to increases of commercial, and industrial land uses,) would necessitate increased wastewater treatment capacity. Considered significant before mitigation, but less than significant after mitigation.	Polices: 8.5.2, 3.5.5.1, 3.5.5.2, 3.5.9.2, and 3.6.3.	No change. The proposed GPA would not increase the intensity of development within the Sand Creek Focus Area, and, thus, future development would not be anticipated to generate more wastewater than what was previously considered in the 2003 General Plan EIR. Future development within the Sand Creek Focus Area would be subject to the applicable policies and measures included in the adopted General Plan, as well as existing regulations within the City's municipal code. With adherence to existing guidelines and regulations, as well as the new policies included in the proposed GPA, impacts would be less than or equal to impacts previously identified in the 2003 General Plan EIR.
Impact 4.12.4. Gas Services. The GP EIR determined that build out of the City will result in a substantial increase in population and residential and non-residential structures, potentially increasing the use of and need for natural gas. Considered significant before mitigation, but less than significant after mitigation.	Policies: 3.6.2, and 9.4.1. Mitigation Measures 4.12.4A and 4.12.4B.	No change. The proposed GPA would not increase the intensity of development within the Sand Creek Focus Area, and, thus, future development would not be anticipated to increase demand for gas beyond levels previously considered in the 2003 General Plan EIR. Impacts would be less than or equal to impacts previously identified in the 2003 General Plan EIR.
Impact 4.12.5. Electric Services. The GP EIR determined that build out of the City will result in a substantial increase in population and residential and non-residential structures, potentially increasing the use of and need for electricity. Considered significant before mitigation, but less than significant after	Mitigation Measures 4.12.4A and 4.12.4B.	No change. The proposed GPA would not increase the intensity of development within the Sand Creek Focus Area, and, thus, future development would not be anticipated to increase demand for electricity beyond levels previously considered in the 2003 General Plan EIR. With adherence to existing guidelines and regulations

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Consistency of Sar	d Creek Focus Area Addendum with	General Plan EIR
General Plan EIR Impact	General Plan EIR Policies/Mitigation Measure	Relationship of Proposed Project to General Plan EIR
mitigation.		related to energy conservation, as well as the new policies included in the proposed GPA, impacts would be less than or equal to impacts previously identified in the 2003 General Plan EIR.
Impact 4.12.6. Solid Waste Services. The GP EIR determined that increases in population and employment could increase the need for solid waste disposal, requiring additional landfill capacity and related support facilities. Considered significant before mitigation, but less than significant after mitigation. Impact 4.16.1. Potential to Degrade Roadway Levels of Service. The GP EIR determined that future growth will increase area-wide traffic volumes with the potential to degrade roadway performance below applicable performance standards. Impacts are considered significant and unavoidable.	Policy: 8.6.2. Mitigation Measures 4.12.6A, 4.12.6B, and 4.12.6C. Transportation/Traffic Policies: 3.4.4, 3.4.5, and 7.3.2 Mitigation Measure. There are no feasible mitigation measures that the City could adopt to reduce traffic impacts to a less than significant level.	No change. The proposed GPA would not increase the intensity of development within the Sand Creek Focus Area, and, thus, future development would not be anticipated to increase generation of solid waste beyond levels previously considered in the 2003 General Plan EIR. Future development within the Sand Creek Focus Area would be subject to the applicable policies and measures included in the adopted General Plan related to solid waste, as well as existing regulations within the City's municipal code. With adherence to existing guidelines and regulations, as well as the new policies included in the proposed GPA, impacts would be less than or equal to impacts previously identified in the 2003 General Plan EIR. No change. The proposed project does not include land use or policy changes that would increase area-wide traffic volumes. Future development within the Sand Creek Focus Area would be subject to the applicable policies and measures included in the adopted General Plan related to circulation systems, as well as existing federal. State, and local guidelines related to transportation systems. With adherence to existing guidelines and regulations, as well as well as the additional be subject to the applicable policies and measures included in the adopted General Plan related to circulation systems. With adherence to existing guidelines and regulations, as well as the additional be subject to the applicable policies and measures included in the adopted general Plan related to circulation systems. With adherence to transportation systems. With adherence to existing guidelines and regulations, as well as the
		new policies included in the proposed OFA,

Sand Creek Focus Area

Consistency of San	Table 4 Id Creek Focus Area Addendum with	General Plan EIR
General Plan EIR Impact	General Plan EIR Policies/Mitigation Measure	Relationship of Proposed Project to General Plan EIR
		impacts would be less than or equal to impacts previously identified in the 2003 General Plan EIR.

E. INITIAL STUDY CHECKLIST

1.	Project Title:	Sand Creek Focus Area
2.	Lead Agency Name and Address:	City of Antioch Community Development Department 200 "H" Street P.O. Box 5007 Antioch, CA 94531
3.	Contact Person and Phone Number:	Forrest Ebbs, AICP Community Development Director (925) 779-7038
4.	Project Location:	North of Contra Costa County Antioch, CA 94531
5.	Project Sponsor's Name and Address:	City of Antioch Community Development Department 200 "H" Street P.O. Box 5007 Antioch, CA 94531

Environmental Factors Potentially Affected

None of the following environmental categories would be potentially affected, as indicated by the following evaluation of environmental impacts.

- □ Aesthetics
- **Biological Resources**
- **Greenhouse Gas Emissions**
- □ Land Use and Planning
- Population and Housing
- □ Transportation and Circulation
- □ Mandatory Findings of Significance

- □ Agriculture and Forest Resources
- Cultural Resources
 Hazards and Hazardous Materials
- □ Mineral Resources
- Public Services
- □ Tribal Cultural Resources

- □ Air Quality
- □ Geology and Soils
- Hydrology and Water Quality
- □ Noise
- □ Recreation
- □ Utilities and Service Systems

Determination

On the basis of this initial evaluation:

- I find that the Proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the Proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the applicant. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the Proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ✗ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project. As such, the proposed project does not include new information of impacts beyond what has been previously analyzed. An ADDENDUM is required.

Signature	Date
Forrest Ebbs, Community Development Director	City of Antioch
Printed Name	For

Evaluation of Environmental Impacts

An analysis of the proposed project's environmental impacts relative to the 2003 General Plan EIR is presented below.

I. Wo	AESTHETICS. <i>buld the project:</i>	"New" Potentially Significant Impact	"New" Less- Than- Significant with Mitigation Incorporated	"New" Less-Than- Significant Impact	Same Impact as 2003 General Plan EIR
a.	Have a substantial adverse effect on a scenic vista?				*
b.	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?				×
c.	Substantially degrade the existing visual character or quality of the site and its surroundings?				×
d.	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				×

Aesthetics Setting

The City of Antioch is located in the East Bay region of the San Francisco Bay Area, immediately north of the Diablo Range, which includes Mt. Diablo. The 2003 General Plan EIR determined views of Mt. Diablo, the ridgelines south of SR 4, and the San Joaquin River as scenic vistas within the City of Antioch. Both Mt. Diablo and the aforementioned ridgelines are visible from portions of the Sand Creek Focus Area.

According to the City of Antioch General Plan, the Sand Creek Focus Area is bounded by existing residential neighborhoods to the north, Black Diamond Mines Regional Preserve to the west, the City limits to the south, and the City of Brentwood to the east. Land has been preserved in regional parks and permanent open space, primarily in extensive grassland to the immediate west and northwest, as well as south of the Sand Creek Focus Area. Per the General Plan, the preserves represent a significant investment of public resources, and are a valued public asset.

The Sand Creek Focus Area is currently planned for buildout as a large-scale planned community including both housing and employment opportunities. The General Plan anticipates buildout of the Sand Creek Focus Area with a range of housing types, including upper income estate housing, golf course-oriented age-restricted housing for seniors, suburban single-family detached homes, multifamily development, and up to 280 acres of retail and employment-generating uses.

Aesthetics Impact Discussion

a. The proposed project includes the addition of various policies to the City's General Plan that are intended to preserve hillsides and hilltops within the Sand Creek Focus Area. Specifically, Policy 4.4.6.7(7)(a) states that hilltop areas designated as Open Space on the proposed Land Use Map are to be protected from development, including grading or crop production. The hilltop-centric areas designated as SC-OS on the proposed Land Use Map approximate the top 25 percent of the hill. Policy 4.4.6.7(7)(c) allows for development on lower hillside areas, but provides specific regulations relating to grading and vegetation. Policy 4.4.6.7(7)(f) requires that housing and other structures do not create an artificial skyline or profile visible beyond a ridgeline or hilltop. The aforementioned policies would limit the potential for future development within the Sand Creek Focus Area to substantially effect existing scenic vistas, including views of Mt. Diablo and the surrounding ridgelines. Given that the proposed project includes specific policies designed to minimize impacts of future development on scenic vistas, and impacts to scenic vistas associated with buildout of the Sand Creek Focus Area with residential and retail uses have been previously analyzed in the 2003 General Plan EIR, the proposed project's impact related to a substantial adverse effect on a scenic vista would be *less than or similar to* impacts previously identified in the 2003 General Plan EIR.

- b. According to the California Scenic Highway Mapping System, the Sand Creek Focus Area is located approximately 27 miles north of the nearest State Scenic Highway, Interstate 680 (I-680), and approximately 2.6 miles south of SR 160, an Eligible State Scenic Highway.¹ Neither I-680 nor SR 160 are visible from the Sand Creek Focus Area. As such, impacts related to substantially damaging scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic Highway, would be *less than or similar to* impacts previously identified in the 2003 General Plan EIR.
- c. The proposed project would not increase the total development yield of the Sand Creek Focus Area or substantially alter the planned uses of the area. Rather, the proposed policy and land use changes are intended to provide clear direction for the future development and environmental management of the area. Accordingly, the project includes new policies intended to protect the visual quality and character of the Sand Creek Focus Area and the surrounding region. For example, as noted above, the proposed Land Use Map would designate hilltops within the Focus Area as SC-OS, and would protect such areas form development. In addition, Policies 4.4.6.7(4)(a-i) provide specific guidelines relating to the provision of open space and trail systems, as well as the protection of various aesthetic resources associated with the Sand Creek corridor.

Per policy 4.4.6.7(8)(a), all applications for development within the Sand Creek Focus Area would be subject to review by the City of Antioch Planning Commission through the Planned Development District process, as described in Article 23 of the City's Zoning Ordinance. As such, future development plans would be required to demonstrate that any residential component would be in harmony with the character of the surrounding neighborhood and community, and would result in densities equal to or low than densities permitted by the General Plan. Review and recommendation of final development plans by the Planning Commission would substantially limit degradation of the existing visual character or quality of the Sand Creek Focus Area associated with future development.

Based on the above, the proposed project would not involve changes which would substantially degrade the existing visual character or quality of the Sand Creek Focus Area and its surroundings beyond what was previously considered, and impacts would be *less than or similar to* impacts previously identified in the 2003 General Plan EIR.

¹ California Department of Transportation. *California Scenic Highway Mapping System*. Available at: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm. Accessed February 2, 2017.

d. With the exception of the Kaiser Permanente Antioch Medical Center and the Dozier-Libbey Medical High School, the Sand Creek Focus Area is currently undeveloped. Thus, the Focus Area currently contains relatively limited sources of light or glare. However, the 2003 General Plan EIR has previously analyzed light and glare impacts associated with buildout of the Sand Creek Focus Area with residential and retail land uses, and the proposed policy and land use changes would not substantially increase the amount of light and glare that could occur. Specifically, as noted above, the total development yield within the Sand Creek Focus Area would not be increased. In addition, future development would be subject to existing General Plan policies regarding light and glare, including Policy 5.4.2(o), which states that lighting must not result in nuisance levels or light or glare on adjacent properties. As such, impacts related to the creation of new sources of substantial light or glare that would adversely affect day or nighttime views in the area would be *less than or similar to* impacts previously identified in the 2003 General Plan EIR.

II. Wo	AGRICULTURE AND FOREST RESOURCES. uld the project:	"New" Potentially Significant Impact	"New" Less- Than- Significant with Mitigation Incorporated	"New" Less-Than- Significant Impact	Same Impact as 2003 General Plan EIR
a.	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping Program of the California Resources Agency, to non-agricultural use?				*
b.	Conflict with existing zoning for agricultural use, or a Williamson Act contract?				*
c.	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section $51104(g)$) ²				×
d.	Result in the loss of forest land or conversion of forest land to non-forest use?				×
e.	Involve other changes in the existing environment which, due to their location or nature, could individually or cumulatively result in loss of Farmland to non-agricultural use?				*

Agriculture and Forest Resources Setting

According to the 2003 General Plan EIR, the Sand Creek Focus Area contains Grazing Land, Farmland of Local Importance, and Urban and Built-Up Land. The Sand Creek Focus Area does not contain land under a Williamson Act contract, and is not zoned for agricultural use, forest land (as defined in Public Resources Code section 12220[g]), timberland (as defined by Public Resources Code section 4526), or zoned Timberland Production (as defined by Government Code section 51104[g]).

Agriculture and Forest Resources Impact Discussion

- a,e. The Sand Creek Focus Area does not contain Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping Program of the California Resources Agency. As such, the proposed project's impacts related to conversion of such land to non-agricultural use would be *less than or similar to* impacts previously identified in the 2003 General Plan EIR.
- b-d. As noted above, the Sand Creek Focus Area does not contain land under a Williamson Act contract, and is not zoned for agricultural use, forest land (as defined in Public Resources Code section 12220[g]), timberland (as defined by Public Resources Code section 4526), or zoned Timberland Production (as defined by Government Code section 51104[g]). As such, the proposed land use and policy changes would not conflict with Williamson Act contracts or conflict with existing zoning for, or cause rezoning of, any of the aforementioned zoning designations. Additionally, the proposed project would not

involve other changes in the existing environment which, due to their location or nature, could individually or cumulatively result in loss of forest land to non-forest use. Therefore, impacts would be *less than or similar to* impacts previously identified in the 2003 General Plan EIR.

III. Wot	AIR QUALITY. uld the project:	"New" Potentially Significant Impact	"New" Less- Than- Significant with Mitigation Incorporated	"New" Less-Than- Significant Impact	Same Impact as 2003 General Plan EIR
a.	Conflict with or obstruct implementation of the applicable air quality plan?				×
b.	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?				×
c.	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?				×
d.	Expose sensitive receptors to substantial pollutant concentrations?				*
e.	Create objectionable odors affecting a substantial number of people?				*

Air Quality Setting

The City of Antioch is located in the San Francisco Bay Area Air Basin (SFBAAB), which is under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). The SFBAAB area is currently designated as a nonattainment area for the State and federal ozone, State and federal fine particulate matter 2.5 microns in diameter ($PM_{2.5}$), and State respirable particulate matter 10 microns in diameter (PM_{10}) ambient air quality standards (AAQS). The SFBAAB is designated attainment or unclassified for all other AAQS. It should be noted that on January 9, 2013, the U.S. Environmental Protection Agency (USEPA) issued a final rule to determine that the Bay Area has attained the 24-hour $PM_{2.5}$ federal AAQS. Nonetheless, the Bay Area must continue to be designated as nonattainment for the federal $PM_{2.5}$ AAQS until such time as the BAAQMD submits a redesignation request and a maintenance plan to the USEPA, and the USEPA approves the proposed redesignation. The USEPA has not yet approved a request for redesignation of the SFBAAB; therefore, the SFBAAB remains in nonattainment for 24-hour $PM_{2.5}$.

In compliance with regulations, due to the nonattainment designations of the area, the BAAQMD periodically prepares and updates air quality plans that provide emission reduction strategies to achieve attainment of the AAQS, including control strategies to reduce air pollutant emissions through regulations, incentive programs, public education, and partnerships with other agencies. The current air quality plans are prepared in cooperation with the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG).

The most recent federal ozone plan is the 2001 Ozone Attainment Plan, which was adopted on October 24, 2001 and approved by the California Air Resources Board (CARB) on November 1, 2001. The plan was submitted to the USEPA on November 30, 2001 for review and approval. The most recent State ozone plan is the 2017 Clean Air Plan (CAP), adopted on April 19, 2017. The 2017 CAP was developed as a multi-pollutant plan that provides an integrated control

strategy to reduce ozone, PM, toxic air contaminants (TACs), and greenhouse gases (GHGs). Although a plan for achieving the State PM_{10} standard is not required, the BAAQMD has prioritized measures to reduce PM in developing the control strategy for the 2017 CAP. The control strategy serves as the backbone of the BAAQMD's current PM control program.

The aforementioned air quality plans contain mobile source controls, stationary source controls, and transportation control measures to be implemented in the region to attain the State and federal AAQS within the SFBAAB. Adopted BAAQMD rules and regulations, as well as the thresholds of significance, have been developed with the intent to ensure continued attainment of AAQS, or to work towards attainment of AAQS for which the area is currently designated nonattainment, consistent with applicable air quality plans. For plan-level projects, BAAQMD thresholds of significance require consistency with the current Air Quality Control Plan control measures. In addition, a plan-level project would exceed the threshold of significance if projected VMT or vehicle trip increase is greater than the projected population increase. For development projects, BAAQMD establishes significance thresholds for emissions of the ozone precursors reactive organic gases (ROG) and oxides of nitrogen (NO_x), as well as for PM₁₀, and PM_{2.5}, expressed in pounds per day (lbs/day) and tons per year (tons/yr).

The 2003 General Plan EIR analyzed air quality impacts for the entirety of the City of Antioch, and determined that impacts would be significant and unavoidable, even with the implementation of mitigation.

Air Quality Impact Discussion

a-c. In order to analyze how the proposed policy and land use changes would affect air quality emissions for buildout of the Sand Creek Focus Area, the emissions associated with buildout under the current General Plan land use designations were compared to emissions which would occur as a result of buildout of the proposed Land Use Map. Operational emissions associated with both scenarios were quantified using the California Emissions Estimator Model (CalEEMod) software version 2016.3.1 – a Statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify air quality emissions, including GHG emissions, from land use projects. Specifically, the model applies inherent default values for various land uses, including construction data, trip generation rates based on the Institute of Transportation Engineers (ITE) Trip Generation Manual, 9th Edition, vehicle mix, trip length, average speed, etc. Where project-specific information is available, such information should be applied in the model.

Modeling for buildout of the Sand Creek Focus Area under the existing General Plan scenario assumed the following:

- The following land uses were applied to the model based on information contained within the adopted General Plan and the 2003 General Plan EIR:²
 - The land use "single-family residential" was applied for 3,537 dwelling units;

²

City of Antioch. Antioch General Plan Update EIR [pg. 4.8-11]. July 2003.

- The land use "apartment low-rise" was applied 433 dwelling units of multi-family housing;
- The land use "regional shopping center" was applied for 1,240 thousand square feet (ksf) of commercial/office space;
- The land use "office park" was applied for 2,600 ksf of business park area;
- The land use "golf course" was applied for an 18-hole golf course based on the existing General Plan land use designation of Golf Course/Senior Housing/Open Space.
- Residential development associated with buildout would include natural gas hearths only, per BAAQMD Rule 3;
- Diversity of development would be increased;
- Buildout would include an on-site pedestrian network and connections to the surrounding areas; and
- All future projects would comply with the 2016 California Building Energy Efficiency Standards Code.

Modeling for buildout of the Sand Creek Focus Area under the proposed project scenario assumed the following:

• The land uses shown in Table 5 were applied to the model based on the proposed land use and policy changes, as well as information contained within the adopted General Plan;

Table 5							
Applied Land Uses							
Land Use Applied in	Land Use Designation in						
CalEEMod	Proposed Land Use Map	Units	Acres				
City Park	SC-OS, SC-OS-H		1,014				
	SC-AV, SC-V, SC-MD, SC-						
Single-Family Housing	MD-H, SC-LD, SC-LD-H,	3,676 units	1,632				
	SC-ZR						
Regional Shopping Center	SC-MU	588.06 ksf	33.75				
Apartment Low-Rise	SC-MU	324 units	20.25				
Hospital	SC-MED	146 beds					
Medical Office Building	SC-MED	245.8 ksf					

- Residential development associated with buildout would include natural gas hearths only, per BAAQMD Rule 3;
- Diversity of development would be increased;
- Buildout would include an on-site pedestrian network and connections to the surrounding areas; and
- All future projects would comply with the 2016 California Building Energy Efficiency Standards Code.

All CalEEMod results are included in the appendix to this Addendum.

According to the CalEEMod results, the proposed project would result in maximum operational criteria air pollutant emissions as shown in Table 6. As shown in the table, the proposed project's operational emissions would be fewer than the operational emissions anticipated to occur under the existing General Plan. Therefore, impacts related to air quality from implementation of the proposed project would be *less than or similar to* impacts previously analyzed in the 2003 General Plan EIR.

Table 6						
Maximum Operational Emissions						
Existing General Plan Proposed Project						
Pollutant	Buildout 1	Emissions	Buildout	Change in		
	lbs/day	tons/yr	lbs/day	tons/yr	Emissions	
ROG	421.46	68.08	325.48	50.53	Fewer	
NO _X	668.09	95.30	533.39	66.94	Fewer	
PM_{10}	522.91	76.78	408.95	53.56	Fewer	
PM _{2.5}	148.82	21.53	117.35	15.09	Fewer	
Source: CalEEMod, May 2017 (see appendix).						

d. Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. Heightened sensitivity may be caused by health problems, proximity to the emissions source, and/or duration of exposure to air pollutants. Children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the effects of air pollution. Sensitive receptors are typically defined as facilities where sensitive receptor population groups (i.e., children, the elderly, the acutely ill, and the chronically ill) are likely to be located. Accordingly, land uses that are typically considered to be sensitive receptors include residences, schools, playgrounds, childcare centers, retirement homes, convalescent homes, hospitals, and medical clinics. The nearest existing sensitive receptors would be the single-family residences located immediately to the north of the Sand Creek Focus Area, as well as the Dozier-Libbey Medical High School within the Focus Area. The major pollutant concentrations of concern are localized carbon monoxide (CO) emissions and toxic air contaminants (TAC) emissions, which are addressed in further detail below.

Localized concentrations of CO are related to the levels of traffic and congestion along streets and at intersections. High levels of localized CO concentrations are only expected where background levels are high, and traffic volumes and congestion levels are high. Emissions of CO are of potential concern, as the pollutant is a toxic gas that results from the incomplete combustion of carbon-containing fuels such as gasoline or wood. CO emissions are particularly related to traffic levels. As discussed in Section XVI, Transportation and Circulation, of this Addendum, the proposed project would not increase impacts related to transportation and circulation beyond levels previously analyzed in the 2003 General Plan EIR. In addition, the proposed land use and policy changes would not increase the total development yield of the Sand Creek Focus Area or increase commercial development. As such, the proposed project would not be expected to result in substantial levels of localized CO at surrounding intersections or generate localized concentrations of CO beyond what has been previously considered in the 2003 General Plan EIR.

Another category of environmental concern is TACs. The CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* (Handbook) provides recommended setback distances for sensitive land uses from major sources of TACs, including, but not limited to, freeways and high traffic roads, distribution centers, and rail yards. The CARB has identified diesel particulate matter (DPM) from diesel-fueled engines as a TAC; thus, high volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic are identified as having the highest associated health risks from DPM. Health risks associated with TACs are a function of both the concentration of emissions and the duration of exposure, where the higher the concentration and/or the longer the period of time that a sensitive receptor is exposed to pollutant concentrations would correlate to a higher health risk.

While the proposed project would allow for future development to occur under buildout of the Sand Creek Focus Area, the project does not include a specific proposal for development at this time, and the proposed land use and policy changes would not be anticipated to result in the exposure of sensitive receptors to substantial pollutant concentrations. Specifically, the project Land Use Map would not introduce new land use designations to the Sand Creek Focus Area that would allow for land uses or operations that would be considered major sources of TACs, including DPM. Furthermore, future development would be subject to project-level review under CEQA to analyze potential impacts associated with TACs. Future projects would additionally be required to comply with all applicable BAAQMD rules and regulations, particularly associated with permitting of air pollutant sources, as well as existing General Plan policies and standards.

Based on the above discussion, the proposed project's impacts associated with exposure of sensitive receptors to substantial concentrations of localized CO or TACs would be *less than or similar to* impacts previously analyzed in the 2003 General Plan EIR.

e. Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, quantitative methodologies to determine the presence of a significant odor impact do not exist. Typical odor-generating land uses include, but are not limited to, wastewater treatment plants, landfills, and composting facilities. The proposed Land Use Map would not permit development of any such land uses within the Sand Creek Focus Area.

In addition, all future development would be subject to existing BAAQMD guidance related to odors. BAAQMD regulates objectionable odors through Regulation 7, Odorous Substances, which does not become applicable until the Air Pollution Control Officer (APCO) receives odor complaints from ten or more complainants within a 90-day period. Once effective, Regulation 7 places general limitation on odorous substances and specific emission limitations on certain odorous compounds, which remain effective until such time that citizen complaints have been received by the APCO for one year. The limits of Regulation 7 become applicable again when the APCO receives odor complaints from five or more complainants within a 90-day
period. If odor complaints are made as a result of future development within the Sand Creek Focus Area, the BAAQMD would ensure that such odors are addressed and any potential odor effects reduced to less than significant.

For the aforementioned reasons, impacts associated with the creation of objectionable odors affecting a substantial number of people would be *less than or similar to* impacts previously analyzed in the 2003 General Plan EIR.

IV Wo	. BIOLOGICAL RESOURCES. buld the project:	"New" Potentially Significant Impact	"New" Less- Than- Significant with Mitigation Incorporated	"New" Less- Than- Significant Impact	Same Impact as 2003 General Plan EIR
a.	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?				×
b.	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?				*
c.	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				*
d.	Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?				*
e.	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				*
f.	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan?				*

Biological Resources Setting

According to the 2003 General Plan EIR, 19 special-status plant species and 39 special-status wildlife species have the potential to occur within the City of Antioch, including the Sand Creek Focus Area. Furthermore, per the City's General Plan, stream and riparian communities are widely distributed throughout the Sand Creek Focus Area. The Sand Creek Focus Area also contains an oak woodland and savanna community. The General Plan characterizes such features as sensitive resources.

Biological Resources Impact Discussion

a-c. The proposed Land Use Map provides for SC-OS and SC-OSH designations in order to protect sensitive resources within the Sand Creek Focus Area, including the sensitive resources identified in the City's General Plan. SC-OS and SC-OSH land use designations within the Sand Creek Focus Area would include areas along the Sand Creek corridor, a sensitive habitat area on the southwestern portion of the Sand Creek Focus Area, a large drainage basin, a future regional park, and various protected hilltops.

Future development within the Sand Creek Focus Area would be subject to projectspecific review under CEQA, whereupon impacts to candidate, sensitive, and/or specialstatus wildlife and plant species would be evaluated, and a biological report would be prepared. In addition, riparian habitat, sensitive natural communities, and Federallydesignated wetlands would be identified and impacts would be analyzed. Such development would be required to comply with existing General Plan policies, including Policy 10.4.2, which includes various regulations protecting wetlands, riparian resources, and other biological resources. In addition, proposed Policy 4.4.6.7(4)(e) would provide for a minimum 125-foot-wide buffer along the entire length of Sand Creek. Development would be prohibited within the buffer area, with the exception of specific uses such as bridges, benches, shade structures, park features, trails, and other similar uses.

Furthermore, per proposed Policy 4.4.6.7(4)(h), all future projects within the Sand Creek Focus Area would be required to submit an Open Space Management Plan to the City concurrent with development applications. The Open Space Management Plan would detail how open space lands would be owned, managed, and maintained. Because the proposed Land Use Map designates sensitive resource areas within the Sand Creek Focus Area as SC-OS and SC-OSH, the Open Space Management Plans would help to further minimize impacts to such resources.

Based on the above, impacts related to candidate, sensitive, and/or special-status species, riparian habitat or other sensitive natural communities, and federally-protected wetlands would be *less than or similar to* impacts previously analyzed in the 2003 General Plan EIR.

d. The western portion of the Sand Creek Focus Area currently serves as a link between two grassland areas, which allows for the movement of wildlife. However, per the City's General Plan, prior urban and agricultural use have reduced the width of the linkage.

The proposed project includes Policy 4.4.6.7(4)(g), which would require that future development within the southwestern portion of the Sand Creek Focus Area retain a continuous grassland corridor between Black Diamond Mines Regional Preserve and Marsh Creek State Park. Preservation of the corridor would allow for unimpeded wildlife movement between the two areas. In order to preserve the corridor, the proposed Land Use Map designates areas within the southwestern portion of the Sand Creek Focus Area as SC-OS. As noted above, future development within areas containing land designated for open space uses would be required to prepare and submit an Open Space Management Plan to the City of Antioch. Therefore, impacts related to substantially interfering with the movement of resident or migratory fish or wildlife species or with established

resident or migratory wildlife corridors, or impeding the use of wildlife nursery sites, would be *less than or similar to* impacts previously analyzed in the 2003 General Plan EIR.

- e. While the proposed project would allow for future development to occur under buildout of the Sand Creek Focus Area, the project does not include a specific proposal for development at this time, and, as such, would not directly conflict with the City's Tree Protection Ordinance (Title 9, Chapter 5, Article 12 of the Antioch Municipal Code). Furthermore, most of the trees within the Sand Creek Focus Area are located within the area west of Empire Mine Road, which would be designated as SC-OS per the proposed Land Use Map. As part of future development applications within the Sand Creek Focus Area, projects would be required to demonstrate consistency with the City's Tree Protection Ordinance. Therefore, impacts related to conflicts with the City's Tree Protection Ordinance would be *less than or similar to* impacts previously analyzed in the 2003 General Plan EIR.
- In July 2007, the East Contra Costa County (ECCC) Habitat Conservation Plan/Natural f. Community Conservation Plan (HCP/NCCP) was adopted by Contra Costa County, other member cities, the USFWS, and the CDFW. The City of Antioch, however, declined to participate in the HCP/NCCP. Currently, the City is working towards developing its own HCP/NCCP; however, no such plan has yet been completed. Therefore, the Sand Creek Focus Area is not located in an area with an approved HCP/NCCP, or local, regional, or State habitat conservation plan, and was not covered by such a plan when the 2003 General Plan EIR was certified. As a result, impacts would be less than or similar to impacts previously identified the 2003 General Plan EIR. in

V. Wo	CULTURAL RESOURCES. <i>buld the project:</i>	"New" Potentially Significant Impact	"New" Less- Than- Significant with Mitigation Incorporated	"New" Less-Than- Significant Impact	Same Impact as 2003 General Plan EIR
a.	Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?				×
b.	Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to Section 15064.5?				×
c.	Directly or indirectly destroy a unique paleontological resource on site or unique geologic features?				*
d.	Disturb any human remains, including those interred outside of formal cemeteries.				*

Cultural Resources Setting

The General Plan and 2003 General Plan EIR do not specifically identify cultural resources within the Sand Creek Focus Area. However, according to the 2003 General Plan EIR, prehistoric cultural resources in the San Francisco Bay region are typically located near sources of fresh water, along the bay shore, and in the hills of Contra Costa County. The Sand Creek Focus Area contains the Sand Creek waterway, as well as hilly terrain. As such, unknown prehistoric cultural resources could potentially be located within the Sand Creek Focus Area.

The City of Antioch Community Development Department maintains a map of known cultural resources sites within the City; however, to deter vandalism, artifact hunting, and other activities with the potential to damage such resources, the locations of known cultural resources are kept confidential.³

Cultural Resources Discussion

a. While the proposed project would allow for future development to occur under buildout of the Sand Creek Focus Area, the project does not include a specific proposal for development at this time. Furthermore, the proposed GPA would not increase overall development yield or area of development of the Focus Area beyond what was previously analyzed in the General Plan EIR (4,000 dwelling units total). The updated Land Use Map would retain the existing Open Space land use designation of the areas along the western portion of the Focus Area, and the Sand Creek corridor, as well as various other sensitive areas, would similarly be protected from development. In addition, future development within the Sand Creek Focus Area would be subject to existing General Plan policies and programs that protect historical resources, including Policy 10.9.2, which requires surveys for projects with the potential to impact known historical resources. If historical resources found to be present, mitigation would be required prior to initiation of construction activities in accordance with applicable CEQA guidelines and provisions of the California Public Resources Code. Therefore, impacts related to

³ City of Antioch. Antioch General Plan Update EIR [pg. 4.4-3]. July 2003

historical resources would be *less than or similar to* impacts previously identified in the 2003 General Plan EIR.

b-d. As noted above, while the proposed project would allow for future development to occur under buildout of the Sand Creek Focus Area, the project does not include a specific proposal for development at this time. The existing development yield cap of 4,000 total dwelling units would be retained, and the updated Land Use Map would not substantially increase development intensity compared to that which was previously anticipated in the City's General Plan. Future projects within the Sand Creek Focus Area would be subject to environmental review under CEQA, which would provide for analysis of impacts related to archaeological and paleontological resources, as well as human remains. Future projects will also adhere to all applicable General Plan policies and programs related to the protection of archaeological and paleontological resources. For example, General Plan Policy 10.9.2 requires surveys for projects having the potential to impact archaeological or paleontological resources. If significant resources are found to be present, mitigation would be provided in accordance with applicable CEQA guidelines and provisions of the California Public Resources Code.

Based on the above, impacts related to archaeological resources, paleontological resources, or human remains would be *less than or similar to* impacts previously identified in the 2003 General Plan EIR.

VI. Wo	GEOLOGY AND SOILS. uld the project:	"New" Potentially Significant Impact	"New" Less- Than- Significant with Mitigation Incorporated	"New" Less-Than- Significant Impact	Same Impact as 2003 General Plan EIR
a.	Expose people or structures to potential				
	substantial adverse effects, including the risk of				
	loss, injury, or death involving:				
	i. Rupture of a known earthquake fault,				
	as delineated on the most recent Alquist-	_	_	_	••
	Priolo Earthquake Fault Zoning Map issued				×
	by the State Geologist for the area based on				
	other substantial evidence of a known fault?	_		_	••
	ii. Strong seismic ground snaking?				*
	iii. Seismic-related ground failure,				×
	including liquetaction?				**
1.	1V. Landslides?				*
D.	topsoil?				*
c.	Be located on a geologic unit or soil that is				
•••	unstable, or that would become unstable as a				
	result of the project, and potentially result in on-				×
	or off-site landslide, lateral spreading,				
	subsidence, liquefaction or collapse?				
d.	Be located on expansive soil, as defined in Table				•
	18-1B of the Uniform Building Code?				•
e.	Have soils incapable of adequately supporting				
	the use of septic tanks or alternative wastewater				*
	disposal systems where sewers are not available				**
	for the disposal of wastewater?				

Geology and Soils Setting

The City of Antioch is located in Contra Costa County, within the seismically active San Francisco Bay Area region. Eastern Contra Costa County, like the San Francisco Bay Area, is located in one of the most seismically active regions in the United States. Major earthquakes have occurred in close proximity to Antioch, and are expected to occur again.

Historically active faults in Contra Costa County include the Concord-Green Valley, Hayward, Calaveras, and Marsh Creek-Greenville faults. The largest regional fault, the San Andreas Fault, is located approximately 45 miles west of the City of Antioch. The nearest active fault zone is the Great Valley Segment 6 fault, located approximately five miles east of the Sand Creek Focus Area. Per the California Division of Mines and Geology, the Sand Creek Focus Area is not located within an Alquist-Priolo Earthquake Fault Zone.

