5.0 ALTERNATIVES

5.1 INTRODUCTION

The California Environmental Quality Act (CEQA) requires that an EIR evaluate a range of reasonable alternatives to the project or to the location of the project that could feasibly avoid or lessen significant environmental impacts while substantially attaining the basic objectives of the proposed Green Valley II Mixed-use project ("proposed project"). An EIR should also evaluate the comparative merits of the alternatives. This chapter sets forth potential alternatives to the proposed project and evaluates them, as required by CEQA.

Key provisions of the *State CEQA Guidelines*[1] pertaining to the alternatives analysis are summarized below:

- The discussion of alternatives shall focus on alternatives to the project or its location that are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.

- An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation.

- The range of alternatives required in an EIR is governed by a "rule of reason." Therefore, the EIR must evaluate only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project.

- The No Project alternative shall be evaluated along with its impact. The No Project analysis shall discuss the existing conditions at the time the notice of preparation is published. Additionally, the analysis shall discuss what would be reasonably expected to occur at the project site in the foreseeable future based on current plans and consistent with available infrastructure and community services if the project were not approved.

- For alternative locations, only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR.

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1 California Code of Regulations, Title 14, Division 6, Chapter 3, *California Environmental Quality Act Guidelines*, Section 15126.6.

- An EIR need not consider an alternative whose effects cannot be reasonably ascertained and whose implementation is remote and speculative.

The range of potentially feasible alternatives is to be selected and discussed in a manner intended to foster meaningful public participation and informed decision making. Among the factors that may be taken into account when addressing the feasibility of alternatives are environmental impacts, site suitability, economic viability, availability of infrastructure, general plan consistency, regulatory limitations, jurisdictional boundaries, and whether the applicant could reasonably acquire, control, or otherwise have access to an alternative site.[2]

5.2 PROJECT OBJECTIVES

The objectives of the project are to develop a well-designed, economically feasible residential community that consists of a variety of residential unit types and incorporates smart growth elements. The applicant's key objectives for the proposed project are to:

- Create a mixed-use development of a scale and character that complements and is supportive of the surrounding uses.
- Develop a well-designed, economically feasible residential community that consists of a variety of residential products and unit types;
- To provide commercial and retail services within walking and biking distance of existing residential uses.

5.3 IMPACTS OF THE PROPOSED PROJECT

To develop project alternatives, the City, as Lead Agency, considered the project objectives and reviewed the significant impacts of the proposed project, identified those impacts that could be substantially avoided or reduced through an alternative, and determined the appropriate range of alternatives to be analyzed. **Section 4.0, Environmental Impact Analysis**, of this Draft EIR evaluates the potential for the proposed project to result in significant impacts to the following resource areas: air quality, biological resources, cultural and tribal resources, greenhouse gas (GHG) emissions, hazards and hazardous materials, land use and planning, noise, public services, transportation, utilities and service systems, and energy. The analysis in **Chapter 4.0** concluded that implementation of the proposed project would result in significant and potentially significant impacts in four resource areas: air quality, biological resources, cultural resources, and transportation. However, all of the significant and potentially significant impacts

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2 California Code of Regulations, Title 14, Division 6, Chapter 3, *California Environmental Quality Act Guidelines*, Section 15126.6(f)(1).

of the proposed project would be reduced to a less-than-significant level with the incorporation of mitigation measures with the exception of intersection impacts as identified in Section 4.9 Transportation. A summary discussion of project impacts under each resource area analyzed in the Draft EIR is presented below. **Table 5.0-20, Summary Comparison of Project Alternatives**, presented at the end of this chapter, lists all potentially significant and significant impacts of the proposed project.

5.3.1 Air Quality

The analysis in **Section 4.1, Air Quality**, of the Draft EIR, identified a potentially significant impact associated with construction phase emissions of fugitive dust (**Impact AIR-1**) and substantial cumulative pollutant concentrations associated with toxic air contaminants (**Impact C-AIR-2**). However, all of these impacts would be reduced to a less than significant level with mitigation. Impacts associated with criteria pollutants such as carbon monoxide (CO), ozone (O_3), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulates (PM10 and PM2.5), lead (Pb), sulfates (SO_4) and hydrogen sulfide (H_2S) would be less than significant. Finally, the analysis found that the proposed project would not conflict with an applicable air quality plan or create objectionable odors. No significant and unavoidable impacts related to air quality were identified.

5.3.2 Biological Resources

As analyzed in **Section 4.2, Biological Resources**, of the Draft EIR, the proposed project could have a potentially significant impact with respect to special-status plant species (**Impact BIO-1**). However this impact would be reduced to a less than significant level with mitigation. The proposed project could have a potentially significant impact with respect to nesting birds (**Impact BIO-2**). This impact would be reduced to a less than significant level with mitigation. Construction of the proposed project could adversely affect protected trees (**Impact BIO-6**). This impact would be reduced to a less than significant level with mitigation. The proposed project would not conflict with an adopted habitat conservation plan and a less than significant impact would occur. There would be no impact with respect to riparian habitat; sensitive natural community; wetlands; and wildlife movement. No significant and unavoidable impacts associated with biological resources were identified.

5.3.3 Cultural Resources

The analysis found in **Section 4.3, Cultural Resources**, of the Draft EIR, identified potentially significant impacts associated with the disturbance of unknown archaeological resources (**Impact CUL-2**) and disturbance of unknown human remains **(Impact CUL-4)**. However, these impacts would be reduced to a less-than-significant level with mitigation. Impacts associated with historical resources, paleontological

resources, and tribal cultural resources were determined to be less than significant. No significant and unavoidable project-level impacts related to cultural resources were identified.

In addition, the analysis identified a potentially significant cumulative impact associated with cultural and tribal cultural resources (**Impact C-CUL-1**). However, with proposed mitigation, the project's contribution to this impact would be less than cumulatively considerable. No significant and unavoidable cumulative impacts related to cultural resources were identified.

5.3.4 Greenhouse Gas Emissions

As analyzed in **Section 4.4, Greenhouse Gas Emissions**, of the Draft EIR, the proposed project would generate GHG emissions during construction and operation that would exceed a threshold, however the project would not be inconsistent with greenhouse gas reduction plans. No significant and unavoidable impacts associated with GHG emissions were identified.

5.3.5 Hazards and Hazardous Materials

The analysis found in **Section 4.5, Hazardous and Hazardous Materials**, of the Draft EIR, did not identify significant hazards associated with the routine transport, use, or disposal of hazardous materials nor did it find that the proposed project would create a significant hazard to the public or the environment through the accidental release of hazardous materials into the environment. In addition, the proposed project would not expose future project site residents to a substantial risk associated with hazardous materials storage on site or on nearby properties. Finally, the project site is not located on a list of hazardous material sites subject to corrective action compiled pursuant to Government Code Section 65962.5 (Cortese List). The proposed project would require mitigation to address expansive soils. No significant and unavoidable impacts associated with hazards and hazardous materials emissions were identified.

5.3.6 Land Use and Planning

As analyzed in **Section 4.6, Land Use and Planning**, of the Draft EIR, the proposed project would not conflict with any applicable land use plan, policy, or regulation of any agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect. No significant and unavoidable impacts related to land use and planning were identified.

5.3.7 Noise

As analyzed in **Section 4.7, Noise**, of the Draft EIR, traffic and stationary noise sources associated with the proposed project would not cause a substantial permanent increase in noise levels at off-site

receptors. In addition, although during construction, the proposed project would result in a substantial temporary or periodic increase in ambient noise levels in the vicinity of the proposed project, mitigation measures would be implemented to reduce construction noise level increases to a less than significant level. Finally, the proposed project would not generate excessive groundborne vibration or groundborne noise levels. No significant and unavoidable impacts associated with noise were identified.

5.3.8 Public Services

As analyzed in **Section 4.8, Public Serves**, of the Draft EIR, the proposed project would not require the construction of new or physically altered fire, police, library, and parks and recreation facilities. No significant and unavoidable impacts related to public services were identified.

5.3.9 Transportation

As analyzed in **Section 4.9, Transportation**, of this Draft EIR, traffic generated by the proposed project would result in a significant impact at the intersection of Lopes Road/Bridgeport Avenue under the Existing plus Project Conditions (**Impact TRANS-1**). However, this impact would be reduced to a less than significant level with mitigation. Traffic generated by the proposed project would result in a significant impact at the intersections of I-80 westbound ramps-Neitzel Road/Suisun Valley Road and Lopes Road/Bridgeport Avenue under Existing plus Approved Projects (EPAP) with Project Conditions (**Impact TRANS-1**). These impacts could be reduced to a less than significant level with the implementation of mitigation measures **TRANS-1a, TRANS-1b, and TRANS-1c**. However, because it is uncertain if the funding would be provided for these specific improvements, for purposes of this EIR impacts are considered significant and unavoidable.

The proposed project would not conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b) (**Impact TRANS-2**) nor substantially increase hazards due to a geometric design feature or incompatible use (**Impact TRANS-3**). Development of the proposed project would have a less than significant impact on emergency access.

Traffic generated by the proposed project would result in a significant cumulative impact at the intersections of Business Center Drive/Suisun Valley Road, I-80 westbound ramps-Neitzel Road/Suisun Valley Road, I-80 eastbound ramps/Pittman Road, and Lopes Road/Bridgeport Avenue under Cumulative with Project, with and without Business Center Drive conditions (**Cumulative Impact C-TRANS-1**). As described for **Impact TRANS-1**, if the required improvements are not funded, impacts would be significant and unavoidable. As the implementation and timing of the mitigation is uncertain, impacts would remain significant and the project would contribute to a cumulative transportation impact.

5.3.10 Utilities and Service Systems

As analyzed in **Section 4.10, Utilities**, of this Draft EIR, the proposed project would not result in the need for new or expanded water supply entitlements nor would it require or result in the construction or expansion of water conveyance or treatment facilities. In addition, development of the proposed project would not require the construction of new or expanded wastewater treatment facilities, nor would it require the construction of new or expanded wastewater conveyance systems. Finally, development of the proposed project would not require the construction of new storm water drainage facilities nor would it generate enough solid waste to require the expansion of the permitted capacity of a regional landfill. No significant and unavoidable impacts related to utilities and service systems were identified.

5.3.11 Energy

The analysis in **Section 4.11, Energy**, of this Draft EIR, concluded that although the proposed project would result in an increase in energy demand, it would not result in a wasteful, inefficient or unnecessary consumption of energy resources, and the impact would be less than significant. No significant and unavoidable impacts associated with energy were identified.

5.3.12 Other Resource Topics

Section 4.12, Other Resource Topics, of this Draft EIR identified no impacts or less than significant impacts related to aesthetics, agricultural and forestry resources, geology and soils, hydrology and water quality, mineral resources, and population and housing. No significant and unavoidable impacts were identified for any of these resources.

5.4 ALTERNATIVES CONSIDERED BUT NOT EVALUATED IN DETAIL

Section 15126.6(c) of the *State CEQA Guidelines* states that an EIR should briefly describe the rationale for selecting the alternatives to be discussed and the reasons for eliminating alternatives from detailed consideration in an EIR. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR is failure to meet most of the basic project objectives, infeasibility, or inability to avoid or substantially reduce significant environmental impacts. The applicant did not identify any preliminary alternatives that were considered but rejected.

5.5 ALTERNATIVES EVALUATED IN DETAIL

According to the *State CEQA Guidelines*, the discussion of alternatives should focus on alternatives to a project or its location that can avoid or substantially lessen the significant effects of the project, while feasibly attaining most of the basic project objectives. The *State CEQA Guidelines* indicate that the range of

alternatives included in this discussion should be sufficient to allow decision-makers to make a reasoned choice. The alternative discussion should provide decision makers with an understanding of the merits and disadvantages of these alternatives.

Alternatives considered for detailed evaluation in this Draft EIR include potential alternate projects that meet most of the project's basic objectives while eliminating or reducing significant environmental impacts of the proposed project identified in **Section 4.0**. Alternatives considered in this Draft EIR for detailed evaluation include:

- No Project/No Development
- No Project/Existing Zoning
- Reduced Residential
- Residential/Fire Station

Table 5.0-20 provides a summary comparison of these alternatives in terms of their ability to reduce the significant and potentially significant impacts of the proposed project.

5.6 ALTERNATIVE IMPACT ANALYSIS

5.6.1 Alternative 1: No Project/No Development Alternative

Description and Analysis

Section 15126.6(e)(1) of the *State CEQA Guidelines*, states that, "the purpose of describing and analyzing a no project alternative is to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project." Under this alternative, no grading or new construction would occur on the project site and the site would remain vacant.

Description and Analysis

Air Quality

Under the No Project/No Development alternative, no construction activities would occur and the site would remain vacant. Therefore, the proposed project's impacts that would result from construction at the project site, including the potentially significant impacts related to fugitive dust and TACs, would be avoided. The less than significant impact from the emissions of criteria pollutants during operations would also be avoided.

Biological Resources

No construction or grading activities would occur on the project site. As a result, the proposed project's impacts that would result from construction at the project site, including the potentially significant impacts related to special-status plant spaces, nesting birds, and protected trees would be avoided.

Cultural and Tribal Cultural Resources

No construction or grading activities would occur on the project site. Therefore, the proposed project's impacts that would result from construction at the project site, including potentially significant impacts related to disturbance of unknown archaeological resources and human remains, would be avoided.

Greenhouse Gas Emissions

Under the No Project/No Development alternative, no construction activities would occur and the site would remain vacant. There would be no GHG emissions associated with construction and operation of proposed project. The proposed project's less than significant impacts associated with GHG emissions would be avoided under this alternative.

Hazards and Hazardous Materials

Under the No Project/No Development alternative, no construction activities would occur and the site would remain vacant. The proposed project's less than significant impacts associated with hazards and hazardous materials, and expansive soils would be avoided under this alternative.

Land Use and Planning

Under the No Project/No Development alternative, no construction activities would occur at the project site and the site would remain vacant. Therefore, this alternative would not result in any land use impacts and the project's less-than-significant impacts related to land use would be avoided.

Noise

Under the No Project/No Development alternative, no construction activities would occur and the site would remain vacant. There would be no noise associated with the construction and operation of proposed project. The proposed project's less than significant impacts associated with noise would be avoided under this alternative.

Public Services and Recreation

Under the No Project/No Development alternative, no construction activities would occur at the project site and the site would remain vacant. Therefore, this alternative would not result in an increase in City population that would demand additional public services or recreational facilities and no impacts would occur. The project's less-than-significant impacts on public services and recreation would be avoided.

Transportation

Under the No Project/No Development alternative, no construction activities would occur and the site would remain vacant. Therefore, the proposed project's impacts on traffic, including the proposed project's potentially significant impact at two intersections (I-80 westbound ramps-Neitzel Road/Suisun Valley Road and Lopes Road/Bridgeport Avenue) under the Existing plus Project Conditions, and two intersections (I-80 westbound ramps-Neitzel Road/Suisun Valley Road and Lopes Road/Bridgeport Avenue) under Existing plus Approved Projects (EPAP) with Project Conditions, would be avoided.

In addition, the project's effect on the intersections of Business Center Drive/Suisun Valley Road, I-80 westbound ramps-Neitzel Road/Suisun Valley Road, I-80 eastbound ramps/Pittman Road, and Lopes Road/Bridgeport Avenue under Cumulative with Project, with and without Business Center Drive conditions, would be also avoided.

Utilities and Service Systems

No construction or grading activities would occur on the project site. Therefore, the proposed project's less than significant impacts on utilities and service systems would be avoided.

Energy

Under the No Project/No Development alternative, no construction activities would occur and the site would remain vacant. There would be no energy consumption associated with the construction and operation of the proposed project. The proposed project's less than significant impacts associated with energy use would be avoided under this alternative.

Other Resource Topics

The No Project/No Development alternative would not affect aesthetics, agricultural resources, hydrology and water quality, expose people or structures to geologic hazards, or result in loss of availability of known mineral resources. In addition, population growth would not be induced by the use of the project site. No impact would occur and no mitigation would be required.

Conclusion and Relationship to Project Objectives

The No Project/No Development alternative would avoid all of the potentially significant impacts of the proposed project. However, none of the project objectives would be met under this alternative.

5.6.2 Alternative 2: No Project/Existing Zoning

Description and Analysis

The *State CEQA Guidelines* state that "the 'no project' analysis shall discuss the existing conditions, as well as what would be reasonably expected to occur in the foreseeable future if the project is not approved, based on current plans and consistency with available infrastructure and community services." Should the proposed project not be approved by the City, it would be reasonable to expect that the project site would be developed by another entity consistent with the site's existing specific plan land use and zoning designations, and available infrastructure.

The project site is designated Business and Industrial Park in the City's General Plan and is zoned IBP-NC (Industrial Business Park-North Cordelia Overlay). The Business and Industrial Park designation is intended for light industrial and office uses and allows a floor-to-area ratio (FAR) of 0.25 to 0.60. Existing development adjacent to the project site consists of office use, and this alternative assumes that similar uses would be developed on the site under this scenario. Based on a typical FAR of 0.35 for this designation, a maximum of about 203,075 square feet of offices space[3] could be constructed on the project site.

As shown in **Table 5.0-1 No Project/Existing Zoning Alternative Trip Generation**, the No Project/Existing Zoning alternative would generate 347 trips in the AM peak hour and 301 trips during the PM peak hour.

Table 5.0-1
No Project/Existing Zoning Alternative
Trip Generation

			Trips					
	Trip Rates		AM Peak Hour			PM Peak Hour		
Land Use	AM	PM	In	Out	Total	In	Out	Total
Office Park	1.71	1.48	309	38	347	42	258	301

Source: Source: Institute of Transportation Engineers' Trip Generation (9th Edition, 2012)

3 The project site is 13.32 acres or approximately 580,220 square feet in size.

Air Quality

Under the No Project/Existing Zoning alternative, emissions of criteria pollutants during construction would be slightly lower as the amount of building space constructed under this alternative (203,075 square feet) would be 18 percent lower than the amount of building space constructed under the proposed project (270,600 square feet). However, the amount of fugitive dust generated by this alternative would be the same, as the same amount of area that would be disturbed under this alternative as would be that same as the amount of area disturbed under the proposed project, and this alternative would implement the same mitigation measure as the proposed project to reduce the impact from fugitive dust emissions to a less than significant level. Finally, while overall construction emissions would be reduced, the lifetime excess cancer risk per million from the construction of the proposed office uses under the No Project/Existing Zoning alternative combined with other sources in the area would still remain above the applicable threshold. Mitigation measures identified for the proposed project would also apply to this alternative to reduce the impact to a less than significant level.

With respect to operational emissions, under the No Project/Existing Zoning alternative, emissions of ROG and NOX from area sources would slightly decrease as the amount of space constructed under this alternative (203,075 square feet) would be slightly lower than the amount of space constructed under the proposed project (248,000 square feet). However, emissions of ROG and NOX from mobile sources under this alternative would be higher compared to the proposed project as the number of AM and PM peak hour vehicle trips generated by the proposed office uses under this alternative (347 AM trips and 301 PM trips) would increase by 73 and six percent, respectively, compared to the number of AM and PM peak hour vehicle trips generated by the proposed residential and commercial uses under the proposed project (201 AM trips and 284 PM trips). However, the increase in emissions due to the additional vehicle trips would not substantially increase the overall level of emissions such that an exceedance of the significance thresholds would occur as emissions of criteria pollutants under the proposed project are 35 percent below BAAQMD thresholds. As a result, the impact would not be substantially increased in comparison to the proposed project and the impacts would remain less than significant.

