THE VILLAGE IN APPLE VALLEY

SHOP. DINE. PLAY. LIVE.

RECIRCULATED DRAFT ENVIRONMENTAL IMPACT REPORT

(SCH No. 2021110271)

FOR THE VILLAGE SPECIFIC PLAN

Prepared for

Town of Apple Valley
14955 Dale Evans Pkwy
Apple Valley, CA 92307

Prepared by

TERRA NOVA®
PLANNING & RESEARCH, INC.

JULY 2022

TOWN OF APPLE VALLEY

VILLAGE SPECIFIC PLAN

DRAFT ENVIRONMENTAL IMPACT REPORT
SCH No. 2021110271

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TOWN OF APPLE VALLEY VILLAGE SPECIFIC PLAN

RECIRCULATED DRAFT ENVIRONMENTAL IMPACT REPORT

EXECUTIVE SUMMARY & ENVIRONMENTAL MATRIX

INTRODUCTION

The Town of Apple circulated the Draft EIR for this Project from April 4, 2022 through May 19, 2022. Based on comments received on the EIR (please see Appendix A), and in an abundance of caution to assure that the public and decision makers have every opportunity to consider and review the Draft EIR, the Town is recirculating the EIR with changes incorporated due to these comments. Comments were received which resulted in changes to mitigation measures in Section 2.5, Biological Resources, and minor typographic changes in Section 2.4, Air Quality. Corresponding changes in the Environmental Matrix, below, have also been made for consistency. All additions are provided in this document in **bold text**; all deletions are provided in ~~strike through text~~. The balance of the document is identical to the originally circulated Draft EIR.

The Town of Apple Valley has prepared this Environmental Impact Report (EIR) to evaluate the potential environmental impacts related to the Village Specific Plan (proposed Project or Project). The Town is the lead agency under the California Environmental Quality Act (CEQA) for this Project.

The EIR has been prepared in accordance with CEQA (as amended) (Public Resources Code §§21000-21189.3) and the State CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3, §§15000-15387). Under State CEQA Guidelines §15121:

- *An EIR is an informational document which will inform public agency decision makers and the public generally of the significant environmental effect of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project. The public agency shall consider the information in the EIR along with other information which may be presented to the agency.*

- *While the information in the EIR does not control the agency's ultimate discretion on the project, the agency must respond to each significant effect identified in the EIR by making findings under Section 15091 and if necessary, by making a statement of overriding consideration under Section 15093.*

- *The information in an EIR may constitute substantial evidence in the record to support the agency's action on the project if its decision is later challenged in court.*

Under State CEQA Guidelines §15123, this Executive Summary describes the proposed Project, potentially significant impacts, and required mitigation measures. Also identified in this section is a summary of the alternatives to the project evaluated in this Draft EIR (Draft EIR or DEIR), including those that would avoid potentially significant effects; issues of concern/areas of controversy known to the Lead Agency; and issues to be resolved including the choice among alternatives and how best to mitigate the potentially significant effects.

The reader should review, but not rely exclusively on the Executive Summary as the sole basis for judgment of the proposed Project and alternatives. The complete DEIR should be consulted for specific information about the potential environmental effects and mitigation measures to address those effects.

Lead Agency

The Town of Apple Valley is the lead agency under CEQA for the proposed Project. The contact person is:

Daniel Alcayaga, Planning Manager
Town of Apple Valley
14955 Dale Evans Parkway
Apple Valley, California 92307
Email: dalcayaga@applevalley.org
Phone: (760)240-7000 x7200

SUMMARY OF THE PROPOSED PROJECT

Project Summary

The Village Specific Plan guides the long-term development and redevelopment of a 651±-acre Planning Area north and south of State Highway 18 in the east central portion of the Town of Apple Valley in southwest San Bernardino County. The Planning Area includes the Village, a historic commercial district generally extending along Highway 18 between Navajo and Central Roads, and surrounding lands. The Specific Plan revises the current land use plan by establishing five (5) planning districts and development guidelines tailored to each district. It is intended to enhance the Planning Area's identity as a downtown shopping and dining destination, guide future development of vacant parcels and redevelopment of underutilized parcels, and protect and expand neighborhoods with guidelines that scale down development at the periphery of the Village. It also coordinates infrastructure improvements and proposes a circulation plan, including a complete streets network, to improve efficiency, safety, and access throughout the Planning Area. In addition to existing development in the Planning Area, implementation of the proposed Project is projected to add an additional 682 dwelling units; 6,067,523 square feet of commercial/service/office/ public facility development; and 2,005 residents. Therefore, at Project buildout, there would be a total of 971 dwelling units; 7,890,903 square feet of commercial/retail/office/public facility development, and 2,855 residents in the Planning Area.

Specific Plan approval will require a General Plan Amendment (GPA); all existing General Plan designations in the Planning Area will change to "Village Specific Plan." It will also require a Zone Change (CZ); all existing zoning designations in the Planning Area will change to Districts 1 through 5, as described in Sections 1 and 2 of the DEIR.