Geology and Soils Impact Discussion

a-d The proposed project would not increase the total development yield of the Sand Creek Focus Area beyond the level previously evaluated in the 2003 General Plan EIR. Furthermore, while the proposed project would allow for future development to occur under buildout of the Sand Creek Focus Area, the project does not include a specific proposal for development at this time. Nonetheless, future development within the Sand Creek Focus Area would be subject to the provisions of the latest California Building Code (CBC), which includes engineering standards appropriate for the seismic area in which the project is located. Conformance with the design standards is enforced through building plan review and approval by the City of Antioch Building Division prior to the issuance of building permits. Proper engineering of future development would ensure that seismic-related effects would not cause adverse impacts.

Future development within the Sand Creek Focus Area would also be subject to existing policies in the City's General Plan related to geologic and seismic hazards. Specifically, Policy 11.3.2 requires preparation of geologic and soils reports for proposed development sites. In addition, Policy 11.3.2 requires evaluations of potential slope stability for development proposed within hillside areas, and requires specialized soils reports in areas with potential soil stability issues (including expansion, settlement, or subsidence). Given that, as noted above, the proposed GPA would not increase development potential within the Sand Creek Focus Area, future development would be subject to the same geologic and seismic hazard exposure previously analyzed in the 2003 General Plan EIR. Therefore, impacts related to the exposure of people or structures to potential adverse impacts involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, or landslides, as well as impacts related to unstable geologic units and expansive soils, would be would be *less than or similar to* impacts previously identified in the 2003 General Plan EIR.

- b. The proposed project would not increase the total development yield of the Sand Creek Focus Area, and the proposed policy and land use changes would not substantially increase soil erosion or loss of topsoil associated with future development within the Focus Area. Per proposed Policy 4.4.6.7(7)(c)(ii), disturbed hillsides would be treated with native grasses or similar treatment to avoid run-off or erosion. In addition, future development would be subject to existing federal, State, and local regulations related to erosion, including Policy 10.6.2 in the City's General Plan, which requires implementation of Best Management Practices (BMPs) to reduce erosion and sedimentation associated with construction activities. As such, impacts related to substantial erosion and loss of topsoil would be *less than or similar to* impacts previously identified in the 2003 General Plan EIR.
- e. Future development within the Sand Creek Focus Area would connect to the existing City sanitary sewer lines maintained by the Delta Diablo Sanitation District, which provides wastewater/sewer service to the City. Buildout of the Sand Creek Focus Area would not include construction or operation of septic tanks or other alternative wastewater disposal systems. Therefore, impacts related to soils incapable of adequately

supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater would be *less than or similar to* impacts previously identified in the 2003 General Plan EIR.

VI Wo	I. GREENHOUSE GAS EMISSIONS. build the project:	"New" Potentially Significant Impact	"New" Less- Than- Significant with Mitigation Incorporated	"New" Less- Than- Significant Impact	Same Impact as 2003 General Plan EIR
a.	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?				*
b.	Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gasses?				×

Greenhouse Gas Emissions Setting

As of 2002, Assembly Bill (AB) 1493 requires the California Air Resources Board (CARB) to develop and implement regulations to reduce automobile and light truck greenhouse (GHG) emissions. These emissions standards, which are stricter than those for other states, were designed to apply to automobiles and light trucks, beginning with the 2009 model year. Ultimately, the USEPA granted California's related request for a waiver to enact the stricter standards. Later, in 2005, Executive Order S-3-05 established GHG emission reduction targets for California. The Executive Order identified statewide targets for GHG reductions to 2000 levels by 2010, to 1990 levels by 2020, and to 80 percent below 1990 levels by 2050. Later, in September 2006, AB 32 established regulatory, reporting, and market mechanisms to achieve quantifiable GHG emission reductions and a climate action plan (CAP) on statewide GHG emissions. AB 32 sets forth a statewide GHG emissions reduction target of 1990 levels by 2020. Executive Order S-3-05 sets forth a transitional reduction target of 2000 levels by 2010, the same target as AB 32 of 1990 levels by 2020, and further builds upon the AB 32 target by requiring a reduction to 80 percent below 1990 levels by 2050. SB 32 also builds upon AB 32 and sets forth a transitional reduction target of 40 percent below 1990 levels by 2030. In order to implement the statewide GHG emissions reduction targets, local jurisdictions are encouraged to prepare and adopt area-specific GHG reduction plans and/or thresholds of significance for GHG emissions.

Prior to the enactment of AB 32 in late 2006, only a few CEQA documents in California addressed climate change issues. In late 2006 and early 2007, the environmental consulting industry and lead agency staffs began to address climate change issues in CEQA documents going forward. Over the course of 2007 and beyond, agencies around the state began to address climate change issues as a matter of course in their CEQA documents. But for most local governments, pre-2007 EIRs for major planning decisions still lacked analyses of the extent to which general plans, specific plans, and zoning documents tended to increase or decrease activities leading to GHG emissions. In the mid-1990s, the Governor's Office of Planning and Research (OPR), in response to a legislative directive, had prepared a report to the Legislature setting forth the conclusion that CEQA was not a tool that could meaningfully address global warming, which was a problem of international scale. That conclusion reflected the common view up until the time period in which AB 32 was enacted.

Senate Bill (SB) 97, signed August 2007, acknowledged that climate change is a prominent environmental issue that requires analysis under CEQA. This bill directed the OPR to prepare, develop, and transmit to the California Natural Resources Agency guidelines for the feasible

mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, by July 1, 2009. The California Natural Resources Agency adopted those guidelines on December 30, 2009, and the guidelines became effective March 18, 2010. The new Guidelines are embodied most substantively in State CEQA Guidelines §15064.4, §15126.4(c), and §15183.5. Between late 2006, when AB 32 was enacted, and March 2010, when the new Guidelines came into effect, neither CEQA nor the State CEQA Guidelines included any specific rules or directives about how to analyze the effects of GHGs, but lead agencies were generally doing the best they could to develop methodologies on their own, with input from leading consultants, other experts, and air pollution control districts and air quality management districts.

After the passage of AB 32, growing societal concern of over climate change prompted project opponents around California to argue in many instances that new environmental documents building on pre-2007 environmental documents must address climate change as a "new significant impact" where the prior environmental document had been silent on the issue. In response to these contentions, three California appellate cases from three different districts of the Court of Appeal have considered whether, pursuant to State CEQA Guidelines §15162(a), impacts related to GHG emissions constitute a new significant impact or new information of substantial importance "which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified." All three decisions have answered these questions in the negative, holding that climate change is not a "new" issue even if societal concern about it has been growing in recent years.

In *Citizens for Responsible Equitable Environmental Development (CREED) v. City of San Diego* (2011) 196 Cal. App. 4th 515, the Court of Appeal, Fourth Appellate District, concluded that the issue of GHG emissions and climate change could have been raised at the time that the original EIR was prepared (in 1994). For this reason, the lead agency was not required to prepare a Supplemental or Subsequent EIR. In the CREED case, the court noted that scientists and the government have been aware that GHG emissions could trigger climatic changes as early as the 1970's, or before. Specifically, the Court of Appeal noted that in *Massachusetts v. E.P.A.* (2007) 549 U.S. 497, 507, the United States Supreme Court stated the following:

In the late 1970's, the Federal Government began devoting serious attention to the possibility that carbon dioxide emissions associated with human activity could provoke climate change. In 1978, Congress enacted the National Climate Program Act, 92 Stat. 601, which required the President to establish a program to 'assist the Nation and the world to understand and respond to natural and man-induced climate processes and their implications,' [citation][sic]. President Carter, in turn, asked the National Research Council, the working arm of the National Academy of Sciences, to investigate the subject. The Council's response was unequivocal: 'If carbon dioxide continues to increase, the study group finds no reason to doubt that climate changes will result and no reason to believe that these changes will be negligible. A wait-and-see policy may mean waiting until it is too late.

The Court of Appeal concluded by stating that "[t]he effect of GHG emissions on climate could have been raised in 1994 when the City considered the FEIR." In *Concerned Dublin Citizens v. City of Dublin* (2013) 214 Cal.App.4th 1301, the Court of Appeal for the Fourth Appellate District adopted this reasoning as its own, reaching exactly the same conclusion on similar facts.

Most recently, in *Citizens Against Airport Pollution v. City of San Jose* (2014) 227 Cal.App.4th 788, the Court of Appeal, Sixth Appellate District, considered whether the lack of GHG and climate change analysis in a 1997 EIR and 2003 SEIR precluded adoption of an addendum. The court relied on previous case law to conclude that the potential environmental impact of GHG emissions was known or could have been known at the time of certification of the 1997 EIR and 2003 SEIR. The court thus upheld the eighth addendum that the City of San Jose had prepared after having completed the 1997 and 2003 EIRs.

The conclusions that were made in the *CREED*, *Dublin Citizens*, and *Citizens Against Airport Pollution* cases can be made also regarding the 2003 General Plan EIR. Under the law as set forth in these cases, the City may not undertake the preparation of a Supplemental or Subsequent EIR based solely on issues relating to climate change. Thus, the overall creation of GHG emissions from development within the Sand Creek Focus Area cannot under the law constitute a new significant impact or new information of substantial importance.

On November 30, 2015, the California Supreme Court issued a decision in the Center for Biological Diversity v. California Department of Fish and Wildlife (Newhall Ranch) case, which involved a challenge to an EIR prepared for the Newhall Ranch development project in Southern California. Although three issues were taken up by the Court for decision, of importance here is the question: Does the EIR validly determine that the development's GHG emissions would not significantly impact the environment? The Court explained that the EIR's attempt at using a quantitative comparison method developed by the ARB's Scoping Plan as a measure of the GHG emissions reductions required by the State as a whole, for a specific land use development in a specific location, was not supported by substantial evidence. Therefore, the EIR's reliance on the project-specific reduction in GHG emissions compared to the Business-As-Usual (BAU) scenario was determined not to be sufficient to support the conclusion that GHG impacts would be less than significant. This court ruling does not materially affect the proposed project, as the analysis contained herein does not measure GHG emissions against an established threshold. Furthermore, as discussed below, the proposed project would not increase the severity of GHG emissions that could result from buildout of the Sand Creek Focus Area under the adopted General Plan.

In addition, since the 2003 General Plan EIR was certified, a number of regulations have been enacted for the purpose of, or with an underlying goal for, reducing GHG emissions, such as the California Green Building Standards Code (CALGreen Code) and the California Building Energy Efficiency Standards Code. Such regulations have become increasingly stringent since the 2003 EIR was certified. For example, according to the California Energy Commission, the current (2016) Building Energy Efficiency Standards are anticipated to result in 28 percent less energy consumption for residential buildings and five percent savings for nonresidential buildings over the previous energy standards.⁴ The proposed project would be required to comply with all current applicable regulations associated with GHG emissions, including the CALGreen Code and California Building Energy Efficiency Standards Code.

⁴ California Energy Commission. 2016 Building Energy Efficiency Standards Adoption Hearing. June 10, 2015.

Technological advancements for the reduction of GHG emissions are ever-evolving. As such, the currently available technologies and regulations would inherently cause the proposed project to result in substantially fewer GHG emissions than what would have been predicted for the site had such analysis been undertaken during the preparation of the 2003 General Plan EIR.

As a means of achieving the statewide GHG emissions reduction goals required by AB 32, in June 2009, the City of Antioch approved Resolution 2009/57 adopting GHG reduction targets to reduce overall City-wide carbon emissions by 25 percent of 1990 levels by 2020 and 80 percent by 2050. The reduction targets adopted by the City mirror the statewide GHG emissions reductions targets established by AB 32. On May 24, 2011, the City Council approved the Community and Municipal Climate Action Plans. The plans highlight possible programs and actions that the City could use to reach the reduction goals adopted with Resolution 2009/57. While the City's Climate Action Plans include city-wide goals and strategies for the reduction of GHG emissions, a quantitative threshold of significance for GHG emissions for individual development projects has not been established by the City and is not set forth in the Climate Action Plans.

Greenhouse Gas Emissions Impact Discussion

a,b. While the proposed project would allow for future development to occur under buildout of the Sand Creek Focus Area, the project does not include a specific proposal for development at this time that would result in GHG emissions. Furthermore, as discussed above, potential impacts related to GHG emissions do not constitute "new information" as defined by CEQA, as GHG emissions were known as potential environmental issues before 1992.⁵ As such, the City could have evaluated climate change at the time the 2003 General Plan EIR was prepared, and this Addendum is not required to address GHG emissions. Nonetheless, in the interest of public disclosure, this Addendum includes an analysis of GHG emissions.

Because the proposed project includes land use and policy changes that could alter future development trends within the Sand Creek Focus Area, implementation of the proposed project could indirectly contribute to increases of GHG emissions. Estimated GHG emissions attributable to future development would be primarily associated with changes in carbon dioxide (CO₂) and, to a lesser extent, other GHG pollutants, such as methane (CH₄) and nitrous oxide (N₂O) associated with area sources, mobile sources or vehicles, utilities (electricity and natural gas), water usage, wastewater generation, and the generation of solid waste. The common unit of measurement for GHG is expressed in terms of annual metric tons of CO_2 equivalents (MTCO₂e/yr).

In order to determine if buildout of the Sand Creek Focus Area under the proposed Land Use Map and new General Plan policies would result in fewer, similar, or greater GHG emissions compared to buildout under the existing General Plan, the GHG emissions associated with buildout under the current General Plan land use designations were

⁵ As explained in a series of cases, most recently in *Concerned Dublin Citizens v. City of Dublin (2013) 214 Cal.* App. 4th 1301. Also see, *Citizens of Responsible Equitable Development v. City of San Diego (2011) 196 Cal.App.4*th 515.

compared to the GHG emissions that would occur as a result of buildout of the proposed Land Use Map. Emissions from both scenarios were quantified using CalEEMod using the same assumptions as presented in the Air Quality section of this Addendum. The proposed project's required compliance with the current California Building Energy Efficiency Standards Code was assumed in the modeling. In addition, the CO₂ intensity factor within the model was adjusted to reflect the Pacific Gas & Electric Company's anticipated progress towards statewide renewable portfolio standard goals. All CalEEMod results are included in the appendix to this Addendum.

According to the CalEEMod results, the buildout of the Sand Creek Focus Area under the existing General Plan would result in annual GHG emissions of 98,255.75 MTCO₂e/yr, while buildout under the proposed land use map would result in annual GHG emissions of 67,323.38 MTCO₂e/yr. Thus, the proposed project would result in fewer overall GHG emissions.

Therefore, the proposed project's impacts related to generation of GHG emissions, either directly or indirectly, that may have a significant impact on the environment, and/or conflicting with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, would be *less than or similar to* impacts that would be anticipated to occur under buildout of the Sand Creek Focus Area under the existing General Plan.

VI Wo	II. HAZARDS AND HAZARDOUS MATERIALS. uld the project:	"New" Potentially Significant Impact	"New" Less-Than- Significant with Mitigation Incorporated	"New" Less-Than- Significant Impact	Same Impact as 2003 General Plan EIR
a.	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				*
b.	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?				*
c.	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				×
d.	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				*
e.	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				*
f.	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				*
g.	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				*
h.	Expose people or structures to the risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				*

Hazards and Hazardous Materials Setting

The term hazardous substance refers to both hazardous materials and hazardous wastes. A material is defined as hazardous if the material appears on a list of hazardous materials prepared by a federal, State, or local regulatory agency or if the material has characteristics defined as hazardous by such an agency.

Hazardous materials and hazardous waste pose potential risks to the health, safety, and welfare of Antioch residents and workers, if handled inappropriately. The Delta Diablo Sanitation District (DDSD) disposes of hazardous materials within the City of Antioch. The DDSD operates the Delta Household Hazardous Waste Collection Facility (DHHWCF). The DHHWCF collects hazardous substances and pollutants such as used oil and filters, anti-freeze, latex and oil-based paints, household batteries, fluorescent and high intensity lamps, cosmetics, pesticides, pool chemicals, and household cleaners for safe disposal at the facility. All hazardous waste must be discharged at a Class I landfill under the Federal Resource Conservation and Recovery Act (RCRA).

Pursuant to the Hazardous Waste Control Law, Antioch has adopted by reference Contra Costa County's Hazardous Waste Management Plan.⁶ The Hazardous Waste Management Plan establishes a comprehensive approach to management of hazardous wastes in the County, including siting criteria for new waste management facilities, educational and enforcement efforts to minimize and control the hazardous waste stream in the County, and policies to maintain a unified database on businesses generating hazardous wastes.

Hazards and Hazardous Materials Impacts Discussion

a,b. Currently, the Sand Creek Focus Area is planned for retail and employment-generating uses, including, but not limited to administrative and professional offices, research and development, light manufacturing and assembly, and hospital and related medical uses. In addition, the Focus Area is planned for a golf course area with a wide variety of residential uses. The proposed GPA would alter the land use patterns within the Focus Area, and would remove the existing golf course land use designation.

The proposed project is intended to provide clear direction for future development and environmental management of the Sand Creek Focus Area; however, with the exception of removing the planned golf course, the project would not alter the intensity of planned uses of the Focus Area. Removal of the golf course designation would reduce the total amount of fertilizer, herbicide, and pesticide use which would otherwise be required to maintain golf course operations. Furthermore, the project would not increase the overall development yield of the Focus Area beyond what is currently anticipated in the City's General Plan. Therefore, the proposed project would not result in a substantial change in the use, storage, or transportation of hazardous materials relative to what was analyzed in the 2003 General Plan EIR.

Future development within the Sand Creek Focus Area could potentially involve demolition, grading, construction activities, and material delivery, which could result in the temporary handling and transport of hazardous materials such as fuels, lubricants, paints, solvents, and insulation. However, all future development would be required to comply with applicable California Health and Safety Codes and local City ordinances

⁶ California Health and Safety Code. *Section 25100-25249. 1990.* Available at: http://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=HSC&division=20.&title=&part=&c hapter=6.5.&article=3.5.

regulating the handling, storage, and transportation of hazardous and toxic materials, including the City's Grading and Drainage Ordinance and Storm Water Pollution Prevention Plan.

Future commercial and residential uses within the Sand Creek Focus Area could potentially use hazardous materials. However, such development would be required to adhere to best management practices (BMPs) and comply with applicable policies in the City's General Plan. Specifically, Policy 11.7.2 requires use permits for all operations involving handling of hazardous materials. In addition, all future projects would be subject to BAAQMD regulations, including regulations related to the identification, handling, and disposal of recognized asbestos-containing materials.

The proposed project would not substantially alter the planned uses of the Sand Creek Focus Area, and all future development would be subject to existing federal, State, and local regulations governing hazardous materials. Therefore, impacts related to creation of a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment, would be *less than or similar to* impacts previously identified in the 2003 General Plan EIR.

- c. The Sand Creek Focus Area contains the Dozier-Libbey Medical High School, and the Diablo Vista Elementary School is located approximately 0.12-mile to the north of the Focus Area. As noted above, future development within the Focus Area would be required to adhere to existing federal, State, and local regulations related to hazardous materials, which would ensure that any and all hazardous materials would be disposed of properly. In addition, all future development would be evaluated for the potential to emit hazardous materials, and, per Section 17213 of the California State Education Code, uses involving emission of hazardous materials would not be permitted within one-quartermile of a school. Therefore, impacts of the proposed project related to emission of hazardous emissions or handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school would be *less than or similar to* impacts previously identified in the 2003 General Plan EIR.
- d. The Sand Creek Focus Area does not contain a site included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.⁷ Therefore, the proposed project would not create a significant hazard to the public or the environment, and impacts related to such would be *less than or similar to* impacts previously identified in the 2003 General Plan EIR.
- e,f. The Sand Creek Focus Area is not located within an airport land use plan or within two miles of an airport. The nearest airport, Funny Farm Airport, located approximately 4.5 miles east of the Sand Creek Focus Area. Consequently, the proposed project would not result in an airport-related safety hazard for people residing or working in the area, and

⁷ California Department of Toxic Substances Control. *Hazardous Waste and Substances Site List*. Available at: http://www.dtsc.ca.gov/SiteCleanup/Cortese_List.cfm. Accessed May 2017.

impacts would be *less than or similar to* impacts previously identified in the 2003 General Plan EIR.

g. In 1996, the City of Antioch approved an Emergency Plan that addresses response to disasters, including, but not limited to, earthquakes, floods, fires, hazardous spills or leaks, major industrial accidents, major transportation accidents, major storms, airplane crashes, environmental response, civil unrest, and national security emergencies. The plan outlines the general authority, organization, and response actions for City of Antioch staff when disasters happen.

The proposed GPA includes the addition of specific policy direction related to circulation within the Sand Creek Focus Area (Policy 4.4.6.7[5]). For example, per Policy 4.4.6.7(5)(a) future development of the Focus Area is required to contain the roadways identified on the proposed Land Use Map. The proposed policies would not result in any modifications to the existing roadway system and, thus, would not physically interfere with the Emergency Plan, particularly with identified emergency routes. Therefore, the proposed project would not interfere with an emergency evacuation or response plan, and impacts would be *less than or similar to* impacts previously identified in the 2003 General Plan EIR.

According to the 2003 General Plan EIR, new development within the rural, hilly terrain h. included in the Sand Creek Focus Area could expose persons to hazardous conditions associated with wildland fires.⁸ However, while the proposed project would allow for future development to occur under buildout of the Sand Creek Focus Area, the project does not include a specific proposal for development at this time, and would not increase the total permitted development yield specified in the City's General Plan. Furthermore, per Policy 8.10.2, Fire Protection Policies, in the General Plan, the City of Antioch is required to provide the Contra Costa County Fire Protection District (CCCFPD) with information pertaining to development proposals and projected levels of growth within the City in order to allow the CCCFPD to maintain appropriate long-term master plans and refine the delivery of service and facilities to maintain performance standards. Therefore, impacts of the proposed project related to exposure of people or structures to the risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands would be less than or similar to impacts previously identified in the 2003 General Plan EIR.

⁸ City of Antioch. *General Plan Update EIR* [page 4.6-9]. July 2003

IX. Wo	HYDROLOGY AND WATER QUALITY. <i>uld the project:</i>	"New" Potentially Significant Impact	"New" Less- Than- Significant with Mitigation Incorporated	"New" Less-Than- Significant Impact	Same Impact as 2003 General Plan EIR
a.	Violate any water quality standards or waste				*
b.	discharge requirements? Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (i.e., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?				×
c.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?				×
d.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off- site?				×
e.	Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?				*
f.	Otherwise substantially degrade water quality?				*
g.	Place housing within a 100-year floodplain, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				×
h.	Place within a 100-year floodplain structures which would impede or redirect flood flows?				*
1.	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.				*
j.	Inundation by seiche, tsunami, or mudflow?				*

Hydrology and Water Quality Setting

The principal waterway within the Sand Creek Focus Area is Sand Creek, which flows from west to east through the center of the Sand Creek Focus Area. The vast majority of the Sand Creek Focus Area is vacant and undeveloped, and does not include impervious surfaces. However, portions of the Sand Creek Focus Area have been developed with roadways, and the area to the east of Deer Valley Road includes the Kaiser Permanente Antioch Medical Center and the Dozier-Libbey Medical High School. The City's General Plan currently anticipates buildout of the undeveloped portions of the Sand Creek Focus Area with a variety of residential and commercial uses, with the exception of the westernmost portion of the Sand Creek Focus area, which would be retained as open space.

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps, panel numbers 06013C0335F and 06013C0330F, the Sand Creek Focus Area is primarily located within Zone X. FEMA defines Zone X as an area not within a 100-year or 500-year floodplain. It should be noted that Sand Creek, which traverses the Sand Creek Focus Area from east to west, is located within a Flood Hazard Zone subject to a one percent annual chance of flood hazard. Per the 2003 General Plan EIR, the Sand Creek Focus Area is not located within a dam failure inundation zone.

Hydrology and Water Quality Impact Discussion

a,f. The proposed project consists of policy and land use changes only, and would not include physical development within the Sand Creek Focus Area. Furthermore, the proposed project would not increase the total development yield of the Sand Creek Focus Area beyond the 4,000-dwelling unit cap established in the City's General Plan, and, thus, would not increase the intensity of development beyond levels previously analyzed in the 2003 General Plan. However, construction and operation of future projects within the Sand Creek Focus Area may have the potential to conflict with water quality standards or waste discharge requirements, and could impact water quality.

The State Water Resources Control Board (SWRCB) regulates stormwater discharges associated with construction activities where clearing, grading, or excavation results in a land disturbance of one or more acres. The City's National Pollutant Discharge Elimination System (NPDES) permit requires applicants to show proof of coverage under the State's General Construction Permit prior to receipt of any construction permits. All future projects disturbing one or more acres of land within the Sand Creek Focus Area would be subject to the requirements of the State's General Construction Permit. Furthermore, future development and/or redevelopment projects that create or alter 10,000 or more square feet of impervious area would be required to contain and treat all stormwater runoff per the County C.3 Stormwater Standards, which have been adopted by the City of Antioch. Future projects would also be subject to applicable General Plan policies and programs related to water quality and waste discharge standards. For example, Policy 10.7.2(i) requires drainage within urban areas to be designed to prevent runoff from landscaped areas and impervious surfaces from carrying pesticides, fertilizers, and urban and other contaminants into natural streams. The proposed project would amend the City's General Plan Land Use Map for the Sand Creek Focus Area to designate areas along the Sand Creek corridor as SC-OS, which would further limit the potential for future projects to impact the water quality of Sand Creek.

Based on the above, the proposed project would not include policy or land use changes that would cause impacts to water quality or conflict with existing water quality and waste discharge regulations. In addition, the GPA would not increase the development yield of the Sand Creek Focus Area and would include land use changes to protect the water quality of Sand Creek. Therefore, impacts related to violation of water quality standards or waste discharge requirements, and/or degradation of water quality, would be *less than or similar to* impacts previously identified in the 2003 General Plan EIR.

- The City of Antioch currently does not rely on groundwater for water supplies.⁹ b. Therefore, any water demand associated with the future development within the Sand Creek Focus Area would not result in a depletion of groundwater. Future development within the Sand Creek Focus Area would include the creation of impervious surfaces. However, the proposed project would not increase the total development yield of the Sand Creek Focus Area, and, thus, would not substantially increase the total acreage of impervious surfaces within the Sand Creek Focus Area beyond acreages previously considered in the 2003 General Plan EIR. Furthermore, consistent with Policy 10.6.2(d) in the City's General Plan, the proposed project would limit development within groundwater recharge areas by limiting urban encroachment along the Sand Creek corridor. Therefore, the proposed project's impacts associated with substantial depletion of groundwater supplies, or substantial interference with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level, would be less than or similar to impacts previously identified in the 2003 General Plan EIR.
- c-e. The proposed project does not include physical improvements that would result in alterations to existing drainage conditions within the Sand Creek Focus Area. As noted above future development would be subject to existing NPDES regulations and C.3 Standards, as well as policies and programs in the General Plan related to drainage and surface runoff. Projects subject to C.3 requirments would be required to include appropriate site design measures, source controls, and hydraulically-sized stormwater treatment measures to ensure that the rate or amount of runoff associated with the project site would be equal to or less than existing levels. In addition, future projects would be subject to Title 6, Chapter 9, in the City's Municipal Code, which requires projects to provide for appropriate detention and treatment of stormwater runoff.

In conclusion, the proposed project does not include changes which would substantially alter the existing drainage pattern of the Sand Creek Focus Area in a manner which would result in erosion, siltation, or flooding on- or off-site, create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems, or provide substantial additional sources of polluted runoff beyond what has been previously been analyzed in the 2003 General Plan EIR. Consequently, impacts would be project would be *less than or similar to* impacts previously identified in the 2003 General Plan EIR.

g-i. The proposed project does not include land use changes that would subject future development to flood hazards or redirect or impede flood flows. As noted above, the proposed Land Use Map would designate areas along the Sand Creek corridor as SC-OS, thereby preventing development of habitable structures from occurring within the Flood Hazard Zone along the Sand Creek corridor. Furthermore, future development would be

⁹ City of Antioch. 2015 Urban Water Management Plan [pg. 6-12]. May 2016.

subject to applicable General Plan policies and programs related to flooding. For example, Policy 11.4.2(a) prohibits all development within the 100-year floodplain unless mitigation measures consistent with the National Flood Insurance Program are provided. As such, the proposed project would not result in changes which would place housing within a 100-year floodplain, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, place within a 100-year floodplain structures which would impede or redirect flood flows, or expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam. Thus, impacts would be *less than or similar to* impacts previously identified in the 2003 General Plan EIR.

j. Tsunamis are defined as sea waves created by undersea fault movement, whereas a seiche is a long-wavelength, large-scale wave action set up in a closed body of water such as a lake or reservoir. The Sand Creek Focus Area is located over 50 miles from the Pacific Ocean and tsunamis typically affect coastlines and areas up to one-quarter mile inland. Due to the project's distance from the coast, future projects within the Sand Creek Focus Area would not be exposed to flooding risks associated with tsunamis. Seiches would not pose a risk to future projects, as the Sand Creek Focus Area is not located adjacent to a large closed body of water. Mudflows typically occur on steep, unstable slopes. While the Sand Creek Focus Area contains a substantial number of sloped areas, the proposed project would limit development on the upper 25 percent of hilltops by designating such areas as SC-OS or SC-OSH. Therefore, the total acreage of developable slopes would be less under than proposed Land Use Map than what is currently anticipated in the City's General Plan.

Based on the above, the proposed project's impacts associated with inundation by seiche, tsunami, or mudflow, would be *less than or similar to* impacts previously identified in the 2003 General Plan EIR.

X. Wo	LAND USE AND PLANNING. <i>uld the project:</i>	"New" Potentially Significant Impact	"New" Less- Than- Significant with Mitigation Incorporated	"New" Less-Than- Significant Impact	Same Impact as 2003 General Plan EIR
a.	Physically divide an established community?				*
b.	Conflict with any applicable land use plans, policies, or regulations of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating on environmental effect?				*
c.	Conflict with any applicable habitat conservation plan or natural communities conservation plan?				×

Land Use and Planning Setting

The Sand Creek Focus Area is located within a primarily undeveloped area of the City of Antioch. According to the City's General Plan, including all amendments to date, the Sand Creek Focus Area currently includes the following land use designations:

- Open Space;
- Hillside and Estate Residential;
- Golf Course/Senior Housing/Open Space;
- Estate and Executive Residential/Open Space;
- Mixed Use Medical Facility, Commercial/Open Space;
- Low Density Residential;
- School;
- Multiple Family;
- Hillside, Estate, and Executive Residential/Open Space;
- Medium Low Density Residential;
- Public/Quasi Public; and
- Open Space/Senior Housing.

Land Use and Planning Impact Discussion

a. A project risks dividing an established community if the project would introduce infrastructure or alter land use so as to change the land use conditions in the surrounding community, or isolate an existing land use. The Sand Creek Focus Area does not contain existing residential development. In addition, the proposed land use changes would not change the land use conditions associated with the residential subdivisions to the north or isolate an existing land use. Therefore, impacts associated with physically dividing an established community would be *less than or similar to* impacts previously identified in the 2003 General Plan EIR.

b. The proposed project includes a GPA to change the General Plan land use designations of the Sand Creek Focus Area. The updated Land Use Map includes SC-V and SC-AV land use designations to reflect the recently-approved Vineyards at Sand Creek and Aviano projects. In addition, the planned golf course area (Golf Course/Senior Housing/Open Space) shown on the existing land use map would be removed, as a golf course is no longer anticipated or viable for the Sand Creek Focus Area. The updated Land Use Map also provides for SC-OS and SC-OSH designations along the Sand Creek Focus Area, a large drainage basin, a future regional park, and various protected hilltops. An SC-MED land use designation would overlay the existing Kaiser Permanent Antioch Medical Center and the Dozier-Libbey Medical High School.

Pending adoption of the proposed land use changes by the City of Antioch, the proposed project would be consistent with the City's General Plan and zoning. In addition, the proposed project would not increase the total development yield of the Sand Creek Focus Area, and does not involve any physical changes that have the potential to conflict with existing land use designations, zoning designations, or other regulations adopted for the purpose of avoiding or mitigation an environmental effect. Per policy 4.4.6.7(8)(a), all applications for development within the Sand Creek Focus Area would be subject to review by the City of Antioch Planning Commission through the Planned Development District process, as described in Article 23 of the City's Zoning Ordinance. As such, future development plans would be required to demonstrate that any residential component would be in harmony with the character of the surrounding neighborhood and community, and would result in densities equal to or low than densities permitted by the General Plan. Review and recommendation of final development plans by the Planning Commission would minimize potential conflicts with the City's General Plan and zoning. Furthermore, per proposed Policy 4.4.6.7(4)(h), all future projects within the Sand Creek Focus Area would be required to submit an Open Space Management Plan to the City concurrent with development applications. The Open Space Management Plan would detail how open space lands would be owned, managed, and maintained, and would ensure protection of sensitive natural resources.

Based on the above, the proposed project's impacts related to conflicts with any applicable land use plans, policies, or regulations of an agency with jurisdiction over the Sand Creek Focus Area adopted for the purpose of avoiding or mitigating on environmental effect would be *less than or similar to* impacts previously identified in the 2003 General Plan EIR.

c. In July 2007, the East Contra Costa County (ECCC) Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP) was adopted by Contra Costa County, other member cities, the USFWS, and the CDFW. The City of Antioch, however, declined to participate in the HCP/NCCP. Currently, the City is working towards developing its own HCP/NCCP; however, no such plan has yet been completed. Therefore, the Sand Creek Focus Area is not located in an area with an approved HCP/NCCP, or local, regional, or State habitat conservation plan, and was not covered by such a plan at the time the 2003

General Plan EIR was certified. As a result, impacts would be *less than or similar to* impacts previously identified in the 2003 General Plan EIR.

XI Wa	. MINERAL RESOURCES. build the project:	"New" Potentially Significant Impact	"New" Less- Than- Significant with Mitigation Incorporated	"New" Less-Than- Significant Impact	Same Impact as 2003 General Plan EIR
a.	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				*
b.	Result in the loss of availability of a locally- important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				*

Mineral Resources Setting

The California State Department of Conservation, Division of Mines and Geology identifies sites with mineral resource potential. The City of Antioch was not identified as having significant mineral resource deposits.

Mineral Resources Impact Discussion

a,b. According to the 2003 General Plan EIR, areas identified in the General Plan for new development do not contain known mineral resources that would be of value to the region or residents of the State.¹⁰ The Sand Creek Focus Area is currently planned for development, and the proposed changes in land use would not result in the loss of availability of known mineral resources or of a locally-important mineral resource recovery site. Therefore, impacts would be *less than or similar to* impacts previously identified in the 2003 General Plan EIR.

¹⁰ City of Antioch. *General Plan Update EIR* [pg. 5-9]. July 2003.

XI Wo	I. NOISE. buld the project result in:	"New" Potentially Significant Impact	"New" Less- Than- Significant with Mitigation Incorporated	"New" Less-Than- Significant Impact	Same Impact as 2003 General Plan EIR
a.	Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?				*
b.	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?				*
c.	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				*
d.	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?				*
e.	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				*
f.	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				*

Noise Setting

The Noise Element of the City's General Plan establishes guidelines regarding noise compatibility issues for a variety of land uses, and describes a range of allowable noise levels. Title 5, Chapter 17, of the City's Municipal Code contains the City's Noise Ordinance, which regulates noise levels within the city limits. The 2003 General Plan EIR provides a comprehensive assessment of existing and long-term noise impacts associated with buildout of the General Plan.