Biological Resources

Similar to the proposed project, the No Project/Existing Zoning alternative would have the potential to result in a potentially significant impact to special-status plant species and nesting birds. The mitigation measures identified for the proposed project would also apply to this alternative to reduce the impact to a less than significant level. In addition, this alternative would not indirectly affect any riparian habitat, sensitive natural community, or wetlands nor interfere with the movement of any wildlife species as these resources are not located on the project site. This alternative would similarly not conflict with an

adopted habitat conservation plan. Finally, the design of this alternative would be required to incorporate the existing oak tree on the project site that is protected under the City's Tree Protection Ordinance. This impact would remain less than significant.

Cultural and Tribal Cultural Resources

Similar to the proposed project, the No Project/Existing Zoning alternative would also have the potential to disturb unknown archaeological resources and human remains. However, the same mitigation measures identified for the proposed project would also be applied to this alternative to reduce impacts to a less than significant level. The same less than significant impacts associated with historic architectural, paleontological, and tribal cultural resources would also occur under this alternative.

Greenhouse Gas Emissions

Under the No Project/Existing Zoning alternative, GHG emissions from area sources during operation would decrease as the amount of space constructed under this alternative (203,075 square feet square feet) would be less than the amount of space constructed under proposed project (248,000 square feet) while GHG emissions from mobile sources would increase as the number of vehicle trips in the AM and PM peak hours generated by the proposed office under this alternative would be greater than the number of vehicle trips generated under the proposed project. However, this alternative would be consistent with the existing zoning and therefore would likely be consistent with both the Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS) and the Solano County Climate Action Plan. The GHG impacts of the alternative would remain less than significant.

Hazards and Hazardous Materials

Similar to the proposed project, the construction and operation of the proposed office uses under the No Project/Existing Zoning alternative would not generally involve the use, transport, or disposal of significant amounts of hazardous materials. In addition, the proposed office uses under this alternative would also not create a significant hazard to future employees and visitors on the project site as the site is not located on a list of hazardous material sites subject to corrective action compiled pursuant to Government Code Section 65962.5 and the concentration of arsenic in soils on site would remain below screening levels. Similarly, employees and visitors to the proposed office uses under this alternative would also not be exposed to hazards associated with past contamination or storage of chemicals on nearby site as these sites have either received regulatory closure or adherence to existing federal, state, and local regulations regarding storage. Similar to the proposed project, this alternative would require mitigation to address expansive soils. Finally, like the proposed project, operation of the proposed office uses under this alternative would not involve any hazardous emissions that could affect a nearby school.

For these reasons and similar to the proposed project, impacts related to hazards and hazardous materials under the No Project/Existing Zoning alternative would remain less than significant.

Land Use and Planning

The No Project/Existing Zoning alternative would not conflict with any applicable land use plan, policy, or regulation of any agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect as it would be consistent with the general plan and zoning designations for the site. As with the proposed project, this impact would be less than significant. However, this Alternative would not assist the City of Fairfield in achieving the 2014-2022 Housing Element goal of encouraging a high quality residential environment with a wide range of housing opportunities.

Noise

Under the No Project/Existing Zoning alternative, noise generated by traffic would increase as the number of vehicle trips (347 AM trips and 301 PM trips) generated by the proposed office uses under this alternative would be greater than the number of vehicle trips (209 AM trips and 290 PM trips) generated under the proposed project.

According to Caltrans, an audible increase in traffic noise (3 dBA) requires an approximate doubling of traffic volumes (Caltrans 2013b). Because traffic volumes are not anticipated to double under any scenario under this alternative, it is not anticipated that there would be an audible increase in traffic noise.

Noise generated by stationary sources such as HVAC systems and parking lots would be reduced under the No Project/Existing Zoning alternative as the amount of space constructed (203,075 square feet) would slightly decrease compared to the proposed project (270,600 square feet), and thus the number of HVAC systems and parking spaces required would also be reduced (an approximate 25% reduction as compared to the proposed project). As with the proposed project, this impact would be less than significant.

Similar to the proposed project, under the No Project/Existing Zoning alternative, construction and operation of the proposed project would not generate excessive groundborne vibration or groundborne noise levels.

Public Services and Recreation

Similar to the proposed project, the No Project/Existing Zoning alternative would increase demand for police and fire services. However, as office uses generally result in fewer calls for service than residential

and commercial uses, the demand for fire and police services and recreation facilities under this alternative would be reduced. As with the proposed project, this impact would be less than significant.

Unlike the proposed project, the No Project/Existing Zoning alternative would not increase demand for schools, libraries, and parks and recreational facilities as this alternative does not include a residential component. No impact would occur with respect to these facilities.

Transportation

Similar to the proposed project, the No Project/Existing Zoning alternative would increase traffic to and from the project site. As shown in **Table 5.0-1, No Project/Existing Zoning Alternative Trip Generation**, the No Project/Existing Zoning alternative would generate 347 trips in the AM peak hour and 301 trips during the PM peak hour. This would be 138 more trips in the AM and 11 more trips PM peak hour as compared to the proposed project. Therefore, the impacts under the No Project/Existing Zoning alternative would be slightly greater and the same mitigation measures would apply to reduce impacts. While the improvements would mitigate the impacts, the construction of some of the improvements would require substantial additional funding and coordination with the Union Pacific Railroad, and thus impacts would remain significant and unavoidable similar to the proposed project.

Utilities and Service Systems

Similar to the proposed project, the No Project/Existing Zoning alternative would increase demand for water and generate additional wastewater and solid waste. However, as office uses generally do not demand as much water or generate as much wastewater and solid waste as residential and commercial uses, the demand for water and the generation of wastewater and solid waste under this alternative would be reduced. As with the proposed project, this impact would be less than significant.

Energy

Under the No Project/Existing Zoning alternative, the amount of energy demanded by the proposed office uses would be lower as the amount of building space constructed under this alternative (203,075 square feet) would be less than the proposed project (248,000 square feet) while the amount of energy demanded by vehicles would increase as the total number of vehicle trips generated by the proposed office uses under this alternative would be greater than the number of vehicle trips generated under the proposed residential and commercial uses under the project. However, the increase in energy use due to a greater number of trips under this alternative would not be substantial as vehicles traveling to and from the project site would be subject to statewide measures intended to improve the energy efficiency of the statewide passenger and heavy-duty truck vehicle fleet (e.g., the Pavley Bill and the Low Carbon Fuel

Standard), thus improving vehicle fuel economies, and thereby conserving gasoline and diesel fuel. As with the proposed project, this impact would be less than significant.

Other Resource Topics

Similar to the proposed project, the No Development/Planned Development Alternative would also result in either no impacts or less than significant impacts with respect to aesthetics, agricultural resources, hydrology and water quality, mineral resources, and population and housing. No significant and unavoidable impacts were identified for any of these resources.

Conclusion and Relationship to Project Objectives

The No Project/Existing Zoning alternative would increase the project's impacts related to transportation while decreasing the proposed project's impacts related to air quality, GHG emissions, land use, noise, public services, utilities and service systems, and energy. Impacts related to biological resources and cultural resources would be similar to those of the proposed project. This alternative would not achieve any of the project objectives because it would not develop a well-designed, economically feasible residential community that consists of a variety of residential products and unit types nor create a mixed-use development of a scale and character that complements and is supportive of the surrounding uses. In addition, this alternative would not provide commercial and retail services within walking and biking distance of existing residential uses.

5.6.3 Alternative 3: Reduced Residential

Description and Analysis

The Reduced Residential alternative would reduce the number of residential units on the project site by approximately 50 percent. Under this alternative a total of 135 residential units would be provided in four 2-story buildings on the residential portion of project site as opposed to a total of 270 residential units provided in four 4-story buildings under the proposed project. The mix of apartment units under this alternative would consist of 17 studio units, 67 1-bedroom units, and 51 2-bedroom units. The commercial component of the proposed project would remain the same and provide approximately 22,600 square feet of commercial space.

As shown in **Table 5.0-2, Reduced Residential Alternative Trip Generation**, the Reduced Residential alternative would generate 121 trips during the AM peak hour and 265 trips during the PM peak hour.

Table 5.0-2
Reduced Residential Alternative Trip Generation

		Trips					
		AM Peak Hour			PM Peak Hour		
Land Use	Quantity	In	Out	Total	In	Out	Total
Apartment	135 du	23	77	100	49	28	77
Retail	22.6 ksf	13	8	21	87	94	181
		36	**85**	**121**	**136**	**122**	**265**

Notes:

1. *1 du = 1 dwelling unit; 1 ksf = 1,000 square feet gross leasable area*
2. *Apartment trip generation based on ITE Trip Generation Manual, 10th Edition Land Use Code 220 (Low-Rise Multifamily Housing)*
3. *Retail trip generation based on ITE Trip Generation Manual, 10th Edition Land Use Code 820 (Shopping Center) No internal capture/mixed use trip reduction has been taken.*

Source: Fehr & Peers, January 2019.

Air Quality

Similar to the proposed project, the Reduced Residential alternative would result in potentially significant impacts associated with fugitive dust. Mitigation measures identified for the proposed project would still apply to this alternative to control emissions and would reduce impacts to a less than significant level.

The less than significant impacts of the proposed project associated with emissions of criteria pollutants such as ozone precursors, CO, particulates, SO_2, lead, sulfates, and H_2S during construction and operation would still remain less than significant. Finally, this alternative would not a conflict with an applicable air quality plan as emissions under this alternative would not exceed the BAAQMD's threshold for criteria pollutants. Finally, this alternative would not create of objectionable odors as the proposed project would not generate substantial odors.

Biological Resources

Similar to the proposed project, the Reduced Residential alternative would have the potential to result in a potentially significant impact to special-status wildlife species and nesting birds. The mitigation measures identified for the proposed project would also apply to this alternative to reduce the impact to a less than significant level. In addition, this alternative would not indirectly affect any riparian habitat, sensitive natural community, or wetlands nor interfere with the movement of any wildlife species as these resources are not located on the project site. This alternative would similarly not conflict with an

adopted habitat conservation plan. Finally, the design of this alternative would incorporate the existing oak tree on the project site that is protected under the City's Tree Protection Ordinance. This impact would remain less than significant.

Cultural Resources and Tribal Cultural Resources

Similar to the proposed project, the Reduced Residential alternative would also have the potential to disturb unknown archaeological resources and human remains. However, the same mitigation measures identified for the proposed project would also be applied to this alternative to reduce impacts to a less than significant level. The same less than significant impacts associated with historic architectural, paleontological, and tribal cultural resources would also occur under this alternative.

Greenhouse Gas Emissions

Under this alternative, GHG emissions during construction would be reduced as the amount of building space constructed would be less than that of the proposed project. Similarly, GHG emissions during operation would also be reduced as a result of fewer apartment units and fewer trips generated under this alternative. The GHG impacts would be less than significant.

Hazards and Hazardous Materials

Similar to the proposed project, the construction and operation of the proposed residential and commercial uses under the Reduced Residential alternative would not generally involve the use, transport, or disposal of significant amounts of hazardous materials. In addition, the proposed residential and commercial uses under this alternative would also not create a significant hazard to future employees and visitors on the project site as the site is not located on a list of hazardous material sites subject to corrective action compiled pursuant to Government Code Section 65962.5 and the concentration of arsenic in soils on site would remain below screening levels. Similarly, residents, employees and visitors to the proposed residential and commercial uses under this alternative would also not be exposed to hazards associated with past contamination or storage of chemicals on nearby site as these sites have either received regulatory closure or adherence to existing federal, state, and local regulations regarding storage. Similar to the proposed project, this alternative would require mitigation to address expansive soils. Finally, like the proposed project, operation of the proposed residential and commercial uses under this alternative would not involve any hazardous emissions that could affect a nearby school. For these reasons and similar to the proposed project, impacts related to hazards and hazardous materials under the Reduced Residential alternative would remain less than significant.

Land Use and Planning

Similar to the proposed project, the Reduced Residential alternative would require a general plan amendment as well as rezoning. With these amendments, the alternative would also not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect. As with the proposed project, this impact would be less than significant. However, this Alternative would not assist the City of Fairfield in achieving the 2014-2022 Housing Element goal of encouraging a high-quality residential environment with a wide range of housing opportunities to the same extent as the proposed project.

Noise

The less than significant impacts of the proposed project associated with traffic noise would be reduced under the Reduced Density alternative as there would be fewer residential units, and thus the alternative would generate a fewer number of vehicle trips to the project site. As with the proposed project, this impact would be less than significant.

Noise generated by stationary sources such as HVAC systems and parking lots would be reduced under the Reduced Density alternative as the project would have fewer residential units, and thus would require fewer HVAC systems and parking spaces. This impact would be less than significant and reduced compared to the proposed project.

Less construction noise would be generated under the Reduced Density alternative as less building space would be constructed compared to the proposed project. This impact would be less than significant and reduced compared to the proposed project.

Under the Reduced Density alternative as fewer residential units would be constructed compared to the proposed project, generation of groundborne vibration or groundborne noise levels would be reduced. Under this alternative, the less than significant impact would be further reduced.

Public Services and Recreation

Similar to the proposed project, the Reduced Residential alternative would also increase demand for fire and police services. In addition, this alternative would also place additional demands on schools, library, and parks and recreation facilities. However, as fewer residential units would be constructed under this alternative, the demand for fire, police, and library services, schools, and parks and recreation facilities would be reduced. This impact would be less than significant and reduced compared to the proposed project.

Transportation

Similar to the proposed project, the Reduced Residential alternative would increase traffic to and from the project site. As shown in **Table 5.0-2 Reduced Residential Alternative Trip Generation**, the No Project/Existing Zoning alternative would generate 121 trips during the AM peak hour and 265 trips during the PM peak hour. This would be 168 less trips in the AM and 25 less trips PM peak hour as compared to the proposed project. Therefore, the impacts under the Reduced Residential alternative would be slightly less than the proposed project. The same mitigation measures would apply to reduce impacts to a less than significant level.

Utilities and Service Systems

Similar to the proposed project, the Reduced Residential alternative would increase demand for water and generate additional wastewater and solid waste. However, as fewer residential units would be constructed under this alternative, the demand for water and the generation of wastewater and solid waste under this alternative would be reduced. As with the proposed project, this impact would be less than significant.

Energy

Under the Reduced Residential alternative, the amount of energy demanded would be reduced as fewer residential units would be built. In addition, energy demanded by vehicles would be reduced as fewer vehicle trips would be generated under this alternative than the proposed project. This impact would remain less than significant.

Other Resource Topics

Similar to the proposed project, the Reduced Residential Density Alternative would result in either no impacts or less than significant impacts on agricultural resources, mineral resources, and population and housing. No mitigation would be required. No significant and unavoidable impacts were identified for any of these resources.

Conclusion and Relationship to Project Objectives

The Reduced Density alternative would decrease the project's impacts related to air quality, GHG emissions, noise, public services, utilities and service systems, transportation, and energy. Impacts related to biological resources, cultural resources, and land use would be similar to those of the proposed project. This alternative would achieve many of the project objectives but it would not meet the objective of developing an economically feasible residential community. In addition, it would not assist the City of

Fairfield in achieving the 2014-2022 Housing Element goal of encouraging a high quality residential environment with a wide range of housing opportunities throughout the City to the same extent as the proposed project.

5.6.3 Alternative 4: Fire Station/Residential

Description and Analysis

The Fire Station alternative would replace the commercial component with a fire station. As shown on **Figure 5.0-1, Fire Station/365-Unit Residential Alternative Site Plan**, the fire station would be located on a 1.5-acre parcel along Business Center Drive on the southwest corner of the project site. The residential component would be located on the remainder of the site and would consist of four 4-story buildings containing 365 units.

As shown in **Table 5.0-3, Fire Station/365-Unit Residential Alternative Trip Generation**, the Fire Station/Residential alternative would generate 268 trips during the AM peak hour and 197 trips during the PM peak hour.

Table 5.0-3
Fire Station/365-Unit Residential Alternative Trip Generation

		Trips					
		AM Peak Hour			PM Peak Hour		
Land Use	**Quantity**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Apartment	365 du	59	199	258	118	69	187
Fire Station	N/A	5	5	10	5	5	10
Net New Trips		***64***	***204***	***268***	***123***	***74***	***197***

Notes:
1. *1 du = 1 dwelling unit*
2. *Apartment trip generation based on ITE Trip Generation Manual, 10th Edition Land Use Code 220 (Low-Rise Multifamily Housing)*
3. *Fire Station trip generation based on the assumptions of ITE Land Use Code 575 which suggests that a fire station of the size proposed generates about eight PM peak hour trips. Therefore, it was assumed that the fire station would generate 10 AM peak hour trips and 10 PM peak hour trips (five inbound trips and five outbound trips). This assumption would be sufficient to cover a fire station with a size in excess of 20,000 square feet. This level of trip generation is consistent with observations of fire station trip generation in Contra Costa County.*

Source: Fehr & Peers, January 2019.

It should be noted that the City reviewed the fire station two fire station alternatives. The alternative laid out in this DEIR as Alternative 4 was considered by the City. Using the narrative and plans provided by

the Spanos team, City staff was able to thoroughly review the proposed site in terms of logistics, station operations, and traffic. Although staff agreed that the general site location north of I-80, with access to Business Center Drive is ideal for a new fire station; the proposed site location at the southeast corner of the overall Green Valley II Mixed Use project poses several concerns and challenges. The following key items were raised:

- The Neitzel Rd/I-80 STA interchange project realigns the westbound I-80 to southbound I-680 connector, establishes a new westbound I-80 on-ramp at Suisun Valley Road and a new westbound I-80 off-ramp at Green Valley Road, as well as removes Neitzel Road. These improvements would substantially alter the ingress and egress of the proposed fire station. Depending on the final design, the interchange improvements could negatively impact the fire station's access significantly.

- The City is actively scheduling a new signalized intersection at Neitzel and Suisun Valley Road. The proposed fire station access onto Neitzel is too close to the upcoming signalized intersection to permit right and left egress; the station would be limited to a right-out only. Furthermore, should access be granted to the proposed station, the intersection signal operations will face consistent impacts. The site's proximity to the interchange also poses challenges in terms of access and safe travel for vehicles at high speeds. As proposed, the fire station's unsuitable proximity to the signalized intersection and interchange significantly affect the signal's operations and compromises safe vehicle access and travel.

- Another concern raised regarding traffic conflicts, was the level of high traffic volumes on and from Suisun Valley Rd. The number of vehicles traveling Suisun Valley Rd. further complicate and contribute to traffic impacts that are not observed at alternative locations (i.e. Fire Station 35 at Lopes Rd.)

- The interface of the propose fire station site with the residential component of Green Valley II project and any future industrial uses to the west raise apprehensions. Although it is recognized that residents and industrial uses would yield to an emergency vehicle coming to-or-from the fire station, the shared access and intermingle traffic still inhibit emergency vehicle access to Business Center Drive.

- Placing the fire station behind four-story apartment buildings impedes the Fire Department's goals to be visible, accessible, and in-partnership with the community. Programs such as, infant safe-surrender, rely on location visibility and access.

When determining whether or not the proposed fire station location would be feasible, staff considered the site's access to Business Center Drive and Neitzel, how surrounding traffic patterns would be impacted, how the logistics and operations of the station would realistically function with the adjacent uses, and if the City's objectives and goals are being met. Staff has concluded that the proposed site does not meet the needs and standards of the City and cannot be supported. Therefore, a second location for the fire station was identified. The site plan is similar to the site plan for the original Alternative 4, with the key difference being the removal of one apartment building on the southwest corner of the site and a different on-site location of the proposed fire station. This revision to Alternative 4 would also have fewer units, the unit total would be 281 units. **Table 5.0-4** presents the trip generation estimates for the modified alternative and a comparison between the trip generation estimates of the original and modified alternative.