Project Background

Apple Valley's historic Village commercial district was once the Town's primary commercial center and is now developed with locally owned retail, service, and restaurant establishments. Surrounding lands include service commercial and residential development and community facilities. The Village is optimally located along State Highway 18, the region's principal arterial, and serves both the local and regional passerby markets. The Village can benefit from an enhanced, cohesive, recognizable identify as a district retail, dining, and gathering destination that celebrates the Town's history.

The existing configuration of Highway 18 between Central and Navajo Roads, with two frontage roads that separate high-speed through traffic from local traffic accessing businesses has resulted in traffic inefficiencies and access challenges

for businesses along this highway segment. Incomplete or absent sidewalks, ramps, and other connectors and amenities and bicyclists also present access and safety concerns.

Beyond the Highway 18 corridor, the Project Planning Area contains a mix of commercial, service, and quasi-industrial uses and vacant lands. Non-motorized access within the Planning Area is negatively affected by discontinuous sidewalks, incomplete street improvements, and limited access to transit. The entire Planning Area is inconsistent in its implementation of architectural standards, landscape treatment, and limited public space. The purpose of the Project is to guide the future development and redevelopment of lands within the Village and improve the character of the area for the long-term economic health of land, business owners, and the visitor experience.

STATEMENT OF PROJECT OBJECTIVES

Under State CEQA Guidelines §15124(b), the project description shall include a statement of objectives. These objectives have been designed to assist the Town in developing a reasonable range of project alternatives to evaluate in the DEIR and aid the decision-makers in preparing findings or a statement of overriding considerations, if necessary.

The project objectives are intended to address the purpose of the Village Specific Plan Project. The Town has identified the following list of criteria as the objectives for the Project.

1. Create a vibrant neighborhood that will stand the test of time.
2. Expand the identity of the Village from Highway 18 throughout the Village boundary.
3. Have a cohesive and harmonious look and feel, with inviting streetscapes and attractive building facades.
4. Enhance connectivity and access throughout the Village.
5. Create a sense of place with interesting public spaces and paseos to increase walkability.
6. Be a convenient place for locals and visitors to stop, shop, and do business.
7. Be a safe and comfortable place for pedestrians, cyclists, and motorists.
8. Attract an eclectic mix of retail, services, specialty shops, and restaurants.
9. Strengthen partnerships between the Town, the Village Property and Business Improvement District (PBID), and business and property owners to fund and implement improvements.

SUMMARY OF PROJECT IMPACTS AND MITIGATION MEASURES

Section 2, Environmental Setting, Impacts, and Mitigation Measures, of this DEIR presents the environmental impact analyses for all CEQA resource topics and identifies mitigation measures to reduce significant impacts to a less than significant level, where appropriate and feasible. A summary of all impacts and mitigation measures from Section 2 is provided in Table M-1 at the end of this summary. Please refer to Section 2 for the complete analysis and discussion.

As shown in Table M-1, impacts associated with operational greenhouse gas emissions will exceed established standards. Findings and a *Statement of Overriding Considerations* will be prepared and will be considered by the Town as a part of its review of the EIR. The draft statement will set forth information, considerations, and findings that are supportive of the goals and benefits of the project as a whole.

ALTERNATIVES SUMMARY

Section 3, Alternatives, of this DEIR presents the alternatives analysis for the proposed Project. CEQA Guidelines §15126.6 requires that an EIR describe and evaluate the comparative merits of a range of alternatives to the project that could feasibly attain most of the objectives of the project, but would avoid or substantially lessen any significant adverse effects of the project. An EIR is not required to 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 CEQA Guidelines further state that the specific alternative of "no project" shall also be evaluated. The alternatives evaluated in this DEIR were identified based on the Apple Valley General Plan and Zoning Ordinance, and the development patterns in this part of the Town. The alternatives were selected in consideration of one or more of the following factors:

- Extent to which the alternative would accomplish most of the basic objectives of the project;
- Extent to which the alternative would avoid or lessen any of the identified significant adverse environmental effects of the project;
- Feasibility of the alternative, taking into account site/geographic suitability, economic viability, constructability, and consistency with regulatory requirements; and
- Appropriateness of the alternative in contributing to a reasonable range of alternatives necessary to permit a reasoned choice by decision-makers.

In consideration of the above factors, the following alternatives were selected to be addressed in this DEIR.

Alternative 1 – No Project/Existing Zoning Alternative
Based on the existing zoning designations within the Specific Plan area, Alternative 1 considers buildout of the Planning Area as currently designated. Under this Alternative, land uses would develop as currently zoned, and the street system would build out consistent with General Plan roadway classifications.