Noise Impact Discussion

a-d The proposed GPA includes Policy 4.4.6.7(1)(a), which would limit the development yield of the Focus Area to 4,000 dwelling units. Thus, the total development yield resulting from implementation of the proposed project would be the same as was previously anticipated in the 2003 General Plan EIR. In addition, the proposed project would not introduce new land uses to the Sand Creek Focus Area which were not previously considered in either the 2003 General Plan EIR or the Aviano and Vineyards at Sand Creek EIRs. Furthermore, the proposed project would result in a reduction in future traffic volumes, which would reduce traffic-related noise associated with future

development. Therefore, the land use and policy changes included in the proposed project would not be anticipated to result in noise or groundborne vibration impacts beyond those previously anticipated by the City.

Furthermore, future development within the Sand Creek Focus Area would be subject to project-level review under CEQA, including site-specific analysis of existing and predicted noise levels and analysis of construction-related groundborne vibration levels. Such development would additionally be subject to existing General Plan policies and standards related to noise and groundborne vibration, as well as the City's Noise Ordinance. For example, per Policy 11.6.2, Temporary Construction, in the City's General Plan, construction activities must be limited to certain hours of operation, and proposed development adjacent to occupied noise-sensitive land uses must implement a construction-related noise management plan. In addition, all construction equipment is required to utilize noise reduction features (e.g., mufflers and engine shrouds) that are at least as effective as features originally installed by the manufacturer.

Based on the above, impacts related to exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels, and substantial permanent or temporary increases in ambient noise levels in the Sand Creek Focus Area, would be *less than or similar to* impacts previously identified in the 2003 General Plan EIR.

e,f. As discussed previously, the Sand Creek Focus Area is not located within the vicinity of a public or private airport and is not covered by an adopted airport land use plan. Therefore, the proposed project's impacts related to such would be *less than or similar to* impacts previously identified in the 2003 General Plan EIR.

XI Wa	II. POPULATION AND HOUSING. <i>build the project:</i>	"New" Potentially Significant Impact	"New" Less- Than-Significant with Mitigation Incorporated	"New" Less-Than- Significant Impact	Same Impact as 2003 General Plan EIR
a.	Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure)?				×
b.	Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				×
c.	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				*

Population and Housing Setting

A majority of the Sand Creek Focus Area is currently vacant and undeveloped. However, the City's General Plan currently anticipates buildout of the area as a large-scale planned community, including both housing and employment opportunities. Per Policy 4.4.6.7(b)(k), a maximum of 4,000 dwelling units are permitted within the Focus Area.

Population and Housing Impact Discussion

a. As discussed throughout this Addendum, the proposed project would not increase the total development yield of the Sand Creek Focus Area beyond the level previously evaluated in the 2003 General Plan EIR. Updates and changes included in the proposed GPA would remove policies related to construction of a golf course within the Focus Area, and would provide new policies related to the land use designations included on the proposed Land Use Map, as well as policies related to financial feasibility of future development, open space and recreation, circulation, community design, hillside and hilltop development, and various other related issue areas.

The Sand Creek Focus Area was previously anticipated for development in the City's General Plan, and the proposed project would not substantially increase the intensity of residential development within the Focus Area. As discussed previously, per proposed Policy 4.4.6.7(8)(a), all applications for development within the Sand Creek Focus Area would be subject to the Planned Development District process described in Article 23 of the City's Zoning Ordinance. As such, future development plans would be required to demonstrate that any residential component would be in harmony with the character of the surrounding neighborhood and community, and would result in densities equal to or lower than densities permitted by the General Plan. Based on the above, the impacts of the proposed project related to induction of substantial population growth in an area, either directly or indirectly, would be *less than or similar to* impacts previously identified in the 2003 General Plan EIR.

b,c. The Sand Creek Focus Area contains a small amount of existing single-family ranch homes. Two housing developments have been approved within the Focus Area; however, such developments have been incorporated into the proposed Land Use Map in the form of the SC-V and SC-AV land use designations. Therefore, the proposed project would not displace substantial numbers of people, resulting in the construction of replacement housing elsewhere, and impacts related to such would be *less than or similar to* impacts previously identified in the 2003 General Plan EIR.

XIV. PUBLIC SERVICES.

Would physic or physic new of constr envir accept perfo	Id the project result in substantial adverse ical impacts associated with the provision of new hysically altered governmental facilities, need for or physically altered governmental facilities, the truction of which could cause significant ronmental impacts, in order to maintain ptable service ratios, response times or other ormance objectives for any of the public services:	"New" Potentially Significant Impact	"New" Less- Than- Significant with Mitigation Incorporated	"New" Less-Than- Significant Impact	Same Impact as 2003 General Plan EIR
a. l	Fire protection?				*
b. 1	Police protection?				*
c	Schools?				*
d. 1	Parks?				*
e. (Other Public Facilities?				*

Public Services Setting

The CCCFPD provides fire and emergency services to the City of Antioch, including the Sand Creek Focus Area. The CCCFPD is an "all-hazards" organization providing fire suppression, paramedic emergency medical services (EMS), technical rescue, water rescue, and fire prevention/investigation services to more than 600,000 residents across a 304-square mile coverage area. The CCCFPD operates 25 fire stations and responds to approximately 45,000 incidents annually. Four of the fire stations are located within the City of Antioch. Station 82 is located approximately 2.4 miles north of the Sand Creek Focus Area along Lone Tree Way. Police protection services for the City are provided by the Antioch Police Department (APD). The Antioch Police Station is located at 300 L Street, approximately seven miles north of the Sand Creek Focus Area.

The Sand Creek Focus Area is located within the attendance boundaries of the Brentwood Union School District (BUSD), the Antioch Unified School District (AUSD), and the Liberty Union High School District (LUHSD).

Existing public parks within the City are discussed in Section XV, Recreation, of this Addendum.

Public Services Impact Discussion

a-e. The proposed project would not increase the total development yielded permitted within the Sand Creek Focus Area, and would generally maintain development trends previously anticipated for the area in the City's General Plan. While the proposed project would allow for future development to occur under buildout of the Sand Creek Focus Area, the project does not include a specific proposal for development at this time.

Future development within the Sand Creek Focus Area would be required to comply with applicable General Plan policies and programs related to public services and facilities, including Policies 8.11.2 and 8.10.2, which require new development requests to be referred to the CCCFPD and the APD, respectively, for review and comment. Future

projects would additionally be required to pay developer impact fees that would fund costs associated with new or expanded school facilities (Policy 8.8.2) and would be subject to Section 9-5.706 of the City's Municipal Code, which includes requirements related to provision of park land and payment of in-lieu fees to fund improvements to and expansion of park facilities within the City.

Given that the proposed project would not increase residential development within the Sand Creek Focus Area beyond levels previously analyzed in the 2003 General Plan EIR, all future development would be subject to applicable goals and programs in the General Plan related to public services. Future construction and/or improvement of government facilities has been planned for, and would be covered by existing development fees. Overall, the proposed project does not include any changes that would trigger new adverse physical impacts associated with the provision of new or physically altered government facilities, or need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for public services. Thus, impacts would be *less than or similar to* impacts previously identified in the 2003 General Plan EIR.

XV. Woi	.RECREATION. <i>uld the project:</i>	"New" Potentially Significant Impact	"New" Less- Than- Significant with Mitigation Incorporated	"New" Less-Than- Significant Impact	Same Impact as 2003 General Plan EIR
a.	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				×
b.	Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				*

Recreation Setting

The Sand Creek Focus Area does not contain any existing parks. However, the City of Antioch operates and maintains numerous parks throughout the City, including Diablo West Park, Chaparral Park, Dallas Ranch Park, Heidorn Park, and Williamson Ranch Park, all of which are located within 0.5-mile of the Focus Area. In addition, both Central Loma Regional Park and Black Diamond Regional Preserve are located to the northwest of the Focus Area. As noted above, future development within the Sand Creek Focus Area would be subject to Section 9-5.706 of the City's Municipal Code, which includes requirements related to provision of park land and payment of in-lieu fees to fund improvements to and expansion of park facilities within the City.

Recreation Impact Discussion

a,b. As discussed throughout this Addendum, the proposed project would not increase the total development yield of the Sand Creek Focus Area beyond the level previously evaluated in the 2003 General Plan EIR. Updates and changes included in the proposed GPA would remove policies related to construction of a golf course within the Focus Area, and would provide new policies related to new land use designations included on the proposed Land Use Map, as well as policies related to financial feasibility of future development, open space and recreation, circulation, community design, hillside and hilltop development, and various other related issue areas.

Specifically, the proposed Policy 4.4.6.7(4) requires that a minimum of 30 percent of the Sand Creek Focus Area is retained as open space, and requires installation of a comprehensive trail system connecting the Focus Area to Black Diamond Regional Preserve, as well as to neighborhood parks, communities, commercial centers, and other features in the area. Each project would be required to submit an Open Space Management Plan concurrent with development applications indicating how open space would be owned, managed, and maintained. In addition, the Policy suggests that all projects within the Sand Creek Focus Area should provide full park acreage dedication requirements consistent with Section 9-5.706 of the City's Municipal Code, and discourages use of in-lieu fees.

Development of the Sand Creek Focus Area with up to 4,000 dwelling units has been previously analyzed in the 2003 General Plan EIR. While the proposed project would alter land use patterns within the Focus Area, the policies included in the proposed GPA would ensure that future development would be consistent with existing City regulations related to provision of recreation facilities. Therefore, impacts related to parks and recreation facilities would be *less than or similar to* impacts previously identified in the 2003 General Plan EIR.

XVI. TRANSPORTATION AND CIRCULATION. Would the project:		"New" Potentially Significant Impact	"New" Less- Than- Significant with Mitigation Incorporated	"New" Less-Than- Significant Impact	Same Impact as 2003 General Plan EIR
a.	Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?				*
b.	Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?				*
c.	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				*
d.	Substantially increase hazards due to a design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				*
e.	Result in inadequate emergency access?				*
f.	Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?				*

Transportation and Circulation Setting

The 2003 General Plan EIR includes an in-depth analysis of traffic impacts associated with buildout of the City of Antioch, including impacts associated with future development and operation of new roadways within the Sand Creek Focus Area.

The Contra Costa Transportation Authority (CCTA) released the most recent Congestion Management Plan for the County in 2015 (2015 Congestion Management Plan). The 2015 Congestion Management Plan provides the overall direction and approach for the regional transportation system.

Transportation and Circulation Impact Discussion

a,b. As discussed throughout this Addendum, the proposed project would not increase the total development yield of the Sand Creek Focus Area. In addition, the proposed Land Use Map would eliminate the golf course area anticipated for the Sand Creek Focus Area

per the existing General Plan. The proposed project would also reduce the total allowable amount of commercial development within the Sand Creek Focus Area. Consequently, the proposed project would not increase the total traffic volumes resulting from buildout of the Sand Creek Focus Area beyond levels previously considered in the 2003 General Plan EIR.

Future development occurring within the Sand Creek Focus Area would be subject to project-specific analysis related to traffic impacts, and would be required to comply with all applicable General Plan policies related to transportation and circulation. For example, per Policy 7.3.2(h), traffic impact studies are required for all new developments that would increase the approved density or intensity of development or generate 50 peak hour trips or more at any intersection evaluated within the Circulation Element of the General Plan.

Based on the above, impacts related to conflicts with the Circulation Element of the City's General Plan and/or the 2015 Congestion Management Plan would be *less than or similar to* impacts previously analyzed in the 2003 General Plan EIR.

- c. The Sand Creek Focus Area is not located near an airport, and the proposed project does not include any changes that would result in a change in air traffic patterns, including either an increase in air traffic levels or a change in location that would result in substantial safety risks. Future development within the Sand Creek Focus Area would be subject to review to determine potential impacts related to air traffic conflicts. Therefore, impacts related to such would be *less than or similar to* impacts previously analyzed in the 2003 General Plan EIR.
- d. The proposed project does not include any physical changes to existing roadways or the introduction of any design features that would be considered hazardous. The proposed Land Use Map does include provisions for future roads within the Sand Creek Focus Area; however, the project does not include a specific development proposal for construction of such roads at this time. Rather, per proposed Policy 4.4.6.7(5)(a), future development within the Sand Creek Focus Area would be required to include construction of the identified roads. The proposed project includes specific policies to ensure such roadways are constructed in a safe manner. For example, proposed Policies 4.4.6.7(5)(c-e), Sand Creek Road, Dallas Ranch Road, and Hillcrest Avenue would be required to include adequate turnouts and similar facilities for bus systems, paved Class I bike paths (unless an alternative nearby parallel path exists), and sidewalks separated from the back of the roadway curbs by at least ten feet. Furthermore, all future roadway improvements would be subject to review and approval by the appropriate federal, State, and local agencies. Therefore, impacts related to increases in hazards due to design features and/or incompatible uses would be *less than or similar to* impacts previously analyzed in the 2003 General Plan EIR.
- e. The proposed project would not increase the total development yield of the Sand Creek Focus Area, and, thus, would not substantially increase the intensity of development beyond levels previously considered in the 2003 General Plan EIR. Therefore, the
proposed policy and land use changes would not increase the demand for emergency response services currently anticipated for the Sand Creek Focus Area. Furthermore, as noted above, the proposed GPA does not propose any physical improvements to local roadways, and, thus, would not obstruct or inhibit emergency access. Future projects require roadway construction or improvements would be required to consult with the CCFD, the APD, and the City of Antioch Public Works Department to ensure adequate provision of emergency access. Therefore, impacts related to emergency access would be *less than or similar to* impacts previously analyzed in the 2003 General Plan EIR.

f. The proposed policy and land use changes would not conflict adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. Rather, the proposed project would provide policies specifically aimed at enhancing future pedestrian connectivity within the Sand Creek Focus Area. Specifically, proposed Policy 4.4.6.7(4)(b) would require installation of a comprehensive trail system that would connect the Sand Creek Focus Area to the Black Diamond Regional Park, as well as neighborhood parks, communities, commercial centers, and other area features. In addition, proposed policy 4.4.6.7(5)(d) would require three future roadways within the Sand Creek Focus Area (Sand Creek Road, Deer Valley Road, and Hillcrest Avenue) to include paved Class I bike paths, unless an alternate nearby parallel path exists within the broader open space trail system. Therefore, the proposed project's impacts related to conflicts with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, and/or degradation of such facilities, would be *less than or similar to* impacts previously analyzed in the 2003 General Plan EIR.

XVII. TRIBAL CULTURAL RESOURCES.

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:

- a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?
- b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

"New" Potentially ignificant Impact	Than- Significant with Mitigation Incorporated	"New" Less-Than- Significant Impact	Same Impact as 2003 General Plan EIR
			×
			×

"New" Less-

Tribal Cultural Resources Setting

Per AB 52, if a project could cause a substantial adverse change in the significance of a Tribal Cultural Resource, lead agencies are required to initiate consultation with any tribes with traditional and/or cultural affiliations in the geographic area where a subject project is located. The 2003 General Plan EIR does not include a discussion of Tribal Cultural Resources, and such resources have not previously been identified within the Sand Creek Focus Area.

Tribal Cultural Resources Impact Discussion

a,b. As discussed in Section V, Cultural Resources, of this Addendum, while the proposed project would allow for future development to occur under buildout of the Sand Creek Focus Area, the project does not include a specific proposal for development at this time, and the proposed GPA would not increase the total development yield of the Focus Area beyond what was previously analyzed in the General Plan EIR (4,000 dwelling units total). The proposed GPA would not increase the total area of disturbance associated with future development within the Sand Creek Focus Area. Future development applications would be subject to environmental review under CEQA, which would provide for analysis of impacts related to Tribal Cultural Resources, and would be required to meet AB 52 and SB 18 consultation requirements. In addition, future projects would be required to adhere to Policy 10.9.2 in the City's General Plan, which provides for the protection of archaeological, paleontological, and historic resources, including Tribal Cultural Resources. Based on the above, impacts related to Tribal Cultural Resources

would be *less than or similar to* impacts previously identified in the 2003 General Plan EIR.

XV Wo	III. UTILITIES AND SERVICE SYSTEMS. uld the project:	"New" Potentially Significant Impact	"New" Less- Than- Significant with Mitigation Incorporated	"New" Less-Than- Significant Impact	Same Impact as 2003 General Plan EIR
a.	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				*
b.	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				*
c.	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				*
d.	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				*
e.	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				×
f.	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?				×
g.	Comply with federal, state, and local statutes and regulations related to solid waste?				*

Utilities and Service Systems Setting

A majority of the Sand Creek Focus Area is undeveloped, and does not contain existing utilities or service systems. Within the developed areas of the City of Antioch to the north of the Focus Area, the City maintains and owns the local sewage collection system and is responsible for the collection and conveyance of wastewater to the Delta Diablo Wastewater Treatment Plant (WWTP). The Delta Diablo Sanitation District (DDSD) owns and operates the regional interceptors and wastewater treatment plant.

The Sand Creek Focus Area is located within the City of Antioch water service area, which serves approximately 17,492 acre-feet of water to over 30,688 connections.¹¹ The service area extends from steep hilly terrain in the south and west portions of the service area to flat with a gentle slope in the northeast portion of the service area. Elevations in the service area range from sea level to over 700 feet. Generally, the service area is limited to elevations less than 560 feet. Four pressure zones are currently required to distribute water, and eventually six to seven pressure zones may be necessary depending on future land development. The principal sources

¹¹ West Yost Associates. Water Supply Assessment for Sand Creek [pg. 3-2]. January 2015

of raw water supply are the Sacramento/San Joaquin Rivers Delta and the Contra Costa Canal. Raw water from the Contra Costa Canal can also be stored in the Antioch Municipal Reservoir. Contra Costa Canal water, purchased from the Contra Costa Water District (CCWD), is pumped from Victoria Canal, Rock Slough, and Old River in the western delta.

Republic Services provides solid waste collection, disposal, recycling, and yard waste services to the City, including the Sand Creek Focus Area. Solid waste and recyclables are taken to the Contra Costa Transfer and Recovery Station in Martinez prior to transfer to the Keller Canyon Landfill in Pittsburg. The Keller Canyon Landfill site is 1,399 acres, 244 of which comprise the actual current disposal acreage. The landfill is permitted to accept 3,500 tons of waste per day and has a total estimated permitted capacity of approximately 75 million cubic yards, with only approximately 12 million cubic yards (16 percent of total capacity) used to date.¹²

Utilities and Service Systems Impact Discussion

a,b,d,e. The proposed project would not increase the total development yield of the Sand Creek Focus Area, and, as such, would not substantially affect the amount of wastewater that could be generated as a result of buildout of the Focus Area. In addition, per proposed Policy 4.4.6.7(8)(a), all applications for development within the Sand Creek Focus Area would be subject to the Planned Development District process described in Article 23 of the City's Zoning Ordinance. Specifically, Section 9-5.2308 requires that in evaluating final development plans, and prior to recommending approval to the City Council, the Planning Commission must make findings that adequate utility service can be supplied to serve all phases of development. In addition, future development would be subject to applicable General Plan policies and programs related to water supply and wastewater capacity.

Therefore, impacts related to exceeding wastewater treatment requirements of the applicable RWQCB, construction of new water or wastewater treatment facilities or expansion of existing facilities, availability of water supplies from existing entitlements and resources, and/or determination by the DDSD that adequate capacity exists to serve the project's projected demand in addition to the DDSD's existing commitments would be *less than or similar to* impacts previously identified in the 2003 General Plan EIR.

c. While the proposed project would allow for future development to occur under buildout of the Sand Creek Focus Area, the project does not include a specific proposal for development at this time, and would not involve changes that would result in the construction of new storm water drainage facilities or expansion of existing facilities. Future development within the Sand Creek Focus Area would be subject to project-level review under CEQA and would undergo a review of the adequacy of existing facilities and the need for new or expanded stormwater facilities. Such development would be subject to all applicable federal, State, and local regulations related to stormwater drainage, including the most recent Contra Costa Clean Water Program Stormwater C.3 Guidebook. C.3 Standards require that post-development runoff does not exceed pre-

¹² California Department of Resources Recycling and Recovery (CalRecycle). Solid Waste Information System. Available at: www.calrecycle.ca.gov/SWFacilities/. Accessed May 2017

development runoff for regualted projects. Therefore, impacts related to the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects, would be *less than or similar to* impacts previously identified in the 2003 General Plan EIR.

f,g. While the proposed project would allow for future development to occur under buildout of the Sand Creek Focus Area, the project does not include a specific proposal for development at this time, and would not involve changes that would increase the generation of solid waste associated with future projects within the Focus Area. Rather, solid waste demand would be less than or similar to demand previously considered in the 2003 General Plan EIR. Future development within the Sand Creek Focus Area would be subject to project-level review under CEQA and would undergo a review of potential issues related to solid waste disposal and landfill capacity. Such development would be subject to all applicable federal, State, and local regulations related to solid waste. Therefore, impacts related to capacity of the Keller Canyon Landfill and compliance with federal, State, and local statutes and regulations related to solid waste would be *less than or similar to* impacts previously identified in the 2003 General Plan EIR.

XIX	K. MANDATORY FINDINGS OF SIGNIFICANCE.	"New" Potentially Significant Impact	"New" Less- Than- Significant with Mitigation Incorporated	"New" Less-Than- Significant Impact	Same Impact as 2003 General Plan EIR
a.	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?				×
b.	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?				*
c.	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?				*

Discussion of Mandatory Findings of Significance

As described throughout this Addendum, while the proposed project would allow for a. future development to occur under buildout of the Sand Creek Focus Area, the project does not include a specific proposal for development at this time, and does not include land use or policy changes that would result in impacts to special-status plant or wildlife species beyond impacts previously considered in the 2003 General Plan EIR. The project would not impact trees protected by the City's Municipal Code. In addition, the proposed project would not result in impacts related to eliminating important examples of major periods of California history or prehistory associated with undiscovered archeological and/or paleontological resources during project construction. Furthermore, future development within the Sand Creek Focus Area would be required to comply with applicable City of Antioch General Plan and Municipal Code policies, and would undergo site-specific CEQA analysis. Therefore, the proposed project would not result in impacts associated with the following: 1) degrade the quality of the environment; 2) substantially reduce or impact the habitat of fish or wildlife species; 3) cause fish or wildlife populations to drop below self-sustaining levels; 4) threaten to eliminate a plant or animal community; 5) reduce the number or restrict the range of a rare or endangered plant or animal; or 6) eliminate important examples of the major periods of California history or prehistory. Overall, impacts would be less than or similar to impacts previously identified in the 2003 General Plan EIR.

- b. As demonstrated in this Addendum, all potential environmental impacts that could occur as a result of project implementation would be less than or similar to impacts previously identified in the 2003 General Plan EIR. Thus, buildout of the Sand Creek Focus Area with urban uses was considered in the cumulative analysis of City buildout of the General Plan. When viewed in conjunction with other closely related past, present, or reasonably foreseeable future projects, the project's cumulative impact would be *less than or similar to* impacts previously identified in the 2003 General Plan EIR.
- c. As described in this Addendum, the proposed land use and policy changes would not cause substantial adverse effects on human beings (including effects related to air quality, excess noise levels, and seismic hazards). In addition, future development within the Sand Creek Focus Area would be subject to project-level review under CEQA, which would include analysis of any potential impacts to human beings and ensure consistency with applicable General Plan policies and standards. Therefore, the proposed project's impact related to causing substantial adverse effects on human beings, either directly or indirectly, would be *less than or similar to* impacts previously identified in the 2003 General Plan EIR.

F. SOURCES

All of the technical reports and modeling results used for the project analysis are available upon request at the City of Antioch Community Development Department, Planning Division, located at Third & "H" Streets in Antioch, California, Monday through Friday between 8:00 and 11:30 AM and between 1:00 PM and 5:00 PM by appointment. The following documents are referenced information sources used for purposes of this Addendum:

- 1. Bay Area Air Quality Management District. *Air Quality Plans*. Available at: http://www.baaqmd.gov/Divisions/Planning-and-Research/Plans.aspx. Accessed March 2017.
- 2. Bay Area Air Quality Management District. *Air Quality Standards and Attainment Status*. Available at: http://www.baaqmd.gov/research-and-data/air-quality-standards-and-attainment-status. Accessed May 2017.
- 3. Bay Area Air Quality Management District. *California Environmental Quality Act Air Quality Guidelines*. May 2017.
- 4. California Department of Conservation. *Contra Costa County Important Farmland Map* 2014. Published April 2016.
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APPENDIX

AIR QUALITY AND GHG MODELING RESULTS

APPENDIX

AIR QUALITY AND GHG MODELING RESULTS

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Sand Creek (As Approved)

Bay Area AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Population	10116	1238	0	0	0	
Floor Surface Area	6,366,600.00	433,000.00	2,600,000.00	1,240,000.00	35,000.00	
Lot Acreage	1,148.38	27.06	59.69	28.47	125.66	
Metric	Dwelling Unit	Dwelling Unit	1000sqft	1000sqft	Hole	
Size	3,537.00	433.00	2,600.00	1,240.00	18.00	
Land Uses	Single Family Housing	Apartments Low Rise	Office Park	Regional Shopping Center	Golf Course	

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	64
Climate Zone	4			Operational Year	2028
Utility Company	Pacific Gas & Electric Cor	mpany			
CO2 Intensity (Ib/MWhr)	322.63	CH4 Intensity (Ib/MWhr)	0.029	N2O Intensity (Ib/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

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Project Characteristics - CO2 Intensity adjusted to reflect PG&E progress towards RPS

Land Use - General Plan Buildout

Construction Phase - Construction not modeled

Off-road Equipment -

Off-road Equipment - Construction not modeled

Energy Use - Energy Intensity adjusted based on 2016 Title 24

Mobile Land Use Mitigation -

Area Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	6,000.00	1.00
tblConstructionPhase	PhaseEndDate	11/28/2078	11/30/2055
tblEnergyUse	T24E	431.22	310.48
tblEnergyUse	T24E	7.64	7.26
tblEnergyUse	T24E	2.89	2.88
tblEnergyUse	T24E	368.92	265.62
tblEnergyUse	T24NG	10,164.29	7,318.29
tblEnergyUse	T24NG	21.14	20.08
tblEnergyUse	T24NG	2.38	2.26
tblEnergyUse	T24NG	32,797.58	23,614.26
tblLandUse	BuildingSpaceSquareFeet	00.00	35,000.00
tblLandUse	LandUseSquareFeet	0.00	35,000.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	00.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	322.63
tblProjectCharacteristics	OperationalYear	2018	2028

2.0 Emissions Summary

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2.1 Overall Construction

Unmitigated Construction

000 0.0000	00.0	0.00	0.000	0.0000	0.000	0.000	00000	0.000	0.0000	0.000	00000	00000	0.0000	0.000	0.0000
000 0.0000	00.0	0.0	0.0000	0.0000	0.0000	0.000.0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
		MT/yr								ıs/yr	ton				
0 CO2e	14 N2(02 CF	2 Total CC	NBio- CO	Bio- CO2	PM2.5 Total	Exhaust PM2.5	Fugitive PM2.5	PM10 Total	Exhaust PM10	Fugitive PM10	S02	со	NOx	

Mitigated Construction

			-
CO2e		0.0000	0000.0
N2O		0.000.0	0.000
CH4	/yr	0.0000	0.000
Total CO2	ΜΤ	0.0000	0.000
NBio- CO2		0.0000	0.000
Bio- CO2		0.0000	0000'0
PM2.5 Total		0.0000	0.000
Exhaust PM2.5		0.000.0	0.00.0
Fugitive PM2.5		0.0000	0000'0
PM10 Total		0.0000	0.0000
Exhaust PM10	s/yr	0.0000	0.0000
Fugitive PM10	ton	0.0000	0000'0
S02		0.0000	0000'0
со		0.0000	00000
NOX		0.0000	0.0000
ROG		0.0000	0.0000
	Year	2055	Maximum

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Sand Creek (As Approved) - Bay Area AQMD Air District, Annual

		1	DV (temela		ion 141 M on the 1	ALC: N	(Jonet VON	. 000 hete	within with some	Marria	- Defe	1 L	Date Date	č	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	00.0	0.00	0.00	0.00	0.00	0.00	Percent Reduction
CO2e	N20	CH4	Total CO2	NBio-CO2	Bio- CO2	PM2.5 Total	Exhaust PM2.5	Fugitive PM2.5	PM10 Total	Exhaust PM10	Fugitive PM10	S02	00	NOX	ROG	
CO2e	N20	CH4	Total CO2	NBio-CO2	Bio-CO2	PM2.5	Exhaust	Fugitive	PM10	Exhaust	Fugitive	S02	00 00	XON	ROG	

Maximum Mitigated ROG + NOX (tons/quarter)		
Maximum Unmitigated ROG + NOX (tons/quarter)		
End Date	Highest	
Start Date		
Quarter		

2.2 Overall Operational

Unmitigated Operational

CO2e		67.2810	2,569.63 70	7,440.64 39	108.856 3	091.314 2	06,877.7 324
N2O		0.0270 6	0.4146 22	.7 0000.0	0.0000 4,	0.6434 2,	1.0850 1(
CH4).9275 [(1.4315 (2.5552 (8.0144 0	6.5671 (9.4956
otal CO2	MT/yr	36.0496	2,410.30 01	7,376.76	658.497 9 1	235.400 2 5	03,317.0 1: 123
Bio- CO2 T		66.7177 6	2,410.30 2 01	7,376.76 7 50	0.0000 1	177.5939 1	00,931.3 1 768
Bio- CO2 N		469.3319 1	0.0000	0.0000	1,658.497 1	257.8066	2,385.635 1 5
PM2.5 Total		4.7317	0.5754	23.5327	0.0000	0.0000	28.8398
Exhaust PM2.5		4.7317	0.5754	0.5794	0.0000	0.0000	5.8865
Fugitive PM2.5			 	22.9533	 		22.9533
PM10 Total		4.7317	0.5754	86.1809	0.0000	0.0000	91.4880
Exhaust PM10	s/yr	4.7317	0.5754	0.6222	0.0000	0.0000	5.9292
Fugitive PM10	tons			85.5588			85.5588
S02		0.0668	0.0454	0.8388			0.9510
со		61.1747	4.2195	198.9345			264.3287
XON		0.8194	7.2790	91.6986			99.7971
ROG		71.2303	0.8328	18.6019			90.6650
	Category	Area	Energy	Mobile	Waste	Water	Total

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2.2 Overall Operational

Mitigated Operational

) 2e		8208	69.63 0	17.12 82	8.856 3	1.314 2	55.75 5	CO2e	8.07
S S		÷ 368.	22,56	69,1 3	4,10	2,09	98,2	N20	1.95
N20		5.8200e 003	0.4146	0.0000	0.0000	0.6434	1.0638	4	4
CH4		0.0524	1.4315	2.3404	98.0144	26.5671	28.4057	2 CH	0.8
otal CO2	MT/yr	65.7765	2,410.30 01	9,058.61 42	,658.497 1	,235.400 2 5	4,728.58 1 84	22 Total CC	8.31
Bio- CO2 T		65.7765 3	2,410.30 2 01	9,058.61 6 42	0.0000 1	77.5939 1	2,812.28 9. 47	2 NBio-CC	8.04
- CO2 N		0000	0000	9 0000	58.497 1	7.8066 9	16.303 9 6	Bio- CO	19.67
5 Bic		.0 25	4 0	0 0)0 1,6	0 251	74 1,9	PM2.5 Total	25.36
PM2. Tota		0.185	0.575	20.76	0.000	0.000	21.52	naust M2.5	3.21
Exhaust PM2.5		0.1857	0.5754	0.5215	0.0000	0.0000	1.2826	tive Exh 2.5 Ph	80 78
Fugitive PM2.5				20.2448		 	20.2448	I Fugit	7 11.
M10 Fotal		1857	5754	.0229	0000	0000	.7840	PM10 Tota	16.0
lo - P		57 0	24	01 76		0	12 76	Exhaust PM10	77.72
Exhai PM1	ons/yr	0.18	0.57	0.56	0.0 0	0.00	1.32	igitive M10	11.80
Fugitive PM10	tc			75.4628			75.4628	2 Fu	21
\$02		3.3100e- 003	0.0454	0.7485	 	 	0.7972	so	1 16.1
00		29.6018	4.2195	81.8485	 	 	15.6698	ວິ 	18.4
XO		3138	2790	4098 1	 		3025 2	NOX	4.50
2		33 	8 7.5	51 87.	 		42 95.	90	1.91
ROG		49.41(0.832	17.83			68.08	R	57
	Category	Area	Energy	Mobile	Waste	Water	Total		Percent Reduction

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
Ŧ	Site Preparation	Site Preparation	11/30/2055	11/30/2055	5	-	

Acres of Grading (Site Preparation Phase): 0

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Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Preparation	Tractors/Loaders/Backhoes	0	8.00	26	0.37
Preparation	Rubber Tired Dozers	0	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment	Worker Trip	Vendor Trip	Hauling Trip	Worker Trip	Vendor Trip	Hauling Trip	Worker Vehicle	Vendor	Hauling
	Count	Number	Number	Number	Length	Length	Length	Class	Vehicle Class	Vehicle Class
Site Preparation	0	00.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	ННDT

3.1 Mitigation Measures Construction

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3.2 Site Preparation - 2055

Unmitigated Construction On-Site

CO2e		0.0000	0.0000	0.000
N2O		0.0000	0.0000	0.000
CH4	'yr	0.000.0	0.0000	0.000.0
Total CO2	MT	0.0000	0.0000	0.000.0
NBio- CO2		0.0000	0.0000	0.000
Bio- CO2		0.0000	0.0000	0000.0
PM2.5 Total		0.0000	0.0000	0.0000
Exhaust PM2.5		0.0000	0.0000	0.0000
Fugitive PM2.5		0.000.0		0.000
PM10 Total		0.000.0	0.0000	0.000
Exhaust PM10	s/yr	0.0000	0.0000	0000'0
Fugitive PM10	tons	0.0000		0.000
S02			0.0000	0.000
со			0.0000	0.000
NOX			0.0000	0.000
ROG			0.0000	0.0000
	Category	Fugitive Dust	Off-Road	Total

Unmitigated Construction Off-Site

CO2e		0.0000	0.0000	0.0000	0.0000
N2O		0.0000	0.0000	0.0000	0.0000
CH4	'yr	0.000.0	0.0000	0.0000	0.000.0
Total CO2	MT	0.0000	0.0000	0.0000	0.0000
NBio- CO2		0.0000	0.0000	0.0000	0.0000
Bio- CO2		0.0000	0.0000	0.0000	0000'0
PM2.5 Total		0.0000	0.0000	0.0000	0.000
Exhaust PM2.5		0.0000	0.0000	0.0000	0.0000
Fugitive PM2.5		0.0000	0.0000	0.0000	0000'0
PM10 Total		0.000.0	0.0000	0.0000	0000'0
Exhaust PM10	s/yr	0.0000	0.0000	0.0000	0000'0
Fugitive PM10	ton	0.0000	0.0000	0.0000	0.0000
SO2					
со					
NOX					
ROG				4	
	Category	Hauling	Vendor	Worker	Total

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3.2 Site Preparation - 2055

Mitigated Construction On-Site

Mitigated Construction Off-Site

02e		0000	0000	0000	0000				
ö		0.0	0.0	0.0	0.0				
N2O		0.0000	0.0000	0.0000	0.000				
CH4	yr	0.000.0	0.0000	0.0000	0.000.0				
Total CO2	MT/y	0.0000	0.0000	0.0000	0.000				
NBio- CO2		0.0000	0.0000	0.0000	0.000				
Bio- CO2		0.0000	0.0000	0.0000	0.000				
PM2.5 Total		0.0000	0.0000	0.0000	0.0000				
Exhaust PM2.5		0.0000	0.0000	0.0000	0.000				
Fugitive PM2.5	tons/yr	0.000.0	0.0000	0.0000	0000.0				
PM10 Total		tons/yr	0.0000	0.0000	0.0000	0.000			
Exhaust PM10			ry/yr	ns/yr	ns/yr	0.0000	0.0000	0.0000	00000
Fugitive PM10			0.0000	0.0000	0.0000	0.0000			
S02									
со									
NOX									
ROG									
	Category	Hauling	Vendor	Worker	Total				