Table 5.0-4
Fire Station/281-Unit Residential Modified Alternative 4 Trip Generation

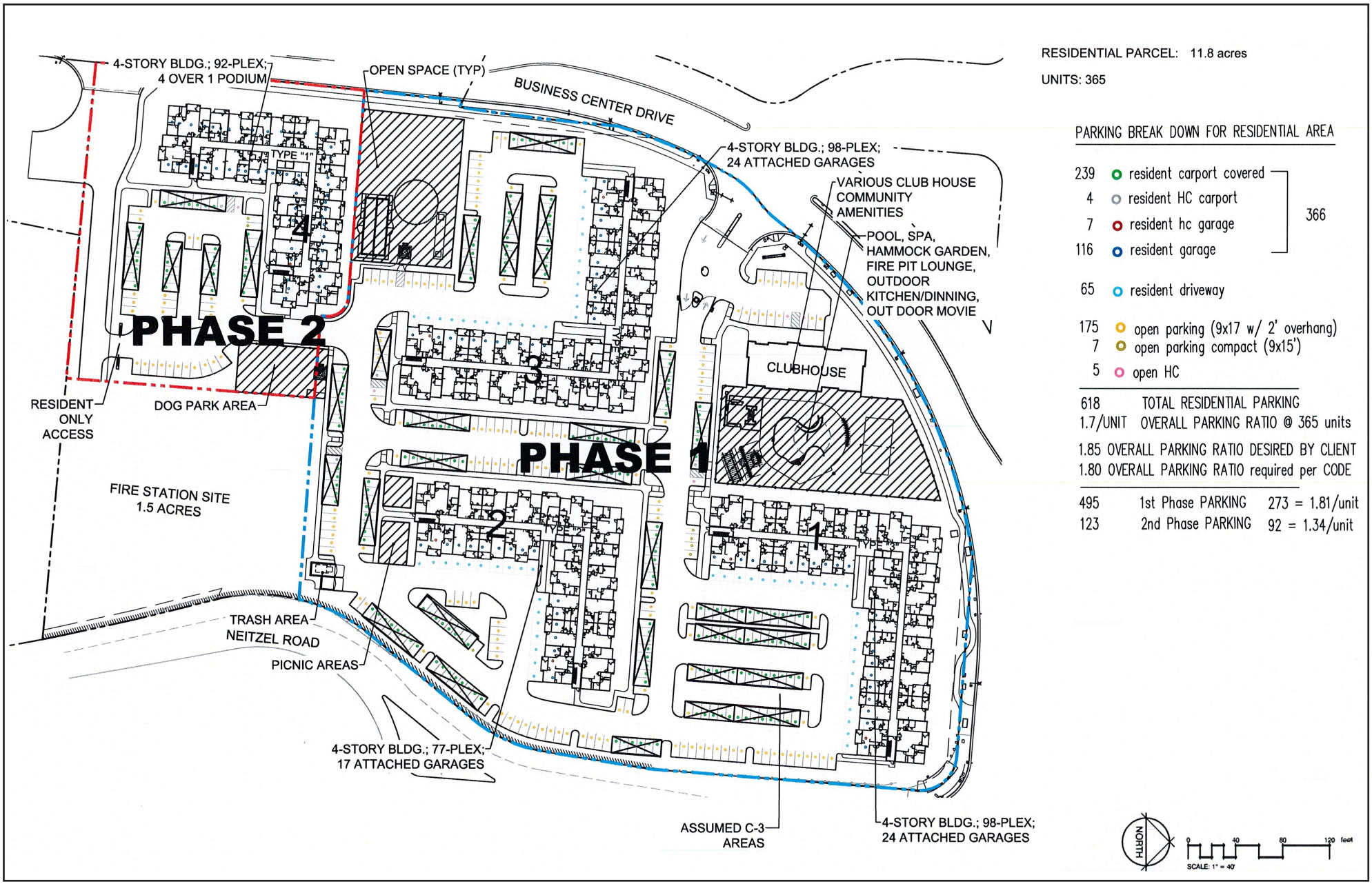
			Trips					
			AM Peak Hour			PM Peak Hour		
Land Use	**Quantity**	**Daily**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Apartment	281du	2,080	46	155	201	93	55	148
Fire Station	N/A	100	5	5	10	5	5	10
Modified Alt Trips		***2,180***	***51***	***160***	***211***	***98***	***60***	***158***
Alternative 4 Trips		***2,820***	***64***	***204***	***268***	***123***	***74***	***197***
Delta (Modified – Original)		***-640***	***-13***	***-44***	***-57***	***-25***	***-14***	***-39***

Notes:

4. *1 du = 1 dwelling unit*
5. *Apartment trip generation based on ITE Trip Generation Manual, 10th Edition Land Use Code 220 (Low-Rise Multifamily Housing)*
6. *Fire Station trip generation based on the assumptions of ITE Land Use Code 575 which suggests that a fire station of the size proposed generates about eight PM peak hour trips. Therefore, it was assumed that the fire station would generate 10 AM peak hour trips and 10 PM peak hour trips (five inbound trips and five outbound trips). This assumption would be sufficient to cover a fire station with a size in excess of 20,000 square feet. This level of trip generation is consistent with observations of fire station trip generation in Contra Costa County.*

Source: Fehr & Peers, June 2019.

As shown in **Table 5.0-4**, Modified Alternative 4 results in 57 fewer AM peak hour trips, 39 fewer PM peak hour trips and 640 fewer weekday daily trips versus original Alternative 4 or about a 20 percent reduction in trips.



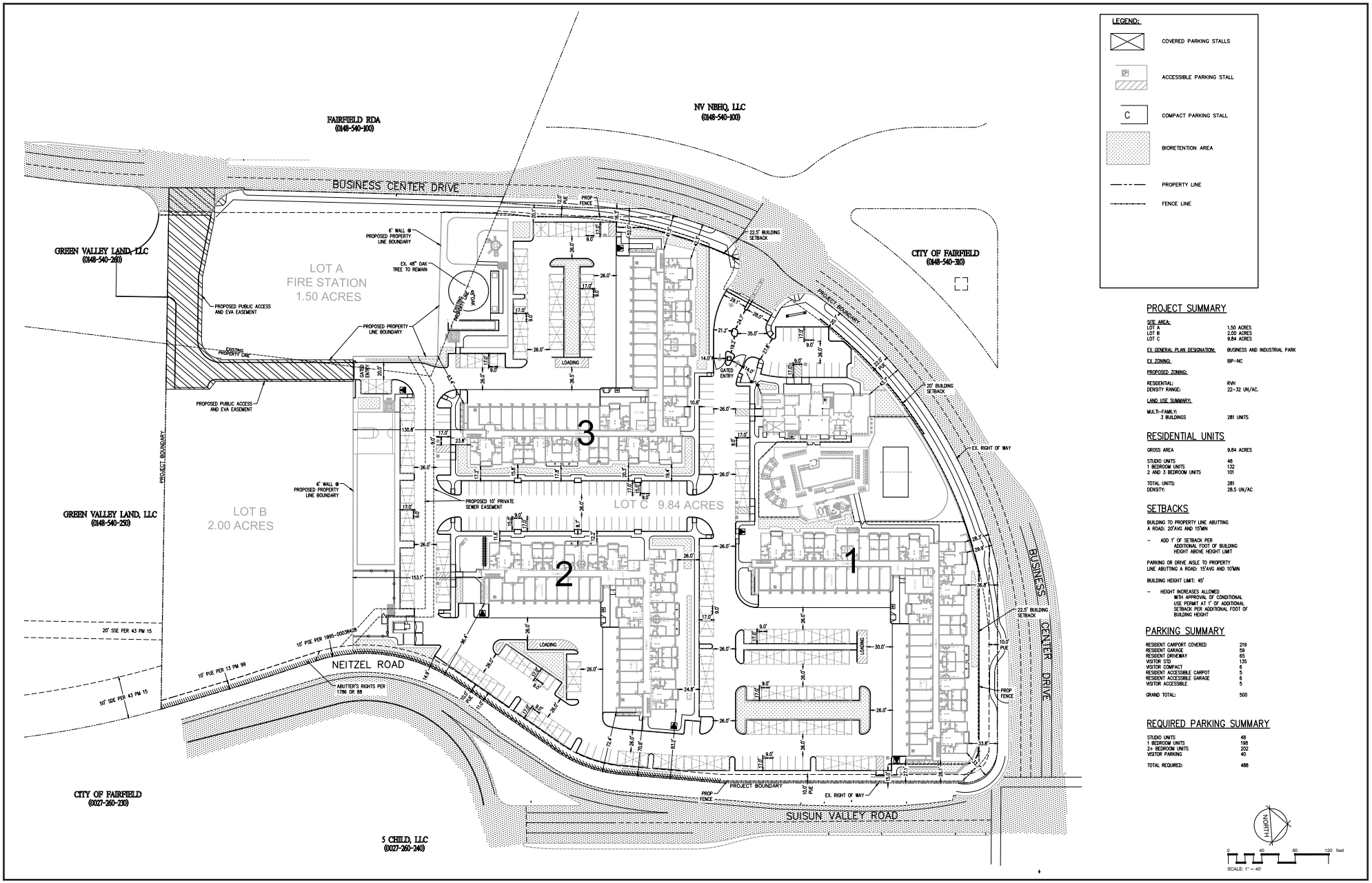
SOURCE: The Spanos Corporation, 2019

FIGURE **5.0-1**

IMPACT SCIENCES

Fire Station / 365-Unit Residential Alternative Site Plan

1328.001•06/19



PROJECT SUMMARY

SITE AREA:	
LOT A	1.50 ACRES
LOT B	2.00 ACRES
LOT C	9.84 ACRES
EX GENERAL PLAN DESIGNATION:	BUSINESS AND INDUSTRIAL PARK
EX ZONING:	IBP–NC
PROPOSED ZONING:	
RESIDENTIAL:	RVH
DENSITY RANGE:	22–32 UN/AC.
LAND USE SUMMARY:	
MULTI–FAMILY: 3 BUILDINGS	281 UNITS

RESIDENTIAL UNITS

GROSS AREA	9.84 ACRES
STUDIO UNITS	48
1 BEDROOM UNITS	132
2 AND 3 BEDROOM UNITS	101
TOTAL UNITS:	281
DENSITY:	28.5 UN/AC

SETBACKS

BUILDING TO PROPERTY LINE ABUTTING A ROAD: 20'AVG AND 15'MIN

– ADD 1' OF SETBACK PER ADDITIONAL FOOT OF BUILDING HEIGHT ABOVE HEIGHT LIMIT

PARKING OR DRIVE AISLE TO PROPERTY LINE ABUTTING A ROAD: 15'AVG AND 10'MIN

BUILDING HEIGHT LIMIT: 45'

– HEIGHT INCREASES ALLOWED WITH APPROVAL OF CONDITIONAL USE PERMIT AT 1' OF ADDITIONAL SETBACK PER ADDITIONAL FOOT OF BUILDING HEIGHT

PARKING SUMMARY

RESIDENT CARPORT COVERED	219
RESIDENT GARAGE	59
RESIDENT DRIVEWAY	65
VISITOR STD	135
VISITOR COMPACT	6
RESIDENT ACCESSIBLE CARPOT	5
RESIDENT ACCESSIBLE GARAGE	6
VISITOR ACCESSIBLE	5
GRAND TOTAL:	500

REQUIRED PARKING SUMMARY

STUDIO UNITS	48
1 BEDROOM UNITS	198
2+ BEDROOM UNITS	202
VISITOR PARKING	40
TOTAL REQUIRED:	488

SOURCE: The Spanos Corporation, 2019

FIGURE **5.0-2**

IMPACT SCIENCES

Fire Station / 281-Unit Residential Alternative Site Plan

Air Quality

Like the proposed project, construction activities associated with the Alternative 4 would result in short-term emissions of criteria pollutants. CalEEMod was used to estimate emissions from the construction of Alternative 4 assuming full build out.

Construction

Criteria Pollutant Emissions

Table 5.0-5, Unmitigated Green Valley II Project Construction Emissions – Alternative 4, shows the average daily construction emissions of ROG, NOX, PM10 exhaust, and PM2.5 exhaust from the construction of Alternative 4. The number of construction days is anticipated to be similar to the proposed project (assumes 532 days), which would occur over approximately two years. As indicated in **Table 5.0-5**, estimated average daily project construction emissions would not exceed the thresholds for ROG, NOx, PM10, and PM2.5. As a result, the impact associated with construction-period emissions of criteria pollutants would be less than significant.

Table 5.0-5
Unmitigated Green Valley II Project Construction Emissions – Alternative 4

	Average Daily Emissions (pounds/day)			
Scenario	**ROG**	**NOx**	**PM10 Exhaust**	**PM2.5 Exhaust**
Average Yearly Construction Emissions (lbs/year)				
2019	1	10	<1	<1
2020	2	14	1	1
2021	11	5	<1	<1
Maximum Average Emissions (lbs/day) [1]	11	14	1	1
Thresholds (lbs/day)	54	54	82	54
Exceeds Threshold?	**No**	**No**	**No**	**No**

Source: Impact Sciences, 2019.
1 - based on 532 construction days

Like construction activities during construction of the proposed project, construction activities would temporarily generate fugitive dust, including PM10 and PM2.5. Sources of fugitive dust would be similar to those identified above under the proposed project. The BAAQMD *CEQA Air Quality Guidelines* consider the impact from a project's construction-phase dust emissions to be less than significant if best

management practices listed in the guidelines are implemented. Without these BMPs, the impact from dust emissions would be potentially significant.

Fugitive Dust

Like the proposed project, construction activities would temporarily generate fugitive dust, including PM10 and PM2.5. Sources of fugitive dust would include disturbed soils at the construction site during grading and haul trucks transporting soils. The BAAQMD *CEQA Air Quality Guidelines* consider the impact from a project's construction-phase dust emissions to be less than significant if best management practices listed in the guidelines are implemented. Without these BMPs, fugitive emissions of PM10 and PM2.5 could result in a cumulatively considerable net increase of criteria pollutants for which the project region is non-attainment under an applicable federal or state ambient air quality standard, and potentially result in adverse health effects. The impact from dust emissions would be potentially significant.

Mitigation Measure AIR-1 requires that the dust control BMPs put forth by the BAAQMD are implemented by the proposed project. With the implementation of the required BAAQMD recommended BMPs pursuant to **Mitigation Measure AIR-1**, the construction of Alternative 4 would not result in substantial emissions of fugitive dust, PM10 or PM2.5, and the impact associated with construction-period emissions of fugitive dust, PM10 and PM2.5 is considered less than significant.

Operations

Operational air pollutant emissions would be generated by similar sources as compared to the proposed project. CalEEMod was used to estimate emissions from operation of the proposed project assuming full build out. The CalEEMod operational emissions modeling outputs are provided in **Appendix 4.1.** Project description information, adjustments to the model, and assumptions used in the modeling are summarized below.

Land Use Descriptions

Project land uses inputs used in CalEEMod to model operational emissions from the entire project are as follows:

- 365 dwelling units: apartments mid-rise, 365,000 square feet of building space, population: 1,110 persons
- Fire Station: Assumed an approximate 5,000 square foot fire station.

Year of Analysis

As discussed above, the earlier the year analyzed in the model, the higher the emission rates used by CalEEMod. The earliest year the project could possibly be constructed and fully occupied would be 2021. Emissions associated with build-out later than 2021 would be lower, because newer vehicles have to meet increasingly more stringent emissions standards.

Trip Generation Rates

CalEEMod allows the user to enter specific vehicle trip generation rates, which were inputted into the model using 2,820 daily trips, which were derived from the generation rates provided in the project traffic report. Weekend rates used in CalEEMod were adjusted proportionally to the weekday rate. The weekend trip rates for the fire station were assumed to be the same as weekday trips. The default trip lengths and trip types specified by CalEEMod were used.

Area Sources

Adjustments were made to the area source inputs of CalEEMod similar to those made under the proposed project. No adjustments were made in CalEEMod for consumer products.

Operational Emissions

Table 5.0-6, Green Valley II Project Operational Emissions – Alternative 4, shows the predicted emissions in terms of annual emissions in tons and average daily operational emissions in pounds per day, assuming 365 days of operation per year. **Appendix 4.1** to this Draft EIR includes the operational CalEEMod model output files. As shown in **Table 5.0-6**, average daily and annual emissions of ROG, NOx, PM10, and PM2.5 emissions associated with operation would be below the BAAQMD significance thresholds. Project operations would not result in a cumulatively considerable net increase of any criterial pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard, and potentially result in adverse health effects. The impact of the project's operational emissions on regional air quality would be less than significant.

Table 5.0-6
Green Valley II Project Operational Emissions – Alternative 4

	Estimated Emissions			
Emissions Source	**ROG**	**NOx**	**PM10 Exhaust**	**PM2.5 Exhaust**
Area Source	1.8	<0.1	<0.1	<0.1

Emissions Source	Estimated Emissions ROG	NO_x	PM10 Exhaust	PM2.5 Exhaust
Energy Source	<0.1	0.2	<0.1	<0.1
Mobile Source	0.8	4.7	<0.1	<0.1
Stationary Source	<0.1	<0.1	<0.1	<0.1
Annual Project Operational Emissions (tons/year)	2.6	4.9	0.1	0.1
Annual Thresholds (tons/year)	*10*	*10*	*15*	*10*
Exceeds Threshold?	***No***	***No***	***No***	***No***
Average Daily Emissions (pounds/day)	14.5	26.7	0.3	0.3
Daily Thresholds (pounds/day)	*54*	*54*	*82*	*54*
Exceeds Threshold?	***No***	***No***	***No***	***No***

Source: Impact Sciences, 2019

Toxic Air Contaminants

Project construction emissions and operational emissions generated by project operations would have the potential to expose sensitive receptors to substantial pollutant concentrations. As illustrated in the tables above and **Tables 4.1-6** and **4.1-7**, the proposed project is anticipated to have similar emissions of PM10 and PM2.5 exhaust. As a result, emissions of DPM are not anticipated to substantially change between the proposed project and Alternative 4. Therefore, the exposure to substantial pollutant concentrations are expected to remain substantially similar between the proposed project and Alternative 4 and the analysis below would apply to either scenario. While Alternative 4 operation would not result in the exposure of sensitive receptors to substantial pollutant concentrations, construction would have the potential to expose sensitive receptors to substantial TAC concentrations, and the impact would be significant. **Mitigation Measure AIR-3** is set forth below to mitigate this significant impact.

Odors

Project construction would generate localized emissions of diesel exhaust during equipment operation and truck activity under both the proposed project and Alternative 4. These emissions may be noticeable from time to time to adjacent receptors. However, they would be temporary, short-term, and localized and are not likely to result in confirmed odor complaints. Furthermore, BAAQMD BMPs and **Mitigation Measure AIR-3** would be implemented to minimize diesel exhaust emissions emitted on the project site during construction. The odor impact from construction-phase emissions would be less than significant. The proposed project does not include any land uses that could subject existing receptors in the project vicinity to substantial odors, such as waste water treatment, rendering services, fiberglass manufacturing,

and etcetera. There are no sources of substantial odors near the project site that could subject the new residents of the site to substantial odors. There would be no impact on the new residents related to exposure to odors.