Alternative 2 – Reduced Intensity Alternative
Under Alternative 2, the Districts would build out with land uses and improvements consistent with the Specific Plan's standards and guidelines, but at a lower density of dwelling units and lower intensity of square footage. For purposes of this Alternative, it has been assumed that residential development would occur at a density of 10 units per acre (50% reduction in density), and commercial square footage would be reduced to a Floor Area Ratio (FAR) of 0.2. The residential density is consistent with past higher density projects built in Town and would likely result in a mix of single-family homes and apartments. The commercial FAR in this Alternative is consistent with the average FAR of existing development within the Planning Area.

ISSUES OF CONCERN/AREAS OF CONTROVERSY

When a Lead Agency determines that an EIR is required for a project, a Notice of Preparation (NOP) must be prepared and submitted to the State Clearinghouse. The purpose of the NOP is to provide responsible and trustee agencies, and the public, with sufficient information describing the proposed Project and the potential environmental effects, and to enable interested parties/persons to make a meaningful response. The Town issued the NOP for the Project on November 19, 2021, and it concluded after the 30-day public review period concluded on December 20, 2021. The Town received comments from the San Bernardino County Department of Public Works, and Mitchell M. Tsai on behalf of the Southwest Regional Council of Carpenters. Their comments and concerns have been included in the analysis within Section 2 of this DEIR. The comment letters request further analysis and information and do not raise any issues considered controversial.

ENVIRONMENTAL SUMMARY MATRIX

This Environmental Impact Report (EIR) has been prepared to assess the potential impacts to the environment that may result from the approval and implementation of the proposed Village Specific Plan Project. The Project includes 651± acres of land in the Town of Apple Valley. In addition to existing development in the Planning Area, implementation of the proposed Project is projected to result in the development of an additional 682 dwelling units; 6,067,523 square feet of commercial/service/office/public facility development; and 2,005 residents. Therefore, at Project buildout, there would be a total of 971 dwelling units; 7,890,903 square feet of commercial/ retail/office/public facility development; and 2,855 residents in the Planning Area.

Summary of Alternatives
The two Project alternatives analyzed in this DEIR are as follows:

Alternative 1 – No Project/Existing Zoning Alternative
Alternative 1 considers buildout of the Planning Area as currently designated. Under this Alternative, land uses would develop as currently zoned, and the street system would build out consistent with General Plan roadway classifications.

Alternative 2 – Reduced Intensity Alternative
Under Alternative 2, the Districts would build out with land uses and improvements consistent with the Specific Plan's standards and guidelines, but at a lower density of dwelling units and lower intensity of square footage. Alternative 2 assumes that residential development would occur at a density of 10 units per acre (50% reduction in density), and commercial square footage would be reduced to a Floor Area Ratio (FAR) of 0.2, consistent with past and existing development in the Planning Area.

Definition of Impacts
The following table briefly summarizes each category of analysis, including level of impact before mitigation, proposed mitigation measures, and level of significance after mitigation. Levels of impact include the following:

Potentially Significant Impacts: Those impacts which, prior to the implementation of mitigation measures, could potentially adversely impact environmental conditions.

Less Than Significant Impacts: Those impacts, which, by virtue of the environmental conditions, predisposing existing development, or the implementation of mitigation measures, are reduced to acceptable or "insignificant" levels.

No Impacts: Those conditions where the proposed Project will not impact the environmental condition.

Areas of Controversy

There are no known areas of controversy in the Project's physical characteristics that are not resolved by Project design, development management and operation, mitigation measures, or standard ongoing monitoring.

TABLE M-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Level of Impact Before Mitigation**	**Proposed Mitigation Measure(s)**	**Level of Significance after Mitigation**
Section 2.3 Aesthetics			
a) Have a substantial adverse effect on a scenic vista.	Less Than Significant	No mitigation is required.	Less Than Significant
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	No Impact	No mitigation is required.	No Impact
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	Less Than Significant	No mitigation is required.	Less Than Significant

TABLE M-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Level of Impact Before Mitigation**	**Proposed Mitigation Measure(s)**	**Level of Significance after Mitigation**
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	Less Than Significant	No mitigation is required.	Less Than Significant
Section 2.4 Air Quality			
a) Conflict with or obstruct implementation of the applicable air quality plan.	Less Than Significant	No mitigation is required.	Less Than Significant
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.	Less Than Significant	No mitigation is required.	Less Than Significant
c) Expose sensitive receptors to substantial pollutant concentrations.	Less Than Significant	No mitigation is required.	Less Than Significant
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.	Less Than Significant	No mitigation is required.	Less Than Significant