4.0 Operational Detail - Mobile

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4.1 Mitigation Measures Mobile

Increase Diversity

Improve Pedestrian Network

	ROG	NOX	СО	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					ton:	s/yr							MT	yr		
Mitigated	17.8351	87.4098	181.8485	0.7485	75.4628	0.5601	76.0229	20.2448	0.5215	20.7663	0.0000	69,058.61 42	69,058.61 42	2.3404	0.0000	69,117.12 32
Unmitigated	18.6019	91.6986	198.9345	0.8388	85.5588	0.6222	86.1809	22.9533	0.5794	23.5327	0.0000	77,376.76 50	77,376.76 50	2.5552	0.0000	77,440.64 39

4.2 Trip Summary Information

	Aver	age Daily Trip Ra	ate	Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,853.47	3,100.28	2628.31	6,597,538	5,819,029
Golf Course	643.32	731.34	711.54	1,202,998	1,061,044
Office Park	29,692.00	4,264.00	1976.00	55,388,067	48,852,275
Regional Shopping Center	52,948.00	61,962.80	31297.60	89,669,118	79,088,162
Single Family Housing	33,672.24	35,051.67	30488.94	77,174,475	68,067,887
Total	119,809.03	105,110.09	67,102.39	230,032,197	202,888,398

4.3 Trip Type Information

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%	Pass-by	ю	6	ю	11	3
Trip Purpose	Diverted	11	39	15	35	11
	Primary	86	52	82	54	86
	H-O or C-NW	54.00	19.00	19.00	19.00	54.00
Trip %	H-S or C-C	15.00	48.00	48.00	64.70	15.00
	H-W or C-W	31.00	33.00	33.00	16.30	31.00
	H-O or C-NW	5.70	7.30	7.30	7.30	5.70
Miles	H-S or C-C	4.80	7.30	7.30	7.30	4.80
	H-W or C-W	10.80	9.50	9.50	9.50	10.80
	Land Use	Apartments Low Rise	Golf Course	Office Park	Regional Shopping Center	Single Family Housing

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	DHM	ОНН	OBUS	UBUS	МСҮ	SBUS	HM
Single Family Housing	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690
Apartments Low Rise	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690
Office Park	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690
Regional Shopping Center	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690
Golf Course	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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CO2e		14,278.87 41	14,278.87 41	8,290.763 0	8,290.763 0
N2O		0.2635	0.2635	0.1511	0.1511
CH4	yr	1.2736	1.2736	0.1580	0.1580
Total CO2	MT/	14,168.51 40	14,168.51 40	8,241.786 2	8,241.786 2
NBio- CO2		14,168.51 40	14,168.51 40	8,241.786 2	8,241.786 2
Bio- CO2		0.0000	0.0000	0.0000	0.0000
PM2.5 Total		0.0000	0.0000	0.5754	0.5754
Exhaust PM2.5		0.0000	0.0000	0.5754	0.5754
Fugitive PM2.5					
PM10 Total		0.000.0	0.0000	0.5754	0.5754
Exhaust PM10	s/yr	0.0000	0.0000	0.5754	0.5754
Fugitive PM10	ton				
S02				0.0454	0.0454
СО				4.2195	4.2195
NOX				7.2790	7.2790
ROG				0.8328	0.8328
	Category	Electricity Mitigated	Electricity Unmitigated	NaturalGas Mitigated	NaturalGas Unmitigated

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5.2 Energy by Land Use - NaturalGas

Unmitigated

CO2e		243.4395	0.0000	2,814.158 0	150.5020	5,082.663 6	8,290.763 0
N20		4.4400e- 003	0.0000	0.0513	2.7400e- 003	0.0926	0.1511
CH4	'yr	4.6400e- 003	0.0000	0.0536	2.8700e- 003	0.0968	0.1580
Total CO2	MT	242.0014	0.0000	2,797.533 6	149.6129	5,052.638 3	8,241.786 2
NBio- CO2		242.0014	0.0000	2,797.533 6	149.6129	5,052.638 3	8,241.786 2
Bio- CO2		0.0000	0.0000	0.0000	0.0000	0.0000	0.000.0
PM2.5 Total		0.0169	0.0000	0.1953	0.0104	0.3527	0.5754
Exhaust PM2.5		0.0169	0.0000	0.1953	0.0104	0.3527	0.5754
Fugitive PM2.5							
PM10 Total		0.0169	0.0000	0.1953	0.0104	0.3527	0.5754
Exhaust PM10	s/yr	0.0169	0.0000	0.1953	0.0104	0.3527	0.5754
Fugitive PM10	ton						
S02		1.3300e- 003	0.0000	0.0154	8.2000e- 004	0.0279	0.0454
CO		0.0889	0.0000	2.1586	0.1154	1.8565	4.2195
NOX		0.2090	0.0000	2.5698	0.1374	4.3628	7.2790
ROG		0.0245	0.0000	0.2827	0.0151	0.5105	0.8328
NaturalGa s Use	kBTU/yr	4.53493e +006	0	5.24238e +007	2.80364e +006	9.46829e +007	
	Land Use	Apartments Low Rise	Golf Course	Office Park	Regional Shopping Center	Single Family Housing	Total

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5.2 Energy by Land Use - NaturalGas

Mitigated

			_	_	_	_	-
CO2e		243.4395	0.0000	2,814.158 0	150.5020	5,082.663 6	8,290.763 0
N2O		4.4400e- 003	0.0000	0.0513	2.7400e- 003	0.0926	0.1511
CH4	/yr	4.6400e- 003	0.000.0	0.0536	2.8700 0 - 003	0.0968	0.1580
Total CO2	Μ	242.0014	0.0000	2,797.533 6	149.6129	5,052.638 3	8,241.786 2
NBio- CO2		242.0014	0.0000	2,797.533 6	149.6129	5,052.638 3	8,241.786 2
Bio- CO2		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
PM2.5 Total		0.0169	0.0000	0.1953	0.0104	0.3527	0.5754
Exhaust PM2.5		0.0169	0.0000	0.1953	0.0104	0.3527	0.5754
Fugitive PM2.5							
PM10 Total		0.0169	0.0000	0.1953	0.0104	0.3527	0.5754
Exhaust PM10	s/yr	0.0169	0.0000	0.1953	0.0104	0.3527	0.5754
Fugitive PM10	ton						
S02		1.3300e- 003	0.0000	0.0154	8.2000e- 004	0.0279	0.0454
СО		0.0889	0.0000	2.1586	0.1154	1.8565	4.2195
NOX		0.2090	0.0000	2.5698	0.1374	4.3628	7.2790
ROG		0.0245	0.0000	0.2827	0.0151	0.5105	0.8328
NaturalGa s Use	kBTU/yr	4.53493e +006	0	5.24238e +007	2.80364e +006	9.46829e +007	
	Land Use	Apartments Low Rise	Golf Course	Office Park	Regional Shopping Center	Single Family Housing	Total

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5.3 Energy by Land Use - Electricity

Unmitigated

14,278.87 41	0.2635	1.2736	14,168.51 40		Total
4,462.606 8	0.0824	0.3980	4,428.115 7	3.02586e +007	Single Family Housing
1,999.955 5	0.0369	0.1784	1,984.498 1	1.35606e +007	Regional Shopping Center
7,526.439 0	0.1389	0.6713	7,468.267 9	5.10328e +007	Office Park
0.000	0.0000	0.0000	0.0000	0	Golf Course
289.8727	5.3500e- 003	0.0259	287.6323	1.96547e +006	Apartments Low Rise
	'/yr	LM		kWh/yr	Land Use
CO2e	N2O	CH4	Total CO2	Electricity Use	

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Sand Creek (As Approved) - Bay Area AQMD Air District, Annual

5.3 Energy by Land Use - Electricity

Mitigated

14,278.87 41	0.2635	1.2736	14,168.51 40		
4,462.606 8	0.0824	0.3980	4,428.115 7	3.02586e +007	uily g
1,999.955 5	0.0369	0.1784	1,984.498 1	1.35606e +007	enter
7,526.439 0	0.1389	0.6713	7,468.267 9	5.10328e +007	- X-
0.0000	0.0000	0.0000	0.0000	0	rse
289.8727	5.3500e- 003	0.0259	287.6323	1.96547e +006	Low
	/yr	Μ		kWh/yr	se
CO2e	N2O	CH4	Total CO2	Electricity Use	

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

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	ROG	XON	00	S02	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					ton	s/yr							MT	'yr		
Mitigated	49.4163	0.6138	29.6018	3.3100e- 003		0.1857	0.1857		0.1857	0.1857	0.0000	365.7765	365.7765	0.0524	5.8200e- 003	368.8208
Unmitigated	71.2303	0.8194	61.1747	0.0668		4.7317	4.7317		4.7317	4.7317	469.3319	166.7177	636.0496	0.9275	0.0270	667.2810

6.2 Area by SubCategory

<u>Unmitigated</u>

CO2e		0.0000	0.0000	617.9035	49.3775	667.2810
N2O		0.0000	0.0000	0.0270	0.0000	0.0270
CH4	/yr	0.0000	0.0000	0.8812	0.0463	0.9275
Total CO2	Μ	0.0000	0.0000	587.8293	48.2203	636.0496
NBio- CO2		0.0000	0.0000	118.4975	48.2203	166.7177
Bio- CO2		0.0000	0.0000	469.3319	0.0000	469.3319
PM2.5 Total		0.000.0	0.0000	4.5681	0.1635	4.7317
Exhaust PM2.5		0.000.0	0.0000	4.5681	0.1635	4.7317
Fugitive PM2.5						
PM10 Total		0.0000	0.0000	4.5681	0.1635	4.7317
Exhaust PM10	s/yr	0.0000	0.0000	4.5681	0.1635	4.7317
Fugitive PM10	ton					
S02				0.0652	1.5600e- 003	0.0668
со				31.6896	29.4851	61.1747
NOX				0.4799	0.3396	0.8194
ROG		6.8071	41.6897	21.8461	0.8875	71.2303
	SubCategory	Architectural Coating	Consumer Products	Hearth	Landscaping	Total

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Sand Creek (As Approved) - Bay Area AQMD Air District, Annual

6.2 Area by SubCategory

Mitigated

CO2e		0.0000	0.0000	319.4433	49.3775	368.8208
N2O		0.000.0	0.0000	5.8200e- 003	0.0000	5.8200e- 003
CH4	/yr	0.0000	0.0000	6.0900e- 003	0.0463	0.0524
Total CO2	MT	0.0000	0.0000	317.5562	48.2203	365.7765
NBio- CO2		0.0000	0.0000	317.5562	48.2203	365.7765
Bio- CO2		0.0000	0.0000	0.0000	0.0000	0.000
PM2.5 Total		0.0000	0.0000	0.0222	0.1635	0.1857
Exhaust PM2.5		0000.0	0.000.0	0.0222	0.1635	0.1857
Fugitive PM2.5				 	 	
PM10 Total		0.0000	0.0000	0.0222	0.1635	0.1857
Exhaust PM10	s/yr	0.0000	0.0000	0.0222	0.1635	0.1857
Fugitive PM10	tons					
S02				1.7500e- 003	1.5600e- 003	3.3100e- 003
CO				0.1167	29.4851	29.6018
NOX				0.2742	0.3396	0.6138
ROG		6.8071	41.6897	0.0321	0.8875	49.4163
	SubCategory	Architectural Coating	Consumer Products	Hearth	Landscaping	Total

7.0 Water Detail

7.1 Mitigation Measures Water

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		CH4	NZU	CU2e
Category		MT	/yr	
Mitigated	1,235.400 5	26.5671	0.6434	2,091.314 2
Unmitigated	1,235.400 5	26.5671	0.6434	2,091.314 2

7.2 Water by Land Use <u>Unmitigated</u>

2,091.314 2	0.6434	26.5671	1,235.400 5		Total
572.5782	0.1821	7.5323	330.0090	230.45 / 145.284	Single Family Housing
227.3802	0.0726	3.0021	130.7063	91.8499 / 56.2951	Regional Shopping Center
1,143.976 3	0.3651	15.1037	657.5985	462.108 / 283.227	Office Park
77.2844	1.4300e- 003	6.8900e- 003	76.6871	0 / 149.721	Golf Course
70.0951	0.0223	0.9221	40.3997	28.2117 / 17.7856	Apartments Low Rise
	/yr	τM		Mgal	Land Use
CO2e	N2O	CH4	Total CO2	Indoor/Out door Use	

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7.2 Water by Land Use

Mitigated

2			22.22		
572.5782	0.1821	7.5323	330.0090	230.45 / 145.284	uily Ig
227.3802	0.0726	3.0021	130.7063	91.8499 / 56.2951	Center
1,143.976 3	0.3651	15.1037	657.5985	462.108 / 283.227	ark
77.2844	1.4300e- 003	6.8900e- 003	76.6871	0 / 149.721	arse
70.0951	0.0223	0.9221	40.3997	28.2117 / 17.7856	s Low
	'/yr	LΜ		Mgal	Jse
0026	NZN	CH4		door Use	

8.0 Waste Detail

8.1 Mitigation Measures Waste

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Sand Creek (As Approved) - Bay Area AQMD Air District, Annual

Category/Year

	4,108.856 3	4,108.856 3
/yr	0.0000	0.0000
MT	98.0144	98.0144
	1,658.497 1	1,658.497 1
	Mitigated	Unmitigated

CO2e

N2O

CH4

Total CO2

8.2 Waste by Land Use <u>Unmitigated</u>

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons		ΜΤ	'/yr	
Apartments Low Rise	199.18	40.4317	2.3895	0.0000	100.1679
Golf Course	2.4	0.4872	0.0288	0.0000	1.2070
Office Park	2418	490.8322	29.0074	0.0000	1,216.015 9
Regional Shopping Center	1302	264.2942	15.6193	0.0000	654.7778
Single Family Housing	4248.72	862.4518	50.9694	0.0000	2,136.687 7
Total		1,658.497 1	98.0144	0000.0	4,108.856 3

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Sand Creek (As Approved) - Bay Area AQMD Air District, Annual

8.2 Waste by Land Use

Mitigated

m			-		
4.108.856	0.0000	98.0144	1.658.497		Total
2,136.687 7	0.0000	50.9694	862.4518	4248.72	Single Family Housing
654.7778	0.0000	15.6193	264.2942	1302	Regional Shopping Center
1,216.015 9	0.0000	29.0074	490.8322	2418	Office Park
1.2070	0.0000	0.0288	0.4872	2.4	Golf Course
100.1679	0.0000	2.3895	40.4317	199.18	Apartments Low Rise
	'/yr	LΜ		tons	Land Use
CO2e	NZO	CH4	I otal CO2	waste Disposed	

9.0 Operational Offroad

	_
Fuel Type	
Load Factor	
Horse Power	
Days/Year	
Hours/Day	
Number	
Equipment Type	

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Fuel Type	
Load Factor	
Horse Power	
Hours/Year	
Hours/Day	
Number	
Equipment Type	

Boilers

Boiler Rating Heat Input/Year Heat Input/Day Number Equipment Type

Fuel Type

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Sand Creek (As Approved) - Bay Area AQMD Air District, Annual

User Defined Equipment

Equipment Type Number

11.0 Vegetation

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Sand Creek (As Approved) - Bay Area AQMD Air District, Summer

Sand Creek (As Approved)

Bay Area AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

	0	35,000.00	125.66	Hole	18.00	Golf Course
	0	1,240,000.00	28.47	1000sqft	1,240.00	Regional Shopping Center
	0	2,600,000.00	59.69	1000sqft	2,600.00	Office Park
	1238	433,000.00	27.06	Dwelling Unit	433.00	Apartments Low Rise
	10116	6,366,600.00	1,148.38	Dwelling Unit	3,537.00	Single Family Housing
_	Population	Floor Surface Area	Lot Acreage	Metric	Size	Land Uses

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	64
Climate Zone	4			Operational Year	2028
Utility Company	Pacific Gas & Electric Com	ıpany			
CO2 Intensity (Ib/MWhr)	322.63	CH4 Intensity (Ib/MWhr)	0.029	N2O Intensity (Ib/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Sand Creek (As Approved) - Bay Area AQMD Air District, Summer

Project Characteristics - CO2 Intensity adjusted to reflect PG&E progress towards RPS

Land Use - General Plan Buildout

Construction Phase - Construction not modeled

Off-road Equipment -

Off-road Equipment - Construction not modeled

Energy Use - Energy Intensity adjusted based on 2016 Title 24

Mobile Land Use Mitigation -

Area Mitigation -

tblConstructionPhase	NumDays	6,000.00	1.00
tblConstructionPhase	PhaseEndDate	11/28/2078	11/30/2055
tblEnergyUse	T24E	431.22	310.48
tblEnergyUse	T24E	7.64	7.26
tblEnergyUse	T24E	2.89	2.88
tblEnergyUse	Т24Е	368.92	265.62
tblEnergyUse	T24NG	10,164.29	7,318.29
tblEnergyUse	T24NG	21.14	20.08
tblEnergyUse	T24NG	2.38	2.26
tblEnergyUse	T24NG	32,797.58	23,614.26
tblLandUse	BuildingSpaceSquareFeet	00.00	35,000.00
tblLandUse	LandUseSquareFeet	00.00	35,000.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	322.63
tblProjectCharacteristics	OperationalYear	2018	2028

2.0 Emissions Summary

Sand Creek (As Approved) - Bay Area AQMD Air District, Summer

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

0.000	0.000	0.0000	0.0000	0.0000	0.000.0	0.0000	0.000	0.0000	0.000	0.0000	-	0000.0	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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	[I	0.0000	0.0000	0.0000 0.0000 0.0000	0.0000 0.0000 0.0000	0.0000 0.0000 0.0000 0.0000	
		ay	p/dl							day	Ib/d					
2 V	2	± 5	10(8) 002		200-000	Total	PM2.5	PM2.5	Total	PM10		PM10	PM10	PM10	PM10	PM10
	N2O	CH4	Total CO2	NBio- CO2	Bio- CO2	PM2.5	Exhaust	Fugitive	PM10	Exhaust		Fugitive	SO2 Fugitive	CO SO2 Fugitive	NOX CO SO2 Fugitive	ROG NOX CO SO2 Fugitive

Mitigated Construction

			-
CO2e		0.0000	0.000
N2O		0.0000	0.000
CH4	lay	0.0000	0.000
Total CO2	lb/dl	0.0000	0.000
NBio- CO2		0.0000	0.000
Bio- CO2		0.0000	0000'0
PM2.5 Total		0.0000	0.000
Exhaust PM2.5		0.000.0	0.00.0
Fugitive PM2.5		0.0000	0.000
PM10 Total		0.0000	0.0000
Exhaust PM10	day	0.0000	0.0000
Fugitive PM10)qI	0.0000	00000
S02		0.0000	00000
со		0.0000	0.0000
XON		0.0000	0.0000
ROG		0.0000	0.000
	Year	2055	Maximum
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Sand Creek (As Approved) - Bay Area AQMD Air District, Summer

ROG NOX CO SO2 Fugitive Exhaust PM10 Fugitive Exhaust PM2.5 Bio-CO2 NBio-CO2 Total N20 CO2 Percent 0.00<		
ROG NOx CO SO2 Fugitive Exhaust PM1.5 Bio-CO2 NBio-CO2 Total CO2 CH4 N20 Percent 0.00 <th>C O 2e</th> <th>0.00</th>	C O 2e	0.00
ROG NOx CO SO2 Fugitive Exhaust PMI0 Fugitive Exhaust PM2.5 Bio-CO2 NBio-CO2 Total CO2 Cola CO2 <thco1 co2<="" th=""> Co12 Cola</thco1>	N20	0.00
ROG NOX CO SO2 Fugitive Exhaust PM10 Fugitive Exhaust PM2.5 Bio-CO2 NBio-CO2 Total CO2 Total CO2 <thtotal co2<="" th=""></thtotal>	CH4	00.0
ROG NOx CO SO2 Fugitive Exhaust PM10 Fugitive Exhaust PM2.5 Bio- CO2 NBio-CO2 Percent 0.00 0.0	Total CO2	00.0
ROG NOx CO SO2 Fugitive Exhaust PM10 Fugitive Exhaust PM2.5 Bio- CO2 Percent 0.00 <th>NBio-CO2</th> <th>00.0</th>	NBio-CO2	00.0
ROG NOx CO SO2 Fugitive Exhaust PM10 Fugitive Exhaust PM2.5 PM2.5 Total PM2.5 Total PM2.5 Total PM2.5 Total Reduction Reduction 0.00	Bio- CO2	0.00
ROG NOx CO SO2 Fugitive Exhaust PM10 Fugitive Exhaust Percent 0.00	PM2.5 Total	0.00
ROG NOX CO SO2 Fugitive Exhaust PM10 Fugitive Percent 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Reduction 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	Exhaust PM2.5	0.00
ROG NOx CO SO2 Fugitive Exhaust PM10 Percent 0.00 0.00 0.00 0.00 0.00 0.00	Fugitive PM2.5	0.00
ROG NOX CO SO2 Fugitive Exhaust Percent 0.00 0.00 0.00 0.00 0.00	PM10 Total	0.00
ROG NOX CO SO2 Fugitive Percent 0.00 0.00 0.00 0.00 0.00	Exhaust PM10	00.0
ROG NOx CO SO2 Percent 0.00 0.00 0.00 0.00	Fugitive PM10	0.00
ROG NOX CO Percent 0.00 0.00 0.00	S02	0.00
ROG NOX Percent 0.00 0.00 Reduction	S	0.00
ROG Percent 0.00 Reduction	NOX	0.00
Percent Reduction	ROG	0.00
		Percent Reduction

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Sand Creek (As Approved) - Bay Area AQMD Air District, Summer

2.2 Overall Operational

Unmitigated Operational

CO2e		103,702.4 004	50,076.72 22	586,230.0 101	740,009.1 326
N2O		5.3423	0.9127	_ *	6.2550
CH4	lay	94.6484	0.9541	18.3082	113.9108
Total CO2	o/dl	99,744.18 04	49,780.89 92	585,772.3 042	735,297.3 838
NBio- CO2		24,041.42 05	49,780.89 92	585,772.3 042	659,594.6 239
Bio- CO2		75,702.75 99			75,702.75 99
PM2.5 Total		705.5621	3.1528	158.4904	867.2053
Exhaust PM2.5		705.5621	3.1528	3.7693	712.4842
Fugitive PM2.5				154.7211	154.7211
PM10 Total		705.5621	3.1528	582.6181	1,291.333 0
Exhaust PM10	day	705.5621	3.1528	4.0476	712.7625
Fugitive PM10)/qI			578.5705	578.5705
S02		9.3984	0.2489	5.7651	15.4124
со		5,303.486 6	23.1207	1,343.486 5	6,670.093 8
NOX		78.2864	39.8851	583.9731	702.1446
ROG		4,119.126 8	4.5633	140.6024	4,264.292 5
	Category	Area	Energy	Mobile	Total

Mitigated Operational

	ROG	NOX	CO	S02	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
bry					p/dI	ay							o/dl	lay		
ā	281.3571	53.0012	348.5609	0.3316		5.7972	5.7972		5.7972	5.7972	0.0000	63,435.44 40	63,435.44 40	1.7715	1.1522	63,823.07 34
λĝ	4.5633	39.8851	23.1207	0.2489	 	3.1528	3.1528	 	3.1528	3.1528		49,780.89 92	49,780.89 92	0.9541	0.9127	50,076.72 22
oile	135.5410	557.7485	1,218.681 5	5.1431	510.2992	3.6432	513.9424	136.4640	3.3920	139.8560		522,725.8 115	522,725.8 115	16.7177		523,143.7 544
tal	421.4614	650.6348	1,590.363 0	5.7236	510.2992	12.5932	522.8924	136.4640	12.3420	148.8060	0.000.0	635,942.1 546	635,942.1 546	19.4433	2.0648	637,043.5 500

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Sand Creek (As Approved) - Bay Area AQMD Air District, Summer

CO2e	13.91
N20	66.99
CH4	82.93
Total CO2	13.51
NBio-CO2	3.59
Bio- CO2	100.00
PM2.5 Total	82.84
Exhaust PM2.5	98.27
Fugitive PM2.5	11.80
PM10 Total	59.51
Exhaust PM10	98.23
Fugitive PM10	11.80
S02	62.86
S	76.16
NOX	7.34
ROG	90.12
	Percent Reduction

3.0 Construction Detail

Construction Phase

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	26	0.37
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment	Worker Trip	Vendor Trip	Hauling Trip	Worker Trip	Vendor Trip	Hauling Trip	Worker Vehicle	Vendor	Hauling
	Count	Number	Number	Number	Length	Length	Length	Class	Vehicle Class	Vehicle Class
Site Preparation	0	00.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HDT

3.1 Mitigation Measures Construction

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Sand Creek (As Approved) - Bay Area AQMD Air District, Summer

3.2 Site Preparation - 2055

Unmitigated Construction On-Site

CO2e		0.0000	0.0000	0.000
N20				
CH4	lay		0.0000	0.000
Total CO2	lb/d	0.000.0	0.0000	0.000
NBio- CO2			0.0000	0.000
Bio- CO2				
PM2.5 Total		0.0000	0.0000	0.0000
Exhaust PM2.5		0.0000	0.0000	0.000
Fugitive PM2.5		0.000.0		0.000
PM10 Total		0.000.0	0.0000	0.000
Exhaust PM10	lay	0.0000	0.0000	0.000
Fugitive PM10	p/qI	0.0000		0.0000
S02			0.0000	0.000
00			0.0000	0.00.0
NOX			0.0000	0.000.0
ROG			0.0000	0.0000
	Category	Fugitive Dust	Off-Road	Total

Unmitigated Construction Off-Site

CO2e		0.0000	0.0000	0.0000	0.0000
N20					
CH4	łay				
Total CO2)/qI	0.0000	0.0000	0.0000	0.000
NBio- CO2					
Bio- CO2					
PM2.5 Total		0.0000	0.0000	0.0000	0.000
Exhaust PM2.5		0.0000	0.0000	0.0000	0.000
Fugitive PM2.5		0.0000	0.0000	0.0000	0000.0
PM10 Total		0.0000	0.0000	0.0000	0000'0
Exhaust PM10	day	0.0000	0.0000	0.0000	0000.0
Fugitive PM10)/qI	0.0000	0.0000	0.0000	0.0000
S02					
СО					
NOX					
ROG					
	Category	Hauling	Vendor	Worker	Total

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Sand Creek (As Approved) - Bay Area AQMD Air District, Summer

3.2 Site Preparation - 2055

Mitigated Construction On-Site

CO2e		0.0000	0.0000	0.000
N20				
CH4	lay		0.0000	0.000
Total CO2	lb/d	0.000.0	0.0000	0.000
NBio- CO2			0.0000	0.000
Bio- CO2			0.0000	0.0000
PM2.5 Total		0.0000	0.0000	0.000
Exhaust PM2.5		0.0000	0.0000	0.0000
Fugitive PM2.5		0000.0		0000'0
PM10 Total		0000.0	0.0000	0000'0
Exhaust PM10	day	0.0000	0.0000	0000'0
Fugitive PM10)/qI	0.0000		0.000
S02			0.0000	0.000
со			0.0000	0000'0
NOX			0.0000	0000.0
ROG			0.0000	0.0000
	Category	Fugitive Dust	Off-Road	Total

Mitigated Construction Off-Site

CO2e		0.0000	0.0000	0.0000	0.000
N2O					
CH4	lay				
Total CO2	lb/d	0.000.0	0.0000	0.0000	0.000
NBio- CO2					
Bio- CO2					
PM2.5 Total		0.0000	0.0000	0.0000	0.000
Exhaust PM2.5		0.0000	0.0000	0.0000	0.000
Fugitive PM2.5		0.0000	0.0000	0.0000	0000.0
PM10 Total		0.0000	0.0000	0.0000	0000.0
Exhaust PM10	day	0.0000	0.0000	0.0000	0.000
Fugitive PM10	/qI	0.0000	0.0000	0.0000	0.000
SO2					
8					
NOX					
ROG					
	Category	Hauling	Vendor	Worker	Total

4.0 Operational Detail - Mobile

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Sand Creek (As Approved) - Bay Area AQMD Air District, Summer

4.1 Mitigation Measures Mobile

Increase Diversity

Improve Pedestrian Network

OG	NOX	CO	S02	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N20	CO2e
				p/qI	lay							b/dl	ay		
5410	557.7485	1,218.681 5	5.1431	510.2992	3.6432	513.9424	136.4640	3.3920	139.8560		522,725.8 115	522,725.8 115	16.7177		523,143.7 544
6024	583.9731	1,343.486 5	5.7651	578.5705	4.0476	582.6181	154.7211	3.7693	158.4904		585,772.3 042	585,772.3 042	18.3082		586,230.0 101

4.2 Trip Summary Information

	Avera	age Daily Trip Ra	ite	Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,853.47	3,100.28	2628.31	6,597,538	5,819,029
Golf Course	643.32	731.34	711.54	1,202,998	1,061,044
Office Park	29,692.00	4,264.00	1976.00	55,388,067	48,852,275
Regional Shopping Center 5	52,948.00	61,962.80	31297.60	89,669,118	79,088,162
Single Family Housing	33,672.24	35,051.67	30488.94	77,174,475	68,067,887
Total	119,809.03	105,110.09	67,102.39	230,032,197	202,888,398

4.3 Trip Type Information

Sand Creek (As Approved) - Bay Area AQMD Air District, Summer

		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
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	ю
Golf Course	9.50	7.30	7.30	33.00	48.00	19.00	52	39	б
Office Park	9.50	7.30	7.30	33.00	48.00	19.00	82	15	ю
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	DHM	ДНН	OBUS	UBUS	MCY	SBUS	НМ
Single Family Housing	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690
Apartments Low Rise	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690
Office Park	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690
Regional Shopping Center	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690
Golf Course	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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Sand Creek (As Approved) - Bay Area AQMD Air District, Summer

	ROG	NOX	8	S02	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N20	CO2e
Category)/qI	day							p/qI	ay		
NaturalGas Mitigated	4.5633	39.8851	23.1207	0.2489		3.1528	3.1528		3.1528	3.1528		49,780.89 92	49,780.89 92	0.9541	0.9127	50,076.72 22
NaturalGas Unmitigated	4.5633	39.8851	23.1207	0.2489	r 	3.1528	3.1528	r 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3.1528	3.1528		49,780.89 92	49,780.89 92	0.9541	0.9127	50,076.72 22

5.2 Energy by Land Use - NaturalGas

Unmitigated

CO2e		1,470.389 4	0.0000	16,997.68 85	909.0413	30,699.60 31	50,076.72 22			
N20		0.0268	0.0000	0.3098	0.0166	0.5595	0.9127			
CH4	lay	0.0280	0.000.0	0.3239	0.0173	0.5849	0.9541			
Total CO2	Ib/c	1,461.703 2	0.0000	16,897.27 64	903.6712	30,518.24 84	49,780.89 92			
NBio- CO2		1,461.703 2	0.0000	16,897.27 64	903.6712	30,518.24 84	49,780.89 92			
Bio- CO2										
PM2.5 Total		0.0926	0.0000	1.0702	0.0572	1.9328	3.1528			
Exhaust PM2.5					0.0926	0.0000	1.0702	0.0572	1.9328	3.1528
Fugitive PM2.5										
PM10 Total		0.0926	0.0000	1.0702	0.0572	1.9328	3.1528			
Exhaust PM10	lb/day	o/day	0.0926	0.0000	1.0702	0.0572	1.9328	3.1528		
Fugitive PM10	/qI									
S02		7.3100e- 003	0.0000	0.0845	4.5200e- 003	0.1526	0.2489			
CO		0.4872	0.0000	11.8281	0.6326	10.1728	23.1206			
NOX		1.1450	0.0000	14.0811	0.7531	23.9060	39.8851			
ROG		0.1340	0.0000	1.5489	0.0828	2.7975	4.5633			
NaturalGa s Use	kBTU/yr	12424.5	0	143627	7681.21	259405				
	Land Use	Apartments Low Rise	Golf Course	Office Park	Regional Shopping Center	Single Family Housing	Total			

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Sand Creek (As Approved) - Bay Area AQMD Air District, Summer

5.2 Energy by Land Use - NaturalGas

Mitigated

02e		70.389 4	0000	997.68 85	0.0413	399.60 31	076.72 22
Ō		1,47		16,9	606	30,6	20'0
N2O		0.0268	0.0000	0.3098	0.0166	0.5595	0.9127
CH4	Уя	0.0280	0.0000	0.3239	0.0173	0.5849	0.9541
Fotal CO2	lb/dl	1,461.703 2	0.0000	16,897.27 64	903.6712	30,518.24 84	49,780.89 92
VBio- CO2		1,461.703 2	0.0000	16,897.27 64	903.6712	30,518.24 84	49,780.89 92
Bio- CO2		· · · · ·					
PM2.5 Total		0.0926	0.0000	1.0702	0.0572	1.9328	3.1528
Exhaust PM2.5		0.0926	0.0000	1.0702	0.0572	1.9328	3.1528
Fugitive PM2.5							
PM10 Total		0.0926	0.0000	1.0702	0.0572	1.9328	3.1528
Exhaust PM10	lay	0.0926	0.0000	1.0702	0.0572	1.9328	3.1528
Fugitive PM10	p/qI						
S02		7.3100e- 003	0.0000	0.0845	4.5200e- 003	0.1526	0.2489
СО		0.4872	0.0000	11.8281	0.6326	10.1728	23.1206
NOX		1.1450	0.0000	14.0811	0.7531	23.9060	39.8851
ROG		0.1340	0.0000	1.5489	0.0828	2.7975	4.5633
NaturalGa s Use	kBTU/yr	12.4245	0	143.627	7.68121	259.405	
	Land Use	Apartments Low Rise	Golf Course	Office Park	Regional Shopping Center	Single Family Housing	Total

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

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Sand Creek (As Approved) - Bay Area AQMD Air District, Summer

	SON	NOX	3	S02	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	BIO- CO2	NBIO- CO2	lotal CO2	CH4	NZO	CO2e
Category)/dI	day							lb/di	ау		
Mitigated	281.3571	53.0012	348.5609	0.3316		5.7972	5.7972		5.7972	5.7972	0.0000	63,435.44 40	63,435.44 40	1.7715	1.1522	63,823.07 34
Unmitigated	4,119.126 8	78.2864	5,303.486 6	9.3984		705.5621	705.5621		705.5621	705.5621	75,702.75 99	24,041.42 05	99,744.18 04	94.6484	5.3423	103,702.4 004