Consistency with BAAQMD CAP

As noted above, the 2017 CAP, adopted by the BAAQMD in April 2017, is the air quality plan that is applicable to the nine-county air basin. That plan includes an emissions inventory that is based on projected growth within the Bay Area counties and cities. Because the 2017 CAP was developed after the City of Fairfield updated its 2014 Housing Element and related Land Use Policies, the CAP reflects the projected population and employment growth for the City of Fairfield, including the growth associated with the proposed project. The City of Fairfield 2014 Housing Element projects that 1,541 multi-family housing units will be developed between the years 2014 and 2022. The proposed project accounts for approximately 17.5 percent of the projected multi-family growth in the 2014 Housing Element under the proposed project, and 23.7 percent of the projected growth under Alternative 4. The project site's zoning and designation in the General Plan would be amended to accommodate such growth. Per Chapter 25.47 of the City's Municipal Code, the proposed project would have to be consistent with the goals, policies, and actions of the General Plan in order to receive City approval. This would ensure consistency with the General Plan growth assumptions, and therefore with the adopted CAP.

Since the growth in emissions due to operation of the proposed project and Alternative 4 would be accounted for in the development projections in the current CAP and the project's operational emissions do not exceed the BAAQMD numeric thresholds under both alternatives, each alternative would not be considered to be in conflict with the CAP, nor would the either alternative obstruct the plan's implementation. The impact would be less than significant.

Under the Fire Station/Residential alternative, emissions of criteria pollutants during construction would be slightly higher as the amount of building space constructed under this alternative (370,000 square feet) would be 27 percent higher than the amount of building space constructed under the proposed project (270,600 square feet). However, the amount of fugitive dust generated by this alternative would be the same, as the same amount of area that would be disturbed under this alternative as would be that same as the amount of area disturbed under the proposed project, and this alternative would implement the same mitigation measure as the proposed project to reduce the impact from fugitive dust emissions to a less than significant level. Finally, the lifetime excess cancer risk per million from the construction of the proposed office uses under the Fire Station/Residential alternative combined with other sources in the area would still remain above the applicable threshold. Mitigation measures identified for the proposed project would also apply to this alternative to reduce the impact to a less than significant level.

With respect to operational emissions, under the Fire Station/Residential alternative, emissions of ROG and NOX from area sources would slightly increase as the amount of space constructed under this alternative would be slightly higher than the amount of space constructed under the proposed project (as noted above). However, emissions of ROG and NOX from mobile sources under this alternative would be lower compared to the proposed project as a result of fewer trips being generated as compared to the proposed project. Total ROG emissions would slightly increase as compared to the proposed project, and NOx emissions would slightly decrease as compared to the proposed project. Emissions would remain below BAAQMD thresholds of significance, and impacts would remain less than significant.

Air Quality

Like the proposed project, construction activities associated with the Modified Alternative 4 would result in short-term emissions of criteria pollutants. CalEEMod was used to estimate emissions from the construction of Modified Alternative 4 assuming full build out.

Construction

Criteria Pollutant Emissions

Table 5.0-7, Unmitigated Green Valley II Project Construction Emissions – Modified Alternative 4, shows the average daily construction emissions of ROG, NOX, PM10 exhaust, and PM2.5 exhaust from the construction of Modified Alternative 4. The number of construction days is anticipated to be similar to the proposed project (assumes 532 days), which would occur over approximately two years. As indicated in **Table 5.0-7**, estimated average daily project construction emissions would not exceed the thresholds for ROG, NOx, PM10, and PM2.5. As a result, the impact associated with construction-period emissions of criteria pollutants would be less than significant.

Table 5.0-7
Unmitigated Green Valley II Project Construction Emissions – Modified Alternative 4

	Average Daily Emissions (pounds/day)			
Scenario	**ROG**	**NOx**	**PM10 Exhaust**	**PM2.5 Exhaust**
Average Yearly Construction Emissions (lbs/year)				
2019	1	10	<1	<1
2020	2	14	1	1
2021	8	5	<1	<1
Maximum Average Emissions (lbs/day) [1]	11	14	1	1

Scenario	Average Daily Emissions (pounds/day) ROG	NO_x	PM10 Exhaust	PM2.5 Exhaust
Thresholds (lbs/day)	54	54	82	54
Exceeds Threshold?	**No**	**No**	**No**	**No**

Source: Impact Sciences, 2019.
1 - based on 532 construction days

Like construction activities during construction of the proposed project, construction activities would temporarily generate fugitive dust, including PM10 and PM2.5. Sources of fugitive dust would be slightly lower than those identified above under the proposed project. The BAAQMD *CEQA Air Quality Guidelines* consider the impact from a project's construction-phase dust emissions to be less than significant if best management practices listed in the guidelines are implemented. Without these BMPs, the impact from dust emissions would be potentially significant.

Fugitive Dust

Like the proposed project, construction activities would temporarily generate fugitive dust, including PM10 and PM2.5. Sources of fugitive dust would include disturbed soils at the construction site during grading and haul trucks transporting soils. The BAAQMD *CEQA Air Quality Guidelines* consider the impact from a project's construction-phase dust emissions to be less than significant if best management practices listed in the guidelines are implemented. Without these BMPs, fugitive emissions of PM10 and PM2.5 could result in a cumulatively considerable net increase of criteria pollutants for which the project region is non-attainment under an applicable federal or state ambient air quality standard, and potentially result in adverse health effects. The impact from dust emissions would be potentially significant.

Mitigation Measure AIR-1 requires that the dust control BMPs put forth by the BAAQMD are implemented by the proposed project. With the implementation of the required BAAQMD recommended BMPs pursuant to **Mitigation Measure AIR-1**, the construction of Modified Alternative 4 would not result in substantial emissions of fugitive dust, PM10 or PM2.5, and the impact associated with construction-period emissions of fugitive dust, PM10 and PM2.5 is considered less than significant.

Operations

Operational air pollutant emissions would be generated by similar sources as compared to the proposed project. CalEEMod was used to estimate emissions from operation of the proposed project assuming full build out. The CalEEMod operational emissions modeling outputs are provided in **Appendix 4.1.** Project

description information, adjustments to the model, and assumptions used in the modeling are summarized below.

Land Use Descriptions

Project land uses inputs used in CalEEMod to model operational emissions from the entire project are as follows:

- 281 dwelling units: apartments mid-rise, 281,000 square feet of building space, population: 854 persons
- Fire Station: Assumed an approximate 5,000 square foot fire station.

Year of Analysis

As discussed above, the earlier the year analyzed in the model, the higher the emission rates used by CalEEMod. The earliest year the project could possibly be constructed and fully occupied would be 2021. Emissions associated with build-out later than 2021 would be lower, because newer vehicles have to meet increasingly more stringent emissions standards.

Trip Generation Rates

CalEEMod allows the user to enter specific vehicle trip generation rates, which were inputted into the model using 2,180 daily trips, which were derived from the generation rates provided in the project traffic report. Weekend rates used in CalEEMod were adjusted proportionally to the weekday rate. The weekend trip rates for the fire station were assumed to be the same as weekday trips. The default trip lengths and trip types specified by CalEEMod were used.

Area Sources

Adjustments were made to the area source inputs of CalEEMod similar to those made under the proposed project. No adjustments were made in CalEEMod for consumer products.

Operational Emissions

Table 5.0-8, Green Valley II Project Operational Emissions – Modified Alternative 4, shows the predicted emissions in terms of annual emissions in tons and average daily operational emissions in pounds per day, assuming 365 days of operation per year. **Appendix 4.1** to this Draft EIR includes the operational CalEEMod model output files. As shown in **Table 5.0-8**, average daily and annual emissions of ROG, NOx, PM10, and PM2.5 emissions associated with operation would be below the BAAQMD significance thresholds. Project operations would not result in a cumulatively considerable net increase of

any criterial pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard, and potentially result in adverse health effects. The impact of the project's operational emissions on regional air quality would be less than significant.

Table 5.0-8
Green Valley II Project Operational Emissions – Modified Alternative 4

	Estimated Emissions			
Emissions Source	**ROG**	**NOx**	**PM10 Exhaust**	**PM2.5 Exhaust**
Area Source	1.4	<0.1	<0.1	<0.1
Energy Source	<0.1	0.1	<0.1	<0.1
Mobile Source	0.6	3.7	<0.1	<0.1
Stationary Source	<0.1	<0.1	<0.1	<0.1
Annual Project Operational Emissions (tons/year)	2.1	3.9	<0.1	<0.1
Annual Thresholds (tons/year)	*10*	*10*	*15*	*10*
Exceeds Threshold?	***No***	***No***	***No***	***No***
Average Daily Emissions (pounds/day)	11.3	21.1	0.2	0.2
Daily Thresholds (pounds/day)	*54*	*54*	*82*	*54*
Exceeds Threshold?	***No***	***No***	***No***	***No***

Source: Impact Sciences, 2019

Toxic Air Contaminants

Project construction emissions and operational emissions generated by project operations would have the potential to expose sensitive receptors to substantial pollutant concentrations. As illustrated in the tables above and **Tables 4.1-6** and **4.1-7**, the proposed project is anticipated to have similar emissions of PM10 and PM2.5 exhaust. As a result, emissions of DPM are not anticipated to substantially change between the proposed project and Alternative 5. Therefore, the exposure to substantial pollutant concentrations are expected to remain substantially similar between the proposed project and Alternative 5 and the analysis below would apply to either scenario. While Modified Alternative 4 operation would not result in the exposure of sensitive receptors to substantial pollutant concentrations, construction would have the potential to expose sensitive receptors to substantial TAC concentrations, and the impact would be significant. **Mitigation Measure AIR-3** is set forth below to mitigate this significant impact.

Odors

Project construction would generate localized emissions of diesel exhaust during equipment operation and truck activity under both the proposed project and Modified Alternative 4. These emissions may be noticeable from time to time to adjacent receptors. However, they would be temporary, short-term, and localized and are not likely to result in confirmed odor complaints. Furthermore, BAAQMD BMPs and **Mitigation Measure AIR-3** would be implemented to minimize diesel exhaust emissions emitted on the project site during construction. The odor impact from construction-phase emissions would be less than significant. The proposed project does not include any land uses that could subject existing receptors in the project vicinity to substantial odors, such as waste water treatment, rendering services, fiberglass manufacturing, and etcetera. There are no sources of substantial odors near the project site that could subject the new residents of the site to substantial odors. There would be no impact on the new residents related to exposure to odors.

Consistency with BAAQMD CAP

As noted above, the 2017 CAP, adopted by the BAAQMD in April 2017, is the air quality plan that is applicable to the nine-county air basin. That plan includes an emissions inventory that is based on projected growth within the Bay Area counties and cities. Because the 2017 CAP was developed after the City of Fairfield updated its 2014 Housing Element and related Land Use Policies, the CAP reflects the projected population and employment growth for the City of Fairfield, including the growth associated with the proposed project. The City of Fairfield 2014 Housing Element projects that 1,541 multi-family housing units will be developed between the years 2014 and 2022. The proposed project accounts for approximately 17.5 percent of the projected multi-family growth in the 2014 Housing Element under the proposed project, and 18.2 percent of the projected growth under Alternative 5. The project site's zoning and designation in the General Plan would be amended to accommodate such growth. Per Chapter 25.47 of the City's Municipal Code, the proposed project would have to be consistent with the goals, policies, and actions of the General Plan in order to receive City approval. This would ensure consistency with the General Plan growth assumptions, and therefore with the adopted CAP.

Since the growth in emissions due to operation of the proposed project and Modified Alternative 4 would be accounted for in the development projections in the current CAP and the project's operational emissions do not exceed the BAAQMD numeric thresholds under both alternatives, each alternative would not be considered to be in conflict with the CAP, nor would the either alternative obstruct the plan's implementation. The impact would be less than significant.

Under the Fire Station/Residential alternative, emissions of criteria pollutants during construction would be slightly higher as the amount of building space constructed under this alternative (286,000 square feet) would be 6 percent higher than the amount of building space constructed under the proposed project (270,600 square feet). However, the amount of fugitive dust generated by this alternative would be the same, as the same amount of area that would be disturbed under this alternative as would be that same as the amount of area disturbed under the proposed project, and this alternative would implement the same mitigation measure as the proposed project to reduce the impact from fugitive dust emissions to a less than significant level. Finally, the lifetime excess cancer risk per million from the construction of the proposed office uses under the Fire Station/Residential alternative combined with other sources in the area would still remain above the applicable threshold. Mitigation measures identified for the proposed project would also apply to this alternative to reduce the impact to a less than significant level.

With respect to operational emissions, under the Fire Station/Residential alternative, emissions of ROG and NOX from area sources would slightly increase as the amount of space constructed under this alternative would be slightly higher than the amount of space constructed under the proposed project (as noted above). However, emissions of ROG and NOX from mobile sources under this alternative would be lower compared to the proposed project as a result of fewer trips being generated as compared to the proposed project. Total ROG emissions would slightly increase as compared to the proposed project, and NOx emissions would slightly decrease as compared to the proposed project. Emissions would remain below BAAQMD thresholds of significance, and impacts would remain less than significant.

Biological Resources

Similar to the proposed project, the Fire Station/Residential alternative would have the potential to result in a potentially significant impact to special-status wildlife species and nesting birds. However, the mitigation measures identified for the proposed project would also apply to this alternative to reduce the impact to a less than significant level. In addition, this alternative would not indirectly affect any riparian habitat, sensitive natural community, or wetlands nor interfere with the movement of any wildlife species as these resources are not located on the project site. This alternative would similarly not conflict with an adopted habitat conservation plan. Finally, the design of this alternative is also likely to incorporate the existing oak tree on the project site that is protected under the City's Tree Protection Ordinance. This impact would remain less than significant. Impacts under the Modified Alternative 4 would be similar and would remain less than significant.

Cultural Resources and Tribal Cultural Resources

Similar to the proposed project, the Fire Station/Residential alternative would also have the potential to disturb unknown archaeological resources and human remains. However, the same mitigation measures identified for the proposed project would also be applied to this alternative to reduce impacts to a less than significant level. The same less than significant impacts associated with historic architectural, paleontological, and tribal cultural resources would also occur under this alternative. Impacts under the Modified Alternative 4 would be similar and would remain less than significant.

Greenhouse Gas Emissions

Construction GHG Emissions

Emissions associated with construction of Alternative 4 are anticipated to occur between Summer 2020 and Summer 2022. Project construction activities include site preparation, grading, building construction, pavement and asphalt installation, landscaping and hardscaping, and architectural coatings. Based on the result of CalEEMod modeling, approximately 1,681 $MTCO_2e$ of GHG emissions would be emitted during the 2-year project construction period.

The BAAQMD has not yet set forth quantitative thresholds for the evaluation of construction-phase GHG emissions. Construction GHG estimates are presented for informational purposes only.

Operational GHG Emissions

Table 5.0-9, Green Valley II Annual Operational Emissions – Alternative 4, presents the results of the CalEEMod model analysis in terms of annual MTCO2e. As shown in **Table 5.0-9** below, operation of the project would generate approximately 3,266 MTCO2e/year. The daily service population associated with the proposed project would be approximately 1,114 persons.[4] The per capita emissions would be 2.9 MTCO2e/per capita/year, which would be below the BAAQMD efficiency threshold of 4.6 MTCO2e/capita/year and the calculated SB 32 2021 based efficiency threshold of 4.4 MTCO2e/capita/year used in this Draft EIR to quantify emissions. However, as shown below, this alternative would exceed the geographically specific 2030 efficiency threshold. Due to the uncertain and evolving nature of GHG analysis, thresholds are provided for informational purposes only.

4 Service population = 1,110 residents + at least 4 firefighters.

Table 5.0-9
Green Valley II Annual Operational Emissions – Alternative 4

Source	Emissions (in MTCO2e)
Area	5
Energy	227
Mobile	2,876
Stationary	1
Waste	88
Water	70
Total Operational Emissions (2021)	**3,266**
Per Capita Emissions	**2.9 MT/capita/year**
BAAQMD Efficiency Threshold	4.6 MT/capita/year
Exceed Threshold?	No
SB 32 based **2021** Efficiency Threshold	4.42 MT/capita/year
Exceed Threshold?	No
SB 32 based **2030** Efficiency Threshold	2.75 MT/capita/year
Exceed Threshold?	**Yes**

Consistency with EO S-3-05, AB 32, SB 350, and SB 32

The proposed project and Alternative 4 would have substantially the same project design features which serve to reduce GHG emissions and VMT, and would have a lower rate of emissions. Therefore, Alternative 4 is consistent with the applicable laws, plans and policies adopted for the purpose of reducing the emissions of GHG emissions. The impact would be less than significant.

Under the Fire Station/Residential alternative, GHG emissions from area sources during operation would slightly increase as the amount of space constructed under this alternative (370,000 square feet square feet) would be greater than the amount of space constructed under proposed project (248,000 square feet) while GHG emissions from mobile sources would decrease as the number of vehicle trips generated under this alternative would be less than the number of vehicle trips generated under the proposed project. The increase in GHG emissions from area sources under the Fire Station/Residential alternative due to an increase in building space would not increase the overall level of GHG emissions as a majority of the project's GHG emissions are generated by mobile sources, which would decrease under this alternative. The GHG impacts of the alternative would remain less than significant.

Construction GHG Emissions – Modified Alternative 4

Emissions associated with construction of Modified Alternative 4 are anticipated to occur between Summer 2020 and Summer 2022. Project construction activities include site preparation, grading, building construction, pavement and asphalt installation, landscaping and hardscaping, and architectural coatings. Based on the result of CalEEMod modeling, approximately 1,588 $MTCO_2e$ of GHG emissions would be emitted during the 2-year project construction period.

The BAAQMD has not yet set forth quantitative thresholds for the evaluation of construction-phase GHG emissions. Construction GHG estimates are presented for informational purposes only.

Operational GHG Emissions

Table 5.0-10, Green Valley II Annual Operational Emissions – Modified Alternative 4, presents the results of the CalEEMod model analysis in terms of annual MTCO2e. As shown in **Table 5.0-10** below, operation of the project would generate approximately 2,790 MTCO2e/year. The daily service population associated with the proposed project would be approximately 858 persons.[5] The per capita emissions would be 3.3 MTCO2e/per capita/year, which would be below the BAAQMD efficiency threshold of 4.6 MTCO2e/capita/year and the calculated SB 32 based efficiency threshold of 4.4 MTCO2e/capita/year used in this Draft EIR to quantify emissions. However, as shown below, this alternative would exceed the geographically specific 2030 efficiency threshold. Due to the uncertain and evolving nature of GHG analysis, thresholds are provided for informational purposes only.

Table 5.0-10
Green Valley II Annual Operational Emissions – Modified Alternative 4

Source	Emissions (in MTCO2e)
Area	4
Energy	390
Mobile	2,272
Stationary	1
Waste	68
Water	55
Total Operational Emissions (2021)	**2,790**
Per Capita Emissions	**3.3 MT/capita/year**

5 Service population = 854 residents + at least 4 firefighters.

Source	Emissions (in MTCO2e)
BAAQMD Efficiency Threshold	4.6 MT/capita/year
Exceed Threshold?	No
SB 32 based **2021** Efficiency Threshold	4.42 MT/capita/year
Exceed Threshold?	No
SB 32 based **2030** Efficiency Threshold	2.75 MT/capita/year
Exceed Threshold?	**Yes**

Consistency with EO S-3-05, AB 32, SB 350, and SB 32

The proposed project and Modified Alternative 4 would have substantially the same project design features which serve to reduce GHG emissions and VMT, and would have a lower rate of emissions. Therefore, Modified Alternative 4 is consistent with the applicable laws, plans and policies adopted for the purpose of reducing the emissions of GHG emissions. The impact would be less than significant.