TABLE M-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Level of Impact Before Mitigation**	**Proposed Mitigation Measure(s)**	**Level of Significance after Mitigation**
Section 2.5 Biological Resources			
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.	Potentially Significant	BIO-1: Site-Specific Biological Surveys Prior to **grading or any other ground-disturbing activity, including vegetation removal or other** development actions, development projects proposed on vacant parcels, or as deemed necessary by the Town, shall be required to conduct site-specific biological studies in compliance with standard survey methodologies and the Apple Valley MSHCP/NCCP. Species-specific and/or resource-specific surveys may be required and shall comply with applicable protocols of CDFW, USFWS, and/or other appropriate regulatory agencies**, as follows:** • **Burrowing Owl surveys shall be conducted consistent with the CDFW Staff Report on Burrowing Owl Mitigation, or the standard in place at the time that surveys are required, including habitat assessments, surveys and impact assessments, to the standards and utilizing the protocols included in the Staff Report.** • **Desert Tortoise pre-construction surveys shall be conducted no more than 48 hours prior to the initiation of ground disturbance, and in accordance with the standards and protocols provided in the US Fish and Wildlife Service 2019 Desert Tortoise Survey Methodology, or the standard in place at the time that surveys are required. If the species is detected, a take permit shall be secured by the development's**	Less Than Significant

TABLE M-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Level of Impact Before Mitigation**	**Proposed Mitigation Measure(s)**	**Level of Significance after Mitigation**
		proponent, consistent with State and federal requirements. • **<u>Mohave Ground Squirrel</u> pre-construction surveys shall be conducted following the standards and protocols of the CDFW Mohave Ground Squirrel Survey Guidelines, or the standard in place at the time that surveys are required.** If biological resources are present that would be significantly impacted by a project, mitigation measures shall be implemented to reduce impacts on sensitive species/habitat to less than significant levels. BIO-2: <u>Nesting Bird Surveys</u> For any grading or other site disturbance or tree or vegetation removal occurring during the nesting season **typically** between February 1st and August 31st, a qualified biologist shall conduct at least one nesting bird survey, and more if deemed necessary by the consulting biologist, ~~immediately prior to initiation of project related ground disturbing activities,~~ **and shall be required to conduct the initial field survey no more than 3 days prior to the initiation of ground disturbance.** If nesting birds are present, no work shall be permitted near the nest until the young birds have fledged**, as determined by the qualified biologist**. ~~While there is no established protocol for nest avoidance, when consulted, t~~**T**he CDFW ~~generally~~ recommends avoidance buffers of about 500 feet for birds-of-prey, and 100-300 feet for songbirds. **A smaller or larger buffer may be determined by the qualified biologist.**	

TABLE M-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Level of Impact Before Mitigation**	**Proposed Mitigation Measure(s)**	**Level of Significance after Mitigation**
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service.	Potentially Significant	BIO-1: Site-Specific Biological Surveys (see 2.5.a above)	Less Than Significant
c) Have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.	Less Than Significant	No mitigation is required.	Less Than Significant
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.	Less Than Significant	No mitigation is required.	Less Than Significant

TABLE M-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Level of Impact Before Mitigation**	**Proposed Mitigation Measure(s)**	**Level of Significance after Mitigation**
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	Less Than Significant	No mitigation is required.	Less Than Significant
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	Less Than Significant	No mitigation is required.	Less Than Significant
Section 2.6 Cultural Resources			
a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5.	Potentially Significant	CUL-1: <u>Pre-Construction Surveys</u> The Town shall require intensive-level cultural resources surveys by qualified archaeologists, historians, and/or architectural historians, where deemed necessary Studies should include in-depth records search at the SCCIC, historic background research, intensive-level field survey, and consultation with Native American representatives and/or other relevant parties, as well as impact revaluation and mitigation programs, as needed. The Town shall monitor and enforce recommended mitigation measures.	Less Than Significant

TABLE M-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Level of Impact Before Mitigation**	**Proposed Mitigation Measure(s)**	**Level of Significance after Mitigation**
		CUL-2: Archaeological and/or Tribal Resource Procurement and Documentation Should unknown archaeological or tribal cultural resources become unearthed, the area of potential resources shall be cordoned off within 50 feet of the find and protected from further disturbance until a qualified archaeologist scan investigate the discovery. The qualified archaeologist shall prepare a findings report summarizing the methods and results of the investigation, including an itemized summary and detailed analysis of recovered artifacts upon completion of field and laboratory work. The report shall include an interpretation of the cultural activities represents by the artifacts and discussion of their significance. The submittal of the report to the Town and Tribal representatives, as appropriate, along with final curation of the recovered artifacts, will signify completion of the monitoring program and, barring any unexpected findings, of extraordinary significant, the mitigation of potential project impacts on cultural and tribal resources.	
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5.	Potentially Significant	CUL-1: Pre-Construction Surveys (see 2.6.a above) CUL-2: Archaeological and/or Tribal Resource Procurement and Documentation (see 2.6.a above)	Less Than Significant