6.2 Area by SubCategory

Unmitigated

CO2e		0.0000	0.0000	103,097.6 296	604.7708	103,702.4 004
N2O				5.3423	-	5.3423
CH4	ay	•		94.0815	0.5670	94.6484
Total CO2	p/ql	0.0000	0.0000	99,153.58 34	590.5970	99,744.18 04
NBio- CO2				23,450.82 35	590.5970	24,041.42 05
Bio- CO2				75,702.75 99		75,702.75 99
PM2.5 Total		0.0000	0.0000	703.7451	1.8170	705.5621
Exhaust PM2.5		0.0000	0.0000	703.7451	1.8170	705.5621
Fugitive PM2.5						
PM10 Total		0.0000	0.0000	703.7451	1.8170	705.5621
Exhaust PM10	day	0.0000	0.0000	703.7451	1.8170	705.5621
Fugitive PM10)/qI					
S02				9.3811	0.0173	9.3984
со				4,975.874 0	327.6126	5,303.486 6
NOX				74.5136	3.7727	78.2864
ROG		37.2991	228.4364	3,843.530 5	9.8608	4,119.126 8
	SubCategory	Architectural Coating	Consumer Products	Hearth	Landscaping	Total

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Sand Creek (As Approved) - Bay Area AQMD Air District, Summer

6.2 Area by SubCategory

Mitigated

	ROG	XON	00	S02	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)dl	day							lb/d	lay		
Architectural Coating	37.2991					0.0000	0.0000		0000.0	0000.0			0.0000			0.0000
Consumer Products	228.4364					0.0000	0.0000		0.0000	0.000.0			0.0000			0.000.0
Hearth	5.7608	49.2285	20.9483	0.3142		3.9802	3.9802		3.9802	3.9802	0.0000	62,844.84 71	62,844.84 71	1.2045	1.1522	63,218.30 26
Landscaping	9.8608	3.7727	327.6126	0.0173		1.8170	1.8170		1.8170	1.8170		590.5970	590.5970	0.5670		604.7708
Total	281.3571	53.0012	348.5609	0.3315		5.7972	5.7972		5.7972	5.7972	0.000	63,435.44 40	63,435.44 40	1.7715	1.1522	63,823.07 34

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

	-
Fuel Type	
Load Factor	
Horse Power	
Days/Year	
Hours/Day	
Number	
Equipment Type	

10.0 Stationary Equipment

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Sand Creek (As Approved) - Bay Area AQMD Air District, Summer

Fire Pumps and Emergency Generators

|--|

Boilers

Fuel Type	
Boiler Rating	
Heat Input/Year	
Heat Input/Day	
Number	
Equipment Type	

<u>User Defined Equipment</u>

Number	
Equipment Type	

11.0 Vegetation

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Sand Creek (As Approved) - Bay Area AQMD Air District, Winter

Sand Creek (As Approved)

Bay Area AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Population	10116	1238	ο	ο	0
Floor Surface Area	6,366,600.00	433,000.00	2,600,000.00	1,240,000.00	35,000.00
Lot Acreage	1,148.38	27.06	59.69	28.47	125.66
Metric	Dwelling Unit	Dwelling Unit	1000sqft	1000sqft	Hole
Size	3,537.00	433.00	2,600.00	1,240.00	18.00
Land Uses	Single Family Housing	Apartments Low Rise	Office Park	Regional Shopping Center	Golf Course

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	64
Climate Zone	4			Operational Year	2028
Utility Company	Pacific Gas & Electric Con	npany			
CO2 Intensity (Ib/MWhr)	322.63	CH4 Intensity (Ib/MWhr)	0.029	N2O Intensity (Ib/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Sand Creek (As Approved) - Bay Area AQMD Air District, Winter

Project Characteristics - CO2 Intensity adjusted to reflect PG&E progress towards RPS

Land Use - General Plan Buildout

Construction Phase - Construction not modeled

Off-road Equipment -

Off-road Equipment - Construction not modeled

Energy Use - Energy Intensity adjusted based on 2016 Title 24

Mobile Land Use Mitigation -

Area Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	6,000.00	1.00
tblConstructionPhase	PhaseEndDate	11/28/2078	11/30/2055
tblEnergyUse	T24E	431.22	310.48
tblEnergyUse	T24E	7.64	7.26
tblEnergyUse	T24E	2.89	2.88
tblEnergyUse	T24E	368.92	265.62
tblEnergyUse	T24NG	10,164.29	7,318.29
tblEnergyUse	T24NG	21.14	20.08
tblEnergyUse	T24NG	2.38	2.26
tblEnergyUse	T24NG	32,797.58	23,614.26
tblLandUse	BuildingSpaceSquareFeet	0.00	35,000.00
tblLandUse	LandUseSquareFeet	0.00	35,000.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	322.63
tblProjectCharacteristics	OperationalYear	2018	2028

2.0 Emissions Summary

Sand Creek (As Approved) - Bay Area AQMD Air District, Winter

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

0.0000	0.000	0.0000	0.000	0.000	0.0000	0.0000	0.000	0.0000	0.0000	0.0000	0.000		0.000	0.0000 0.0000	0.0000 0.0000 0.0000	0.0000 0.0000 0.0000
0.000	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	0.0000 0.0000 0.0000	0.0000 0.0000 0.0000 0.0000	0.0000 0.0000 0.0000 0.0000 0.0000
		lay	lb/c							day	/q	-	-	_	-	_
ö	N2O	CH4	Total CO2	NBio- CO2	Bio- CO2	PM2.5 Total	Exhaust PM2.5	Fugitive PM2.5	PM10 Total	Exhaust PM10	0	Fugitive PM10	SO2 Fugitive PM10	CO SO2 Fugitive PM10	NOX CO SO2 Fugitive PM10	ROG NOX CO SO2 Fugitive PM10

Mitigated Construction

CO2e		0.0000	0.0000
N2O		0.0000	0.0000
CH4	lay	0.0000	0.000
Total CO2	lb/dl	0.0000	0.000
NBio- CO2		0.0000	0.000
Bio- CO2		0.000.0	0000'0
PM2.5 Total		0.0000	0.000
Exhaust PM2.5		0.000.0	0.000
Fugitive PM2.5		0.0000	0000'0
PM10 Total		0.0000	0.000
Exhaust PM10	day	0.0000	0.0000
Fugitive PM10)/qI	0.0000	00000
S02		0.0000	0.000
со		0.0000	0.0000
XON		0.0000	0.0000
ROG		0.0000	0.0000
	Year	2055	Maximum

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Sand Creek (As Approved) - Bay Area AQMD Air District, Winter

אטפ	NON	8	S02	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
	00.0	0.00	0.00	0.00	00.0	0.00	0.00	0.00	0.00	00.0	00.0	0.00	0.00	0.00	0.00

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Sand Creek (As Approved) - Bay Area AQMD Air District, Winter

2.2 Overall Operational

Unmitigated Operational

703,830.8 678	6.2550	114.4273	699,106.2 076	623,403.4 476	75,702.75 99	867.2210	712.4999	154.7211	1,291.349 4	712.7789	578.5705	15.0548	6,682.082 3	722.4474	4,243.017 8	Total
550,051.7 453		18.8247	549,581.1 280	549,581.1 280		158.5061	3.7850	154.7211	582.6345	4.0640	578.5705	5.4075	1,355.475 0	604.2759	119.3278	Mobile
50,076.72 22	0.9127	0.9541	49,780.89 92	49,780.89 92		3.1528	3.1528		3.1528	3.1528		0.2489	23.1207	39.8851	4.5633	Energy
103,702.4 004	5.3423	94.6484	99,744.18 04	24,041.42 05	75,702.75 99	705.5621	705.5621		705.5621	705.5621		9.3984	5,303.486 6	78.2864	4,119.126 8	Area
		łay)/qI							day)/qI					Category
CO2e	N2O	CH4	Total CO2	NBio- CO2	Bio- CO2	PM2.5 Total	Exhaust PM2.5	Fugitive PM2.5	PM10 Total	Exhaust PM10	Fugitive PM10	S02	со	XON	ROG	

Mitigated Operational

	ROG	NOX	СО	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					p/qI	lay							p/qI	łay		
Area	281.3571	53.0012	348.5609	0.3316		5.7972	5.7972		5.7972	5.7972	0.0000	63,435.44 40	63,435.44 40	1.7715	1.1522	63,823.07 34
Energy	4.5633	39.8851	23.1207	0.2489		3.1528	3.1528		3.1528	3.1528		49,780.89 92	49,780.89 92	0.9541	0.9127	50,076.72 22
Mobile	114.2890	575.2035	1,243.682 6	4.8227	510.2992	3.6596	513.9587	136.4640	3.4077	139.8717		490,236.9 122	490,236.9 122	17.2795		490,668.8 997
Total	400.2094	668.0897	1,615.364 1	5.4032	510.2992	12.6096	522.9087	136.4640	12.3577	148.8217	0.0000	603,453.2 553	603,453.2 553	20.0051	2.0648	604,568.6 952

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Sand Creek (As Approved) - Bay Area AQMD Air District, Winter

CO2e	14.10
N20	66.99
CH4	82.52
Total CO2	13.68
NBio-CO2	3.20
Bio- CO2	100.00
PM2.5 Total	82.84
Exhaust PM2.5	98.27
Fugitive PM2.5	11.80
PM10 Total	59.51
Exhaust PM10	98.23
Fugitive PM10	11.80
S02	64.11
с	75.83
NOX	7.52
ROG	90.57
	Percent Reduction

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
	Site Preparation	Site Preparation	11/30/2055	11/30/2055	5		

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
reparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
reparation	Rubber Tired Dozers	0	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment	Worker Trip	Vendor Trip	Hauling Trip	Worker Trip	Vendor Trip	Hauling Trip	Worker Vehicle	Vendor	Hauling
	Count	Number	Number	Number	Length	Length	Length	Class	Vehicle Class	Vehicle Class
Site Preparation	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	ННDT

3.1 Mitigation Measures Construction

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Sand Creek (As Approved) - Bay Area AQMD Air District, Winter

3.2 Site Preparation - 2055

Unmitigated Construction On-Site

CO2e		0.0000	0.0000	0.0000
N20				
CH4	ay		0.0000	0.000.0
Total CO2	p/dl	0.000.0	0.0000	0.000.0
NBio- CO2			0.0000	0.000
Bio- CO2				
PM2.5 Total		0.0000	0.0000	0.0000
Exhaust PM2.5		0.0000	0.0000	0.000
Fugitive PM2.5		0.000.0		0.000.0
PM10 Total		0.0000	0.0000	0.000.0
Exhaust PM10	day	0.0000	0.0000	0000.0
Fugitive PM10)/qI	0.0000		0.000
S02			0.0000	0.000
со			0.0000	0000.0
NOX			0.0000	0000.0
ROG			0.0000	0.0000
	Category	Fugitive Dust	Off-Road	Total

Unmitigated Construction Off-Site

CO2e		0.0000	0.0000	0.0000	0.0000
N20					
CH4	łay				
Total CO2)/qI	0.0000	0.0000	0.0000	0.000
NBio- CO2					
Bio- CO2					
PM2.5 Total		0.0000	0.0000	0.0000	0.000
Exhaust PM2.5		0.0000	0.0000	0.0000	0.000
Fugitive PM2.5		0.0000	0.0000	0.0000	0000.0
PM10 Total		0.0000	0.0000	0.0000	0000'0
Exhaust PM10	day	0.0000	0.0000	0.0000	0000.0
Fugitive PM10)/qI	0.0000	0.0000	0.0000	0.0000
S02					
СО					
NOX					
ROG					
	Category	Hauling	Vendor	Worker	Total

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Sand Creek (As Approved) - Bay Area AQMD Air District, Winter

3.2 Site Preparation - 2055

Mitigated Construction On-Site

CO2e		0.0000	0.0000	0.000
N20				
CH4	lay		0.0000	0.000
Total CO2	lb/d	0.000.0	0.0000	0.000
NBio- CO2			0.0000	0.000
Bio- CO2			0.0000	0.0000
PM2.5 Total		0.0000	0.0000	0.000
Exhaust PM2.5		0.0000	0.0000	0.0000
Fugitive PM2.5		0000.0		0000'0
PM10 Total		0000.0	0.0000	0000'0
Exhaust PM10	day	0.0000	0.0000	0000'0
Fugitive PM10)/qI	0.0000		0.000
S02			0.0000	0.000
со			0.0000	0000'0
NOX			0.0000	0000.0
ROG			0.0000	0.0000
	Category	Fugitive Dust	Off-Road	Total

Mitigated Construction Off-Site

CO2e		0.000	0.0000	0.0000	0.000
N2O					
CH4	ay				
Total CO2	p/qI	0.000.0	0.0000	0.0000	0.000
NBio- CO2					
Bio- CO2					
PM2.5 Total		0.0000	0.0000	0.0000	0.000
Exhaust PM2.5		0.0000	0.0000	0.0000	0.000
Fugitive PM2.5		0.000.0	0.0000	0.0000	0.000
PM10 Total		0.000.0	0.0000	0.0000	0.000
Exhaust PM10	day	0.0000	0.0000	0.0000	0.000
Fugitive PM10)/qI	0.0000	0.0000	0.0000	0.0000
S02					
СО					
NOX					
ROG					
	Category	Hauling	Vendor	Worker	Total

4.0 Operational Detail - Mobile

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Sand Creek (As Approved) - Bay Area AQMD Air District, Winter

4.1 Mitigation Measures Mobile

Increase Diversity

Improve Pedestrian Network

CO2e		490,668.8 997	550,051.7 453
N20			
CH4	lay	17.2795	18.8247
Total CO2	p/dl	490,236.9 122	549,581.1 280
NBio- CO2		490,236.9 122	549,581.1 280
Bio- CO2			
PM2.5 Total		139.8717	158.5061
Exhaust PM2.5		3.4077	3.7850
Fugitive PM2.5		136.4640	154.7211
PM10 Total		513.9587	582.6345
Exhaust PM10	lay	3.6596	4.0640
Fugitive PM10	0/qI	510.2992	578.5705
S02		4.8227	5.4075
0		1,243.682 6	1,355.475 0
NOX		575.2035	604.2759
ROG		114.2890	119.3278
	Category	Mitigated	Unmitigated

4.2 Trip Summary Information

	Ave	rage Daily Trip Ra	ate	Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,853.47	3,100.28	2628.31	6,597,538	5,819,029
Golf Course	643.32	731.34	711.54	1,202,998	1,061,044
Offlice Park	29,692.00	4,264.00	1976.00	55,388,067	48,852,275
Regional Shopping Center	52,948.00	61,962.80	31297.60	89,669,118	79,088,162
Single Family Housing	33,672.24	35,051.67	30488.94	77,174,475	68,067,887
Total	119,809.03	105,110.09	67,102.39	230,032,197	202,888,398

4.3 Trip Type Information

Sand Creek (As Approved) - Bay Area AQMD Air District, Winter

		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
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	ю
Golf Course	9.50	7.30	7.30	33.00	48.00	19.00	52	39	ი
Office Park	9.50	7.30	7.30	33.00	48.00	19.00	82	15	ю
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	DHD	ДНН	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690
Apartments Low Rise	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690
Office Park	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690
Regional Shopping Center	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690
Golf Course	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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Sand Creek (As Approved) - Bay Area AQMD Air District, Winter

	ROG	XON	8	S02	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N20	CO2e
Category)/dI	łay							p/qI	ay		
NaturalGas Mitigated	4.5633	39.8851	23.1207	0.2489		3.1528	3.1528		3.1528	3.1528		49,780.89 92	49,780.89 92	0.9541	0.9127	50,076.72 22
NaturalGas Unmitigated	4.5633	39.8851	23.1207	0.2489	r 1 1 1 1 1 1 1 1 1 1 1 1 1	3.1528	3.1528	r • • • • 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3.1528	3.1528		49,780.89 92	49,780.89 92	0.9541	0.9127	50,076.72 22

5.2 Energy by Land Use - NaturalGas

Unmitigated

CO2e		1,470.389 4	0.0000	16,997.68 85	909.0413	30,699.60 31	50,076.72 22
N2O		0.0268	0.0000	0.3098	0.0166	0.5595	0.9127
CH4	lay	0.0280	0.0000	0.3239	0.0173	0.5849	0.9541
Total CO2)/qI	1,461.703 2	0.0000	16,897.27 64	903.6712	30,518.24 84	49,780.89 92
NBio- CO2		1,461.703 2	0.0000	16,897.27 64	903.6712	30,518.24 84	49,780.89 92
Bio- CO2		1-2-2-2-2	, , , , ,				
PM2.5 Total		0.0926	0.0000	1.0702	0.0572	1.9328	3.1528
Exhaust PM2.5		0.0926	0.0000	1.0702	0.0572	1.9328	3.1528
Fugitive PM2.5							
PM10 Total		0.0926	0.0000	1.0702	0.0572	1.9328	3.1528
Exhaust PM10	day	0.0926	0.0000	1.0702	0.0572	1.9328	3.1528
Fugitive PM10	/qI						
S02		7.3100e- 003	0.0000	0.0845	4.5200e- 003	0.1526	0.2489
CO		0.4872	0.0000	11.8281	0.6326	10.1728	23.1206
NOX		1.1450	0.0000	14.0811	0.7531	23.9060	39.8851
ROG		0.1340	0.0000	1.5489	0.0828	2.7975	4.5633
NaturalGa s Use	kBTU/yr	12424.5	0	143627	7681.21	259405	
	Land Use	Apartments Low Rise	Golf Course	Office Park	Regional Shopping Center	Single Family Housing	Total

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Sand Creek (As Approved) - Bay Area AQMD Air District, Winter

5.2 Energy by Land Use - NaturalGas

Mitigated

CO2e		470.389 4	0.0000	3,997.68 85	09.0413),699.60 31),076.72 22
N2O		0.0268 1,-) 0000.	0.3098 16	0.0166 9().5595 3C	.9127 50
CH4		0280 0	0000	3239 0	0173 0	5849 0	9541 0
1002	Ib/day	1.703 0. 2	000	97.27 0. 34	6712 0.	18.24 0. 34	80.89 0. 32
2 Total		3 1,46	0.0	, 16,8 6	903.	t 30,5 ε	9 49,7
NBio- CO:		1,461.703 2	0.0000	16,897.27 64	903.6712	30,518.24 84	49,780.89 92
Bio- CO2							
PM2.5 Total		0.0926	0.0000	1.0702	0.0572	1.9328	3.1528
Exhaust PM2.5		0.0926	0.0000	1.0702	0.0572	1.9328	3.1528
Fugitive PM2.5							
PM10 Total		0.0926	0.0000	1.0702	0.0572	1.9328	3.1528
Exhaust PM10	lay	0.0926	0.0000	1.0702	0.0572	1.9328	3.1528
Fugitive PM10	lb/d						
S02		7.3100e- 003	0.0000	0.0845	4.5200e- 003	0.1526	0.2489
CO		0.4872	0.0000	11.8281	0.6326	10.1728	23.1206
NOX		1.1450	0.0000	14.0811	0.7531	23.9060	39.8851
ROG		0.1340	0.0000	1.5489	0.0828	2.7975	4.5633
NaturalGa s Use	kBTU/yr	12.4245	0	143.627	7.68121	259.405	
	Land Use	Apartments Low Rise	Golf Course	Office Park	Regional Shopping Center	Single Family Housing	Total

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

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Sand Creek (As Approved) - Bay Area AQMD Air District, Winter

	ROG	NOX	co	S02	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)/dl	łay							p/qI	ay		
Mitigated	281.3571	53.0012	348.5609	0.3316		5.7972	5.7972		5.7972	5.7972	0.0000	63,435.44 40	63,435.44 40	1.7715	1.1522	63,823.07 34
Unmitigated	4,119.126 8	78.2864	5,303.486 6	9.3984		705.5621	705.5621		705.5621	705.5621	75,702.75 99	24,041.42 05	99,744.18 04	94.6484	5.3423	103,702.4 004

6.2 Area by SubCategory

Unmitigated

CO2e		0.000.0	0.0000	103,097.6 296	604.7708	103,702.4 004
N2O		•		5.3423		5.3423
CH4	ay	•		94.0815	0.5670	94.6484
Total CO2	p/dl	0.000.0	0.0000	99,153.58 34	590.5970	99,744.18 04
NBio- CO2		• • • • •		23,450.82 35	590.5970	24,041.42 05
Bio- CO2				75,702.75 99		75,702.75 99
PM2.5 Total		0.0000	0.0000	703.7451	1.8170	705.5621
Exhaust PM2.5		0.0000	0.0000	703.7451	1.8170	705.5621
Fugitive PM2.5						
PM10 Total		0.0000	0.0000	703.7451	1.8170	705.5621
Exhaust PM10	day	0.0000	0.0000	703.7451	1.8170	705.5621
Fugitive PM10	lb/dl					
S02				9.3811	0.0173	9.3984
со				4,975.874 0	327.6126	5,303.486 6
NOX				74.5136	3.7727	78.2864
ROG		37.2991	228.4364	3,843.530 5	9.8608	4,119.126 8
	SubCategory	Architectural Coating	Consumer Products	Hearth	Landscaping	Total

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Sand Creek (As Approved) - Bay Area AQMD Air District, Winter

6.2 Area by SubCategory

Mitigated

63,823.07 34	1.1522	1.7715	63,435.44 40	63,435.44 40	0.000	5.7972	5.7972		5.7972	5.7972		0.3315	348.5609	53.0012	281.3571	Total
604.7708		0.5670	590.5970	590.5970		1.8170	1.8170		1.8170	1.8170		0.0173	327.6126	3.7727	9.8608	Landscaping
63,218.30 26	1.1522	1.2045	62,844.84 71	62,844.84 71	0.0000	3.9802	3.9802		3.9802	3.9802		0.3142	20.9483	49.2285	5.7608	Hearth
0.000.0			0.0000			0.0000	0.0000		0.0000	0.0000					228.4364	Consumer Products
0.0000			0.0000			0.0000	0.0000		0.0000	0.0000					37.2991	Architectural Coating
		ay	p/qI							day	/qI					SubCategory
CO2e	N2O	CH4	Total CO2	NBio- CO2	Bio- CO2	PM2.5 Total	Exhaust PM2.5	Fugitive PM2.5	PM10 Total	Exhaust PM10	Fugitive PM10	SO2	co	NON	ROG	

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Fuel Type	
Load Factor	
Horse Power	
Days/Year	
Hours/Day	
Number	
Equipment Type	

10.0 Stationary Equipment

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Sand Creek (As Approved) - Bay Area AQMD Air District, Winter

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Fuel Type	
Boiler Rating	
Heat Input/Year	
Heat Input/Day	
Number	
Equipment Type	

<u>User Defined Equipment</u>

Number	
Equipment Type	

11.0 Vegetation

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Date: 5/24/2017 12:51 PM

Sand Creek (As Approved)

Bay Area AQMD Air District, Mitigation Report

Construction Mitigation Summary

Phase	ROG	XON	CO	S02	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
				Percent F	Reduction							
Site Preparation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	00.0	0.00	0.00	0.00	0.00
										• -		

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Rubber Tired Dozers	Diesel	No Change	0	0	No Change	00.00
Tractors/Loaders/Backhoes	Diesel	No Change	0	0	No Change	0.00

CO2 CH4 N2O CO2e	Jnmitigated mt/yr	DE+000 0.00000E+000 0.00000E+000 0.00000E+000	DE+000 0.00000E+000 0.00000E+000 0.00000E+000
NBio- CO2 Tota		0.00000E+000 0.000C	0.00000E+000 0.000C
Bio- CO2		0.00000E+000	0.00000E+000
Exhaust PM2.5		0.00000E+000	0.00000E+000
Exhaust PM10		0.00000E+000	0.00000E+000
SO2		0.00000E+000	0.00000E+000
S	nmitigated tons/y	0.00000E+000	0.00000E+000
XON	D	0.00000E+000	0.00000E+000
ROG		0.00000E+000	0.00000E+000
Equipment Type		Rubber Tired Dozers	Tractors/Loaders/ Backhoes

		8	8
CO2e		0.00000E+(0.00000E+(
N2O		0.00000E+000	0.00000E+000
CH4	ed mt/yr	0.00000E+000	0.00000E+000
Total CO2	Mitigate	0.00000E+000	0.00000E+000
NBio- CO2		0.00000E+000	0.00000E+000
Bio- CO2		0.00000E+000	0.00000E+000
Exhaust PM2.5		0.00000E+000	0.00000E+000
Exhaust PM10		0.00000E+000	0.00000E+000
S02		0.00000E+000	0.00000E+000
co	itigated tons/yr	0.00000E+000	0.00000E+000
NOX	Ň	0.00000E+000	0.00000E+000
ROG		0.00000E+000	0.00000E+000
Equipment Type		Rubber Tired Dozers	Tractors/Loaders/Ba ckhoes

Mod Vers	sion: CalEEMc	od.2016.3.1			Pag	je 2 of 7			Dat	e: 5/24/2017	7 12:51 PM	
ient Type	ROG	NOX	СО	S02	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
					Per	cent Reduction						
Fired Doze	rs 0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
/Loaders/E choes	a 0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
/e Dus	t Mitigation											
No No	itigation Meas	ure	Mitigatior	ר Input		Mitigatic	on Input		Mitigatic	in Input		
<u>й</u> Ж	oil Stabilizer fo oads	ır unpaved	:PM10 Re	duction		PM2.5 F	Reduction					
ĕö	eplace Ground sturbed	I Cover of Ar	ea: PM10 Re	eduction	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	PM2.5 F	Reduction					
:>	ater Exposed	Area	PM10 Re	eduction		PM2.51	Reduction		Frequer day)	ncy (per		
<u>່</u> ວ	Ipaved Road I	Mitigation	Moisture %	Content		Vehicle (mph)	Speed					
0	ean Paved Ro	ad	% PM Re	eduction	ō	00				•		
												1
					Unmitigated			Mitigated		ď	ercent Reduction	
Pha	se	Sou	urce	PM10	PM	12.5	PM10	H	PM2.5	PM10	-	M2.5
ation		Fugitive Dust			00.00	0.00		0.00	0.0	-0	00.0	0.00
ration		Roads			0.00	0.00		0.00	0.0	+	0.00	0.00
					-						-	

Operational Percent Reduction Summary

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Date: 5/24/2017 12:51 PM

Category	DG N(×C	co	S02	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
			Percent R	eduction								
Architectural Coating	0.00	0.00	0.00	0.00	00.0	0.00	0.00	00.0	00.0	00.0	0.00	0.00
Consumer Products	0.00	0.00	0.00	00.0	00.0	0.00	0.00	00.0	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	00.00	0.00	00.0	0.00	0.00	00.0	00.00	00	0.00	00.0
dearth 9	9 9.85	42.86	99.63	97.32	99.51	99.51	100.00	-167.99	45.98	99.31	78.44	48.30
andscaping	0.00	0.00	00.00	0.00	00.0	0.00	0.00	00.0	00.00	00	0.00	00.0
Mobile	4.12	4.68	8.59	10.77	9.97	66.6	0.00	10.75	10.75	8.41	0.00	10.75
Vatural Gas	0.00	0.00	00.00	0.00	00.0	0.00	0.00	00.0	00.00	00	0.00	00.0
Nater Indoor	0.00	0.00	00.00	0.00	00.0	0.00	0.00	00.0	00.00	00	0.00	00.0
Nater Outdoor	0.00	0.00	0.00	0.00	00.0	0.00	0.00	00.0	00.00	00.0	0.00	00.0

Operational Mobile Mitigation

Project Setting: Suburban Center

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
No	Land Use	Increase Density	0.00			
Yes	Land Use	Increase Diversity	0.22	0.51		
оN	Land Use	Improve Walkability Design	00.0			
оN	Land Use	Improve Destination Accessibility	00.0			
No	Land Use	Increase Transit Accessibility	0.25			
оN	Land Use	Integrate Below Market Rate Housing	00.0			
	Land Use	Land Use SubTotal	0.10			

'24/2017 12:51 PM																				2.00		
Date: 5	0 Project Site and Connecting Off- Site			2	20	-0			10	10	10	10	2			10		0	10	10		io
	2.0	· • • • • • • • • • • • • • • • •	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1			4.5(0.0	0.0	0.0	10.00	0.0
Page 4 of 7	Improve Pedestrian Network	Provide Traffic Calming Measures	Implement NEV Network	Neighborhood Enhancements Subtotal	Limit Parking Supply	Unbundle Parking Costs	On-street Market Pricing	Parking Policy Pricing Subtotal	Provide BRT System	Expand Transit Network	Increase Transit Frequency	Transit Improvements Subtotal	Land Use and Site Enhancement Subtotal	Implement Trip Reduction Program	Transit Subsidy	Implement Employee Parking "Cash Out"	Workplace Parking Charge	Encourage Telecommuting and Alternative Work Schedules	Market Commute Trip Reduction Option	Employee Vanpool/Shuttle	Provide Ride Sharing Program	Commute Subtotal
ersion: CalEEMod.2016.3.1	Neighborhood Enhancements	Neighborhood Enhancements	Neighborhood Enhancements	Neighborhood Enhancements	Parking Policy Pricing	Parking Policy Pricing	Parking Policy Pricing	Parking Policy Pricing	Transit Improvements	Transit Improvements	Transit Improvements	Transit Improvements		Commute	Commute	Commute	Commute	Commute	Commute	Commute	Commute	Commute
CalEEMod Ve	Yes	No	No		Yes	No	oN		No	No	No			oN	No	No	٥N	° N	٥N	No	No	

Date: 5/24/2017 12:51 PM		
	0.00	0.12
Page 5 of 7	Implement School Bus Program	Total VMT Reduction
/ersion: CalEEMod.2016.3.1	School Trip	
CalEEMod √	No	

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
Yes	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	100.00
No	Use Low VOC Paint (Residential Exterior)	150.00
No	Use Low VOC Paint (Non-residential Interior)	100.00
No	Use Low VOC Paint (Non-residential Exterior)	150.00
No	Use Low VOC Paint (Parking)	150.00
No	% Electric Lawnmower	00.0
No	% Electric Leafblower	00.0
No	% Electric Chainsaw	00.0

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Exceed Title 24		
No	Install High Efficiency Lighting		
No	On-site Renewable		

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Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00
DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
٥N	Apply Water Conservation on Strategy		
No	Use Reclaimed Water		
Q	Use Grey Water		
Q	Install low-flow bathroom faucet	32.00	
No	Install low-flow Kitchen faucet	18.00	
Q	Install low-flow Toilet	20.00	
Q	Install low-flow Shower	20.00	
Q	Turf Reduction		
Q	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape		

Solid Waste Mitigation

Mitigation Measures

Input Value

Date: 5/24/2017 12:51 PM

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Sand Creek (As Approved) - Bay Area AQMD Air District, Summary Report

Sand Creek (As Approved)

Bay Area AQMD, Summary Report

1.0 Project Characteristics

1.1 Land Usage

Population	10116	1238	ο	ο	0
Floor Surface Area	6,366,600.00	433,000.00	2,600,000.00	1,240,000.00	35,000.00
Lot Acreage	1,148.38	27.06	59.69	28.47	125.66
Metric	Dwelling Unit	Dwelling Unit	1000sqft	1000sqft	Hole
Size	3,537.00	433.00	2,600.00	1,240.00	18.00
Land Uses	Single Family Housing	Apartments Low Rise	Office Park	Regional Shopping Center	Golf Course

1.2 Other Project Characteristics

Urbanization Climate Zone	Urban 4	Wind Speed (m/s)	2.2	Precipitation Freq (Days) Operational Year	64 2028
Utillity Company	Pacific Gas & Electric Cor	mpany			
CO2 Intensity (Ib/MWhr)	322.63	CH4 Intensity (Ib/MWhr)	0.029	N2O Intensity (Ib/MWhr)	0.006

1.3 User Entered Comments

Only CalEEMod defaults were used.

Page 2 of 3

Sand Creek (As Approved) - Bay Area AQMD Air District, Summary Report

Project Characteristics - CO2 Intensity adjusted to reflect PG&E progress towards RPS

Land Use - General Plan Buildout

Construction Phase - Construction not modeled

Off-road Equipment -

Off-road Equipment - Construction not modeled

Energy Use - Energy Intensity adjusted based on 2016 Title 24

Mobile Land Use Mitigation -

Area Mitigation -

2.0 Peak Daily Emissions

Peak Daily Construction Emissions

Peak Daily Construction Emissions

				Unmi	tigated					Miti	gated		
		ROG	XON	со	SO2	PM10	PM2.5	ROG	XON	со	SO2	PM10	PM2.5
Year	Phase						/qı	day					
2055	Site Preparation	0.0000 S											
	Peak Daily Total	0.0000 S											
	Air District Threshold												
	Exceed Significance?												

Peak Daily Operational Emissions

Peak Daily Operational Emissions
Page 3 of 3

Sand Creek (As Approved) - Bay Area AQMD Air District, Summary Report

				Unmit	igated					Mitig	ated		
		ROG	XON	со	S02	PM10	PM2.5	ROG	XON	со	SO2	PM10	PM2.5
Opera	ational Activity)/qI	day					
On-Site Area		4,119.1268 S	78.2864 S	5,303.4866 S	9.3984 S	705.5621 S	705.5621 S	281.3571 S	53.0012 S	348.5609 S	0.3316 S	5.7972 S	5.7972 S
On-Site Energ	At	4.5633 S	39.8851 S	23.1207 S	0.2489 S	3.1528 S	3.1528 S	4.5633 S	39.8851 S	23.1207 S	0.2489 S	3.1528 S	3.1528 S
Off-Site Mobile	e	140.6024 S	604.2759 W	1,355.4750 W	5.7651 S	582.6345 W	158.5061 W	135.5410 S	575.2035 W	1,243.6826 W	5.1431 S	513.9587 W	139.8717 W
Peak	Daily Total	4,264.2925 S	722.4474 W	6,682.0823 W	15.4124 S	1,291.3494 W	867.2210 W	421.4614 S	668.0897 W	1,615.3641 W	5.7236 S	522.9087 W	148.8217 W
Air Di	strict Threshold												
Excee	ed Significance?												

3.0 Annual GHG Emissions

Annual GHG

Annual GHG

			Unmit	igated			Mitig	jated	
		CO2	CH4	N2O	CO2e	CO2	CH4	N2O	CO2e
GHG Activity	Year				LM	⁻/yr			
Construction	2055	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Operational	2028	103,317.0123	129.4956	1.0850	106,877.7330	94,728.5884	128.4057	1.0638	98,255.7518
	Total								
	Significance Threshold								
	Exceed Significance?								