Under the Fire Station/Residential alternative, GHG emissions from area sources during operation would slightly increase as the amount of space constructed under this alternative (286,000 square feet square feet) would be greater than the amount of space constructed under proposed project (248,000 square feet) while GHG emissions from mobile sources would decrease as the number of vehicle trips generated under this alternative would be less than the number of vehicle trips generated under the proposed project. The increase in GHG emissions from area sources under the Fire Station/Residential alternative due to an increase in building space would not increase the overall level of GHG emissions as a majority of the project's GHG emissions are generated by mobile sources, which would decrease under this alternative. The GHG impacts of the alternative would remain less than significant.

Hazards and Hazardous Materials

Similar to the proposed project, the construction and operation of the proposed residential and commercial uses under the Fire Station/Residential alternative would not generally involve the use, transport, or disposal of significant amounts of hazardous materials. In addition, the proposed fire protection and residential uses under this alternative would also not create a significant hazard to future employees and visitors on the project site as the site is not located on a list of hazardous material sites subject to corrective action compiled pursuant to Government Code Section 65962.5 and the concentration of arsenic in soils on site would remain below screening levels. Similarly, fire personnel, residents, and visitors to the proposed fire protection and residential uses under this alternative would

also not be exposed to hazards associated with past contamination or storage of chemicals on nearby site as these sites have either received regulatory closure or adherence to existing federal, state, and local regulations regarding storage. Similar to the proposed project, this alternative would require mitigation to address expansive soils. Finally, like the proposed project, operation of the proposed fire protection and residential uses under this alternative would not involve any hazardous emissions that could affect a nearby school. For these reasons and similar to the proposed project, impacts related to hazards and hazardous materials under the Fire Station/Residential alternative would remain less than significant.

Land Use and Planning

Similar to the proposed project, the Fire Station/Residential alternative would require a general plan amendment as well as rezoning. With these amendments, the alternative would also not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect. As with the proposed project, this impact would be less than significant.

Noise

Traffic Noise

Operation of both the proposed project and Alternative 4 would result in a traffic volume increase of approximately 15 percent during the existing plus project scenario at Business Center Drive, between NorthBay Driveway and Neitzel Road, which is the most affected street segment from proposed project operation. Future plus project traffic volumes would increase approximately 77 percent as compared to existing conditions for both the proposed project and also Alternative 4, and the future plus project traffic volumes would increase approximately three percent as compared to the cumulative baseline for both alternatives. Operation of Modified Alternative 4 would result in a traffic volume decrease of approximately 29 percent as compared to Alternative 4. As Alternative 4 is not anticipated to audibly increase traffic noise levels, Modified Alternative 4 is also not anticipated to create an audible traffic noise level increase.

According to Caltrans, an audible increase in traffic noise (3 dBA) requires an approximate doubling of traffic volumes (Caltrans 2013b). Because traffic volumes are not anticipated to double under any scenario, it is not anticipated that there would be an audible increase in traffic noise. As previously discussed, the noise measured at the project site was 62 dBA CNEL. A significant increase in traffic noise in the project vicinity would be 3 dBA. Because the project would not result in a 3 dBA or greater increase in traffic noise, this impact is considered less than significant.

Heating, Ventilation, and Air Conditioning

Substantially similar HVAC systems that would be installed for the proposed project would be installed under Alternative 4, and it is assumed that under Alternative 4, the HVAC systems would be a similar distance to off-site sensitive receptors as compared to the proposed project. According to Section 25.1405 of the Fairfield Municipal Code, sound sources associated with residential uses, such as air conditioning and similar equipment, are exempt from provisions presented in the Fairfield Municipal Code. Because noise generated by HVAC systems would not exceed the ambient sound levels and is exempt from the standards presented in the Fairfield Municipal Code, this impact would be less than significant.

Fire Station Operations

The proposed fire station located at the southwest corner of the project site under Alternative 4 would be occupied and operated 24 hours per day, 7 days per week. The majority of operations would occur during daytime hours; however, emergency vehicle operations would potentially occur at any time of the day or night. Sirens from ambulances and fire engines can produce noise levels of up to 113dBA at a distance of 40 feet (City of Los Angeles 2016), which can be both an annoyance and potentially damaging to hearing if a human is exposed to this noise level for more than 15 minutes at a time. Of the previously identified sensitive receptors nearest to the project site, this could result in noise level increases of up to approximately 39 dBA when an emergency vehicle is leaving the station, and an increase of up to 54 dBA if the vehicle is passing within 50 feet of a receptor. As emergency vehicles are considered mobile sources using public roadways, mitigating potential noise impacts from emergency vehicles on public roadways is not feasible. Further, it would not be possible to predict all possible routes that an emergency vehicle would travel along to every call.

Under Section 25.1405 of the City of Fairfield Municipal Code, authorized government personnel providing emergency response to the general public, including the operation of emergency response vehicles and equipment, is exempt from the noise regulations presented in the Municipal Code and would not be considered an impact under CEQA. Therefore, this impact would be less than significant.

On-Site Construction Equipment and Activities

The project site boundary is not expected to differ between the proposed project and Alternative 4 or Modified Alternative 4. As such, the distance between construction noise sources and off-site sensitive receptors would not change significantly. As a result, construction noise would be substantially similar as compared to the proposed project.

Because construction activities would elevate ambient noise levels by more than 5 dB(A) at one or more of the adjacent sensitive receptors, mitigation measures **MM NOI-1** through **MM NOI-5** are required to reduce construction noise level increases to less than 5 dB(A). Following the implementation of the mitigation measures, impacts would be less than significant.

Off-Site Haul Trucks

Like on-site construction noise, the haul truck route for trucks transporting material to and from the project site would not change between the proposed project and Alternative 4 or Modified Alternative 4. As such, the distance between off-site construction noise sources and off-site sensitive receptors would not change significantly. As a result, construction noise would be substantially similar as compared to the proposed project.

Trucks removing debris and soil or delivering construction materials to and from the project site during construction has the potential to generate increased noise levels at off-site sensitive receptors. However, because of the proximity of the project site to the Interstate 80 (I-80), haul trucks are not anticipated to pass nearby sensitive land uses prior to accessing the I-80. As a result, nearby sensitive off-site land uses are not anticipated to be exposed to increased ambient noise levels due to passing haul trucks. This impact is considered less than significant.

Mitigation Measures: Mitigation measures **MM NOI-1** through **MM NOI-5** are required to reduce ambient noise levels during construction.

Construction Vibration

The project site boundary is not expected to differ between the proposed project and Alternative 4 or Modified Alternative 4. As such, the distance between construction vibration sources and off-site sensitive receptors would not change significantly. As a result, construction vibration would be substantially similar between both alternatives. Implementation of Alternative 4, like the proposed project, would not expose persons to or generate excessive groundborne vibration or groundborne noise levels, and this impact would be less than significant.

Operational Vibration

During operation of both the proposed project and Alternative 4 and Modified Alternative 4, there would not be significant stationary sources of ground-borne vibration, such as heavy equipment operations. Operational ground-borne vibration in the project vicinity would be generated by vehicular travel on the local roadways. Vehicles traveling on paved roads rarely create enough groundborne vibration to be perceptible to humans unless the road surface is poorly maintained and there are potholes or bumps. If

traffic, typically heavy trucks, induces perceptible vibration in buildings, such as window rattling or shaking of small loose items, then it is most likely an effect of low-frequency airborne noise or ground characteristics. Project-related traffic would expose residential land uses during long-term operation to a vibration levels that are unlikely to be perceptible to humans and would be considered less than significant.

Public Services and Recreation

Implementation of the Alternative 4 would add approximately 1,110 residents[6] to the population of Fairfield, as opposed to the 821 residents under the proposed project, thus the demand for fire, police, and library services, schools, and parks and recreation facilities would be greater. Modified Alternative 4 would add approximately 854 persons to the project site which would also be slightly greater than the proposed project.

Fire Protection

Similar to the proposed project, the proposed new residential uses are expected to create the typical range of fire service calls that other such uses create, including kitchen/house fires, garbage bin fires, car fires, electrical fires, etc. Impacts associated with the additional residents include an increase in the number of fire department responses, routine fire prevention life/safety inspections, public education activities, participation in community events, and ongoing relations with the homeowners.

Similar to the proposed project, Alternative 4 and Modified Alternative 4 would be designed to include any Code-required fire safety features and emergency safety provisions, and in would comply with the Building Code, Fire Code, and other FFD requirements. In addition, the alternative would include a new fire station. As discussed in Section 4.8 Public Services, the area covered by Station 35 is developing and the numbers of calls for service in the area are expected to increase as future development is built. In addition, the area covered by Station 35 is split by I-80, which presents unique challenges in responding to calls for service as Station 35 is located on the south side of I-80 and there are a limited number of crossings over the freeway to the north side of I-80 where the project site is located. As a result, it is likely that as more development occurs in the Green Valley and Cordelia areas, the project site will fall outside the five-minute travel range of Station 35. This fire station would meet the need for a fire station north of I-80 and would be expected to decrease overall response times. Therefore, impacts related to response times would be less than significant.

6 Based on an average household size of 3.04 persons for the City of Fairfield (DOF 2018).

Police Protection

Similar to the proposed project, the new residents, and visitors to the site would be expected to increase the demand on existing police protection services. However, as there is no commercial component under this Alternative, service calls would be expected to decrease as compared to the proposed project. Similar to the proposed project, the FPD would also review the site design during the planning and building plan check process with respect to lighting, landscaping, building access and visibility, street circulation, building design, and defensible space, as well as implement the FPD's ***Fairfield Police Department Crime Free Multi-Housing Program***. Incorporation of the Department's recommendations would further reduce the number of service calls and potential impacts to the FPD. Similar to the proposed project, the Applicant will be required to pay AB 1600 fees which are a group of four fees which pay for City and Public facilities and would offset costs associated with the accommodation of additional officers and equipment. Similar to the proposed project, impacts under this Alternative are not anticipated to generate a demand for additional police protection services that could exceed the FPD's capacity to serve the Project Site. Therefore, operations under this Alternative would not necessitate the provision of new or physically altered government facilities, the construction of which would cause significant environmental impacts, in order to maintain FPD's capability to serve the Site and impacts would be less than significant.

Schools

Implementation of Alternative 4 would add approximately 1,110 residents to the population of Fairfield. As indicated in **Table 5.0-11, Alternative 4 Student Generation**, the alternative would generate 194 students in grades K-6, 31 students in grades 7-8, and 50 students in grades 9-12 for a total of 275 students.

Table 5.0-11
Alternative 4 Student Generation

Grade Group	Multi-Family Generation Rate[1]	Students
K-6	0.532	194
7-8	0.085	31
9-12	0.138	50
Total	**0.755**	**275**

Source: School Facility Needs Analysis and Justification Study, 2018, Table 1-1
1 Students per unit

As discussed in section **4.8, Public Services - Schools**, the Fairfield Unified School District (FSUSD) does not have current capacity to accommodate an influx of new elementary and middle school students generated by the proposed project although some capacity may be available in the future during the 2025-26 academic school year. In addition, while the FSUSD currently has some capacity to accept new high school students, it is expected that no capacity will be available in the future 2025-26 academic school year. As such existing schools would operate over capacity in future years to accommodate student population generated as a result of the proposed project and new or expanded school facilities would be required. This would be a potentially significant impact.

According to the FSUSD's Facilities Master Plan, all expansion or construction of new facilities would occur on existing campuses and priority projects have been identified. In order to offset the costs of new construction due to increased future student generation, the FSUSD has established developer fees to pay for new school expansion and construction. The developer fees are $6.14 per square foot of residential development and $0.56 per square foot for commercial development. In addition, the school district would receive a portion of the property taxes collected annually after the project is constructed. According to SB 50, payment of developer fees constitutes full mitigation of any school impacts under CEQA. Modified Alternative 4 would generate fewer students overall, impacts would still be mitigated through payment of developer fees. Therefore, similar to the proposed project, following the payment of developer fees, impacts under Alternative 4 and Modified Alternative 4 would be less than significant.

Libraries

As noted above, Alternative 4 would increase the population of the City of Fairfield by approximately 1,110 persons, thereby increasing demand on library facilities. The Fairfield Cordelia branch currently provides 0.4 square feet of library space and 1.2 volumes per capita. Based on a planning standard of 0.5 square feet of library space and two volumes per capita recommended by the American Library Association, the proposed project would generate the need for approximately 555 square feet of additional library space and about 2,220 additional volumes. As previously discussed in section **4.8, Impact PS-4**, the local area libraries are operated by the County of Solano. As such, the Supervising Librarian of the Fairfield Cordelia branch has indicated that it does have capacity, along with Fairfield's Civic Library Branch, to reasonably accommodate the demand of residents generated by the proposed project (Madigan 2018). Further, similar to the proposed project, and as provided in the City of Fairfield General Plan, Public Facilities and Services Element **Objective PF 17**, the City of Fairfield would continue to "Assist in the adequate provision of County services." Specifically, **Policy PF 17.1** states that the City shall "Continue to collect fees from new development to fund its share of County-provided facilities and services (e.g. library, health, welfare, and justice system)." As with the proposed project, the increased demand under Alternative 4 would not be substantial enough to necessitate the construction of new or

expanded facilities. Modified Alternative 4 would result in less demand than Alternative 4, but slightly greater demand than the proposed project. The impact associated with library services would be less than significant.

Parks

As noted above, Alternative 4 would increase the population of the City of Fairfield by approximately 1,110 persons, thereby increasing demand for parks owned and maintained by the City of Fairfield's Department of Parks and Recreation. The City strives to provide 1.5 acres of neighborhood parks and 2 acres of community parks per 1,000 residents and therefore, the proposed project would generate the need for approximately 1.2 acres of neighborhood park land and 1.6 acres of community park land. The City currently provides approximately 0.86 acres of neighborhood parkland per 1,000 residents and 1.13 acres of community parkland per 1,000 residents, which is below the City's standard, and the addition of the proposed project would lower these ratios to 0.85 acres of neighborhood parkland per 1,000 residents and 1.12 acres of community parkland per 1,000 residents. Similar to the proposed project, Alternative 4 would include open spaces and amenities; however, the increase in population of approximately 1,110 residents could incrementally increase the use of existing neighborhood and community parks in the vicinity of the project. Use of nearby parks and recreational facilities by the residents of the project could accelerate the wear and tear of local and regional park and recreation facilities, if park use were to increase substantially such that deterioration of existing parks would occur, impacts would be significant.

Similar to the proposed project, Alternative 4 would include a number of amenities including a clubhouse/pool area and several recreation areas, thus decreasing the need for project residents to use local public parks. In addition to providing new park and recreational services to existing and future residents, the proposed project would be subject to AB 1600 developer impact fees, Quimby Act Ordinance requirements, and Bedroom Tax. These fees would go to maintenance of existing parks thereby offsetting improvement costs or toward the development of new parks. Therefore, payment of Quimby fees or dedication of park land would ensure impacts associated with Alternative 4 to parks and other recreational facilities would be less than significant.

Modified Alternative 4 would result in less demand than Alternative 4, but slightly greater demand than the proposed project.

Transportation

Similar to the proposed project, the Fire Station/Residential alternative would increase traffic to and from the project site. As shown in **Table 5.0-3 Fire Station/Residential Alternative Trip Generation**, the Fire Station/Residential alternative would generate 268 trips during the AM peak hour and 197 trips during

the PM peak hour. This would be 59 more trips in the AM and 93 fewer PM peak hour trips as compared to the proposed project. This is to be expected as Alternative 4 includes 365 dwelling units and the proposed project only includes 270 units; retail uses typically generate only a small number of AM peak hour trips. However, in the PM peak hour, the proposed project generates 93 more trips than Alternative 4 due to the higher intensity of PM peak hour activity associated with retail uses. Therefore, it is expected that the relative level of impact in the AM peak hour would be higher with Alternative 4 versus the proposed project; in the PM peak hour, it is expected that the relative level of impact would be higher under the proposed project versus Alternative 4.

Impacts under Existing Plus Project Intersection Conditions

The effects of additional vehicle trips on intersection levels of service were calculated for the Existing plus Project condition, and the resulting levels of service are presented in **Table 5.0-12, Existing and Existing Plus Alternative 4 Intersection LOS Summary**.

Table 5.0-12
Existing and Existing Plus Alternative 4 Intersection LOS Summary

				Existing Conditions		Existing Plus Project Conditions	
	Intersection	Intersection Control	Peak Hour	Avg Delay[1]	LOS[2]	Avg Delay[1]	LOS[2]
1	Mangels Boulevard/ Green Valley Road	Signalized	AM	21.5	C	21.5	C
			PM	21.2	C	21.2	C
2	Business Center Drive/ Green Valley Road	Signalized	AM	34.4	C	36.5	D
			PM	48.0	D	49.7	D
3	Business Center Drive/ Neitzel Road	AWSC	AM	15.6	C	17.0	C
			PM	14.1	B	14.6	B
4	I-80 westbound ramps/ Green Valley Road	Signalized	AM	5.1	A	5.4	A
			PM	4.6	A	4.6	A
5	I-80 eastbound ramps/ Green Valley Road	Signalized	AM	13.8	B	14.4	B
			PM	15.8	B	16.8	B
6	Mangels Boulevard/ Westamerica Drive	Signalized	AM	13.8	B	14.1	B
			PM	13.9	B	13.3	B
7	Business Center Drive/ Center Project Driveway-Westamerica Drive	Signalized	AM	10.2	B	15.7	B
			PM	7.9	A	15.0	B
8	Business Center Drive/ South Project Driveway-NorthBay Driveway	SSSC	AM	0.2 (15.8)	A (C)	2.3 (18.8)	A (C)
			PM	0.6 (13.7)	A (B)	1.6 (20.5)	A (C)

	Intersection	Intersection Control	Peak Hour	Existing Conditions Avg Delay[1]	Existing Conditions LOS[2]	Existing Plus Project Conditions Avg Delay[1]	Existing Plus Project Conditions LOS[2]
9	Westamerica Drive/ Suisun Valley Road	Signalized	AM	14.0	B	14.0	B
			PM	10.9	B	10.9	B
10	Business Center Drive/ Suisun Valley Road	Signalized	AM	22.3	C	23.3	C
			PM	20.7	C	21.6	C
11	I-80 westbound ramps-Neitzel Road/Suisun Valley Road	AWSC	AM	90.7	F	>120	F
			PM	21.1	C	23.9	C
12	I-80 eastbound ramps/ Pittman Road	Signalized	AM	16.8	B	17.8	B
			PM	12.9	B	13.4	B
13	Central Way/ Pittman Road	Signalized	AM	14.2	B	14.3	B
			PM	16.7	B	16.7	B
14	Central Way/ Cordelia Road	SSSC	AM	5.9 (12.1)	A (B)	6.1 (12.2)	A (B)
			PM	6.4 (17.7)	A (C)	6.6 (18.0)	A (C)
15	Lopes Road/ Cordelia Road	SSSC[5]	AM	>120 (>120)	F (F)	>120 (>120)	F (F)
			PM	**>120 (>120)**	**F (F)**	**>120 (>120)**	**F (F)**
16	Lopes Road/ Bridgeport Avenue	SSSC	AM	>120 (>120)	F (F)	>120 (>120)	F (F)
			PM	**111.7 (>120)**	**F (F)**	**>120 (>120)**	**F (F)**

Source: Fehr & Peers, 2019.
Notes:
[1]Whole intersection average delay reported for signalized intersections and all-way stop-controlled intersections. Side-street stop-controlled delay presented as Whole Intersection Average Delay (Worst Movement Delay). Delay calculated per HCM 2010 methodologies.
[2]LOS designation per HCM 2010.
***Bold** indicates unacceptable operations. **Bold and highlighted** indicates a significant impact.*

Presently, two intersections operate below the City's LOS standard:

- Intersection 15: Lopes Road/Cordelia Road
- Intersection 16: Lopes Road/Bridgeport Avenue

Table 5.0-12 indicates that, similar to the proposed project, the addition of project related traffic under this alternative would worsen the operations of Intersections 15 and 16 which are currently operating deficiently under Existing Conditions.