TABLE M-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Level of Impact Before Mitigation**	**Proposed Mitigation Measure(s)**	**Level of Significance after Mitigation**
c) Disturb any human remains, including those interred outside of formal cemeteries	Potentially Significant	CUL-3: Human Remains Should human remains be discovered during grading or other construction activity, in accordance with State law, the County coroner shall be contacted. If the remains are determined to be of Native American heritage, the Native American Heritage Commission (NAHC) and the appropriate local Native American Tribe shall be contacted to determine the Most Likely Descendant (MLD).	Less Than Significant
Section 2.7 Energy Resources			
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.	Less Than Significant	No mitigation is required.	Less Than Significant
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	No Impact	No mitigation is required.	No Impact
Section 2.8 Geology and Soils			
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:	No Impact	No mitigation is required.	No Impact

TABLE M-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Level of Impact Before Mitigation**	**Proposed Mitigation Measure(s)**	**Level of Significance after Mitigation**
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			
ii) Strong seismic ground shaking?	Potentially Significant	GEO-1: Proposals for future development and redevelopment under the Apple Valley Village Specific Plan shall include site-specific subsurface geotechnical investigations that address geologic and soil hazards, including ground shaking, settlement, liquefaction, subsidence, collapsible and expansive soils, and other relevant conditions and potential hazards. Seismic-related hazards shall be analyzed using Probabilistic Seismic Hazard Analysis (PSHA). The geotechnical investigations shall provide site-specific mitigation measures, including but not limited to proper excavation, compaction, and foundation design, as well as other standard construction practices.	Less Than Significant
iii) Seismic related ground failure, including liquefaction?	Potentially Significant	GEO-1 (see 2.8.a.ii above)	Less Than Significant

TABLE M-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Level of Impact Before Mitigation**	**Proposed Mitigation Measure(s)**	**Level of Significance after Mitigation**
iv) Landslides?	No Impact	No mitigation is required.	No Impact
b) Result in substantial soil erosion or the loss of topsoil.	Less Than Significant	No mitigation is required.	Less Than Significant
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.	Potentially Significant	GEO-1 (see 2.8.a.ii above)	Less Than Significant
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.	Potentially Significant	GEO-1 (see 2.8.a.ii above)	Less Than Significant
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.	Less Than Significant	No mitigation is required.	Less Than Significant

TABLE M-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Level of Impact Before Mitigation**	**Proposed Mitigation Measure(s)**	**Level of Significance after Mitigation**
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	No Impact	No mitigation is required.	No Impact
Section 2.9 Greenhouse Gas Emissions			
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	Potentially Significant	GHG-1: <u>Energy Efficient Design</u> Site plans shall incorporate energy-efficient design elements, including appropriate site orientation, possibility for incorporation of active and/or passive solar design, and the use of shade and windbreak trees, to reduce fuel consumption for heating and cooling. GHG-2: <u>Alternative Energy: Community Wide</u> To encourage the use of alternative energy sources, installation of electric vehicle charging stations shall be encouraged in all new development and in major retrofits. GHG-3: <u>CEQA Analysis: Sustainability Plan Measures</u> Projects that require CEQA analysis shall be required to conduct detailed impact analyses and incorporate mitigation measures into their designs using the Towns' current Climate Action Plan prescribed reduction measures for achieving greenhouse gas emission reduction targets. All proposed mitigation measures shall be reviewed and approved by the Town prior to the issuance of grading or demolition permits.	Significant and Unavoidable

TABLE M-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Level of Impact Before Mitigation**	**Proposed Mitigation Measure(s)**	**Level of Significance after Mitigation**
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	Potentially Significant	GHG-1: Energy Efficient Design (see 2.9.a above) GHG-2: Alternative Energy: Community Wide (see 2.9.a above) GHG-3: CEQA Analysis: Sustainability Plan Measures (see 2.9.a above)	Significant and Unavoidable
Section 2.10 Hazard & Hazardous Materials			
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	Less Than Significant	No mitigation is required.	Less Than Significant
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	Less Than Significant	No mitigation is required.	Less Than Significant
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an	Less Than Significant	No mitigation is required.	Less Than Significant

TABLE M-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Level of Impact Before Mitigation**	**Proposed Mitigation Measure(s)**	**Level of Significance after Mitigation**
existing or proposed school.			
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment.	No Impact	No mitigation is required.	No Impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area.	No Impact	No mitigation is required.	No Impact
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	Less Than Significant	No mitigation is required.	Less Than Significant

TABLE M-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Level of Impact Before Mitigation**	**Proposed Mitigation Measure(s)**	**Level of Significance after Mitigation**
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.	Less Than Significant	No mitigation is required.	Less Than Significant
Section 2.11 Hydrology and Water Quality			
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.	Less Than Significant	No mitigation is required.	Less Than Significant
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.	Less Than Significant	No mitigation is required.	Less Than Significant
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through	Less Than Significant	No mitigation is required.	Less Than Significant

TABLE M-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Level of Impact Before Mitigation**	**Proposed Mitigation Measure(s)**	**Level of Significance after Mitigation**
the addition of impervious surfaces, in a manner which would: i) result in substantial erosion or siltation on- or off-site; ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or iv) impede or redirect flood flows.			
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.	Less Than Significant	No mitigation is required.	Less Than Significant