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Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

Sand Creek (As Proposed)

Bay Area AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Population	0	10513	927	0	0	0
Floor Surface Area	44,169,840.00	6,616,800.00	324,000.00	588,060.00	104,500.61	245,800.00
Lot Acreage	1,014.00	1,632.00	20.25	33.75	2.40	5.64
Metric	Acre	Dwelling Unit	Dwelling Unit	1000sqft	Bed	1000sqft
Size	1,014.00	3,676.00	324.00	588.06	146.00	245.80
Land Uses	City Park	Single Family Housing	Apartments Low Rise	Regional Shopping Center	Hospital	Medical Office Building

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	64
Climate Zone	4			Operational Year	2028
Utility Company	Pacific Gas & Electric Corr	pany			
CO2 Intensity (Ib/MWhr)	322.63	CH4 Intensity (Ib/MWhr)	0.029	N2O Intensity (Ib/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

Project Characteristics - CO2 Intensity Adjusted for PG&E progress towards RPS

Land Use - *

Construction Phase - Construction not modeled Off-road Equipment - Construction not modeled

Off-road Equipment - Construction not modeled

Energy Use - Adjusted based on 2016 Title 24

Mobile Land Use Mitigation -

Area Mitigation -

Trips and VMT - Construction not modeled

2028	2018	OperationalYear	tblProjectCharacteristics
322.63	641.35	CO2IntensityFactor	olProjectCharacteristics
0.00	3.00	OffRoadEquipmentUnitAmount	tblOffRoadEquipment
00.0	4.00	OffRoadEquipmentUnitAmount	tblOffRoadEquipment
33.75	13.50	LotAcreage	tblLandUse
1,632.00	1,193.51	LotAcreage	tblLandUse
23,614.26	32,797.58	T24NG	tblEnergyUse
2.26	2.38	T24NG	tblEnergyUse
7,318.29	10,164.29	T24NG	tblEnergyUse
265.62	368.92	T24E	tblEnergyUse
2.88	2.89	T24E	tblEnergyUse
310.48	431.22	T24E	tblEnergyUse
1.00	6,000.00	NumDays	tblConstructionPhase
New Value	Default Value	Column Name	Table Name

2.0 Emissions Summary

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Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

2.1 Overall Construction

Unmitigated Construction

0.0000	0.0000	0.000	0.0000	0.0000	0.0000	0000'0	0.000	0.0000	0.0000	0.0000	00000	00000	0.0000	0.0000	0.0000	Aaximum
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	017
		/yr	MT							IS/yr	ton					ear
CO2e	N2O	CH4	Total CO2	NBio- CO2	Bio- CO2	PM2.5 Total	Exhaust PM2.5	Fugitive PM2.5	PM10 Total	Exhaust PM10	Fugitive PM10	S02	со	NOX	ROG	

Mitigated Construction

CO2e		0.0000	0.000
N2O		0.000.0	0.000
CH4	/yr	0.0000	0.000
Total CO2	MT	0.0000	0.0000
NBio- CO2		0.0000	0.000
Bio- CO2		0.000.0	0000.0
PM2.5 Total		0.0000	0.000
Exhaust PM2.5		0.0000	0.000
Fugitive PM2.5		0.0000	0.000
PM10 Total		0.0000	0.000
Exhaust PM10	s/yr	0.0000	0.0000
Fugitive PM10	ton	0.0000	0.0000
S02		0.0000	0.0000
00		0.0000	0.0000
NOX		0.0000	0.000
ROG		0.0000	0.0000
	Year	2017	Maximum

CO2e	00.0
N20	0.00
CH4	0.00
Total CO2	00'0
NBio-CO2	0.00
Bio- CO2	0.00
PM2.5 Total	0.00
Exhaust PM2.5	0.00
Fugitive PM2.5	0.00
PM10 Total	0.00
Exhaust PM10	0.00
Fugitive PM10	0.00
S02	0.00
CO	0.00
NOX	0.00
ROG	0.00
	Percent Reduction

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Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

Maximum Mitigated ROG + NOX (tons/quarter)	
Maximum Unmitigated ROG + NOX (tons/quarter)	
End Date	Highest
Start Date	
Quarter	

2.2 Overall Operational

Unmitigated Operational

73,424.90 88	0.5554	115.0629	70,382.82 11	68,095.34 52	2,287.475 9	21.6804	5.7007	15.9798	65.2952	5.7304	59.5648	0.6874	203.3562	70.1349	73.4468	Total
1,478.233 1	0.2864	11.4334	1,107.053 8	996.6078	110.4459	0.0000	0.0000		0.0000	0.0000						Water
4,199.288 0	0.0000	100.1716	1,694.998 9	0.0000	1,694.998 9	0.0000	0.0000		0.0000	0.0000						Waste
53,905.88 82	0.0000	1.7781	53,861.43 58	53,861.43 58	0.0000	16.3831	0.4033	15.9798	59.9979	0.4331	59.5648	0.5839	138.4388	63.7814	12.9377	Mobile
13,158.04 65	0.2414	0.7267	13,067.95 63	13,067.95 63	0.0000	0.4422	0.4422		0.4422	0.4422		0.0349	2.6923	5.5195	0.6401	Energy
683.4531	0.0277	0.9531	651.3763	169.3453	482.0310	4.8551	4.8551		4.8551	4.8551		0.0686	62.2251	0.8340	59.8690	Area
		'/yr	ΤM							s/yr	ton					Category
CO2e	N2O	CH4	Total CO2	NBio- CO2	Bio- CO2	PM2.5 Total	Exhaust PM2.5	Fugitive PM2.5	PM10 Total	Exhaust PM10	Fugitive PM10	S02	S	NOX	ROG	

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Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

2.2 Overall Operational

Mitigated Operational

Oze		.6475	58.04 35	11.16 73	99.288 0	8.233 1	123.38 25	CO2e	8.31
э)e- 1 376.	4 13,1	0 48,1	0 4,19	4 1,47	67,3	N20	3.91
NZO		5.9600 003	0.241	0.000	0.000	0.286	0.533	H4	91
CH4	yr	0.0528	0.7267	1.6286	100.1716	11.4334	114.0130	CI	o
l otal CO2	MT/	373.5524	13,067.95 63	48,070.45 34	1,694.998 9	1,107.053 8	64,314.01 48	02 Total C	8.62
NBIO- CO2		373.5524	13,067.95 63	48,070.45	0.0000	996.6078	62,508.57 (00	02 NBio-C	7 8.20
BIO- CU2		0.000.0	0000.0	0000.0	l ,694.998 9	110.4459	1,805.444 (Bio-C(21.07
PM2.5 Total		0.1874	0.4422	14.4571	0.0000	0000.0	15.0868 1	st PM2.5 5 Total	30.41
xhaust PM2.5		0.1874	0.4422	0.3630	0000.0	0000.0	0.9926	e Exhaus PM2.5	82.59
2.5 F				942 0			942 0	Fugitive PM2.5	11.80
PM PM				14.0			7 14.0	PM10 Total	17.98
Total		0.1874	0.4422	52.926(0.0000	0.0000	53.5557	aust 110	.21
Exnaust PM10	/yr	0.1874	0.4422	0.3898	0.0000	0.0000	1.0195	ive Exh	80 82
Fugitive PM10	tons			52.5362			52.5362	Eugit PM	4 11.8
202		.3600e- 003	0.0349	0.5210			0.5593	\$02	18.64
0		9.8100 3	.6923 (6.5438 (9.0461 (CO	21.79
Ň		226 29	195 2	7955 120			3377 15	NOX	4.56
ž		0.6	5.5	6.09	 		9 66.9	g	50
200Y		37.488	0.6401	12.403			50.531	RC	31.
	Category	Area	Energy	Mobile	Waste	Water	Total		Percent Reduction

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
4	Site Preparation	Site Preparation	8/1/2017	8/1/2017	5		

Acres of Grading (Site Preparation Phase): 0

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Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

tor	0.37	0.40
Load Fact		
Horse Power	26	247
Usage Hours	8.00	8.00
Amount	0	0
Offroad Equipment Type	Tractors/Loaders/Backhoes	Rubber Tired Dozers
Phase Name	Site Preparation	Site Preparation

Trips and VMT

ННDT	HDT_Mix	LD_Mix	20.00	7.30	10.80	0.00	0.00	0.00	0	Site Preparation
Hauling	Vendor	Worker Vehicle	Hauling Trip	Vendor Trip	Worker Trip	Hauling Trip	Vendor Trip	Worker Trip	Offroad Equipment	Phase Name
Vehicle Class	Vehicle Class	Class	Length	Length	Length	Number	Number	Number	Count	

3.1 Mitigation Measures Construction

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Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

3.2 Site Preparation - 2017

Unmitigated Construction On-Site

CO2e		0.0000	0.0000	0.000
N2O		0.0000	0.0000	0.000
CH4	/yr	0.000.0	0.0000	0.000.0
Total CO2	Μ	0.000.0	0.0000	0.000
NBio- CO2		0.0000	0.0000	0.000
Bio- CO2		0.0000	0.0000	0000'0
PM2.5 Total		0.0000	0.0000	0.0000
Exhaust PM2.5		0.0000	0.0000	0.0000
Fugitive PM2.5		0.000.0		0.000
PM10 Total		0.000.0	0.0000	0.000
Exhaust PM10	s/yr	0.0000	0.0000	0000'0
Fugitive PM10	ton	0.0000		0.000
S02			0.0000	0.000
со			0.0000	0000.0
NOX			0.0000	0000.0
ROG			0.0000	0.0000
	Category	Fugitive Dust	Off-Road	Total

Unmitigated Construction Off-Site

		_	-		_
CO2e		0.0000	0.0000	0.0000	0.0000
N2O		0.0000	0.0000	0.0000	0.000
CH4	/yr	0.000.0	0.0000	0.0000	0.000.0
Total CO2	Μ	0.000.0	0.0000	0.0000	0.000
NBio- CO2		0.0000	0.0000	0.0000	0.000
Bio- CO2		0.0000	0.0000	0.0000	0.000
PM2.5 Total		0.0000	0.0000	0.0000	0.000
Exhaust PM2.5		0.0000	0.0000	0.0000	0.000
Fugitive PM2.5		0.0000	0.0000	0.0000	0000'0
PM10 Total	tons/yr	0.0000	0.0000	0.0000	0000'0
Exhaust PM10		0.0000	0.0000	0.0000	0.000
Fugitive PM10		0.0000	0.0000	0.0000	0.0000
S02		0.0000	0.0000	0.0000	0.000
со		0.0000	0.0000	0.0000	0000.0
XON		0.0000	0.0000	0.0000	0.000
ROG		0.0000	0.0000	0.0000	0.0000
	Category	Hauling	Vendor	Worker	Total

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Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

3.2 Site Preparation - 2017

Mitigated Construction On-Site

CO2e		0.0000	0.0000	0.000
N2O		0.0000	0.0000	0.000
CH4	ʻyr	0.000.0	0.0000	0.000
Total CO2	MT	0.0000	0.0000	0.000
NBio- CO2		0.0000	0.0000	0.0000
Bio- CO2		0.0000	0.0000	0000'0
PM2.5 Total		0.0000	0.0000	0.000
Exhaust PM2.5		0.0000	0.0000	0.0000
Fugitive PM2.5		0.000.0		0.000
PM10 Total		0.000.0	0.0000	0.000
Exhaust PM10	s/yr	0.0000	0.0000	0.0000
Fugitive PM10	ton	0.0000		0.0000
SO2			0.0000	0.0000
со			0.0000	0000.0
NOX			0.0000	0000.0
ROG			0.0000	0.0000
	Category	Fugitive Dust	Off-Road	Total

Mitigated Construction Off-Site

CO2e		0.0000	0.0000	0.0000	0.0000		
N2O		0.0000	0.0000	0.0000	0.000		
CH4	/yr	0.000.0	0.0000	0.0000	0.000.0		
Total CO2	Μ	0.000.0	0.0000	0.0000	0.000		
NBio- CO2				0.0000	0.0000	0.0000	0.000
Bio- CO2		0.0000	0.0000	0.0000	0.000		
PM2.5 Total		0.0000	0.0000	0.0000	0.0000		
Exhaust PM2.5		0.0000	0.0000	0.0000	0.000		
Fugitive PM2.5		0.000.0	0.0000	0.0000	0.00.0		
PM10 Total		0.0000	0.0000	0.0000	0.000.0		
Exhaust PM10	s/yr	0.0000	0.0000	0.0000	0.000		
Fugitive PM10	ton	0.0000	0.0000	0.0000	0.000		
S02		0.0000	0.0000	0.0000	0.0000		
СО		0.000.0	0.0000	0.0000	0.000		
NOX		0.000.0	0.0000	0.0000	0.000		
ROG		0.0000	0.0000	0.0000	0.0000		
	Category	Hauling	Vendor	Worker	Total		

4.0 Operational Detail - Mobile

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Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

4.1 Mitigation Measures Mobile

Increase Diversity

Improve Pedestrian Network

CO2e		48,111.16 73	53,905.88 82
N2O		0.0000	0.0000
CH4	ʻyr	1.6286	1.7781
Total CO2	Μ	48,070.45 34	53,861.43 58
NBio- CO2		48,070.45 34	53,861.43 58
Bio- CO2		0.0000	0.0000
PM2.5 Total		14.4571	16.3831
Exhaust PM2.5		0.3630	0.4033
Fugitive PM2.5		14.0942	15.9798
PM10 Total		52.9260	59.9979
Exhaust PM10	s/yr	0.3898	0.4331
Fugitive PM10	ton	52.5362	59.5648
S02		0.5210	0.5839
СО		126.5438	138.4388
XON		60.7955	63.7814
ROG		12.4039	12.9377
	Category	Mitigated	Unmitigated

4.2 Trip Summary Information

	Ave	rage Daily Trip Ra	ate	Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,135.16	2,319.84	1966.68	4,936,726	4,354,193
City Park	1,916.46	23,068.50	16974.36	15,134,630	13,348,743
Regional Shopping Center	25,110.16	29,385.36	14842.63	42,524,856	37,506,923
Single Family Housing	34,995.52	36,429.16	31687.12	80,207,343	70,742,876
Hospital	1,889.24	1,188.44	1049.74	4,203,767	3,707,722
Medical Office Building	8,880.75	2,202.37	380.99	13,137,936	11,587,659
Total	74,927.30	94,593.67	66,901.52	160,145,258	141,248,117

4.3 Trip Type Information

Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

		Miles			Trip %			Trip Purpos	e %
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
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	ю
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	9
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	1	ю
Hospital	9.50	7.30	7.30	64.90	16.10	19.00	73	25	2
Medical Office Building	9.50	7.30	7.30	29.60	51.40	19.00	60	30	10

4.4 Fleet Mix

0.000690	0.000914	0.005671	0.001891	0.002682	0.027858	0.019160	0.005280	0.013366	0.107168	0.193743	0.036923	0.584654	Medical Office Building
0.000690	0.000914	0.005671	0.001891	0.002682	0.027858	0.019160	0.005280	0.013366	0.107168	0.193743	0.036923	0.584654	Hospital
0.000690	0.000914	0.005671	0.001891	0.002682	0.027858	0.019160	0.005280	0.013366	0.107168	0.193743	0.036923	0.584654	Regional Shopping Center
0.000690	0.000914	0.005671	0.001891	0.002682	0.027858	0.019160	0.005280	0.013366	0.107168	0.193743	0.036923	0.584654	Apartments Low Rise
0.000690	0.000914	0.005671	0.001891	0.002682	0.027858	0.019160	0.005280	0.013366	0.107168	0.193743	0.036923	0.584654	Single Family Housing
0.000690	0.000914	0.005671	0.001891	0.002682	0.027858	0.019160	0.005280	0.013366	0.107168	0.193743	0.036923	0.584654	City Park
MH	SBUS	MCY	UBUS	OBUS	ПНD	MHD	LHD2	LHD1	MDV	LDT2	LDT1	LDA	Land Use

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

	ROG	XON	8	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
Category					tons	s/yr							MT/	yr		
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	6,733.353 5	6,733.353 5	0.6052	0.1252	6,785.800 3
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	6,733.353 5	6,733.353 5	0.6052	0.1252	6,785.800 3
NaturalGas Mitigated	0.6401	5.5195	2.6923	0.0349		0.4422	0.4422		0.4422	0.4422	0.0000	6,334.602 8	6,334.602 8	0.1214	0.1161	6,372.246 2
NaturalGas Unmitigated	0.6401	5.5195	2.6923	0.0349		0.4422	0.4422		0.4422	0.4422	0.0000	6,334.602 8	6,334.602 8	0.1214	0.1161	6,372.246 2

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Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

5.2 Energy by Land Use - NaturalGas

Unmitigated

UU Ze		182.1579	0.0000	619.2536	217.0540	71.3744	5,282.406 4	6,372.246 2
NZO		3.3200e- 003	0.0000	0.0113	3.9600e- 003	1.3000e- 003	0.0963	0.1161
CH4	/yr	3.4700e- 003	0.0000	0.0118	4.1400e- 003	1.3600e- 003	0.1007	0.1214
	ΤM	181.0819	0.0000	615.5954	215.7718	70.9527	5,251.201 1	6,334.602 8
NBIO- CUZ		181.0819	0.0000	615.5954	215.7718	70.9527	5,251.201 1	6,334.602 8
BIO- UU2		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0126	0.0000	0.0430	0.0151	4.9500e- 003	0.3666	0.4422
Exnaust PM2.5		0.0126	0.0000	0.0430	0.0151	4.9500e- 003	0.3666	0.4422
PM2.5								
Total		0.0126	0.0000	0.0430	0.0151	4.9500e- 003	0.3666	0.4422
PM10	ıs/yr	0.0126	0.0000	0.0430	0.0151	4.9500e- 003	0.3666	0.4422
PM10	ton							
SUZ		1.0000e- 003	0.0000	3.3900e- 003	1.1900e- 003	3.9000e- 004	0.0289	0.0349
3		0.0665	0.0000	0.4750	0.1665	0.0548	1.9295	2.6923
Ň		0.1564	0.0000	0.5655	0.1982	0.0652	4.5343	5.5195
9 0 2		0.0183	0.0000	0.0622	0.0218	7.1700e- 003	0.5306	0.6401
ivaturaica s Use	kBTU/yr	3.39335e +006	0	1.15358e +007	4.04341e +006	1.3296e +006	9.84038e +007	
	Land Use	Apartments Low Rise	City Park	Hospital	Medical Office Building	Regional Shopping Center	Single Family Housing	Total

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5.2 Energy by Land Use - NaturalGas

Mitigated

CO2e		182.1579	0.0000	619.2536	217.0540	71.3744	5,282.406 4	6,372.246 2
N2O		3.3200e- 003	0.000.0	0.0113	3.9600e- 003	1.3000e- 003	0.0963	0.1161
CH4	'yr	3.4700e- 003	0.0000	0.0118	4.1400e- 003	1.3600e- 003	0.1007	0.1214
Total CO2	Μ	181.0819	0.0000	615.5954	215.7718	70.9527	5,251.201 1	6,334.602 8
NBio- CO2		181.0819	0.0000	615.5954	215.7718	70.9527	5,251.201 1	6,334.602 8
Bio- CO2		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
PM2.5 Total		0.0126	0.0000	0.0430	0.0151	4.9500e- 003	0.3666	0.4422
Exhaust PM2.5		0.0126	0.0000	0.0430	0.0151	4.9500e- 003	0.3666	0.4422
Fugitive PM2.5								
PM10 Total		0.0126	0.0000	0.0430	0.0151	4.9500e- 003	0.3666	0.4422
Exhaust PM10	s/yr	0.0126	0.0000	0.0430	0.0151	4.9500e- 003	0.3666	0.4422
Fugitive PM10	ton							
S02		1.0000e- 003	0.0000	3.3900e- 003	1.1900e- 003	3.9000e- 004	0.0289	0.0349
S		0.0665	0.0000	0.4750	0.1665	0.0548	1.9295	2.6923
NOX		0.1564	0.0000	0.5655	0.1982	0.0652	4.5343	5.5195
ROG		0.0183	0.0000	0.0622	0.0218	7.1700e- 003	0.5306	0.6401
NaturalGa s Use	kBTU/yr	3.39335e +006	0	1.15358e +007	4.04341e +006	1.3296e +006	9.84038e +007	
	Land Use	Apartments Low Rise	City Park	Hospital	Medical Office Building	Regional Shopping Center	Single Family Housing	Total

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Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	I otal CO2	CH4	NZO	COZe
Land Use	kWh/yr		ΤΜ	/yr	
Apartments Low Rise	1.4707e +006	215.2260	0.0194	4.0000e- 003	216.9025
City Park	0	0.0000	0.0000	0.0000	0.0000
Hospital	2.18302e +006	319.4683	0.0287	5.9400e- 003	321.9567
Medical Office Building	4.47848e +006	655.3914	0.0589	0.0122	660.4963
Regional Shopping Center	6.43102e +006	941.1322	0.0846	0.0175	948.4628
Single Family Housing	3.14477e +007	4,602.135 6	0.4137	0.0856	4,637.982 1
Total		6,733.353 5	0.6052	0.1252	6,785.800 3

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Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N20	CO2e
Land Use	kWh/yr		MT	'/yr	
Apartments Low Rise	1.4707e +006	215.2260	0.0194	4.0000e- 003	216.9025
City Park	0	0.0000	0.0000	0.0000	0.0000
Hospital	2.18302e +006	319.4683	0.0287	5.9400e- 003	321.9567
Medical Office Building	4.47848e +006	655.3914	0.0589	0.0122	660.4963
Regional Shopping Center	6.43102e +006	941.1322	0.0846	0.0175	948.4628
Single Family Housing	3.14477e +007	4,602.135 6	0.4137	0.0856	4,637.982 1
Total		6,733.353 5	0.6052	0.1252	6,785.800 3

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

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Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

	ROG	NOX	СО	S02	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	s/yr							MT,	'yr		
Mitigated	37.4880	0.6226	29.8100	3.3600e- 003		0.1874	0.1874		0.1874	0.1874	0.0000	373.5524	373.5524	0.0528	5.9600e- 003	376.6475
Unmitigated	59.8690	0.8340	62.2251	0.0686		4.8551	4.8551		4.8551	4.8551	482.0310	169.3453	651.3763	0.9531	0.0277	683.4531

6.2 Area by SubCategory

<u>Unmitigated</u>

CO2e		0.0000	0.0000	633.7385	49.7146	683.4531
N2O		0.0000	0.0000	0.0277	0.0000	0.0277
CH4	/yr	0.0000	0.0000	0.9066	0.0466	0.9531
Total CO2	Μ	0.0000	0.0000	602.8255	48.5508	651.3763
NBio- CO2		0.0000	0.0000	120.7945	48.5508	169.3453
Bio- CO2		0.0000	0.0000	482.0310	0.0000	482.0310
PM2.5 Total		0.000.0	0.0000	4.6904	0.1647	4.8551
Exhaust PM2.5		0.000.0	0.0000	4.6904	0.1647	4.8551
Fugitive PM2.5						
PM10 Total		0.0000	0.0000	4.6904	0.1647	4.8551
Exhaust PM10	s/yr	0.0000	0.0000	4.6904	0.1647	4.8551
Fugitive PM10	ton					
S02				0.0670	1.5700e- 003	0.0686
со				32.5345	29.6906	62.2251
NOX				0.4920	0.3420	0.8340
ROG		5.3752	31.1874	22.4138	0.8926	59.8690
	SubCategory	Architectural Coating	Consumer Products	Hearth	Landscaping	Total

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Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

6.2 Area by SubCategory

Mitigated

CO2e		0.000.0	0.0000	326.9329	49.7146	376.6475
N2O		0000.0	0.0000	5.9600e- 003	0.0000	5.9600e- 003
CH4	/yr	0.0000	0.0000	6.2300e- 003	0.0466	0.0528
Total CO2	MT	0.0000	0.0000	325.0016	48.5508	373.5524
NBio- CO2		0.0000	0.0000	325.0016	48.5508	373.5524
Bio- CO2		0.000.0	0.0000	0.0000	0.0000	0.000.0
PM2.5 Total		0.0000	0.0000	0.0227	0.1647	0.1874
Exhaust PM2.5		0000.0	0.000.0	0.0227	0.1647	0.1874
Fugitive PM2.5			+ 	+ 	+ 	
PM10 Total		0.0000	0.0000	0.0227	0.1647	0.1874
Exhaust PM10	s/yr	0.0000	0.0000	0.0227	0.1647	0.1874
Fugitive PM10	tons					
S02			 	1.7900e- 003	1.5700e- 003	3.3600e- 003
со				0.1194	29.6906	29.8100
XON				0.2806	0.3420	0.6226
ROG		5.3752	31.1874	0.0328	0.8926	37.4880
	SubCategory	Architectural Coating	Consumer Products	Hearth	Landscaping	Total

7.0 Water Detail

7.1 Mitigation Measures Water

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Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

		014	020	COZE
Category		ΤM	'/yr	
Mitigated	1,107.053 8	11.4334	0.2864	1,478.233 1
Unmitigated	1,107.053 8	11.4334	0.2864	1,478.233 1

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Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

7.2 Water by Land Use

Unmitigated

1,478.233 1	0.2864	11.4334	1,107.053 8		Total
595.0799	0.1892	7.8283	342.9779	239.506 / 150.993	Single Family Housing
107.8332	0.0344	1.4237	61.9864	43.5591 / 26.6975	Regional Shopping Center
69.6286	0.0242	1.0075	37.2176	30.8431 / 5.87488	Medical Office Building
29.6023	0.0103	0.4283	15.8229	13.1128 / 2.49767	Hospital
623.6392	0.0115	0.0556	618.8191	0 / 1208.16	City Park
52.4499	0.0167	0.6900	30.2298	21.1099 / 13.3084	Apartments Low Rise
	'/yr	LΜ		Mgal	Land Use
CO2e	NZO	CH4	Total CO2	Indoor/Out door Use	

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Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal		MT	'/yr	
Apartments Low Rise	21.1099 / 13.3084	30.2298	0.6900	0.0167	52.4499
City Park	0 / 1208.16	618.8191	0.0556	0.0115	623.6392
Hospital	13.1128 / 2.49767	15.8229	0.4283	0.0103	29.6023
Medical Office Building	30.8431 / 5.87488	37.2176	1.0075	0.0242	69.6286
Regional Shopping Center	43.5591 / 26.6975	61.9864	1.4237	0.0344	107.8332
Single Family Housing	239.506 / 150.993	342.9779	7.8283	0.1892	595.0799
Total		1,107.053 8	11.4334	0.2864	1,478.233 1

8.0 Waste Detail

8.1 Mitigation Measures Waste

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Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

Category/Year

	4,199.288 0	4,199.288 0
'/yr	0.0000	0.0000
ΤM	100.1716	100.1716
	1,694.998 9	1,694.998 9
	Mitigated	Unmitigated

CO2e

N2O

CH4

Total CO2

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Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

8.2 Waste by Land Use

Unmitigated

4,199.288 0	0.0000	100.1716	1,694.998 9		Total
2,220.541 5	0.0000	52.9697	896.2985	4415.46	Single Family Housing
310.5216	0.0000	7.4073	125.3388	617.46	Regional Shopping Center
1,335.022 5	0.0000	31.8462	538.8679	2654.64	Medical Office Building
214.3970	0.0000	5.1143	86.5391	426.32	Hospital
43.8530	0.0000	1.0461	17.7008	87.2	City Park
74.9524	0.0000	1.7880	30.2538	149.04	Apartments Low Rise
	'/yr	μ		tons	Land Use
CO2e	N20	CH4	Total CO2	Waste Disposed	

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Date: 5/24/2017 2:19 PM

Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

8.2 Waste by Land Use

Mitigated

	vvaste Disposed		CH4	NZU	0.02e
Land Use	tons		MT	/yr	
Apartments Low Rise	149.04	30.2538	1.7880	0.0000	74.9524
City Park	87.2	17.7008	1.0461	0.0000	43.8530
Hospital	426.32	86.5391	5.1143	0.0000	214.3970
Medical Office Building	2654.64	538.8679	31.8462	0.0000	1,335.022 5
Regional Shopping Center	617.46	125.3388	7.4073	0.0000	310.5216
Single Family Housing	4415.46	896.2985	52.9697	0.0000	2,220.541 5
Total		1,694.998 9	100.1716	0.000	4,199.288 0

9.0 Operational Offroad

Fuel Type
Load Factor
Horse Power
Days/Year
Hours/Day
Number
Equipment Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Fuel Type	
Load Factor	
Horse Power	
Hours/Year	
Hours/Day	
Number	
Equipment Type	

Boilers

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Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

|--|

<u>User Defined Equipment</u>

Equipment Type Numb

11.0 Vegetation

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Sand Creek (As Proposed) - Bay Area AQMD Air District, Summer

Sand Creek (As Proposed)

Bay Area AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

ea Population	0	10513	927	0	0	0
Floor Surface Are	44,169,840.00	6,616,800.00	324,000.00	588,060.00	104,500.61	245,800.00
Lot Acreage	1,014.00	1,632.00	20.25	33.75	2.40	5.64
Metric	Acre	Dwelling Unit	Dwelling Unit	1000sqft	Bed	1000sqft
Size	1,014.00	3,676.00	324.00	588.06	146.00	245.80
Land Uses	City Park	Single Family Housing	Apartments Low Rise	Regional Shopping Center	Hospital	Medical Office Building

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	64
Climate Zone	4			Operational Year	2028
Utility Company	Pacific Gas & Electric Con	ynary			
CO2 Intensity (Ib/MWhr)	322.63	CH4 Intensity (Ib/MWhr)	0.029	N2O Intensity (Ib/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Sand Creek (As Proposed) - Bay Area AQMD Air District, Summer

Project Characteristics - CO2 Intensity Adjusted for PG&E progress towards RPS

Land Use - * Construction Phase - Construction not modeled

Off-road Equipment - Construction not modeled

Off-road Equipment - Construction not modeled

Energy Use - Adjusted based on 2016 Title 24

Mobile Land Use Mitigation -

Area Mitigation -

Trips and VMT - Construction not modeled

2028	2018	OperationalYear	
322.63	641.35	CO2IntensityFactor	
0.00	3.00	adEquipmentUnitAmount	OffRoa
0.00	4.00	dEquipmentUnitAmount	OffRoad
33.75	13.50	LotAcreage	
1,632.00	1,193.51	LotAcreage	
23,614.26	32,797.58	T24NG	
2.26	2.38	T24NG	
7,318.29	10,164.29	T24NG	
265.62	368.92	T24E	
2.88	2.89	Т24Е	
310.48	431.22	T24E	
1.00	6,000.00	umDays	Z
New Value	Default Value	mn Name	Colu

2.0 Emissions Summary

Sand Creek (As Proposed) - Bay Area AQMD Air District, Summer

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

0.000	0.000.0	0.000	00000	0.0000	00000	00000	0000.0	00000	0.0000	0.0000	00000	0.0000	00000	0.0000	0.000	Maximum
0.0000	0.000.0	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	2017
		łay)/ql							day)qI					Year
CO2e	N2O	CH4	Total CO2	NBio- CO2	Bio- CO2	PM2.5 Total	Exhaust PM2.5	Fugitive PM2.5	PM10 Total	Exhaust PM10	Fugitive PM10	S02	CO	NOX	ROG	

Mitigated Construction

	CO2e		0.0000	0.000
	N2O		0.0000	0.000
ĺ	CH4	lay	0.0000	0.000
Ì	Total CO2	p/dl	0.0000	0.000
	NBio- CO2		0.0000	0.000
	Bio- CO2		0.0000	0000.0
	PM2.5 Total		0.0000	0.000.0
ĺ	Exhaust PM2.5		0.0000	0.000
	Fugitive PM2.5		0.0000	0.000
ĺ	PM10 Total		0.0000	0.000
	Exhaust PM10	day	0.0000	0.0000
	Fugitive PM10)/qI	0.0000	0.0000
	S02		0.0000	0.0000
	S		0.0000	0.000
	NOX		0.0000	0.000.0
	ROG		0.0000	0.0000
		Year	2017	Maximum

CO2e	00.0
N20	0.00
CH4	0.00
Total CO2	00'0
NBio-CO2	0.00
Bio- CO2	0.00
PM2.5 Total	0.00
Exhaust PM2.5	0.00
Fugitive PM2.5	0.00
PM10 Total	0.00
Exhaust PM10	0.00
Fugitive PM10	0.00
S02	0.00
CO	0.00
NOX	0.00
ROG	0.00
	Percent Reduction

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Sand Creek (As Proposed) - Bay Area AQMD Air District, Summer

2.2 Overall Operational Unmitigated Operational

	ROG	NOX	0	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
ategory					p/qI	lay							o/dl	lay		
Area	4,153.011 7	80.0957	5,432.843 8	9.6353		723.5110	723.5110		723.5110	723.5110	77,622.92 67	24,500.05 73	102,122.9 841	96.9054	5.4777	106,177.9 734
inergy	3.5073	30.2439	14.7522	0.1913		2.4232	2.4232	+ 	2.4232	2.4232		38,261.39 37	38,261.39 37	0.7333	0.7015	38,488.76 21
Aobile	109.7624	455.8089	1,047.709 9	4.4946	450.9869	3.1561	454.1430	120.6028	2.9391	123.5418		456,687.5 248	456,687.5 248	14.2791		457,044.5 034
Total	4,266.281 4	566.1485	6,495.305 8	14.3212	450.9869	729.0903	1,180.077 2	120.6028	728.8733	849.4760	77,622.92 67	519,448.9 759	597,071.9 026	111.9179	6.1792	601,711.2 388

Mitigated Operational

	ROG	NOX	CO	S02	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					Ib/c	łay							p/dl	ay		
Area	216.1563	54.1822	351.3349	0.3390		5.9036	5.9036		5.9036	5.9036	0.000.0	64,912.95 14	64,912.95 14	1.8029	1.1792	65,309.41 70
Energy	3.5073	30.2439	14.7522	0.1913		2.4232	2.4232		2.4232	2.4232		38,261.39 37	38,261.39 37	0.7333	0.7015	38,488.76 21
Mobile	105.8171	435.3672	950.4263	4.0098	397.7705	2.8409	400.6113	106.3716	2.6450	109.0166		407,543.7 419	407,543.7 419	13.0394		407,869.7 259
Total	325.4807	519.7933	1,316.513 3	4.5402	397.7705	11.1677	408.9381	106.3716	10.9718	117.3434	0.0000	510,718.0 871	510,718.0 871	15.5756	1.8806	511,667.9 050

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Sand Creek (As Proposed) - Bay Area AQMD Air District, Summer

CO2e	14.96
N20	69.56
CH4	86.08
Total CO2	14.46
NBio-CO2	1.68
Bio- CO2	100.00
PM2.5 Total	86.19
Exhaust PM2.5	98.49
Fugitive PM2.5	11.80
PM10 Total	65.35
Exhaust PM10	98.47
Fugitive PM10	11.80
S02	68.30
со	79.73
NOX	8.19
ROG	92.37
	Percent Reduction

3.0 Construction Detail

Construction Phase

Week	
	8/1/2017
	8/1/2017
rnase i ype	Site Preparation
LIASE NALLE	Site Preparation
Number	-

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	26	0.37
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment	Worker Trip	Vendor Trip	Hauling Trip	Worker Trip	Vendor Trip	Hauling Trip	Worker Vehicle	Vendor	Hauling
	Count	Number	Number	Number	Length	Length	Length	Class	Vehicle Class	Vehicle Class
Site Preparation	0	00.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	ННDT

3.1 Mitigation Measures Construction

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Sand Creek (As Proposed) - Bay Area AQMD Air District, Summer

3.2 Site Preparation - 2017

Unmitigated Construction On-Site

CO2e		0.0000	0.0000	0.0000
N20				
CH4	lay		0.000.0	0.000
Total CO2	lb/d	0.000.0	0.0000	0.000
NBio- CO2			0.0000	0.000
Bio- CO2				
PM2.5 Total		0.000.0	0.0000	0.000
Exhaust PM2.5		0.0000	0.0000	0.000
Fugitive PM2.5		0000.0		0.00.0
PM10 Total		0.000.0	0.0000	0.00.0
Exhaust PM10	day	0.0000	0.0000	0.0000
Fugitive PM10)/qI	0.0000		0.0000
S02			0.0000	0.000
00			0.0000	0000.0
NOX			0.0000	0000.0
ROG			0.0000	0.0000
	Category	Fugitive Dust	Off-Road	Total