Similar to the proposed project, there would be a less than significant impact to the intersection of Lopes Road/Cordelia Road in the PM peak hour.

Although the intersection of Lopes Road/Bridgeport Avenue operates at an overall LOS F during PM peak hour, the project under this alternative would add less than 10 trips to the northbound approach in the PM peak hour. Therefore, the project under this alternative would avoid the significant impact at this intersection in the PM peak hour and there would be a less than significant impact at this intersection

Impacts on Freeway Segments and Ramps under Existing Conditions

As shown in **Table 5.0-13, Existing and Existing plus Alternative 4 Conditions - Study Freeway Segments LOS Summary**, under this alternative, adding the project freeway traffic would not worsen operations on any of the study freeway segments or ramps from LOS D or better. Therefore, similar to the proposed project, the project under this alternative would have a less than significant impact on freeway operation under Existing plus Project conditions.

Table 5.0-13
Existing and Existing Plus Alternative 4 Conditions – Study Freeway Segment LOS Summary

			Existing Conditions		Existing Plus Project Conditions	
Segment	**Facility Type**	**Peak Hour[1]**	**Density[1]**	**LOS**	**Density [1]**	**LOS**
Westbound I-80						
1. Truck Scales on-ramp to Suisun Valley Road off-ramp	Diverge	AM PM	21.5 16.7	C B	21.6 16.8	C B
2. Suisun Valley Road off-ramp	Diverge	AM PM	28.5 24.5	D C	28.5 24.8	D C
3. Suisun Valley Road off-ramp to Southbound I-680 connector off-ramp	Basic	AM PM	19.6 14.8	C B	19.6 14.8	C B
4. Southbound I-680 connector off-ramp	Major Diverge	AM PM	22.3 16.9	C B	22.3 16.9	C B
5. Southbound I-680 connector off-ramp to Northbound I-680 connector on-ramp	Basic	AM PM	14.9 10.8	B A	14.9 10.8	B A
Eastbound I-80						
6. Green Valley Road/Southbound I-680 connector off-ramp to Northbound I-680 connector/Green Valley Road on-ramp	Basic	AM PM	14.7 17.7	B B	14.7 17.7	B B

Segment	Facility Type	Peak Hour[1]	Existing Conditions		Existing Plus Project Conditions	
			Density[1]	LOS	Density[1]	LOS
7. Northbound I-680 connector/Green Valley on-ramp	Major Merge	AM	21.9	C	21.9	C
		PM	29.5	D	29.6	D
8. Suisun Valley Road off-ramp	Diverge	AM	29.3	D	29.4	D
		PM	32.4	D	32.5	D
9. Suisun Valley Road off-ramp to Suisun Valley Road on-ramp	Basic	AM	19.3	C	19.3	C
		PM	25.6	C	25.6	C
10. Suisun Valley Road on-ramp	Merge	AM	24.0	C	24.5	C
		PM	29.5	D	29.7	D
11. Suisun Valley Road on-ramp to Truck Scales off-ramp	Basic	AM	21.0	C	21.2	C
		PM	28.6	D	28.7	D
Southbound I-680						
12. South of I-80	Basic	AM	29.6	D	29.9	D
		PM	24.9	C	25.0	C
13. South of Gold Hill Road	Basic	AM	25.5	C	25.8	C
		PM	21.4	C	21.4	C
Northbound I-680						
14. South of Gold Hill Road	Basic	AM	17.7	B	17.7	B
		PM	28.6	D	28.8	D
15. South of I-80	Basic	AM	23.5	C	23.6	C
		PM	34.4	D	34.7	D

Source: Fehr & Peers, 2019.
Notes:
[1] GP = General Purpose Lane, HOV = High-Occupancy Vehicle Lane
[2] LOS based on 2010 HCM
Results in **bold** *denotes unacceptable operations.*

Existing Plus Alternative 4 Signal Warrant Analysis

The peak-hour signal warrants (Warrant 3A and Warrant 3B) from the *Manual on Uniform Traffic Control Devices* (MUTCD) were used to evaluate unsignalized intersections that operate unacceptably under Existing Plus Alternative 4 Conditions to determine if a traffic signal is warranted. Similar to the proposed project, the following unsignalized intersections operating unacceptably under Existing and Existing Plus Alternative 4 conditions meet either Warrant 3A or Warrant 3B in the PM peak hour under this alternative:

- Intersection 15: Lopes Road/Cordelia Road
- Intersection 16: Lopes Road/Bridgeport Avenue

Pedestrians, Bicycle Facilities, and Public Transit Service

Impacts to pedestrian facilities, bicycle facilities, and public transit service would be similar to the impacts of the proposed project. Under this alternative, impacts to pedestrian, bicycle and transit modes would be less than significant (for bicycles and public transit) or less than significant with implementation of **Mitigation Measure TRANS-1b** (for pedestrians) under Existing Plus Alternative 4 Conditions.

Impacts under Existing Plus Approved Projects (EPAP) Intersection Conditions

The effects of the additional vehicle trips on intersection levels of service were calculated for the EPAP condition under this alternative, and the resulting levels of service are presented in **Table 5.0-14, Existing Plus Approved Projects (EPAP) Conditions Intersection LOS Summary**.

Table 5.0-14
Existing Plus Approved Projects (EPAP) Conditions Intersection LOS Summary

				EPAP without Project Conditions		EPAP with Project Conditions	
	Intersection	Intersection Control[1]	Peak Hour[2]	Avg Delay[3]	LOS[4]	Avg Delay[2]	LOS[3]
1	Mangels Boulevard/ Green Valley Road	Signalized	AM	21.3	C	21.3	C
			PM	19.3	B	19.3	B
2	Business Center Drive/ Green Valley Road	Signalized	AM	44.6	D	48.6	D
			PM	**91.6**	**F**	**94.2**	**F**
3	Business Center Drive/ Neitzel Road	AWSC	AM	8.3	A	8.6	A
			PM	8.1	A	8.2	A
4	I-80 westbound ramps/ Green Valley Road	Signalized	AM	6.9	A	7.5	A
			PM	6.2	A	6.4	A
5	I-80 eastbound ramps/ Green Valley Road	Signalized	AM	18.1	B	19.4	B
			PM	25.0	C	28.5	C
6	Mangels Boulevard/ Westamerica Drive	Signalized	AM	14.7	B	14.9	B
			PM	13.7	B	13.8	B
7	Business Center Drive/ Center Project Driveway- Westamerica Drive	Signalized	AM	11.4	A	17.4	B
			PM	9.1	A	16.7	B

	Intersection	Intersection Control[1]	Peak Hour[2]	EPAP without Project Conditions Avg Delay[3]	EPAP without Project Conditions LOS[4]	EPAP with Project Conditions Avg Delay[2]	EPAP with Project Conditions LOS[3]
8	Business Center Drive/ South Project Driveway-NorthBay Driveway	SSSC	AM PM	0.6 (21.8) 0.9 (17.3)	A (C) A (C)	2.7 (27.0) 2.0 (27.6)	A (D) A (D)
9	Westamerica Drive/ Suisun Valley Road	Signalized	AM PM	15.2 11.8	B B	15.2 11.8	B B
10	Business Center Drive/ Suisun Valley Road	Signalized	AM PM	25.0 23.7	C C	25.9 24.9	C C
11	I-80 westbound ramps-Neitzel Road/Suisun Valley Road	AWSC	AM PM	>120 **37.1**	F **E**	>120 **46.1**	F **E**
12	I-80 eastbound ramps/ Pittman Road	Signalized	AM PM	21.3 15.3	C B	24.0 16.2	C B
13	Central Way/ Pittman Road	Signalized	AM PM	16.0 17.8	B B	16.0 17.9	B B
14	Central Way/ Cordelia Road	SSSC	AM PM	6.6 (13.4) 9.5 (25.4)	A (B) A (D)	6.7 (13.6) 9.7 (26.2)	A (B) A (D)
15	Lopes Road/ Cordelia Road	SSSC[5]	AM PM	>120 (>120) **>120 (>120)**	F (F) **F (F)**	>120 (>120) **>120 (>120)**	F (F) **F (F)**
16	Lopes Road/ Bridgeport Avenue	SSSC	AM PM	>120 (>120) **>120 (>120)**	F (F) **F (F)**	>120 (>120) **>120 (>120)**	F (F) **F (F)**

Source: Fehr & Peers, 2019.
Notes:
1. AWSC = All-Way Stop-Controlled, SSSC = Side-Street Stop-Controlled
2. AM = Weekday morning peak hour, PM = Weekday evening peak hour
3. Whole intersection average delay reported for signalized intersections and all-way stop-controlled intersections. Side-street stop-controlled delay presented as Whole Intersection Average Delay (Worst Movement Delay). Delay calculated per *HCM 2010* methodologies.
4. LOS designation per *HCM 2010*.
5. Analyzed as side-street stop-controlled after applying approximation process described in Section 2.5.3.
Bold *indicates unacceptable operations.* ***Bold and highlighted*** *indicates a significant impact.*

As presented in **Table 5.0-14**, under the EPAP with Alternative 4 Conditions, conditions under this alternative could result in a significant impact to intersection operations at the following intersections:

- Intersection 2: Business Center Drive/Green Valley Road
- Intersection 11: I-80 westbound ramps-Neitzel Road/Suisun Valley Road

- Intersection 15: Lopes Road/Cordelia Road
- Intersection 16: Lopes Road/Bridgeport Avenue

Similar to the proposed project, the addition of project related traffic under this alternative would worsen the operations of Intersections 2, 11, 15, and 16 which are currently operating deficiently under Existing Conditions, but it would not result in new LOS deficiencies at other study intersections.

Similar to the proposed project, under this alternative, there would be a less than significant impact to the intersection of Business Center Drive/Green Valley Road and Lopes Road/Cordelia Road.

Similar to the proposed project, under this alternative, the addition of project trips to I-80 westbound ramps-Neitzel Road/Suisun Valley Road would result in a significant impact in and the PM peak hours. Similarly, implementation of **Mitigation Measure TRANS-1c** would reduce the impact to a less than significant level. However, similar to conditions for the proposed project, because it is uncertain if the funding would be provided for the necessary improvement, this impact is considered significant and unavoidable.

Under this alternative, although the intersection of Lopes Road/Bridgeport Avenue operates at an overall LOS F during both peak hours, the proposed project would add less than 10 trips to the northbound approach in the PM peak hour. Therefore, under this alternative, the significant impact to the intersection in the PM peak hour would be avoided and a less than significant impact would occur.

Impacts on Freeway Segments and Ramps under EPAP Conditions

The EPAP Conditions freeway analysis includes traffic volume growth due to adjacent development as well as regional growth in traffic volumes. As shown in **Table 5.0-15, Existing Plus Approved Projects (EPAP) Conditions – Study Freeway Segment LOS Summary**, under this alternative, all freeway segments would operate at an acceptable LOS (LOS E or better) after the addition of project generated trips. Therefore, similar to the proposed project, the project under this alternative would have a less than significant impact on freeway operation under EPAP with Project conditions.

Table 5.0-15
Existing Plus Approved Projects (EPAP) Conditions Study Freeway Segment LOS Summary

Segment	Facility Type	Peak Hour	EPAP without Project Conditions		EPAP with Project Conditions	
			Density	LOS[1]	Density	LOS[1]
Westbound I-80						
1. Truck Scales on-ramp to Suisun Valley Road off-ramp	Diverge	AM PM	22.6 17.6	C B	22.7 17.7	C B
2. Suisun Valley Road off-ramp	Diverge	AM PM	28.5 24.8	D C	28.7 25.1	D C
3. Suisun Valley Road off-ramp to Southbound I-680 connector off-ramp	Basic	AM PM	20.6 15.5	C B	20.6 15.5	C B
4. Southbound I-680 connector off-ramp	Major Diverge	AM PM	23.4 17.6	C B	23.4 17.6	C B
5. Southbound I-680 connector off-ramp to Northbound I-680 connector on-ramp	Basic	AM PM	15.6 11.1	B B	15.6 11.1	B B
Eastbound I-80						
6. Green Valley Road/Southbound I-680 connector off-ramp to Northbound I-680 connector/Green Valley Road on-ramp	Basic	AM PM	15.4 18.4	B C	15.4 18.4	B C
7. Northbound I-680 connector/Green Valley on-ramp	Major Merge	AM PM	23.2 31.9	C D	23.3 32.0	C D
8. Suisun Valley Road off-ramp	Diverge	AM PM	29.6 34.2	D D	29.7 34.4	D D
9. Suisun Valley Road off-ramp to Suisun Valley Road on-ramp	Basic	AM PM	20.2 27.2	C D	20.2 27.2	C D
10. Suisun Valley Road on-ramp	Merge	AM PM	25.0 31.2	C D	25.5 31.4	C D
11. Suisun Valley Road on-ramp to Truck Scales off-ramp	Basic	AM PM	22.3 31.0	C D	22.5 31.1	C D
Southbound I-680						
12. South of I-80	Basic	AM PM	32.0 26.6	D D	32.1 26.5	D D
13. South of Gold Hill Road	Basic	AM PM	27.3 22.6	D C	27.4 22.5	D C

Segment	Facility Type	Peak Hour	EPAP without Project Conditions		EPAP with Project Conditions	
			Density	LOS[1]	Density	LOS[1]
Northbound I-680						
14. South of Gold Hill Road	Basic	AM	18.6	C	18.7	C
		PM	30.6	D	30.8	D
15. South of I-80	Basic	AM	24.8	C	24.9	C
		PM	37.4	E	37.7	E

Source: Fehr & Peers, 2019.
Notes:
[1] LOS based on 2010 HCM
Results in **bold** *denotes unacceptable operations.*

Existing Plus Approved Projects (EPAP) Signal Warrant Analysis

The peak-hour signal warrants (Warrant 3A and Warrant 3B) from the *Manual on Uniform Traffic Control Devices* (MUTCD) were used to evaluate unsignalized intersections that operate unacceptably under EPAP without and with Alternative 4 conditions, to determine if a traffic signal is warranted. The following unsignalized intersections, which operate at unacceptable levels in the Existing condition, and meet Peak Hour Signal Warrants in the Existing condition, are projected to continue operating at deficient levels and peak hour signal warrants would continue to be satisfied under this alternative:

- Intersection 11: I-80 westbound ramps-Neitzel Road/Suisun Valley Road
- Intersection 15: Lopes Road/Cordelia Road
- Intersection 16: Lopes Road/Bridgeport Avenue

Pedestrians, Bicycle Facilities, and Public Transit Service

Similar to the proposed project, EPAP without Project and EPAP with Project conditions for pedestrian facilities, bicycle facilities, and public transit service would generally be equivalent to Existing Conditions and Existing Plus Project conditions. Therefore, similar to the proposed project, under this alternative, impacts to pedestrian, bicycle and transit modes would be less than significant (for bicycles and public transit) or less than significant with implementation of **Mitigation Measure TRANS-1b** (for pedestrians) under EPAP with Project Conditions.

Informational Vehicle-Miles Traveled (VMT) Analysis

In response to Senate Bill 743 (SB 743), the Office of Planning and Research (OPR) has updated California Environmental Quality Act (CEQA) guidelines to include new transportation-related evaluation metrics.

Draft guidelines were developed in August 2014, with updated draft guidelines prepared January 2016, which incorporated public comments from the August 2014 guidelines. OPR released final adopted Guidelines in December 2018. The final proposed Guidelines include a new Section 15064.3 on VMT analysis and thresholds for land use developments. OPR also released a Technical Advisory on Evaluating Transportation Impacts in CEQA. New Guidelines section 15064.3 states that they do not take effect until July 1, 2020 unless the lead agency adopts them earlier. Neither the City of Fairfield nor the Solano Transportation Authority (STA) have established any standards or thresholds on VMT. The schedule set forth by the state does not require this analysis to be included in CEQA documents until July 2020. Therefore, this VMT evaluation is included in this EIR for informational purposes only.

CEQA Guidelines Section 15064.3, Determining the Significance of Transportation Impacts, notes the following: "Generally, vehicle miles traveled is the most appropriate measure of transportation impacts. For the purposes of this section, "vehicle miles traveled" refers to the amount and distance of automobile travel attributable to a project." With regard to the criteria for analyzing transportation impacts, the new guideline states for land use projects that VMT exceeding an applicable threshold of significance may indicate a significant impact. In its technical advisory related to VMT approach to traffic impact analysis, OPR suggests that for residential, new developments that have an estimated VMT/per capita that is 15 percent below existing regional VMT per capita would be considered to result in a less than significant traffic impact. For office uses, new developments that would result in VMT 15 percent below existing regional VMT per employee (work tour or home-based work) would be considered to result in a less than significant traffic impact. Local-serving retail may be less than significant when the new development is less than 50,000 square-feet. A significant impact could occur when new retail increases VMT compared to previous shopping patterns.

In the absence of the City or STA adopted VMT threshold, this guidance provided by the state as used below not as a significance threshold but to provide context to the estimated VMT for the project site under existing and plus project conditions.

To conduct the proposed project VMT assessment, published data was used from the Metropolitan Transportation Commission (MTC), including data from the MTC travel demand model. The MTC published data was used to establish average VMT per capita values for existing residential uses in Fairfield, Solano County and the nine-county Bay Area. The MTC travel demand model also provides average VMT per capita values for residential areas near the project site.

The existing average VMT per capita for residential uses and employment uses for the City of Fairfield, Solano County and the Bay Area based on the MTC data are presented in **Table 5.0-16**. Home based trips in Fairfield are similar to the Bay Area average, while slightly lower than the County-wide average. Work

based trips to jobs in Fairfield are slightly lower than regional averages, potentially indicating that jobs in Fairfield tend to be filled by more local residents.

Table 5.0-16
Existing VMT per Capita

Land Use Type	Fairfield	Solano County	Bay Area
Residence-Based VMT	15.2	16.7	15.3
Work-Based VMT	20.0	22.2	22.7

Source: Fehr & Peers, 2019.

Data from the MTC travel demand model indicate that the average VMT per capita for the lower Green Valley and lower Suisun Valley residential areas is about 25 VMT per capita per day. This level of vehicle travel is higher than the City of Fairfield average as well as the Bay Area Average.

Therefore, Alternative 4, as with the proposed project, would contribute to an increase in vehicle miles of travel on a per capita basis since Alternative 4 would add a housing development that would require residents to travel longer than average distances to meet their daily needs. As there are no thresholds of significance, this analysis is being prepared for informational purposes only.

Traffic Hazards

Similar to the proposed project, the design of the project under this alternative would not cause a permanent alteration to the local vehicular circulation routes and patterns, or impede public access or travel on any public rights-of-way and no design hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses would be created. Further, the final design of the project under this alternative, including curb cuts, ingress, egress, and other streetscape changes, would be subject to review by the City of Fairfield Department of Public Works, Transportation Division and would be required to comply with all requirements of the Division. Similar to the proposed project, impacts would be less than significant.

Emergency Access

Similar to the proposed project, the Fire Station/Residential alternative is not anticipated to degrade roadway operations to the point where emergency vehicles are impacted. Therefore, the project under this alternative would not conflict with existing or planned emergency response routes, nor would it provide inadequate access to accommodate emergency vehicles.

Impacts under Cumulative 2035 Intersection Conditions

Under this alternative, intersection LOS was calculated for the following scenarios: Cumulative without Alternative 4, Cumulative with Alternative 4, Cumulative plus Business Center Drive without Alternative 4, and Cumulative plus Business Center Drive with Alternative 4. **Table 5.0-17** provides the results of the intersection LOS calculations.