TABLE M-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Level of Impact Before Mitigation**	**Proposed Mitigation Measure(s)**	**Level of Significance after Mitigation**
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	No Impact	No mitigation is required.	No Impact
Section 2.12 Land Use/Planning			
a) Physically divide an established community.	Less Than Significant	No mitigation is required.	Less Than Significant
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.	Less Than Significant	No mitigation is required.	Less Than Significant
Section 2.13 Noise			
a) Generate substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	Less Than Significant with Mitigation	NOI-1 Residential development proposed along Navajo Road or Central Road, in Districts 4 and 5, shall be required to prepare a project-specific noise impact analysis to analyze the noise levels resulting from adjacency to these roadways. The noise analyses shall provide interior and exterior noise levels, and shall include mitigation measures, if necessary, to assure that noise levels remain within the Town's acceptable standards for residential land uses.	Less Than Significant

TABLE M-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Level of Impact Before Mitigation**	**Proposed Mitigation Measure(s)**	**Level of Significance after Mitigation**
b) Result in the generation of excessive groundborne vibration or groundborne noise levels.	Less Than Significant	No mitigation is required.	Less Than Significant
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.	No Impact	No mitigation is required.	No Impact
Section 2.14 Population, Housing, and Socio-Economic Resources			
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).	Less Than Significant	No mitigation is required.	Less Than Significant

TABLE M-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Level of Impact Before Mitigation**	**Proposed Mitigation Measure(s)**	**Level of Significance after Mitigation**
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.	Less Than Significant	No mitigation is required.	Less Than Significant
Section 2.15 Public Services			
a) The project would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: • Fire protection	Less Than Significant	No mitigation is required.	Less Than Significant
• Police protection	Less Than	No mitigation is required.	Less Than

TABLE M-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Level of Impact Before Mitigation**	**Proposed Mitigation Measure(s)**	**Level of Significance after Mitigation**
	Significant		Significant
• Schools	Less Than Significant	No mitigation is required.	Less Than Significant
• Parks	Less Than Significant	No mitigation is required.	Less Than Significant
• Other public facilities	Less Than Significant	No mitigation is required.	Less Than Significant
Section 2.16 Recreational Resources			
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.	Less Than Significant	No mitigation is required.	Less Than Significant
b) include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment.	Less Than Significant	No mitigation is required.	Less Than Significant

TABLE M-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Level of Impact Before Mitigation**	**Proposed Mitigation Measure(s)**	**Level of Significance after Mitigation**
Section 2.17 Transportation and Traffic			
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.	Potentially Significant	TRANSP-1: Intersection of Navajo Road and Powhatan Road West When warranted, a traffic signal shall be installed at the intersection of Navajo Road at Powhatan Road West and coordinated with the existing traffic signal at Navajo Road and Powhatan Road East. TRANSP-2: Powhatan Road Between Navajo and Central Roads Should circulation plan Alternative 1 (All Roundabouts on Highway 18) be implemented, the Town shall routinely (at least every 5 years) monitor traffic volumes on Powhatan Road between Navajo Road and Central Road to determine whether this roadway segment should be widened to 4 lanes and designated and improved as a Major Thoroughfare. Should this occur, this roadway segment shall be designated a Through Truck Route, the intersection of Powhatan Road and Central Road shall be signalized, and development projects shall be required to provide adequate right-of-way for a Major Thoroughfare.	Less Than Significant
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).	Less Than Significant	No mitigation is required.	Less Than Significant

TABLE M-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Level of Impact Before Mitigation**	**Proposed Mitigation Measure(s)**	**Level of Significance after Mitigation**
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).	Less Than Significant	No mitigation is required.	Less Than Significant
d) Result in inadequate emergency access.	Less Than Significant	No mitigation is required.	Less Than Significant
Section 2.18 Tribal Cultural Resources			
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k).	Potentially Significant	CUL-1: Pre-Construction Surveys (see 2.6.a above) CUL-2: Archaeological and/or Tribal Resource Procurement and Documentation (see 2.6.a above) CUL-3: Human Remains (see 2.6.c above)	Less Than Significant
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public	Potentially Significant	CUL-1: Pre-Construction Surveys (see 2.6.a above) CUL-2: Archaeological and/or Tribal Resource Procurement and Documentation (see 2.6.a above) CUL-3: Human Remains (see 2.6.c above)	Less Than Significant

TABLE M-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Level of Impact Before Mitigation**	**Proposed Mitigation Measure(s)**	**Level of Significance after Mitigation**
Resource Code Section 5024.1h, the lead agency shall consider the significance of the resource to a California Native American tribe.			
Section 2.19 Utilities and Service Systems			
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.	Less Than Significant	No mitigation is required.	Less Than Significant
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.	Less Than Significant	No mitigation is required.	Less Than Significant