Unmitigated Construction Off-Site

CO2e		0.0000	0.0000	0.0000	0.000
N2O			#		
CH4	day	0.0000	0.0000	0.0000	0.000.0
Total CO2)/ql	0.0000	0.0000	0.0000	0000.0
NBio- CO2		0.0000	0.0000	0.0000	0.0000
Bio- CO2					
PM2.5 Total		0.0000	0.0000	0.0000	0.000
Exhaust PM2.5		0.0000	0.0000	0.0000	0.000.0
Fugitive PM2.5		0.0000	0.0000	0.0000	0.000
PM10 Total		0.0000	0.0000	0.0000	0000.0
Exhaust PM10	day	0.0000	0.0000	0.0000	00000
Fugitive PM10)/qI	0.0000	0.0000	0.0000	0.000.0
S02		0.0000	0.0000	0.0000	0.0000
со		0.0000	0.0000	0.0000	0000.0
NOX		0.0000	0.0000	0.0000	0.000
ROG		0.0000	0.0000	0.0000	0.0000
	Category	Hauling	Vendor	Worker	Total

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Sand Creek (As Proposed) - Bay Area AQMD Air District, Summer

3.2 Site Preparation - 2017

Mitigated Construction On-Site

CO2e		0.0000	0.0000	0.0000
N20				
CH4	ay		0.0000	0.000.0
Total CO2	p/qI	0.0000	0.0000	0.000.0
NBio- CO2			0.0000	0.0000
Bio- CO2			0.0000	0.000
PM2.5 Total		0.0000	0.0000	0.000
Exhaust PM2.5		0.0000	0.0000	0.0000
Fugitive PM2.5		0.000.0		0.000
PM10 Total		0.0000	0.0000	0000'0
Exhaust PM10	day	0.0000	0.0000	0.0000
Fugitive PM10)/qI	0.0000		0.0000
S02			0.0000	0.0000
8			0.0000	0.0000
NOX			0.0000	0000.0
ROG			0.0000	0.0000
	Category	Fugitive Dust	Off-Road	Total

Mitigated Construction Off-Site

CO2e		0.0000	0.0000	0.0000	0.000
N2O					
CH4	lay	0.000.0	0.0000	0.0000	0.000
Total CO2)/qI	0000.0	0.0000	0.0000	0.000
NBio- CO2		0.0000	0.0000	0.0000	0.000
Bio- CO2					
PM2.5 Total		0.0000	0.0000	0.0000	0.000
Exhaust PM2.5		0.0000	0.0000	0.0000	0.000
Fugitive PM2.5		0000.0	0.0000	0.0000	0000.0
PM10 Total		0000.0	0.0000	0.0000	0.000
Exhaust PM10	day	0.0000	0.0000	0.0000	00000
Fugitive PM10)/qI	0.0000	0.0000	0.0000	0.0000
S02		0.0000	0.0000	0.0000	0.0000
СО		0000.0	0.0000	0.0000	0.000
NOX		0.000.0	0.0000	0.0000	0.000
ROG		0.0000	0.0000	0.0000	0.0000
	Category	Hauling	Vendor	Worker	Total

4.0 Operational Detail - Mobile

Page 8 of 15

Sand Creek (As Proposed) - Bay Area AQMD Air District, Summer

4.1 Mitigation Measures Mobile

Increase Diversity

Improve Pedestrian Network

ROG	NOX	СО	S02	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
				p/qI	ay							p/qI	lay		
105.8171	435.3672	950.4263	4.0098	397.7705	2.8409	400.6113	106.3716	2.6450	109.0166		407,543.7 419	407,543.7 419	13.0394		407,869.7 259
109.7624	455.8089	1,047.709 9	4.4946	450.9869	3.1561	454.1430	120.6028	2.9391	123.5418		456,687.5 248	456,687.5 248	14.2791		457,044.5 034

4.2 Trip Summary Information

	Ave	rage Daily Trip Ra	ate	Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,135.16	2,319.84	1966.68	4,936,726	4,354,193
City Park	1,916.46	23,068.50	16974.36	15,134,630	13,348,743
Regional Shopping Center	25,110.16	29,385.36	14842.63	42,524,856	37,506,923
Single Family Housing	34,995.52	36,429.16	31687.12	80,207,343	70,742,876
Hospital	1,889.24	1,188.44	1049.74	4,203,767	3,707,722
Medical Office Building	8,880.75	2,202.37	380.99	13,137,936	11,587,659
Total	74,927.30	94,593.67	66,901.52	160,145,258	141,248,117

4.3 Trip Type Information

Sand Creek (As Proposed) - Bay Area AQMD Air District, Summer

% e	Pass-by	ю	9	5	ю	2	10
Trip Purpose	Diverted	11	28	35	1	25	30
	Primary	86	66	54	86	73	60
	H-O or C-NW	54.00	19.00	19.00	54.00	19.00	19.00
Trip %	H-S or C-C	15.00	48.00	64.70	15.00	16.10	51.40
	H-W or C-W	31.00	33.00	16.30	31.00	64.90	29.60
	H-O or C-NW	5.70	7.30	7.30	5.70	7.30	7.30
Miles	H-S or C-C	4.80	7.30	7.30	4.80	7.30	7.30
	H-W or C-W	10.80	9.50	9.50	10.80	9.50	9.50
	Land Use	Apartments Low Rise	City Park	Regional Shopping Center	Single Family Housing	Hospital	Medical Office Building

4.4 Fleet Mix

0.000690	0.000914	0.005671	0.001891	0.002682	0.027858	0.019160	0.005280	0.013366	0.107168	0.193743	0.036923	0.584654	Medical Office Building
0.000690	0.000914	0.005671	0.001891	0.002682	0.027858	0.019160	0.005280	0.013366	0.107168	0.193743	0.036923	0.584654	Hospital
0.000690	0.000914	0.005671	0.001891	0.002682	0.027858	0.019160	0.005280	0.013366	0.107168	0.193743	0.036923	0.584654	Regional Shopping Center
0.000690	0.000914	0.005671	0.001891	0.002682	0.027858	0.019160	0.005280	0.013366	0.107168	0.193743	0.036923	0.584654	Apartments Low Rise
0.000690	0.000914	0.005671	0.001891	0.002682	0.027858	0.019160	0.005280	0.013366	0.107168	0.193743	0.036923	0.584654	Single Family Housing
0.000690	0.000914	0.005671	0.001891	0.002682	0.027858	0.019160	0.005280	0.013366	0.107168	0.193743	0.036923	0.584654	City Park
MH	SBUS	MCY	UBUS	OBUS	ДНН	MHD	LHD2	LHD1	MDV	LDT2	LDT1	LDA	Land Use

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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Sand Creek (As Proposed) - Bay Area AQMD Air District, Summer

	ROG	XOX	8	S02	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/d	łay							lb/di	ау		
NaturalGas Mitigated	3.5073	30.2439	14.7522	0.1913		2.4232	2.4232		2.4232	2.4232		38,261.39 37	38,261.39 37	0.7333	0.7015	38,488.76 21
NaturalGas Unmitigated	3.5073	30.2439	14.7522	0.1913		2.4232	2.4232		2.4232	2.4232	-	38,261.39 37	38,261.39 37	0.7333	0.7015	38,488.76 21

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Sand Creek (As Proposed) - Bay Area AQMD Air District, Summer

5.2 Energy by Land Use - NaturalGas

Unmitigated

CO2e		1,100.245 2	0.0000	3,740.330 0	1,311.019 5	431.1055	31,906.06 19	38,488.76 21
N20		0.0201	0.0000	0.0682	0.0239	7.8600 c- 003	0.5815	0.7015
CH4	ay	0.0210	0.0000	0.0713	0.0250	8.2100e- 003	0.6079	0.7333
Total CO2	p/qI	1,093.745 6	0.0000	3,718.234 4	1,303.274 8	428.5588	31,717.58 02	38,261.39 37
NBio- CO2		1,093.745 6	0.0000	3,718.234 4	1,303.274 8	428.5588	31,717.58 02	38,261.39 37
Bio- CO2								
PM2.5 Total		0.0693	0.0000	0.2355	0.0825	0.0271	2.0088	2.4232
Exhaust PM2.5		0.0693	0.0000	0.2355	0.0825	0.0271	2.0088	2.4232
Fugitive PM2.5	Land Use kBTU/yr lb/day							
PM10 Total		0.0693	0.0000	0.2355	0.0825	0.0271	2.0088	2.4232
Exhaust PM10		0.0693	0.0000	0.2355	0.0825	0.0271	2.0088	2.4232
Fugitive PM10								
S02		5.4700e- 003	0.0000	0.0186	6.5200e- 003	2.1400e- 003	0.1586	0.1913
8		0.3646	0.0000	2.6028	0.9123	0.3000	10.5725	14.7522
XON		0.8568	0.0000	3.0985	1.0861	0.3571	24.8454	30.2439
ROG		0.1003	0.0000	0.3408	0.1195	0.0393	2.9074	3.5073
NaturalGa s Use		9296.84	0	31605	11077.8	3642.75	269599	
		Apartments Low Rise	City Park	Hospital	Medical Office Building	Regional Shopping Center	Single Family Housing	Total
Page 12 of 15

Sand Creek (As Proposed) - Bay Area AQMD Air District, Summer

5.2 Energy by Land Use - NaturalGas

Mitigated

CO2e		1,100.245 2	0.0000	3,740.330 0	1,311.019 5	431.1055	31,906.06 19	38,488.76 21
N20		0.0201	0.0000	0.0682	0.0239	7.8600e- 003	0.5815	0.7015
CH4	ay	0.0210	0.0000	0.0713	0.0250	8.2100e- 003	0.6079	0.7333
Total CO2	p/dI	1,093.745 6	0.0000	3,718.234 4	1,303.274 8	428.5588	31,717.58 02	38,261.39 37
NBio- CO2		1,093.745 6	0.0000	3,718.234 4	1,303.274 8	428.5588	31,717.58 02	38,261.39 37
Bio- CO2								
PM2.5 Total		0.0693	0.0000	0.2355	0.0825	0.0271	2.0088	2.4232
Exhaust PM2.5		0.0693	0.0000	0.2355	0.0825	0.0271	2.0088	2.4232
Fugitive PM2.5								
PM10 Total		0.0693	0.0000	0.2355	0.0825	0.0271	2.0088	2.4232
Exhaust PM10	day	0.0693	0.0000	0.2355	0.0825	0.0271	2.0088	2.4232
Fugitive PM10)/qI							
S02		5.4700e- 003	0.0000	0.0186	6.5200e- 003	2.1400e- 003	0.1586	0.1913
CO		0.3646	0.0000	2.6028	0.9123	0.3000	10.5725	14.7522
NOX		0.8568	0.0000	3.0985	1.0861	0.3571	24.8454	30.2439
ROG		0.1003	0.0000	0.3408	0.1195	0.0393	2.9074	3.5073
NaturalGa s Use	kBTU/yr	9.29684		31.605	11.0778	3.64275	269.599	
	Land Use	Apartments Low Rise	City Park	Hospital	Medical Office Building	Regional Shopping Center	Single Family Housing	Total

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

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Sand Creek (As Proposed) - Bay Area AQMD Air District, Summer

	ROG	XON	CO	S02	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/dl	day							lb/di	ay		
Mitigated	216.1563	54.1822	351.3349	0.3390		5.9036	5.9036		5.9036	5.9036	0.0000	64,912.95 14	64,912.95 14	1.8029	1.1792	65,309.41 70
Unmitigated	4,153.011 7	80.0957	5,432.843 8	9.6353	r 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	723.5110	723.5110	 	723.5110	723.5110	77,622.92 67	24,500.05 73	102,122.9 841	96.9054	5.4777	106,177.9 734

6.2 Area by SubCategory

Unmitigated

CO2e		0.0000	0.0000	105,569.0 739	608.8996	106,177.9 734
N2O				5.4777		5.4777
CH4	ay			96.3352	0.5702	96.9054
Total CO2	p/dl	0.000.0	0.0000	101,528.3 385	594.6456	102,122.9 841
NBio- CO2		• • • • •		23,905.41 18	594.6456	24,500.05 73
Bio- CO2				77,622.92 67		77,622.92 67
PM2.5 Total		0.0000	0.0000	721.6809	1.8301	723.5110
Exhaust PM2.5		0.0000	0.0000	721.6809	1.8301	723.5110
Fugitive PM2.5						
PM10 Total		0.0000	0.0000	721.6809	1.8301	723.5110
Exhaust PM10	łay	0.0000	0.0000	721.6809	1.8301	723.5110
Fugitive PM10	lb/c					
S02				9.6178	0.0174	9.6353
со				5,102.948 4	329.8954	5,432.843 8
NOX				76.2962	3.7995	80.0957
ROG		29.4532	170.8897	3,942.751 3	9.9176	4,153.011 7
	SubCategory	Architectural Coating	Consumer Products	Hearth	Landscaping	Total

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Sand Creek (As Proposed) - Bay Area AQMD Air District, Summer

6.2 Area by SubCategory

Mitigated

	ROG	ŇŎŇ	8	S02	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/d	day)/dl	łay		
Architectural Coating	29.4532					0.0000	0.0000		0000.0	0000.0			0.0000			0.0000
Consumer Products	170.8897					0.0000	0.0000		0.0000	0000.0			0.0000			0.0000
Hearth	5.8958	50.3827	21.4394	0.3216		4.0735	4.0735		4.0735	4.0735	0.0000	64,318.30 59	64,318.30 59	1.2328	1.1792	64,700.51 74
Landscaping	9.9176	3.7995	329.8954	0.0174		1.8301	1.8301		1.8301	1.8301		594.6456	594.6456	0.5702		608.8996
Total	216.1563	54.1822	351.3349	0.3390		5.9036	5.9036		5.9036	5.9036	0.000	64,912.95 14	64,912.95 14	1.8029	1.1792	65,309.41 70

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Fuel Type	
Load Factor	
Horse Power	
Days/Year	
Hours/Day	
Number	
Equipment Type	

10.0 Stationary Equipment

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Sand Creek (As Proposed) - Bay Area AQMD Air District, Summer

Fire Pumps and Emergency Generators

Horse Power Load Factor Fuel Type
Hours/Year
Hours/Day
Number
Equipment Type

Boilers

Fuel Type	
Boiler Rating	
Heat Input/Year	
Heat Input/Day	
Number	
Equipment Type	

<u>User Defined Equipment</u>

11.0 Vegetation

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Sand Creek (As Proposed) - Bay Area AQMD Air District, Winter

Sand Creek (As Proposed)

Bay Area AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Population	0	10513	927	0	0	0
Floor Surface Area	44,169,840.00	6,616,800.00	324,000.00	588,060.00	104,500.61	245,800.00
Lot Acreage	1,014.00	1,632.00	20.25	33.75	2.40	5.64
Metric	Acre	Dwelling Unit	Dwelling Unit	1000sqft	Bed	1000sqft
Size	1,014.00	3,676.00	324.00	588.06	146.00	245.80
Land Uses	City Park	Single Family Housing	Apartments Low Rise	Regional Shopping Center	Hospital	Medical Office Building

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	64
Climate Zone	4			Operational Year	2028
Utility Company	Pacific Gas & Electric Corr	pany			
CO2 Intensity (Ib/MWhr)	322.63	CH4 Intensity (Ib/MWhr)	0.029	N2O Intensity (Ib/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Sand Creek (As Proposed) - Bay Area AQMD Air District, Winter

Project Characteristics - CO2 Intensity Adjusted for PG&E progress towards RPS

Land Use - *

Construction Phase - Construction not modeled

Off-road Equipment - Construction not modeled

Off-road Equipment - Construction not modeled

Energy Use - Adjusted based on 2016 Title 24

Mobile Land Use Mitigation -

Area Mitigation -

Trips and VMT - Construction not modeled

2028	2018	OperationalYear	tblProjectCharacteristics
322.63	641.35	CO2IntensityFactor	olProjectCharacteristics
0.00	3.00	OffRoadEquipmentUnitAmount	tblOffRoadEquipment
0.00	4.00	OffRoadEquipmentUnitAmount	tblOffRoadEquipment
33.75	13.50	LotAcreage	tblLandUse
1,632.00	1,193.51	LotAcreage	tblLandUse
23,614.26	32,797.58	T24NG	tblEnergyUse
2.26	2.38	T24NG	tblEnergyUse
7,318.29	10,164.29	T24NG	tblEnergyUse
265.62	368.92	T24E	tblEnergyUse
2.88	2.89	T24E	tblEnergyUse
310.48	431.22	T24E	tblEnergyUse
1.00	6,000.00	NumDays	tblConstructionPhase
New Value	Default Value	Column Name	Table Name

2.0 Emissions Summary

Sand Creek (As Proposed) - Bay Area AQMD Air District, Winter

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

		0000 0.0000	0000 0.0000
	Ą	0.0000	0.0000 0.
	lb/di	0.0000	0.000
		0.0000	0.000
BI0- 502		0.0000	0.000
Total		0.0000	0.000
EXNAUSI PM2.5		0.0000	0.000
PM2.5		0.0000	0.0000
Total		0.0000	0.0000
Exnaust PM10	day	0.0000	0.0000
PM10	yqı	0.0000	0.0000
202		0.0000	0.0000
3		0.0000	0.0000
NOX		0.0000	0.0000
RUG		0.0000	0.0000
	Year	2017	Maximum

Mitigated Construction

CO2e		0.0000	0000.0	
N2O		0.000.0	0.000	
CH4	lay	0.0000	0.000	
Total CO2	lb/	0.0000	0.000	
NBio- CO2		0.0000	0.000	
Bio- CO2		0.0000	0000.0	
PM2.5 Total		0.0000	0.000	
Exhaust PM2.5		0.000.0	0.000	
Fugitive PM2.5		0.0000	0.000	
PM10 Total	day		0.0000	0.000
Exhaust PM10		0.0000	0.000	
Fugitive PM10)/qI	0.0000	00000	
S02		0.0000	0000.0	
со		0.0000	0000.0	
NOX		0.0000	0.0000	
ROG		0.0000	0.0000	
	Year	2017	Maximum	

CO2e	00.0
N20	0.00
CH4	0.00
Total CO2	00'0
NBio-CO2	0.00
Bio- CO2	0.00
PM2.5 Total	0.00
Exhaust PM2.5	0.00
Fugitive PM2.5	0.00
PM10 Total	0.00
Exhaust PM10	0.00
Fugitive PM10	0.00
S02	0.00
CO	0.00
NOX	0.00
ROG	0.00
	Percent Reduction

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Sand Creek (As Proposed) - Bay Area AQMD Air District, Winter

2.2 Overall Operational

Unmitigated Operational

		_			
CO2e		106,177.9 734	38,488.76 21	428,836.0 028	573,502.7 383
N2O		5.4777	0.7015	4	6.1792
CH4	łay	96.9054	0.7333	14.6832	112.3220
Total CO2	p/dl	102,122.9 841	38,261.39 37	428,468.9 219	568,853.2 997
NBio- CO2		24,500.05 73	38,261.39 37	428,468.9 219	491,230.3 730
Bio- CO2		77,622.92 67			77,622.92 67
PM2.5 Total		723.5110	2.4232	123.5541	849.4882
Exhaust PM2.5		723.5110	2.4232	2.9513	728.8855
Fugitive PM2.5				120.6028	120.6028
PM10 Total		723.5110	2.4232	454.1558	1,180.090 0
Exhaust PM10	day	723.5110	2.4232	3.1689	729.1030
Fugitive PM10	Ib/day			450.9869	450.9869
S02		9.6353	0.1913	4.2158	14.0424
со		5,432.843 8	14.7522	1,057.261 2	6,504.857 1
NOX		80.0957	30.2439	471.6282	581.9678
ROG		4,153.011 7	3.5073	93.1436	4,249.662 5
	Category	Area	Energy	Mobile	Total

Mitigated Operational

	ROG	XON	CO	S02	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/d	day							lb/c	łay		
Area	216.1563	54.1822	351.3349	0.3390		5.9036	5.9036		5.9036	5.9036	0.000.0	64,912.95 14	64,912.95 14	1.8029	1.1792	65,309.41 70
Energy	3.5073	30.2439	14.7522	0.1913		2.4232	2.4232		2.4232	2.4232		38,261.39 37	38,261.39 37	0.7333	0.7015	38,488.76 21
Mobile	89.2159	448.9666	970.1207	3.7600	397.7705	2.8536	400.6241	106.3716	2.6572	109.0289		382,211.0 077	382,211.0 077	13.4788		382,547.9 772
Total	308.8795	533.3927	1,336.207 7	4.2903	397.7705	11.1804	408.9509	106.3716	10.9840	117.3557	0.000	485,385.3 528	485,385.3 528	16.0151	1.8806	486,346.1 563

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Sand Creek (As Proposed) - Bay Area AQMD Air District, Winter

CO2e	15.20
N20	69.56
CH4	85.74
Total CO2	14.67
NBio-CO2	1.19
Bio- CO2	100.00
PM2.5 Total	86.19
Exhaust PM2.5	98.49
Fugitive PM2.5	11.80
PM10 Total	65.35
Exhaust PM10	98.47
Fugitive PM10	11.80
S02	69.45
со	79.46
NOX	8.35
ROG	92.73
	Percent Reduction

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
-	Site Preparation	Site Preparation	8/1/2017	8/1/2017	2		

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Trips and VMT

Phase Name	Offroad Equipment	Worker Trip	Vendor Trip	Hauling Trip	Worker Trip	Vendor Trip	Hauling Trip	Worker Vehicle	Vendor	Hauling
	Count	Number	Number	Number	Length	Length	Length	Class	Vehicle Class	Vehicle Class
Site Preparation	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	ННDT

3.1 Mitigation Measures Construction

Page 6 of 15

Sand Creek (As Proposed) - Bay Area AQMD Air District, Winter

3.2 Site Preparation - 2017 Unmitigated Construction On-Site

CO2e		0.0000	0.0000	0.0000			
N2O	lb/day						
CH4		lb/day	lay	ay		0.000.0	0.000.0
Total CO2			0.000.0	0.0000	0.000.0		
NBio- CO2					0.0000	0.000	
Bio- CO2							
PM2.5 Total		0.0000	0.0000	0.0000			
Exhaust PM2.5		0.0000	0.0000	0.000			
Fugitive PM2.5		0000.0		0000.0			
PM10 Total		0.000.0	0.0000	0.000			
Exhaust PM10	day	//day	0.0000	0.0000	0.0000		
Fugitive PM10)/qI	0.0000		0.0000			
S02			0.0000	0.000			
со			0.0000	0000.0			
XON			0.0000	0.000			
ROG			0.0000	0.0000			
	Category	Fugitive Dust	Off-Road	Total			

Unmitigated Construction Off-Site

CO2e		0.0000	0.0000	0.0000	0.000
N2O					
CH4	lay	0.0000	0.0000	0.0000	0.000.0
Total CO2)/qI	0.0000	0.0000	0.0000	0.000
NBio- CO2		0.0000	0.0000	0.0000	0.000
Bio- CO2					
PM2.5 Total		0.0000	0.0000	0.0000	0.000
Exhaust PM2.5		0.0000	0.0000	0.0000	0.0000
Fugitive PM2.5		0.0000	0.0000	0.0000	0.000
PM10 Total		0.0000	0.0000	0.0000	0.000
Exhaust PM10	day	0.0000	0.0000	0.0000	0.0000
Fugitive PM10)/qI	0.0000	0.0000	0.0000	0.000
S02		0.0000	0.0000	0.0000	0.000
со		0.0000	0.0000	0.0000	0.000.0
NOX		0.0000	0.0000	0.0000	00000
ROG		0.0000	0.0000	0.0000	0.0000
	Category	Hauling	Vendor	Worker	Total

Page 7 of 15

Sand Creek (As Proposed) - Bay Area AQMD Air District, Winter

3.2 Site Preparation - 2017

Mitigated Construction On-Site

CO2e		0.0000	0.0000	0000.0		
N20	lay					
CH4		lay	łay		0.0000	0.000
Total CO2)/qI	0.0000	0.0000	0.000		
NBio- CO2			0.0000	0000.0		
Bio- CO2			0.0000	0.0000		
PM2.5 Total		0.0000	0.0000	0.000		
Exhaust PM2.5		0.0000	0.0000	0.0000		
Fugitive PM2.5		0.0000		0000'0		
PM10 Total		0.0000	0.0000	0000.0		
Exhaust PM10	lb/day	'day	day	0.0000	0.0000	0000.0
Fugitive PM10		0.0000		0.0000		
S02			0.0000	0.000		
CO				0.0000	0000.0	
NOX			0.0000	0000.0		
ROG			0.0000	0.0000		
	Category	Fugitive Dust	Off-Road	Total		

Mitigated Construction Off-Site

CO2e		0.0000	0.0000	0.0000	0.000
N2O					
CH4	łay	0.000.0	0.0000	0.0000	0.000
Total CO2)/qI	0000.0	0.0000	0.0000	0.000
NBio- CO2		0.0000	0.0000	0.0000	0000'0
Bio- CO2					
PM2.5 Total		0.0000	0.0000	0.0000	0.000
Exhaust PM2.5		0.0000	0.0000	0.0000	0.000
Fugitive PM2.5		0.0000	0.0000	0.0000	0000.0
PM10 Total		0.000.0	0.0000	0.0000	0.000
Exhaust PM10	day	0.0000	0.0000	0.0000	0000.0
Fugitive PM10)/qI	0.0000	0.0000	0.0000	0.0000
S02		0.0000	0.0000	0.0000	0.000
СО		0.000.0	0.0000	0.0000	0.000
NOX		0.0000	0.0000	0.0000	0.000
ROG		0.0000	0.0000	0.0000	0.0000
	Category	Hauling	Vendor	Worker	Total

4.0 Operational Detail - Mobile

Page 8 of 15

Sand Creek (As Proposed) - Bay Area AQMD Air District, Winter

4.1 Mitigation Measures Mobile

Increase Diversity

Improve Pedestrian Network

	ROG	XON	CO	S02	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	ABio- CO2	Total CO2	CH4	N2O	CO2e
Category					p/qI	łay							p/dl	ay		
Mitigated	89.2159	448.9666	970.1207	3.7600	397.7705	2.8536	400.6241	106.3716	2.6572	109.0289		382,211.0 077	382,211.0 077	13.4788		382,547.9 772
Unmitigated	93.1436	471.6282	1,057.261 2	4.2158	450.9869	3.1689	454.1558	120.6028	2.9513	123.5541		428,468.9 219	428,468.9 219	14.6832		428,836.0 028

4.2 Trip Summary Information

	Ave	rage Daily Trip Ra	ate	Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,135.16	2,319.84	1966.68	4,936,726	4,354,193
City Park	1,916.46	23,068.50	16974.36	15,134,630	13,348,743
Regional Shopping Center	25,110.16	29,385.36	14842.63	42,524,856	37,506,923
Single Family Housing	34,995.52	36,429.16	31687.12	80,207,343	70,742,876
Hospital	1,889.24	1,188.44	1049.74	4,203,767	3,707,722
Medical Office Building	8,880.75	2,202.37	380.99	13,137,936	11,587,659
Total	74,927.30	94,593.67	66,901.52	160,145,258	141,248,117

4.3 Trip Type Information

Sand Creek (As Proposed) - Bay Area AQMD Air District, Winter

% €	Pass-by	С	6	11	ю	2	10
Trip Purpose	Diverted	11	28	35	11	25	30
	Primary	86	66	54	86	73	60
	H-O or C-NW	54.00	19.00	19.00	54.00	19.00	19.00
Trip %	H-S or C-C	15.00	48.00	64.70	15.00	16.10	51.40
	H-W or C-W	31.00	33.00	16.30	31.00	64.90	29.60
	H-O or C-NW	5.70	7.30	7.30	5.70	7.30	7.30
Miles	H-S or C-C	4.80	7.30	7.30	4.80	7.30	7.30
	H-W or C-W	10.80	9.50	9.50	10.80	9.50	9.50
	Land Use	Apartments Low Rise	City Park	Regional Shopping Center	Single Family Housing	Hospital	Medical Office Building

4.4 Fleet Mix

0.000690	0.000914	0.005671	0.001891	0.002682	0.027858	0.019160	0.005280	0.013366	0.107168	0.193743	0.036923	0.584654	Medical Office Building
0.000690	0.000914	0.005671	0.001891	0.002682	0.027858	0.019160	0.005280	0.013366	0.107168	0.193743	0.036923	0.584654	Hospital
0.000690	0.000914	0.005671	0.001891	0.002682	0.027858	0.019160	0.005280	0.013366	0.107168	0.193743	0.036923	0.584654	Regional Shopping Center
0.000690	0.000914	0.005671	0.001891	0.002682	0.027858	0.019160	0.005280	0.013366	0.107168	0.193743	0.036923	0.584654	Apartments Low Rise
0.000690	0.000914	0.005671	0.001891	0.002682	0.027858	0.019160	0.005280	0.013366	0.107168	0.193743	0.036923	0.584654	Single Family Housing
0.000690	0.000914	0.005671	0.001891	0.002682	0.027858	0.019160	0.005280	0.013366	0.107168	0.193743	0.036923	0.584654	City Park
MH	SBUS	MCY	UBUS	OBUS	ДНН	MHD	LHD2	LHD1	MDV	LDT2	LDT1	LDA	Land Use

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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Sand Creek (As Proposed) - Bay Area AQMD Air District, Winter

	ROG	XOX	3	S02	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBIO- CO2	I otal CO2	CH4	NZO	CO2e
Category					o/qI	łay							lb/df	Уя		
NaturalGas Mitigated	3.5073	30.2439	14.7522	0.1913		2.4232	2.4232		2.4232	2.4232		38,261.39 37	38,261.39 37	0.7333	0.7015	38,488.76 21
NaturalGas Unmitigated	3.5073	30.2439	14.7522	0.1913		2.4232	2.4232		2.4232	2.4232		38,261.39 37	38,261.39 37	0.7333	0.7015	38,488.76 21

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Sand Creek (As Proposed) - Bay Area AQMD Air District, Winter

5.2 Energy by Land Use - NaturalGas

<u>Unmitigated</u>

CO2e		1,100.245 2	0.0000	3,740.330 0	1,311.019 5	431.1055	31,906.06 19	38,488.76 21
N20		0.0201	0.000.0	0.0682	0.0239	7.8600e- 003	0.5815	0.7015
CH4	ay	0.0210	0.0000	0.0713	0.0250	8.2100 6- 003	0.6079	0.7333
Total CO2	p/qI	1,093.745 6	0.0000	3,718.234 4	1,303.274 8	428.5588	31,717.58 02	38,261.39 37
NBio- CO2		1,093.745 6	0.0000	3,718.234 4	1,303.274 8	428.5588	31,717.58 02	38,261.39 37
Bio- CO2								
PM2.5 Total		0.0693	0.0000	0.2355	0.0825	0.0271	2.0088	2.4232
Exhaust PM2.5		0.0693	0.0000	0.2355	0.0825	0.0271	2.0088	2.4232
Fugitive PM2.5								
PM10 Total		0.0693	0.0000	0.2355	0.0825	0.0271	2.0088	2.4232
Exhaust PM10	day	0.0693	0.0000	0.2355	0.0825	0.0271	2.0088	2.4232
Fugitive PM10	/qI							
S02		5.4700e- 003	0.0000	0.0186	6.5200e- 003	2.1400e- 003	0.1586	0.1913
8		0.3646	0.0000	2.6028	0.9123	0.3000	10.5725	14.7522
XON		0.8568	0.0000	3.0985	1.0861	0.3571	24.8454	30.2439
ROG		0.1003	0.0000	0.3408	0.1195	0.0393	2.9074	3.5073
NaturalGa s Use	kBTU/yr	9296.84	0	31605	11077.8	3642.75	269599	
	Land Use	Apartments Low Rise	City Park	Hospital	Medical Office Building	Regional Shopping Center	Single Family Housing	Total

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Sand Creek (As Proposed) - Bay Area AQMD Air District, Winter

5.2 Energy by Land Use - NaturalGas

Mitigated

CO2e		1,100.245 2	0.0000	3,740.330 0	1,311.019 5	431.1055	31,906.06 19	38,488.76 21
N20		0.0201	0.0000	0.0682	0.0239	7.8600e- 003	0.5815	0.7015
CH4	ay	0.0210	0.0000	0.0713	0.0250	8.2100e- 003	0.6079	0.7333
Total CO2	p/qI	1,093.745 6	0.000.0	3,718.234 4	1,303.274 8	428.5588	31,717.58 02	38,261.39 37
NBio- CO2		1,093.745 6	0.0000	3,718.234 4	1,303.274 8	428.5588	31,717.58 02	38,261.39 37
Bio- CO2								
PM2.5 Total		0.0693	0.0000	0.2355	0.0825	0.0271	2.0088	2.4232
Exhaust PM2.5		0.0693	0.000.0	0.2355	0.0825	0.0271	2.0088	2.4232
Fugitive PM2.5								
PM10 Total		0.0693	0.0000	0.2355	0.0825	0.0271	2.0088	2.4232
Exhaust PM10	day	0.0693	0.0000	0.2355	0.0825	0.0271	2.0088	2.4232
Fugitive PM10)/qI							
S02		5.4700e- 003	0.0000	0.0186	6.5200e- 003	2.1400e- 003	0.1586	0.1913
со		0.3646	0.0000	2.6028	0.9123	0.3000	10.5725	14.7522
NOX		0.8568	0.0000	3.0985	1.0861	0.3571	24.8454	30.2439
ROG		0.1003	0.0000	0.3408	0.1195	0.0393	2.9074	3.5073
NaturalGa s Use	kBTU/yr	9.29684	0	31.605	11.0778	3.64275	269.599	
	Land Use	Apartments Low Rise	City Park	Hospital	Medical Office Building	Regional Shopping Center	Single Family Housing	Total

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

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Sand Creek (As Proposed) - Bay Area AQMD Air District, Winter

	ROG	Ň	00	S02	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)/qI	day							p/qI	ay		
Mitigated	216.1563	54.1822	351.3349	0.3390		5.9036	5.9036		5.9036	5.9036	0.0000	64,912.95 14	64,912.95 14	1.8029	1.1792	65,309.41 70
Unmitigated	4,153.011 7	80.0957	5,432.843 8	9.6353		723.5110	723.5110		723.5110	723.5110	77,622.92 67	24,500.05 73	102,122.9 841	96.9054	5.4777	106,177.9 734

6.2 Area by SubCategory

Unmitigated

CO2e		0.0000	0.0000	105,569.0 739	608.8996	106,177.9 734
N2O				5.4777		5.4777
CH4	lay			96.3352	0.5702	96.9054
Total CO2	lb/dl	0.0000	0.0000	101,528.3 385	594.6456	102,122.9 841
NBio- CO2				23,905.41 18	594.6456	24,500.05 73
Bio- CO2				77,622.92 67		77,622.92 67
PM2.5 Total		0.0000	0.0000	721.6809	1.8301	723.5110
Exhaust PM2.5		0.0000	0.0000	721.6809	1.8301	723.5110
Fugitive PM2.5						
PM10 Total		0.0000	0.0000	721.6809	1.8301	723.5110
Exhaust PM10	łay	0.0000	0.0000	721.6809	1.8301	723.5110
Fugitive PM10	lb/d					
S02				9.6178	0.0174	9.6353
со				5,102.948 4	329.8954	5,432.843 8
NOX				76.2962	3.7995	80.0957
ROG		29.4532	170.8897	3,942.751 3	9.9176	4,153.011 7
	SubCategory	Architectural Coating	Consumer Products	Hearth	Landscaping	Total

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Sand Creek (As Proposed) - Bay Area AQMD Air District, Winter