Table 5.0-17
Cumulative Conditions Intersection Levels of Service

				Without Business Center Drive Extension				Plus Business Center Drive Extension			
				Cumulative without Alternative 4 Conditions		Cumulative with Alternative 4 Conditions		Cumulative without Alternative 4 Conditions		Cumulative with Alternative 4 Conditions	
	Intersection	Control Type	Peak Hour[2]	Delay[3]	LOS[4]	Delay[3]	LOS[4]	Delay[3]	LOS[4]	Delay[3]	LOS[4]
1	Mangels Boulevard/ Green Valley Road	Signalized	AM	26.6	C	26.6	C	26.6	C	26.6	C
			PM	21.5	C	21.5	C	21.5	C	21.5	C
2	Business Center Drive/ Green Valley Road	Signalized	AM	>120	F	>120	F	>120	F	>120	F
			PM	**>120**	**F**	**>120**	**F**	**>120**	**F**	**>120**	**F**
3	Business Center Drive/ Neitzel Road	*Intersection Removed by I-80/I-680/SR 12 Interchange Improvement Project*									
4	I-80 westbound ramps/ Green Valley Road	Signalized	AM	32.5	C	33.4	C	31.1	C	31.6	C
			PM	38.5	D	38.5	D	33.9	C	34.0	C
5	I-80 eastbound ramps/ Green Valley Road	Signalized	AM	13.3	B	13.5	B	11.6	B	11.8	B
			PM	32.9	C	35.6	D	24.2	C	24.9	C
6	Mangels Boulevard/ Westamerica Drive	Signalized	AM	18.4	B	18.5	B	18.4	B	18.5	B
			PM	11.8	B	12.6	B	11.8	B	12.6	B
7	Business Center Drive/ Center Project Driveway-Westamerica Drive	Signalized	AM	12.6	B	18.3	B	12.6	B	18.3	B
			PM	14.4	B	28.0	C	14.4	B	28.0	C

				Without Business Center Drive Extension				Plus Business Center Drive Extension			
				Cumulative without Alternative 4 Conditions		Cumulative with Alternative 4 Conditions		Cumulative without Alternative 4 Conditions		Cumulative with Alternative 4 Conditions	
	Intersection	Control Type	Peak Hour[2]	Delay[3]	LOS[4]	Delay[3]	LOS[4]	Delay[3]	LOS[4]	Delay[3]	LOS[4]
8	Business Center Drive/ South Project Driveway-NorthBay Driveway	SSSC	AM PM	0.9 (31.4) 1.3 (21.6)	A (D) A (C)	2.3 (38.8) 2.3 (27.4)	A (E) A (D)	0.9 (31.4) 1.3 (21.6)	A (D) A (C)	2.3 (38.8) 2.3 (27.4)	**A (E)** A (D)
9	Westamerica Drive/ Suisun Valley Road	Signalized	AM PM	16.9 20.8	B C	16.9 20.8	B C	16.9 20.8	B C	16.9 20.8	B C
10	Business Center Drive/ Suisun Valley Road	Signalized	AM PM	31.7 **62.7**	C **E**	40.8 **70.1**	D **E**	31.7 **62.7**	C **E**	40.8 **70.1**	D **E**
11	I-80 westbound ramps-Neitzel Road/Suisun Valley Road	AWSC	AM PM	>120 **>120**	F **F**	>120 **>120**	F **F**	>120 **>120**	F **F**	>120 **>120**	F **F**
12	I-80 eastbound ramps/ Pittman Road	Signalized	AM PM	57.6 **57.8**	E **E**	70.5 **65.4**	E **E**	57.6 **57.8**	E **E**	70.5 **65.4**	E **E**
13	Central Way/ Pittman Road	Signalized	AM PM	19.0 23.9	B C	19.0 24.1	B C	19.0 23.9	B C	19.0 24.1	B C
14	Central Way/ Cordelia Road	SSSC	AM PM	11.0 (26.9) **>120 (>120)**	B (D) **F (F)**	11.4 (27.8) **>120 (>120)**	B (D) **F (F)**	11.0 (26.9) **>120 (>120)**	B (D) **F (F)**	11.4 (27.8) **>120 (>120)**	B (D) **F (F)**
15	Lopes Road/ Cordelia Road	SSSC[5]	AM PM	>120 (>120) **>120 (>120)**	F (F) **F (F)**	>120 (>120) **>120 (>120)**	F (F) **F (F)**	>120 (>120) **>120 (>120)**	F (F) **F (F)**	>120 (>120) **>120 (>120)**	F (F) **F (F)**
16	Lopes Road/ Bridgeport Avenue	SSSC	AM PM	>120 (>120) **>120 (>120)**	F (F) **F (F)**	>120 (>120) **>120 (>120)**	F (F) **F (F)**	>120 (>120) **>120 (>120)**	F (F) **F (F)**	>120 (>120) **>120 (>120)**	F (F) **F (F)**

Intersection	Control Type	Peak Hour[2]	Without Business Center Drive Extension				Plus Business Center Drive Extension			
			Cumulative without Alternative 4 Conditions		Cumulative with Alternative 4 Conditions		Cumulative without Alternative 4 Conditions		Cumulative with Alternative 4 Conditions	
			Delay[3]	LOS[4]	Delay[3]	LOS[4]	Delay[3]	LOS[4]	Delay[3]	LOS[4]

Source: Fehr & Peers, 2019.

Notes:

[1] AWSC = All-Way Stop-Controlled, SSSC = Side-Street Stop-Controlled

[2] AM = Weekday morning peak hour, PM = Weekday evening peak hour

[3] Whole intersection average delay reported for signalized intersections and all-way stop-controlled intersections. Side-street stop-controlled delay presented as Whole Intersection Average Delay (Worst Movement Delay). Delay calculated per HCM 2010 methodologies.

[4] LOS designation per HCM 2010.

[5] Analyzed as side-street stop-controlled after applying approximation process.

***Bold** indicates unacceptable operations. **Bold and highlighted** indicates a significant impact.*

Cumulative without Business Center Drive, with and without Project

The results of the LOS calculations indicate that the following intersections are projected to not meet their respective LOS standards under Cumulative without Business Center Drive extension, both without and with Alternative 4 conditions:

- Intersection 2: Business Center Drive/Green Valley Road
- Intersection 10: Business Center Drive/Suisun Valley Road
- Intersection 11: I-80 westbound ramps-Neitzel Road/Suisun Valley Road
- Intersection 12: I-80 eastbound ramps/Pittman Intersection 14: Central Way/Cordelia Road
- Intersection 15: Lopes Road/Cordelia Road Intersection 16: Lopes Road/Bridgeport Avenue

Under the Fire Station/Residential alternative, the additional traffic would worsen the operations of the above intersections, but would not result in new deficiencies.

Similar to the proposed project, under the Fire Station/Residential alternative, there would be a significant impact at the Business Center Drive/Suisun Valley Road intersection in the PM peak hour. The same mitigation measures would be recommended to reduce impacts to a less than significant level.

Similar to the propose project, under the Fire Station/Residential alternative, there would be a significant impact at the I-80 westbound ramps-Neitzel Road/Suisun Valley Road intersection and the I-80 eastbound ramps/Pittman Road intersection during the PM peak hours. The same mitigation measures would be recommended to reduce impacts to a less than significant level. However, similar to conditions for the proposed project, while the improvements would mitigate the impacts, the construction of the improvements would require substantial additional funding and coordination with the Union Pacific Railroad, and thus, this impact is considered significant and unavoidable.

Under the Fire Station/Residential alternative, the significant cumulative impact at the intersection of Lopes Road/Bridgeport Avenue in the PM peak hour would be avoided and a less than significant impact would occur.

The results of the intersection operations analysis indicate that other study intersections would continue to operate at LOS D or better after the addition of project trips. Therefore, under this alternative, the project's impacts to these other study intersections under Cumulative with Project Conditions would be less than significant.

Cumulative plus Business Center Drive Extension with and without Alternative 4

Under the Fire Station/Residential alternative, the project could result in a significant impact to intersection operations at the following intersections:

- Intersection 2: Business Center Drive/Green Valley Road
- Intersection 10: Business Center Drive/Suisun Valley Road
- Intersection 11: I-80 westbound ramps-Neitzel Road/Suisun Valley Road Intersection 12: I-80 eastbound ramps/Pittman Road
- Intersection 14: Central Way/Cordelia Road Intersection 15: Lopes Road/Cordelia Road
- Intersection 16: Lopes Road/Bridgeport Avenue

Similar to the proposed project, under the Fire Station/Residential alternative, there would be a significant impact at the Business Center Drive/Suisun Valley Road intersection in the PM peak hour. The same mitigation measures would be recommended to reduce impacts to a less than significant level.

Similar to the propose project, under the Fire Station/Residential alternative, there would be a significant impact at the I-80 westbound ramps-Neitzel Road/Suisun Valley Road intersection and the I-80 eastbound ramps/Pittman Road intersection during the PM peak hours. The same mitigation measures would be recommended to reduce impacts to a less than significant level. However, similar to conditions for the proposed project, because it is uncertain if the funding would be provided for the necessary improvement, this impact is considered significant and unavoidable.

Under the Fire Station/Residential alternative, the significant cumulative impact at the intersection of Lopes Road/Bridgeport Avenue in the PM peak hour would be avoided and a less than significant impact would occur.

The results of the intersection operations analysis indicate that other study intersections would continue to operate at LOS D or better after the addition of project trips. Under this alternative, the project's impacts to these other study intersections under Cumulative plus Business Center Drive Extension with Project Conditions would be less than significant.

Impacts on Freeway Segments and Ramps under Cumulative 2035 Conditions

Table 5.0-18 presents the results of the freeway operations analysis for the project under the Fire Station/Residential alternative.

Table 5.0-18
Existing Freeway Segment Peak Hour Levels of Service

Segment	Segment Type	Peak Hour	Cumulative without Alterative 4 Conditions		Cumulative with Alternative 4 Conditions	
			Density	LOS[1]	Density	LOS[1]
Westbound I-80						
1. Truck Scales on-ramp to Suisun Valley Road off-ramp	Basic	AM PM	18.0 14.0	C B	18.1 14.1	C B
2. Suisun Valley Road off-ramp	Diverge	AM PM	18.0 14.0	C B	18.1 14.1	C B
3. Suisun Valley Road off-ramp to Suisun Valley Road on-ramp	Basic	AM PM	17.8 13.8	B B	17.8 13.8	B B
4. Suisun Valley Road on-ramp	Merge	AM PM	17.6 14.2	B B	17.7 14.2	B B
5. Green Valley Road off-ramp	Diverge	AM PM	17.3 14.0	B B	17.4 14.0	B B
6. Green Valley Road off-ramp to Southbound I-680 connector off-ramp	Basic	AM PM	14.4 10.9	B A	14.5 11.0	B A
Eastbound I-80						
7. Eastbound SR 12 on-ramp to Northbound I-680 connector on-ramp	Basic	AM PM	12.5 15.3	B B	12.6 15.4	B B
8. Northbound I-680 connector on-ramp	Merge	AM PM	16.7 21.5	B C	16.7 21.6	B C
9. Green Valley Road on-ramp	Merge	AM PM	16.4 20.9	B C	16.4 21.0	B C
10. Suisun Valley Road off-ramp	Diverge	AM PM	16.4 20.7	B C	16.4 20.8	B C
11. Suisun Valley Road off-ramp to Suisun Valley Road on-ramp	Basic	AM PM	16.1 21.2	B C	16.1 21.2	B C
12. Suisun Valley Road on-ramp	Merge	AM PM	15.7 21.0	B C	15.8 21.1	B C
13. Suisun Valley Road on-ramp to Truck Scales off-ramp	Basic	AM PM	15.7 20.8	B C	15.8 20.9	B C

Segment	Segment Type	Peak Hour	Cumulative without Alterative 4 Conditions		Cumulative with Alternative 4 Conditions	
			Density	LOS[1]	Density	LOS[1]
Southbound I-680						
14. South of I-80	Basic	AM PM	25.7 22.1	C C	25.9 22.1	C C
15. South of Gold Hill Road	Basic	AM PM	39.2 30.1	E D	39.7 30.2	E D
Northbound I-680						
16. South of Gold Hill Road	Basic	AM PM	23.8 **v/c 1.025[2]**	C **F**	23.9 **v/c 1.029[2]**	C **F**
17. South of I-80	Basic	AM PM	21.0 29.2	C D	21.0 29.3	C D

Source: Fehr & Peers, 2019.
Notes:
[1] LOS based on 2010 HCM
[2] Volume-to-capacity ratio presented in lieu of Density as segment operates at LOS F. Calculated density above 45 pcpmpl.
Results in **bold** *denotes unacceptable operations.*

As shown in **Table 5.0-18**, the majority of freeway segments will operate at an acceptable LOS (LOS E or better) after the addition of project generated trips. Similar to the proposed project, the following segment operates at LOS F during the indicated peak hour:

- Cumulative Segment 16 – Northbound I-680 south of Gold Hill Road (PM peak hour)

Similar to the proposed project, under this alternative, there would be a less than significant impact at this segment.

As with the proposed project, all other segments under this alternative would continue to operate at LOS E or better after the addition of project trips. Therefore, similar to the proposed project, the impact to freeway operations would be less than significant under Cumulative with Project conditions

Pedestrians, Bicycle Facilities, and Public Transit Service

Cumulative without Alternative 4 and Cumulative Plus Alternative 4 conditions (without and with the Business Center Drive Extension) for pedestrian facilities, bicycle facilities, and public transit facilities would be similar to the impacts of the proposed project. Under this alternative, the impacts to pedestrian, bicycle and transit modes would be less than significant (for bicycles and public transit) or less then

significant with implementation of **Mitigation Measure TRANS-1b** (for pedestrians) under Cumulative Plus Project conditions.

Traffic Hazards

Similar to the proposed project, the design of the project under this alternative would not cause a permanent alteration to the local vehicular circulation routes and patterns, or impede public access or travel on any public rights-of-way and no design hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses would be created. Further, the final design of the project under this alternative, including curb cuts, ingress, egress, and other streetscape changes, would be subject to review by the City of Fairfield Department of Public Works, Transportation Division and would be required to comply with all requirements of the Division. Similar to the proposed project, impacts would be less than significant.

Emergency Access

Similar to the proposed project, the Fire Station/Residential alternative is not anticipated to degrade roadway operations to the point where emergency vehicles are impacted. Therefore, the project under this alternative would not conflict with existing or planned emergency response routes, nor would it provide inadequate access to accommodate emergency vehicles.

Modified Alternative 4 Transportation Impacts

The following sections present a qualitative analysis of the impacts to the transportation system under Modified Alternative 4.

Intersection and Freeway Operations

The analysis for Alternative 4 presented above indicates that the project would result in significant intersection operations impacts at the following intersections:

- Intersection 10: Business Center Drive/Suisun Valley Road (significantly impacted under Cumulative conditions)
- Intersection 11: I-80 westbound ramps-Neitzel Road/Suisun Valley Road (significantly impacted under Existing, Existing plus Approved Projects, and Cumulative conditions)
- Intersection 12: I-80 eastbound ramps/Pittman Road (significantly impacted under Cumulative conditions)

Based on the level of impact at these intersections, it is anticipated that these intersections would remain significantly impacted under the Modified Alternative 4 development proposal. However, the relative level of impact would be reduced under Modified Alternative 4, and all mitigation measures previously presented related to the impacts under the original Alternative 4 would be sufficient to result in intersection operations impacts that would be less-than-significant with mitigation under Modified Alternative 4. However, as stated above, due to the uncertainty associated with the timing and funding of these improvements, impacts are considered significant and unavoidable.

As presented above, the project impact to freeway operations are less-than-significant under Alternative 4. Similar to intersection operations impacts, the relative level of impact to freeway operations under Modified Alternative 4 would be reduced versus Alternative 4. Therefore, the project impact to freeway operations would be less-than-significant under Alternative 4.

Pedestrian and Bicycle

The level of impact for pedestrians, bicyclists, the transit system (and its users), and emergency vehicle access under Modified Alternative 4 is similar to the level of impact under Alternative 4. As noted in above, impacts to bicyclists, transit, and emergency vehicle access are less-than-significant. If the pedestrian mitigation measure (installation of a crosswalk along the southern approach at Business Center Drive/Westamerica Drive-Center Driveway) is constructed, then the project impact to the pedestrian system under Modified Alternative 4 would be less-than-significant with mitigation.

Utilities and Service Systems

Wastewater

Alternative 4 would generate approximately 0.37 mgd of wastewater.[7] Wastewater generated by Alternative 4 would be conveyed to the WWTP. The FSSD facility has a permitted dry weather capacity of 23.7 mgd and a peak hour wet weather capacity of 55 mgd (FSSD 2018). The difference between the proposed project and this alternative would represent a change of 0.01 percent of the remaining capacity for the FSSD. This incremental change would not be a material difference. Further, the FSSD has indicated that plant would be capable of handling increased flows anticipated with the proposed project and future growth in the City (Herston 2018). Therefore, development of the alternative would not require the relocation or construction of new or expanded wastewater treatment facilities, nor would it result in a discharge that would cause the water treatment facility to exceed the wastewater treatment requirements of the Regional Water Quality Control Board. Modified Alternative 4 would represent an

7 Based on 90 percent of potable water demand ([415 AFY = 135 mgy]/365 days = 0.37 mgd).

even smaller incremental change between the existing condition and the alternative. This impact would be less than significant.

Wastewater generated on site would be collected through an on-site collection system and then conveyed off site via a new 8-inch sewer line to an existing 8-inch sewer stub located about 1,000 feet south of the project site. The environmental impacts of this extension to the existing sewer stub would be similar to the proposed project and are analyzed in other sections of this EIR. Impacts on biological resources are evaluated in **Section 4.2** and mitigation measures are set forth in that section to address potentially significant impacts to special-status species. In addition, impacts on cultural resources are evaluated in **Section 4.3**, and mitigation measures are set forth in that section to address potentially significant impacts to archaeological resources that could be encountered during construction. Similarly, impacts associated with construction-phase air pollutant emissions and noise and vibrations are analyzed in **Section 4.1** and **Section 4.7**, respectively**.** All impacts would be less than significant with implementation of the proposed mitigation measures. The environmental effect associated with off-site wastewater conveyance improvements would be less than significant and would be similar under Modified Alternative 4.

Stormwater

Drainage would be provided to the site by a proposed on-site storm drain infrastructure system. The on-site storm drain infrastructure improvements would connect to an existing 72-inch storm drain located in Business Center Drive. The existing storm drain in Business Center Drive was designed to accommodate flows resulting from buildout in the project area regardless of land use type. Therefore, development of Alternative 4 would not require an upgrade or extension to the existing off-site storm drain infrastructure system, and this impact would be less than significant. The impact would be similar under Modified Alternative 4.

Electric Power

Alternative 4 is estimated to require approximately 1,920 megawatt hours (MWh) per year of electricity. This includes usage associated with both the residential and fire station components of the project. As required by California code, all proposed buildings will meet or exceed Title 24 standards and apartments will be equipped with Energy Star certified appliances. In addition, interior and exterior lighting will utilize energy efficient LED light fixtures. A minimum of 15 percent of the roof areas will be reserved for future photovoltaic (PV) solar installation, and infrastructure (conduit, structural elements, etc.) will be provided to facilitate the future PV solar installation. On-site parking will be designed as Electric Vehicle (EV) charging ready, for future installation of EV changing stations.