TABLE M-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	**Level of Impact Before Mitigation**	**Proposed Mitigation Measure(s)**	**Level of Significance after Mitigation**
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.	Less Than Significant	No mitigation is required.	Less Than Significant
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.	Less Than Significant	No mitigation is required.	Less Than Significant
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.	Less Than Significant	No mitigation is required.	Less Than Significant

TOWN OF APPLE VALLEY VILLAGE SPECIFIC PLAN

RECIRCULATED DRAFT ENVIRONMENTAL IMPACT REPORT

1. INTRODUCTION AND PROJECT DESCRIPTION

1.1 Introduction

The California Environmental Quality Act (CEQA) (California Public Resources Code §21000-21189.57) and the State CEQA Guidelines (California Code Regs., tit. 14 §15000-15387) establish and guide the environmental review process for all projects in California. This document has been prepared in conformance with CEQA and the State CEQA Guidelines to evaluate the potential impacts associated with the Apple Valley Village Specific Plan (proposed Project). The proposed action evaluated in this Environmental Impact Report (EIR) constitutes a "project," as defined by §15378 of the State CEQA Guidelines.

1.2 Project Location and Limits

The Village Specific Plan Planning Area includes 651± acres in the east central portion of the Town of Apple Valley in southwestern San Bernardino County, California. It is generally bounded by Arapahoe and Esaws Avenues on the north, Ottawa Road on the south, Central Road on the east, and the realigned Yucca Loma and Navajo Roads on the west. Additional contiguous parcels are located on the east and west. The Planning Area includes a 1.5± mile segment of State Highway 18.

The Planning Area is within portions of Sections 21, 22, 23, 26, 27, and 28, Township 5 North, Range 3 West, San Bernardino Baseline & Meridian (SBB&M) (USGS Apple Valley North and Apple Valley South 7.5-minute quadrangle maps).

1.3 Project Description

The Village Specific Plan Planning Area includes 651± acres north and south of the State Highway 18 corridor in the east central portion of the Town of Apple Valley (Exhibits 1-1, 1-2, 1-3). It includes the historic Village corridor and surrounding lands. The Village corridor generally extends along Highway 18 between Navajo and Central Roads. It was once the Town's primary commercial center and is developed with locally owned retail, service, and restaurant establishments. Surrounding lands include service commercial and residential development and community facilities.

The Village Specific Plan guides the long-term development and redevelopment of the Planning Area. It revises the current land use plan by establishing five (5) planning districts, each with its own land uses, development standards, and guidelines that are tailored to the district's existing uses, development potential, and community vision. The Specific Plan is intended to enhance the Village's identity as a downtown shopping and dining destination, guide future development of vacant parcels and redevelopment of underutilized parcels, and protect residential neighborhoods with guidelines that scale down development at the periphery of the Village. It expands the mix of land uses to serve local and sub-regional markets while also preserving small-scale and locally owned businesses. It coordinates various aspects of infrastructure planning, infill development, and lot consolidation, where appropriate. Its transportation concept improves the functioning of Highway 18 in the Planning Area by minimizing traffic conflicts, integrating multimodal features, and improving access to provide an efficient and safe circulation system. Its vision and development standards and guidelines are consistent with General Plan goals and policies.

Table 1-1 summarizes potential changes to the Planning Area resulting from buildout of the Specific Plan. There are currently an estimated 289 dwelling units, 1,823,380 square feet of commercial/service/office/public facility development, and 850 residents in the Planning Area. Implementation of the proposed Project could result in an additional 682 dwelling units, 6,067,523 square feet of commercial/retail/office/public facility development, and 2,005 residents. Therefore, at Project buildout, there would be a total of 971 dwelling units, 7,890,903 square feet of commercial/retail/office/public facility development, and 2,855 residents in the Planning Area.