6.2 Area by SubCategory

Mitigated

	ROG	ŇŎŇ	8	S02	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/d	day)/dl	łay		
Architectural Coating	29.4532					0.0000	0.0000		0000.0	0000.0			0.0000			0.0000
Consumer Products	170.8897					0.0000	0.0000		0.0000	0000.0			0.0000			0.0000
Hearth	5.8958	50.3827	21.4394	0.3216		4.0735	4.0735		4.0735	4.0735	0.0000	64,318.30 59	64,318.30 59	1.2328	1.1792	64,700.51 74
Landscaping	9.9176	3.7995	329.8954	0.0174		1.8301	1.8301		1.8301	1.8301		594.6456	594.6456	0.5702		608.8996
Total	216.1563	54.1822	351.3349	0.3390		5.9036	5.9036		5.9036	5.9036	0.000	64,912.95 14	64,912.95 14	1.8029	1.1792	65,309.41 70

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

	-
Fuel Type	
Load Factor	
Horse Power	
Days/Year	
Hours/Day	
Number	
Equipment Type	

10.0 Stationary Equipment

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Sand Creek (As Proposed) - Bay Area AQMD Air District, Winter

Fire Pumps and Emergency Generators

	Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
I							

Boilers

Fuel Type	
Boiler Rating	
Heat Input/Year	
Heat Input/Day	
Number	
Equipment Type	

<u>User Defined Equipment</u>

|--|

11.0 Vegetation

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Date: 5/24/2017 2:22 PM

Sand Creek (As Proposed)

Bay Area AQMD Air District, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOX	СО	S02	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
				Percent F	Reduction							
Site Preparation	0.00	00.00	0.00	0.00	0.00	00.00	0.00	0.00	0.00	0.00	0.00	00.0
		-	-	-	-	-	-		-	-	-	

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Rubber Tired Dozers	Diesel	No Change	0	0	No Change	00.0
Tractors/Loaders/Backhoes	Diesel	No Change	0	0	No Change	0.00

CO2 CH4 N2O CO2e	Jnmitigated mt/yr	DE+000 0.00000E+000 0.00000E+000 0.00000E+000	DE+000 0.00000E+000 0.00000E+000 0.00000E+000
NBio- CO2 Tota		0.00000E+000 0.000C	0.00000E+000 0.000C
Bio- CO2		0.00000E+000	0.00000E+000
Exhaust PM2.5		0.00000E+000	0.00000E+000
Exhaust PM10		0.00000E+000	0.00000E+000
SO2		0.00000E+000	0.00000E+000
S	nmitigated tons/y	0.00000E+000	0.00000E+000
XON	D	0.00000E+000	0.00000E+000
ROG		0.00000E+000	0.00000E+000
Equipment Type		Rubber Tired Dozers	Tractors/Loaders/ Backhoes

_			
CO2e		0.00000E+000	0.00000E+000
N2O		0.00000E+000	0.00000E+000
CH4	d mt/yr	0.00000E+000	0.00000E+000
Total CO2	Mitigate	0.00000E+000	0.00000E+000
NBio- CO2		0.00000E+000	0.00000E+000
Bio- CO2		0.00000E+000	0.00000E+000
Exhaust PM2.5		0.00000E+000	0.00000E+000
Exhaust PM10		0.00000E+000	0.00000E+000
SO2		0.00000E+000	0.00000E+000
S	igated tons/yr	0.00000E+000	0.00000E+000
NOX	Mi	0.00000E+000	0.00000E+000
ROG		0.00000E+000	0.00000E+000
Equipment Type		Rubber Tired Dozers	Tractors/Loaders/Ba ckhoes

ersion: CalEEMod.2016.	Aod.2016	3.1			Paç	je 2 of 7			Dai	te: 5/24/201	7 2:22 PM	
pe ROG NOX CO SO2	NOX CO SO2	co so2	S02	_	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
					Per	cent Reduction						
>zers 0.00000E+000 0.00000E+000 0.00000E+000	0 0.00000E+000 0.00000E+000 0.00000E+00	.00000E+000 0.00000E+00	0.00000E+00	0	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+00
s/Ba 0.00000E+000 0.00000E+000 0.00000E+000 0.00000E+000	0 0.00000E+000 0.00000E+000 0.00000E+000	.00000E+000 0.00000E+000	0.00000E+000		0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+00
ıst Mitigation												
Mitigation Measure Mitigation Input	Nitigation Input	Mitigation Input	լորսt			Mitigatic	on Input		Mitigatio	on Input		
Soil Stabilizer for unpaved PM10 Reduction Roads	for unpaved PM10 Reduction	PM10 Reduction	duction	1		PM2.5 F	Reduction					
Replace Ground Cover of Area PM10 Reduction Disturbed	nd Cover of Area PM10 Reduction	a PM10 Reduction	duction	1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	PM2.5 F	Reduction	- - - - - - - - - - - - - - - - - - -				
Water Exposed Area PM10 Reduction	d Area PM10 Reduction	PM10 Reduction	duction	:		PM2.51	Reduction		Frequer day)	ncy (per		
Unpaved Road Mitigation Moisture Content %	1 Mitigation Moisture Content %	Moisture Content %	Content	:		Vehicle (mph)	Speed		 			
Clean Paved Road % PM Reduction	Road % PM Reduction	% PM Reduction	duction		0	00						
				1								1
					Unmitigated			Mitigated		Ч	ercent Reductio	-
*hase Source PM10	Source PM10	e PM10	PM10		PM	12.5	PM10		PM2.5	PM10		PM2.5
Fugitive Dust	Fugitive Dust				00.0	0.00		00.0	0.0	00	00.0	0.00
Roads	Roads			1	00.0	00.0		0.00	0.0	•••	0.00	0.00
-	-	-				-		-		_	-	

Operational Percent Reduction Summary

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Date: 5/24/2017 2:22 PM

Partent Reduction O 0.00	Category	ROG	NOX	СО	S02	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Architectural Coating 0.00 0.0				Percent	Reduction								
Consumer Products 0.00 </td <td>Architectural Coating</td> <td>00.0</td> <td>00.0</td> <td>00.0</td> <td>00.0</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>00.0</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td>	Architectural Coating	00.0	00.0	00.0	00.0	0.00	0.00	0.00	00.0	0.00	0.00	0.00	0.00
Electricity 0.00	Consumer Products	00.0	00.0	00.0	0.00	0.00	0.00	0.00	00.0	0.00	0.00	0.00	0.00
Hearth 99.63 42.97 99.63 97.33 99.52 100.00 -169.05 46.09 Landscaping 0.00	Electricity	00.0	00.0	00.0	0.00	0.00	0.00	0.00	00.0	0.00	0.00	0.00	0.00
Landscaping 0.00	Hearth	99.85	42.97	6 <u>9</u> .63	97.33	99.52	99.52	100.00	-169.05	46.09	99.31	78.47	48.41
Mobile 4.13 4.68 8.59 10.77 9.99 0.00 10.75 10.75 Natural Gas 0.00	Landscaping	00.0	00.0	00.0	0.00	0.00	0.00	0.00	00.0	0.00	0.00	0.00	0.00
Natural Gas 0.00	Mobile	4.13	4.68	8.59	10.77	9.98	6.99	0.00	10.75	10.75	8.41	0.00	10.75
Water Indoor 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	Natural Gas	00.0	00.0	0.00	0.00	0.00	0.00	0.00	00.0	0.00	0.00	0.00	0.00
Water Outdoor 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	Water Indoor	00.0	00.0	00.0	0.00	0.00	0.00	0.00	00.0	0.00	0.00	0.00	0.00
	Water Outdoor	00.0	00.0	00.0	00.0	0.00	0.00	0.00	00.0	0.00	00.0	0.00	00.00

Operational Mobile Mitigation

Project Setting: Suburban Center

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
No	Land Use	Increase Density	0.00			
Yes	Land Use	Increase Diversity	0.11	0.33		
٥N	Land Use	Improve Walkability Design	00.00			
٥N	Land Use	Improve Destination Accessibility	00.00			
٥N	Land Use	Increase Transit Accessibility	0.25			
٥N	Land Use	Integrate Below Market Rate Housing	00.00			
	Land Use	Land Use SubTotal	0.10			

																				00.		
24/2017 2:22 PM																				2		
Date: 5/	Project Site and Connecting Off- Site																					
	2.00		0.00	0.02	0.00	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.12			4.50		00.0	00.0	0.0	10.00	00.0
Page 4 of 7	Improve Pedestrian Network	Provide Traffic Calming Measures	Implement NEV Network	Neighborhood Enhancements Subtotal	Limit Parking Supply	Unbundle Parking Costs	On-street Market Pricing	Parking Policy Pricing Subtotal	Provide BRT System	Expand Transit Network	Increase Transit Frequency	Transit Improvements Subtotal	Land Use and Site Enhancement Subtotal	Implement Trip Reduction Program	Transit Subsidy	Implement Employee Parking "Cash Out"	Workplace Parking Charge	Encourage Telecommuting and Alternative Work Schedules	Market Commute Trip Reduction Option	Employee Vanpool/Shuttle	Provide Ride Sharing Program	Commute Subtotal
ersion: CalEEMod.2016.3.1	Neighborhood Enhancements	Neighborhood Enhancements	Neighborhood Enhancements	Neighborhood Enhancements	Parking Policy Pricing	Parking Policy Pricing	Parking Policy Pricing	Parking Policy Pricing	Transit Improvements	Transit Improvements	Transit Improvements	Transit Improvements		Commute	Commute	Commute	Commute	Commute	Commute	Commute	Commute	Commute
CalEEMod Ve	Yes	No	No		Yes	No	No		No	No	No			No	No	No	No	No	No	No	No	

Date: 5/24/2017 2:22 PM		2
	0.0	0.13
Page 5 of 7	Implement School Bus Program	Total VMT Reduction
ersion: CalEEMod.2016.3.1	School Trip	
CalEEMod V	No	

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
Yes	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	100.00
No	Use Low VOC Paint (Residential Exterior)	150.00
No	Use Low VOC Paint (Non-residential Interior)	100.00
No	Use Low VOC Paint (Non-residential Exterior)	150.00
No	Use Low VOC Paint (Parking)	150.00
No	% Electric Lawnmower	00.0
No	% Electric Leafblower	00.0
No	% Electric Chainsaw	00.0

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Exceed Title 24		
No	Install High Efficiency Lighting		
No	On-site Renewable		

Page 6 of 7

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00
DishWasher		15.00
an		50.00
Refrigerator		15.00

Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy		
No	Use Reclaimed Water		
No	Use Grey Water		
No	Install low-flow bathroom faucet	32.00	
No	Install low-flow Kitchen faucet	18.00	
No	Install low-flow Toilet	20.00	
No	Install low-flow Shower	20.00	
No	Turf Reduction		
No	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape		

Solid Waste Mitigation

Mitigation Measures

Input Value

Date: 5/24/2017 2:22 PM

EEMod Version: CalEEMod.2016.3.1	Page 7 of 7
stitute Recycling and Composting Services srcent Reduction in Waste Disposed	

Page 1 of 3

Sand Creek (As Proposed) - Bay Area AQMD Air District, Summary Report

Sand Creek (As Proposed)

Bay Area AQMD, Summary Report

1.0 Project Characteristics

1.1 Land Usage

Population	0	10513	927	0	0	0
Floor Surface Area	44,169,840.00	6,616,800.00	324,000.00	588,060.00	104,500.61	245,800.00
Lot Acreage	1,014.00	1,632.00	20.25	33.75	2.40	5.64
Metric	Acre	Dwelling Unit	Dwelling Unit	1000sqft	Bed	1000sqft
Size	1,014.00	3,676.00	324.00	588.06	146.00	245.80
Land Uses	City Park	Single Family Housing	Apartments Low Rise	Regional Shopping Center	Hospital	Medical Office Building

1.2 Other Project Characteristics

Jrbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	64
Climate Zone	4			Operational Year	2028
Jtility Company	Pacific Gas & Electric Co	mpany			
CO2 Intensity Ib/MWhr)	322.63	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (Ib/MWhr)	0.006

1.3 User Entered Comments

Only CalEEMod defaults were used.

Page 2 of 3

Sand Creek (As Proposed) - Bay Area AQMD Air District, Summary Report

Project Characteristics - CO2 Intensity Adjusted for PG&E progress towards RPS

Construction Phase - Construction not modeled

Land Use - *

Off-road Equipment - Construction not modeled

Off-road Equipment - Construction not modeled

Energy Use - Adjusted based on 2016 Title 24

Mobile Land Use Mitigation -

Area Mitigation -

Trips and VMT - Construction not modeled

2.0 Peak Daily Emissions

Peak Daily Construction Emissions

Peak Daily Construction Emissions

				Unmi	tigated					Mitig	gated		
		ROG	XON	СО	SO2	PM10	PM2.5	ROG	XON	СО	S02	PM10	PM2.5
Үеа	Ir Phase)/qI	lay					
20	17 Site Preparation	0.000 S	0.000 S	0.0000 S									
	Peak Daily Total	0.000 S	0.000 S	0.0000 S									
	Air District Threshold												
	Exceed Significance?												

Peak Daily Operational Emissions

Peak Daily Operational Emissions

Page 3 of 3

Sand Creek (As Proposed) - Bay Area AQMD Air District, Summary Report

	PM2.5		5.9036 S	2.4232 S	109.0289 W	117.3557 W		
	PM10		5.9036 S	2.4232 S	400.6241 W	408.9509 W		
jated	SO2		0.3390 S	0.1913 S	4.0098 S	4.5402 S		
Mitig	со		351.3349 S	14.7522 S	970.1207 W	1,336.2077 W		
	XON		54.1822 S	30.2439 S	448.9666 W	533.3927 W		
	ROG	day	216.1563 S	3.5073 S	105.8171 S	325.4807 S		
	PM2.5)/qI	723.5110 S	2.4232 S	123.5541 W	849.4882 W		
	PM10		723.5110 S	2.4232 S	454.1558 W	1,180.0900 W		
tigated	S02		9.6353 S	0.1913 S	4.4946 S	14.3212 S		
Unmit	CO		5,432.8438 S	14.7522 S	1,057.2612 W	6,504.8571 W		
	XON		80.0957 S	30.2439 S	471.6282 W	581.9678 W		
	ROG		4,153.0117 S	3.5073 S	109.7624 S	4,266.2814 S		
		Operational Activity	Area	Energy	Mobile	Peak Daily Total	Air District Threshold	Exceed Significance?
			On-Site	On-Site	Off-Site			

3.0 Annual GHG Emissions

Annual GHG

Annual GHG

			Unmit	igated			Mitig	lated	
		C02	CH4	N2O	CO2e	CO2	CH4	N2O	CO2e
GHG Activity	Year				LM	/yr			
Construction	2017	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Operational	2028	70,382.8211	115.0629	0.5554	73,424.9093	64,314.0148	114.0130	0.5337	67,323.3839
	Total								
	Significance Threshold								
	Exceed Significance?								

CITY OF ANTIOCH PLANNING COMMISSION RESOLUTION NO. 2017-**

RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF ANTIOCH RECOMMENDING APPROVAL OF AN AMENDMENT TO THE GENERAL PLAN AMENDING THE LAND USE ELEMENT FOR THE SAND CREEK FOCUS AREA (SECTION 4.4.6.7)

WHEREAS, the City initiated an update to the 2003 General Plan Land Use Element for the policies affecting the Sand Creek Focus Area; and,

WHEREAS, the policies related to development within the Sand Creek Focus Area were originally adopted in November 2003 and conditions have since changed that affect the appropriateness and viability of the policies; and,

WHEREAS, the City of Antioch recognizes that the adoption of new policies and the restatement of valid existing policies will better guide the physical development of the Sand Creek Focus Area and improve transparency and predictability of development; and,

WHEREAS, an Addendum to the 2003 General Plan Environmental Impact Report was prepared in accordance with the California Environmental Quality Act (CEQA) Guidelines Section 15162, and considered by the Planning Commission on July 19, 2017; and,

WHEREAS, the Planning Commission recommended adoption of the Addendum to the Environmental Impact Report to the City Council; and,

WHEREAS, the Land Use Element Amendments were made available to the public on the City of Antioch website and at the Community Development Department for a period of 10 days prior to the public hearing, from July 9 to July 19, 2017 and are attached hereto as Exhibit "A"; and,

WHEREAS, the Planning Commission duly gave notice of public hearing as required by law; and,

WHEREAS, on July 19, 2017, the Planning Commission duly held a public hearing on the matter, and received and considered evidence, both oral and documentary.

NOW THEREFORE BE IT RESOLVED, that the Planning Commission makes the following findings required for approval of the proposed General Plan Amendment:

- 1. The proposed project conforms to the provisions and standards of the General Plan in that the proposed amendment is internally consistent with all other provisions of the General Plan and does not conflict with any of the previously adopted Goals, Policies and Programs of the General Plan; and,
- 2. The proposed Amendment is necessary to implement the goals and objectives of the General Plan in that it will further implement the City of Antioch Housing Element; and,
- 3. The proposed Amendment will not be detrimental to the public interest, convenience, and general welfare of the City in that the Amendment will result in a logical placement of land uses consistent with the overall intent of the General Plan; and,
- 4. The proposed project will not cause environmental damage in that the project includes an Addendum to the Environmental Impact Report which concluded that the project does not result in any significant or unavoidable impacts; and,
- 5. The Proposed General Plan Amendment will not require changes to or modifications of any other plans that the City Council adopted before the date of this resolution.

BE IT FURTHER RESOLVED that the Planning Commission does hereby recommend to the City Council APPROVAL of the General Plan Amendment to amend the Land Use Element for the policies affecting the Sand Creek Focus Area (Section 4.4.6.7).

* * * * * * *

I HEREBY CERTIFY that the foregoing recommendation was passed and adopted by the Planning Commission of the City of Antioch, at a regular meeting thereof, held on the 19th day of July, 2017 by following vote:

AYES: NOES: ABSTAIN: ABSENT:

> FORREST EBBS Secretary to the Planning Commission

EXHIBIT A

Land Use Element Amendments

4.4.6.7 Sand Creek. The Sand Creek Focus Area encompasses approximately 2,873 acres in the southern portion of the City of Antioch.

This Focus Area is bounded by existing residential neighborhoods to the north, Black Diamond Mines Regional Preserve to the west, the city limits to the south, and the City of Brentwood to the east. Empire Mine Road and Deer Valley Road run in a general north-south direction through the Focus Area, dividing it roughly into thirds.

a. Purpose and Primary Issues.

Sand Creek, as well as natural hillsides and canyons within the Sand Creek Focus Area, contain habitats for sensitive plant and animal species, as well as habitat linkages and movement corridors. Overall, the western portion of the Focus Area is more environmentally sensitive than the eastern portion in terms of steep topography, biological habitats and linkages, the existence of abandoned coal mines, and proximity to public open space at Black Diamond Mines Regional Preserve. The west end of the Sand Creek Focus Area serves as a linkage between two regionally significant blocks of grassland. Decades of urban and agricultural use have greatly reduced the width of this linkage, substantially increasing the ecological importance of the remaining linkage within the Sand Creek Focus Area. Land has been preserved in regional parks and permanent open space, primarily in extensive grassland to the immediate west and northwest, as well as south of the Sand Creek Focus Area. These preserves represent a significant investment of public resources, and are a valued public asset.

Stream and riparian communities occupy a small portion of the Focus Area, but are widely distributed. Because of their high biotic value, stream and riparian communities within the Focus Area are considered to be a sensitive resource. The Focus Area also includes an oak woodland and savanna community, which, because of its high wildlife value, is considered to be a sensitive resource.

b. Policy Direction.

The environmental sensitivity of portions of the Sand Creek Focus Area has been recognized in the prior General Plans; however, policy direction was very general. The following policy discussion and policies for the Sand Creek Focus Area are intended to provide clear direction for the future development and environmental management of the area.

The Sand Creek Focus Area is intended to function as a large-scale planned community, providing needed housing and support services. Residential development within the Sand Creek Focus Area will provide for a range of housing types, including medium and large-lot single-family homes and senior housing.

The following policies apply to development within the Sand Creek Focus Area.

1. Development Yield

- a. The development yield for the Sand Creek Focus Area shall not exceed 4,000 dwelling units.
- b. The Total Development Yield for an individual development project shall be based on the Land Use Map for the Sand Creek Focus Area and the following policies:
 - i. The Total Development Yield establishes the maximum number of residential units that should be built over a specified geographic area or project site.
 - ii. The Total Development Yield is derived by multiplying the area, in acres, by the specified density for each land use area, or portion thereof, as presented on the Land Use Map for the Sand Creek Focus Area.
 - iii. The Total Development Yield for a project is the sum of the units derived from each land use area contained within the project site.
 - iv. The unit count resulting from the Total Development Yield are not required to be sited within the land use designation area from where they were derived, but may be located in any residential or mixed use land use area within the project site.
 - v. All units sited within a residential land use area must conform to the underlying minimum lot size and other development standards, if applicable, of that land use area.
 - vi. The following table contains the approximate acreage and anticipated development yield for the various Land Use Designations for the Sand Creek Focus Area. These figures are estimates only and may be evaluated with more precision with a project application. The conceptual number of units reflected in Table A are not assigned to or "owned" by any property owner or developer. Instead, the number of units assigned to a particular property will be determined by the City Council in connection with its approval of a particular development project.
 - vii. The Total Development Yield for lands designated SC-ZR, located west of Empire Mine Road, shall be developed on a project-specific basis through the Planned Development process. This determination shall be informed by detailed analysis of geological, topographical, biological, and any other constraints affecting the property. In no case shall the density exceed that of the SC-LD designation of 2.0 units per acre.

TABLE A: TOTAL DEVELOPMENT	YIELD		
Land Use Designation	Acres	Units	Density
Sand Creek – Vineyards (SC-V)	138	533	3.9
Sand Creek – Aviano (SC-AV)	108	641	5.9
Sand Creek – Medium Density (SC-MD)	54	324	6.0
Sand Creek - Medium Density – Hillside (SC-MD-H)	190	570	3.0
Sand Creek- Low Density (SC-LD)	93	140	1.5
Sand Creek- Low Density Hillside (SC-LD-H)	696	1,392	2.0
Sand Creek – Zeka Ranch (SC-ZR)	201	201	1.0
Sand Creek – Mixed Use (SC-MU)	206	To be determined with project-specific analysis	1.0-2.0
Sand Creek – Medical (SC-MED)	83	0	0.0
Sand Creek – Open Space (SC-OS)	958	0	0.0
Sand Creek – Open Space – Hillside (SC-OS)	56	0	0.0
Total	2,783	4,000 max.	1.4

2. Land Use Designations

a. Land Use Designations are intended to provide a basic description of their purpose and basic development standards. The Planned Development (PD) process will determine project-specific standards. The designations are described in the following table:

TABLE B: LAND USE DESIGNATION	INS
Land Use Designation	Description
SC-V	The Vineyards at Sand Creek project was approved in 2016 and is designated as approved. Any changes to the project will require a General Plan amendment.
SC-AV	The Aviano project was approved in 2015 and is designated as approved. Any changes to the project will require a General Plan amendment.
SC-MD	These designations are intended for the development of single-family neighborhoods on mid-size lots with
SC-MD-H	opportunities for clustering or condominium-style development.
SC-LD	These designations are intended for the development of
SC-LD-H	associated suburban neighborhood amenities.
SC-ZR	The Zeka Ranch property is intended for development of single-family neighborhoods on relatively larger lots for estate or executive-style properties.
SC-MU	This designation allows for development of commercial and residential uses in a Town Center environment. Residential uses should occupy no more than 50% of the site, but may be built as attached condominiums,apartments, or similar higher density housing.
SC-MED	This designation reflects the existing Kaiser Permanent Antioch Medical Center and the adjacent medical high school.
SC-OS	These designations identify the various open space and protected natural areas, including the Sand Creek
SC-OS-H	corridor, the sensitive habitat at the southwest corner of the site, the large drainage basin and future regional park, and protected hilltops.

b. Land Use Designations are assigned based on topography, natural features, and proximity to major transportation routes. These designations, and their corresponding maximum densities, allow for an equitable and predictable disbursement of units to ensure that the total development yield for the Sand Creek Focus Area does not exceed 4,000. As such, any proposed
amendment to the General Plan that increases the total development yield of the site will preclude other development sites from reaching their development potential. Such a practice is strongly discouraged and should only be accomplished if development rights are transferred from another parcel. Transferring units from one approved project to another will allow for greater creativity and consolidation of units. The following rules generally describe how a development transfer might occur:

- i. Owners of both properties must apply concurrently for the development transfer.
- ii. A deed restriction or other legal notice assigned to the deed of the property must be recorded concurrently with the development transfer.
- iii. The development transfer must be approved concurrently with the approval of the receiving project and the entire action must be considered during the environmental review process.
- iv. The development transfer may not be used to transfer units obtained through the Density Bonus process. Similarly, the above rules do not preclude ordinary use of the Density Bonus process.
- c. Senior housing is strongly encouraged throughout the Focus Area.
 - i. The Density Bonus process may be used to increase the density for applicable senior projects.
 - ii. Any project providing a minimum of 30% of the total units for Senior Housing shall be entitled to a 20% Density Bonus. Any project providing 100% Senior Housing shall be entitled to a 45% Density Bonus. For the purposes of this calculation, the "project" shall include the entire development under same ownership and under concurrent review. This Density Bonus shall only apply to senior housing units.
 - iii. Senior housing may be developed on smaller lots as described in the Land Use Designation Table for the Sand Creek Focus Area.
 - iv. Senior housing alternatives, such as assisted living facilities or multifamily senior residences, are encouraged throughout the Focus Area, including within residential land use designations. These facilities are not to be considered "units" and are not to be deducted from the Total Development Yield for a project if they are available exclusively for senior households, they are not made available as ownership units, they are complemented by on-site services, and they are licensed by the State of California Department of Social Services.
- d. The commercial component of the Mixed Use land use designation must conform to the land use standards of the Neighborhood Commercial (C-N) Land Use designation.
- e. Due to its unique geological, topographical, biological, and other conditions, a density range has been established for the property west of Empire Mine Road (SC-ZR). The lower end (1.0 units/acre) of this density range is intended to correspond to the hilled areas of the property, while the higher end (2.0 units/acre) is intended to correspond to the flat portions of the property. The exact delineation of these two density areas shall be determined by new precise topographical and related data through the

Planned Development process. Similarly, the lot sizes and other development standards shall be determined through the Planned Development process.

TABLE C: DEVELOPMENT STANDARDS		
Designation	Minimum Lot Size	Average Lot Size (sf)
SC-V	-	-
SC-AV	-	-
SC-MD	4,000 sf	5,000 sf
SC-MD-H		
SC-LD	5,000 sf	7,000 sf
SC-LD-H		
SC-ZR	To be determined through Planned Development process.	
SC-MU	-	-
SC-MED	1 acre	-
SC-OS	-	-
SC-OS-H	-	-
Senior Housing (all districts)	4,000 sf	-

3. Financial Analysis

- a. All non-public projects shall be demonstrated to be financially sustainable and not requiring ongoing expense to the City of Antioch that exceeds tax and other financial benefits from the project. A Fiscal Impact Analysis shall be provided that demonstrates sustainability over 10, 20, and 30-year timeframes.
- b. Private streets and utilities are encouraged to achieve financial sustainability.

4. Open Space and Recreation

- a. A minimum of 30% of the Sand Creek Focus Area shall be dedicated Open Space.
- b. A comprehensive trail system shall be installed throughout the Sand Creek Focus Area that connects to Black Diamond Mines Regional Preserve and, ideally, to other regional trails. The trail system should avoid roadwayadjacent sidewalks and connect neighborhood parks, communities, commercial centers, and other area features. The trail system should follow ridgelines and designated open space areas and should be open to the general public to the greatest extent possible. The trail system should also traverse the Sand Creek corridor.
- c. A public staging area shall be developed as near as possible to Black Diamond Mines Regional Preserve to allow for public access.
- d. All projects should provide full park acreage dedication requirements and inlieu fees are strongly discouraged. Neighborhood parks should contain a variety of passive and active facilities and should be sited so as to have direct access to the trail system.
- e. The entire length of Sand Creek shall contain a minimum 125'-wide buffer. Development should be prohibited within this buffer area, with the following exceptions:
 - i. Bridges,
 - ii. Benches, shade structures, interpretive monuments, or similar park features,
 - iii. Minor grading or temporary encroachment necessary to serve development outside of the buffer, or
 - iv. Trails.
 - v. The 125-foot buffer shall not apply to land within the confines of the Contra Costa County Flood Control Basin or future regional park. An appropriate buffer shall be provided on a project-specific basis, and, in no case, shall the average buffer be less than 125 feet
- f. Careful attention should be given to the experience within the Sand Creek corridor and, especially, along the trails. One-sided residential streets with open views to the creek corridor and neighborhood parks are encouraged to be located adjacent to the Sand Creek corridor. Exceptions should be made when there is significant change in elevation or other features that visually disconnect the residential lots from the creek corridor High traffic roadways, highly visible residential backyard fences, sound walls, the rear of commercial buildings, visible basins, or similar offensive features are strongly discouraged adjacent to the Sand Creek corridor.
- g. A viable, continuous grassland corridor between Black Diamond Mines Regional Preserve and Marsh Creek State Park shall be retained using linkages in the southwestern portion of the Lone Tree Valley (within the Sand Creek drainage area), Horse Valley, and the intervening ridge. The primary goal of preserving such a corridor is to allow for wildlife movement between Black Diamond Mines Regional Preserve and Marsh Creek State Park.

Completion of such a corridor is contingent upon the cooperation with the City of Brentwood and Contra Costa County, each of whom may have land use jurisdiction over portions of this corridor. To preserve this corridor and in view of other significant development constraints, certain lands in the southwestern portion of the Focus Area are designated as "Open Space," as depicted in the Land Use Map for the Sand Creek Focus Area.

- h. Each project must submit an Open Space management plan concurrent with the application indicating how open space lands will be owned, managed, and maintained.
- i. A large regional park or sports complex should be developed within the detention basin owned by Contra Costa County Flood Control District. The City of Antioch shall work with the District in its development, as provided in the approved Sand Creek Basin Master Plan.

5. Circulation

- a. The development of the Sand Creek Focus Area must contain the roadways identified on the Land Use Map for the Sand Creek Focus Area. The exact alignment of the identified roadways may be altered as long as important connections are ultimately made.
- b. The extension of Dallas Ranch Road should be called Sand Creek Road for continuity throughout the Focus Area.
- c. Sand Creek Road, Deer Valley Road, and Hillcrest Avenue, at minimum, should contain adequate turn-outs and similar facilities for bus systems.
- d. Sand Creek Road, Deer Valley Road, and Hillcrest Avenue shall all have paved Class I bike paths, unless an alternate nearby parallel path exists within the broader Open Space trail system.
- e. Sidewalks on Sand Creek Road, Deer Valley Road, and Hillcrest Avenue shall be separated from the back of curb by at least ten feet.
- f. Roundabouts and traffic circles should use wherever practical to avoid unnecessary stops.
- g. Upon full construction of Sand Creek Road to its ultimate width, Empire Mine Road should be limited to emergency vehicle access and use by pedestrians or cyclists and through traffic should be absolutely limited to property owners reliant on Empire Mine Road for access.
- h. Bridges over Sand Creek should be limited and used only where necessary. Consolidation of vehicle bridges is strongly encouraged and bridge locations should be limited to the following:
 - i. Empire Mine Road
 - ii. Southward from Sand Creek Road
 - iii. Deer Valley Road
 - iv. Hillcrest Avenue Extension
 - v. Southward from the intersection of Sand Creek Road and "B" Street as referenced in Project Specific Condition #98 of Resolution Number 2009/** approving the Aviano Adult Community Project.
 - vi. Additional bridges shall be considered on a case-by-case basis.

6. Community Design

- a. Neighborhoods, roadways, trails, medians, parks, commercial centers, and other features should reflect a cohesive design theme, which is unique to the Sand Creek Focus Area and reflective of its character.
- b. Individual projects should use similar or identical exterior treatments facing major roadways to avoid non-cohesive or trendy exterior designs.
- c. Drainage facilities should be designed to have a natural appearance and to avoid the appearance of heavy concrete structures.
- d. Water collection/detention basins shall be designed to resemble natural ponds or similar water bodies and shall have irregular shapes and complementary planting. The entire basin shall be designed such that any required fencing is minimally visible or screened by heavy planting.
- e. Chain link fencing may not be used for any purpose throughout the Sand Creek Focus Area. Split-rail or other rustic fencing may be an appropriate material.
- f. Existing stands of oak trees, individual oak trees, or other unique natural features, shall be retained and integrated into parks, medians, or similar public areas.
- g. Exotic landscaping, such as palm trees and large grass expanses (except for playfields), should be avoided in public areas. New landscaping should utilize native plant species, natural design, and water-efficient methods throughout.

7. Hillsides and Hilltops

- a. Hilltop areas designated as Open Space on the Land Use Map for the Sand Creek Focus Area shall be retained in their natural condition. They may not be graded, used for crop production, or otherwise altered without specific approval based on unique conditions or compelling justification.
- b. The precise outlines of the protected Hilltops are provided herein and are approximations based on the best available information. The shapes represent the top 25% of the hill, which is derived from subtracting the base elevation of the hill from the uppermost elevation, finding the upper 25%, and tracing the corresponding topographic mark. More precise shapes may be considered during a project application.
- c. Hillsides, designated with "-H", are available for development subject to the following:
 - i. All grading and development should use a "landform grading" approach, whereby the terrain can be graded or modified, but the final appearance must be that of a natural hillside with organic contours, inconsistent slopes, curving topography, natural plantings.
 - ii. Disturbed hillsides must be treated with native grasses or similar treatment to avoid run-off or erosion.
 - iii. The planting of oak trees and other native plants is strongly encouraged for modified hillsides.
- d. Where retaining walls are used, the materials must be natural in appearance and stepped to prevent a severe drop-off. A maximum individual wall height of 6' is recommended.

- e. Except where described in this section, the treatment of hillsides should generally adhere to the Hillside Design Policies contained in Section 5.4.14.
- f. Houses or other structures should not be sited so as to create an artificial skyline or profile visible beyond the ridgeline or hilltop.

8. Other

- a. All applications for development within the Sand Creek Focus Area are subject to review through the Planned Development District process, as described in Article 23 of the Zoning Ordinance. In approving a Planned Development, the Planning Commission and City Council shall find that the project meets the general spirit and intention of this section of the Land Use Element. Minor deviations to land use designation boundaries, roadway alignments, or other standards, as well as permissible land uses, may be considered as part of the unique provisions of the Planned Development District process.
- b. The maps contained within this General Plan are intended for general purposes and it is expected that future development applications will provide specific mapping, surveying, and analysis of geographical, biological, and other natural constraints. This specific mapping may be used to modify the boundaries of land use designations only if such a modification does not increase overall development yield for the Focus Area and is otherwise consistent with the General Plan. Further, individual applications may include provisions for enhanced clustering or increased densities as part of the Planned Development yield for the project site and are determined to be consistent with the overall purpose of the General Plan, except as noted in Section i. below.
 - i. Any boundary adjustments made to the area west of Empire Mine Road shall be minor and shall not create islands of residential development. These adjustments shall be based upon subsequently developed information and data relating to environmental conditions or public health and safety. It is presumed that these boundary adjustments may introduce additional land for residential development. In such a case, the additional land shall assume the SC-ZR land use designation and associated density allowances.
- c. The text contained in the General Plan, along with the maps and land use designations, is not a guarantee of development rights, but is intended to provide general guidance for future growth. The City of Antioch acknowledges that any development in this area will be subject to review and approval by other State and federal agencies and does not suppose in this General Plan that all areas designated for development will ultimately receive adequate approvals from all agencies to achieve the level of development suggested in this General Plan.