Project construction would require small quantities of electricity; however, diesel fuel would be the primary energy source that would power construction equipment and generators.

Therefore, the alternative and the Modified Alternative 4 would not result in the consumption of energy resources that could not be accommodated within the electricity supply and distribution system of PG&E and no relocation or construction of new or expanded facilities would be needed. A less than significant impact would occur.

Natural Gas

Alternative 4 is estimated to require about 3,153 million British Thermal Units per year (mBTU/y) of natural gas. This includes usage associated with residential and fire station uses and also assumes that the residential natural gas usage will meet or exceed Title 24 standards and that Energy Star appliances will be installed in the residential units. Additionally, the natural gas demand associated with the proposed project is within the parameters of projected load growth, and PG&E will be able to meet the demand in this area. Therefore, this alternative and the Modified Alternative 4 would not result in a demand of natural gas that could not be accommodated within the natural gas supply and distribution system of PG&E and no relocation or construction of new or expanded facilities would be needed. The impact would be less than significant.

Telecommunications

As with the proposed project, under Alternative 4 telecommunication services to the project site would be provided by a regional provider (AT&T, Comcast, DirecTV, DISH Network, Excede, and Verizon). Development of the project site would create an increased demand for cable television and telephone services. Operation, maintenance, and capital improvement costs would be funded through developer fees and future customer billing. In addition, the telecommunications companies would be given the opportunity to review and comment on any proposed development requiring new service. All phone and cable lines would be installed in roadway rights-of-way, so there would not be any environmental effects beyond the construction effects previously identified in this EIR. Telecommunication providers regularly construct cell towers to provide coverage for the continuously growing demand. The addition of the proposed residential and fire station uses would be consistent with typical growth patterns and developments. A less than significant impact would occur under this alternative and the Modified Alternative 4.

Water

Alternative 4 would demand approximately 370,475 gallons per day (gpd) or 415 acre-feet per year (AFY) of water[8] and be served by the FMU's surface water supplies. **Table 5.0-19, Alternative 4 Summary of Potable Water Demand versus Supply**, provides a comparison of projected water demand and supplies during hydrologic normal, single-day, and multiple dry years for the entire FMU system over a 20 year planning period. As shown, the FMU has enough water supply available to serve its projected demand during all hydrologic conditions through 2040. If the project site is developed in accordance with the existing land use designation of Business and Industrial Park, potable water demand is estimated to be approximately 57 acre-feet per year. However, the proposed residential uses would use approximately 408 afy. Water use associated with a fire station can have numerous variables but would be expected to be less than the commercial component for several reasons:

- Structures are assumed to have approximately 3 full-time persons staffed at the site at all time
- Landscaping is assumed to be drought tolerant
- Fire trucks are assumed to be topped off approximately one time per week on site, all other times would be filled from hydrants off site (150 gallons/fill x 52 fills per year)
- Hose training is estimated to occur between January and June each year (8,000 gallons per year)[9]
- Incidental truck washing

Based on the above estimates the fire station uses are anticipated to use approximately 1.17 acre-feet per year, which is an increase of result in a demand of approximately 410 acre-feet per year. Although Alternative 4 would demand more water than the land uses previously planned for the site, **Table 5.0-19** shows that there would still be a surplus in water supply. Additionally, the City has confirmed that enough surplus water is available to serve the proposed project plus future growth in the City (Riesenberg 2018).

8 (365 dwelling units X 1,000 gallons/day/dwelling unit) = 365,000 gallons/ day or 408 acre-feet/year.

9 Estimates for water use from the Montecito Fire Protection District (MFPD) Station 3 Project (MFPD 2016)

Table 5.0-19
Alternative 4 Summary of Potable Water Demand versus Supply

	Supply and Demand Comparison, AFY				
Hydrologic Condition	**2020**	**2025**	**2030**	**2035**	**2040**
Normal Year					
Available Surface Water Supply	9,808	11,014	12,578	13,783	13,783
Total Water Demand (with Alternative 4)	6,565	7,532	8,518	9,527	9,955
Potential Surplus (Deficit)	3,243	3,482	4,060	4,257	3,828
Single Dry Year					
Available Surface Water Supply	11,646	11,646	11,646	11,646	11,646
Total Water Demand (with Alternative 4)	6,565	7,532	8,518	9,527	9,955
Potential Surplus(Deficit)	5,081	4,114	3,128	2,119	1,691
Multiple Dry Years					
Multiple-Dry Year First Year Supply — Available Surface Water Supply	11,001	11,001	11,001	11,001	11,001
Multiple-Dry Year First Year Supply — Total Water Demand (with Alternative 4)	6,565	7,532	8,518	9,527	9,955
Multiple-Dry Year First Year Supply — Potential Surplus (Deficit)	4,436	3,469	2,483	1,474	1,046
Multiple-Dry Year Second Year Supply — Available Surface Water Supply	11,001	11,001	11,001	11,001	11,001
Multiple-Dry Year Second Year Supply — Total Water Demand with Alternative 4)	6,565	7,532	8,518	9,527	9,955
Multiple-Dry Year Second Year Supply — Potential Surplus (Deficit)	4,436	3,469	2,483	1,474	1,046
Multiple-Dry Year Third Year Supply — Available Surface Water Supply	11,001	11,001	11,001	11,001	11,001
Multiple-Dry Year Third Year Supply — Total Water Demand (with Alternative 4)	6,565	7,532	8,518	9,527	9,955
Multiple-Dry Year Third Year Supply — Potential Surplus (Deficit)	4,436	3,469	2,483	1,474	1,046

Source: City of Fairfield 2015 Urban Water Management Plan, 2016
Water demand and supply from Tables 7-2 through 7-4.

Additionally, similar to the proposed project, the design of Alternative 4 would promote the smart use and conservation of water. The Alternative 4 would implement a number of water saving measures, such as implementing highly efficient technologies for irrigation, water fixtures, and hot water systems. Lawns would be implemented sparingly and landscaping would consist of drought-tolerant plants with very low to medium water needs. Recycled water, captured by the two proposed recycled water mains, will be used for all landscaped areas.

In summary, water demand associated with Alternative 4 would be served by existing supplies under normal, single-dry, and multiple dry years, and the development of Alternative 4 would not result in the need for new or expanded water supply entitlements. The alternative's impact related to water supply would be less than significant.

Modified Alternative 4 would result in a demand of approximately 315.17 acre feet per year which would be a reduction of 100 acre fee per year compared to Alternative 4 and would also be less than significant.

Potable water service would be provided to the site by a proposed on-site water infrastructure system. The on-site water infrastructure improvements would connect to an existing 24-inch potable water main located in Business Center Drive. The water infrastructure in the area has been properly designed and sized to the project site and adjacent properties (Paluck 2018), Therefore development of the alternative would not require an upgrade or extension to the existing off-site water infrastructure system, and this impact would be less than significant.

The City's Waterman and NBR treatment plants treat surface water prior to delivery to City water customers. The Waterman Treatment Plant has a treatment capacity of 30 mgd and currently treats an average of 9 mgd while the NBR Treatment Plant has a treatment capacity of 26.7 mgd and currently treats an average of 17.3 mgd. As identified above under ***Wastewater***, the total calculated water demand for the alternative would be approximately 370,745 gpd or 0.37 mgd. With an excess capacity of approximately 30 mgd combined, the City has indicated that both treatment plants have adequate capacity to accommodate the water demands associated with the proposed project and future growth in the City (Riesenberg 2018). As a result, the proposed project would not require the construction or expansion of water treatment facilities, and this impact would be less than significant.

Solid Waste

It is estimated that Alternative 4 would generate approximately 3,794 pounds of solid waste per day[10], which would result in 692 tons or 969 cubic yards[11] of solid waste per year. The Potrero Hills landfill has a permitted capacity of 83.1 permitted million cy and a maximum daily throughput of 4,330 tons, and currently has a remaining capacity of 54.6 million cy and processes 3,400 tons daily, while the Recology Hay Road Landfill has a permitted capacity of 37 million cy and a maximum daily throughput of 2,400 tons, and currently has a remaining capacity of 24.9 million cy and process 1,700 tons daily. Under current projected development conditions, the Potrero Hills landfill has a projected lifespan extending

10 (365 units X 10 pounds/unit/day) + ([5,000 square feet X 10.53 pounds/square foot/year]/365 days/year) = 3,794 pounds/day.

11 1 cubic yard of solid waste = 1.4 tons of solid waste.

through 2048 and the Hay Road landfill has a projected lifespan extending through 2053. With a combined excess capacity of 79.5 million cy, both landfills have adequate capacity to accommodate the solid waste generated by the proposed project and future growth in the County and beyond (Hannum 2018). Therefore, development of the alternative would not require the expansion of landfill capacity, and this impact would be less than significant.

In 2003, the City achieved a 65 percent waste diversion rate and has continued to meet its diversion rates ever since (City of Fairfield 2009). As detailed in **Section 3.0, Project Description**, the proposed project would include sustainable development features to minimize waste disposed in landfills; Alternative 4 would implement all of the same sustainable development features. Therefore, the alternative be consistent with Senate Bill 1016 and would not impair the attainment of the 50 percent per-capita diversion goal. A less than significant impact would occur. Modified Alternative 4 would generate less solid waste than Alternative 4 and as such would also result in less than significant impacts.

Utilities – Cumulative Conditions

Water Supply

Development of Alternative 4 and modified Alternative 4, combined with other past, present, and reasonably foreseeable development in the FMU service area, would increase demand for water. As shown in **Table 5.0-19** above, the FMU has enough potable water supply available to serve its projected demand, which includes existing and proposed development as well as the alternative. Therefore, the alternative combined with related projects would not result in the need for new or expanded water supply entitlements, and the cumulative impact would be less than significant.

Wastewater Conveyance and Treatment

The proposed project, combined with other past, present, and reasonably foreseeable development (listed in **Table 4.0-1**) within the service area of the WWTP, would increase the amount of wastewater that would require treatment. All planned and future projects would be required to demonstrate that sewer service is available to ensure that adequate sanitation can be provided. As discussed above under ***Wastewater*** the FSSD has indicated that the plant would be capable of handling increased flows anticipated with the proposed project and future growth in the City. Therefore, the alternatives combined with related projects would not result in the need for new or expanded wastewater treatment capacity, and the cumulative impact would be less than significant.

Storm Drainage

The proposed project, combined with other past, present, and reasonably foreseeable development (listed in **Table 4.0-1**) would develop new impervious surfaces that have the potential generate additional volumes of runoff that may cause flooding in downstream waterways. All planned and future projects would be required to demonstrate that storm water mains for each site have been designed to accommodate project flows. As discussed above under ***Stormwater***, the existing storm drain system in the vicinity of the project site has been designed to accommodate flows resulting from buildout in the project area regardless of land use type. Therefore, the cumulative impact with respect to drainage would be less than significant.

Solid Waste

Alternative 4 and Modified Alternative 4, in conjunction with reasonably foreseeable projects, and future growth in the County and beyond, would increase demand for solid waste and composting facilities. As discussed above under ***Solid Waste***, with a combined remaining capacity of 38.7 million cubic yards, both landfills serving the proposed project have sufficient capacity to receive the additional waste from future growth in the City, County, and other areas nearby in the Bay Area and Sacramento Valley. Therefore, cumulative impacts with regard to solid waste would be less than significant.

Electricity

The proposed project site is within an urban area of Fairfield and related projects would be connected to the existing electricity distribution system through minor extensions, which would not result in a significant environmental impact.

The alternative's demand for electricity by itself would not require the construction of new power generation facilities, and as noted above under ***Electricity***, the alternative's impact related to off-site generation facilities would be less than significant. The alternative's demand would, however, combine with the demand for electricity associated with other proposed projects in the region and could contribute to the need for an expansion of an existing power plant or the construction of a new power plant. Approximately 67 percent of electricity used within California in 2015 was generated within the state, while the remaining portion of electricity was generated in the southwest United States and within the Pacific Northwest. Therefore, electricity needed by the cumulative projects may in fact be generated out of state. It is therefore not reasonable to predict where the new supply sources would be located or to evaluate the environmental consequences from the construction and operation of such facilities. Furthermore, if the new power generation facilities were to be located in California, they would be subject to environmental review and would be required to avoid or minimize their environmental impacts. Accordingly, the cumulative impact would be less than significant.

Natural Gas

Related projects would be connected to the existing natural gas distribution system through minor extensions, which would not result in a significant environmental impact.

The alternative's demand for natural gas by itself would not require the construction of new power generation facilities, and as noted above under ***Natural Gas***, the alternative's impact related to off-site generation facilities would be less than significant. The alternative's demand would, however, combine with the demand for natural gas associated with other proposed projects in the region and could contribute to the need for an expansion or construction of an existing natural gas facility. As detailed in **Section 4.10.2.6**, in 2012, natural gas used within California was extracted mainly from out of state. It is therefore not reasonable to predict where the new supply sources would be located or to evaluate the environmental consequences from the construction and operation of such facilities. Furthermore, if the new natural gas facilities were to be located in California, they would be subject to environmental review and would be required to avoid or minimize their environmental impacts. Accordingly, the cumulative impact would be less than significant.

Telecommunications

As mentioned above, telecommunication providers regularly construct cell towers to provide coverage for the continuously growing demand. The alternative, in conjunction with reasonably foreseeable projects, and future growth in the County and beyond, would be typical of growth patterns and could be accommodated by telecommunication providers. Accordingly, the cumulative impact would be less than significant.

Energy

Under the Fire Station/Residential Alternative, the amount of energy demanded by the proposed residential uses would be slightly higher as the amount of building space constructed under this alternative (approximately 365,000 square feet) would be greater than the proposed project (248,000 square feet); while the amount of energy demanded by vehicles would slightly decrease as the total number of net new vehicle trips generated by Alternative 4 (465 trips) would be less than the number of vehicle trips generated under the proposed project (499 trips). However, the increase in energy use would not be substantial. As with the proposed project, this impact would be less than significant.

Other Resource Topics

Similar to the proposed project, the Fire Station/Residential Alternative would result in no impacts or less than significant impacts on agricultural resources, geology and soils, mineral resources, and population

and housing. No mitigation would be required. As with the proposed project, the alternative would have the potential to affect nesting birds and water quality, thus the same mitigation measures would be required to reduce impacts to a less than significant level.

Conclusion and Relationship to Project Objectives

The Fire Station/Residential Alternative would increase the project's impacts related to air quality (criteria pollutants and operational emissions of ROG and NOX), noise, public services, and utilities and service systems, while decreasing the proposed project's impacts related to air quality, GHG emissions, transportation, and energy. Impacts related to biological resources, cultural resources, geology and soils, and land use would be similar to those of the proposed project. This alternative would achieve the project objective of developing a well-designed, economically feasible residential community that consists of a variety of residential products and unit types. This alternative would not create a mixed-use development of a scale and character that complements and is supportive of the surrounding uses. Lastly, this alternative would not provide commercial and retail services within walking and biking distance of existing residential uses.

5.7 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires the identification of the environmentally superior alternative among the alternatives to the proposed project. The environmentally superior alternative must be an alternative to the proposed project that reduces some of the environmental impacts of the proposed project, regardless of the financial costs associated with this alternative. Identification of the environmentally superior alternative is an informational procedure and the alternative identified as the environmentally superior alternative may not be that which best meets the goals or needs of the proposed project. Additionally, if the No Project Alternative is determined to reduce most impacts, CEQA requires that the EIR identify an environmentally superior alternative among the other alternatives (*State CEQA Guidelines* Section 15126.6).

As stated above, the proposed project would result in intersection impacts at the three identified intersections. The only alternatives that would reduce the intersection impacts to below a level of insignificance are the No Project Alternative and the Reduced Density Alternative. Alternative 3, Reduced Density Alternative, therefore, is determined to be the environmentally superior alternative. As this alternative would provide as half as many units as the proposed project, it would reduce the project's significant and potentially significant impacts to the greatest extent. For this reason, Alternative 3 is the environmentally superior alternative. However, while this alternative would achieve many of the project objectives, it would not meet the objective of developing an economically feasible residential community. In addition, it would not assist the City of Fairfield in achieving the 2014-2022 Housing Element goal of encouraging a high-quality residential environment with a wide range of housing opportunities

throughout the City to the same extent as the proposed project. Modified Alternative 4 would incrementally reduce impacts compared to the proposed project and would provide both high quality residential environment with the added community benefit of a needed fire station. As such, Modified Alternative 4 is the preferred alternative.

Table 5.0-20
Summary Comparison of Project Alternatives[1]

	Project Impact	Proposed Project (Before/After Mitigation)	Alternative 1: No Project/ No Development	Alternative 2: No Project/ Existing Zoning	Alternative 3: Reduced Development	Alternative 4: Fire Station/Residential
AIR-1	Construction activities associated with the proposed project would result in a violation of an air quality standard, contribute substantially to an existing or projected air quality violation, or result in a cumulatively considerable net increase of a criteria pollutant for which the project region is non-attainment under an applicable national or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)	S/LTS	Avoided	Reduced	Reduced	Similar
AIR-2	Operation of the proposed project would result in a violation of an air quality standard, contribute substantially to an existing or projected air quality violation, or result in a cumulatively considerable net increase of a criteria pollutant for which the project region is non-attainment under an applicable national or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).	S/LTS	Avoided	Reduced	Reduced	Similar

	Project Impact	Proposed Project (Before/After Mitigation)	Alternative 1: No Project/ No Development	Alternative 2: No Project/ Existing Zoning	Alternative 3: Reduced Development	Alternative 4: Fire Station/Residential
AIR-5	Project construction would expose sensitive receptors to substantial pollutant concentrations.	PS/LTS	Avoided	Similar	Reduced	Similar
BIO-2	The proposed project would not directly or indirectly affect any riparian habitat, sensitive natural community, or wetlands nor interfere with the movement of any wildlife species, but project construction noise could affect nesting birds.	PS/LTS	Avoided	Similar	Similar	Similar
CUL-2	The proposed project could cause a substantial change in the significance of an archaeological resource pursuant to Section 15064.5.	PS/LTS	Avoided	Similar	Similar	Similar
CUL-4	The proposed project could disturb human remains, including those interred outside of formal cemeteries.	PS/LTS	Avoided	Similar	Similar	Similar
CUL-5	The proposed project could cause a substantial adverse change in the significance of a tribal cultural resource.	PS/LTS	Avoided	Similar	Similar	Similar
C-CUL-1	Cumulative development could cause a substantial change in the significance of a historical resource or unique archaeological resource pursuant to Section 15064.5 or impact tribal cultural resources, but the proposed project would not contribute substantially to the cumulative impacts.	PS/LTS	Avoided	Similar	Similar	Similar

	Project Impact	Proposed Project (Before/After Mitigation)	Alternative 1: No Project/ No Development	Alternative 2: No Project/ Existing Zoning	Alternative 3: Reduced Development	Alternative 4: Fire Station/Residential
TRANS-1	Development of the proposed project would conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.	S/SU	Avoided	Similar	Reduced	Similar
C-TRANS-1	Development of the proposed project would conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the traffic circulation system under Near-Term (2027) plus Project Conditions.	S/SU	Avoided	Similar	Reduced	Similar
UTL-4	Development of the proposed project would require the construction of new or expanded wastewater conveyance systems.	PS/LTS	Avoided	Greater (S)	Reduced	Similar

KEY
SU Significant and unavoidable
S Significant
PS Potentially significant impact
LTS Less than significant impact
Avoided Proposed project's impact avoided
Similar Impact similar to proposed project
Reduced Impact less than proposed project
Greater Impact greater than proposed project
1 This table lists only the significant or potentially significant environmental impacts of the proposed project.

5.8 REFERENCES

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