Table 1-1
Proposed Project Buildout Summary

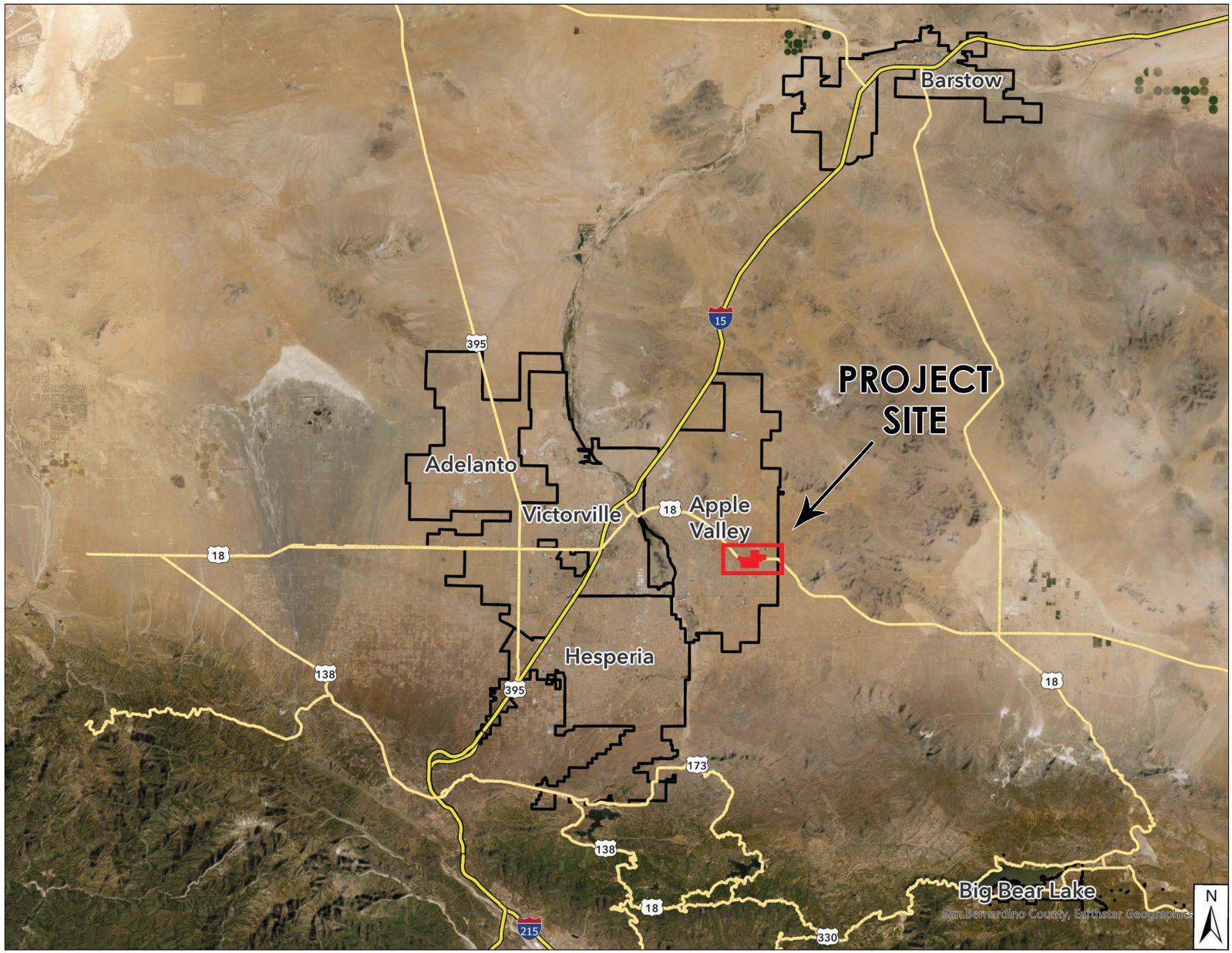
	Residential (dwelling units)	Commercial/ Service/Office/ Public Facility (square feet)	Population[1]
Existing	289	1,823,380	850
Potential new facilitated by proposed Project	682	6,067,523	2,005
Total at Specific Plan Buildout	971	7,890,903	2,855

[1] Based on 2.94 persons per household, California Dept. of Finance, Table E-5, January 1, 2021.

The Specific Plan allows a broad range of land uses that are similar in nature to those currently developed in the Planning Area. No substantial change in land use is foreseen or expected, given the permitted uses provided in the Specific Plan. The Specific Plan also establishes district-specific development standards, which allow for somewhat more intense development of the Planning Area. The proposed development standards (provided in Table 3-2 of the Specific Plan), are reproduced in Table 1.2, below.

Table 1-2
Summary of Development Standards

	DISTRICT 1	DISTRICT 2	DISTRICT 3	DISTRICT 4	DISTRICT 5
Residential Density (DU/AC), min-max	6-20 DU/AC	NA	NA	6-20 DU/AC	6-20 DU/AC
Dwelling unit size, min	600 sf	NA	NA	600 sf	600 sf
Lot area, min.	NA	NA	NA	7,000 sf	7,000 sf
Max. Height:					
a. Within 100 ft of residential use/district or Fronting Highway 18	25 ft	25 ft	25 ft	25ft	35ft
b. All other locations	35 ft	35 ft	35 ft		
Lot Coverage:					
a. Non-Res FAR, max.	1.0	0.5	0.5	NA	NA
b. Res Lot coverage, max	60%	NA	NA	60%	60%
Frontage:					
a. Site frontage, min.	NA	NA	NA	50 ft	50 ft
b. Lot width, min	50 ft	50 ft	50 ft	50 ft	50 ft
Lot depth, min	75 ft	75 ft	75 ft	75 ft	75 ft
Front Setback, min.					
a. From local streets	0 ft	20 ft	20 ft	15 ft	15 ft
b. From major or secondary streets	0 ft	20 ft	20 ft		
Rear Setback, min.	0 ft	0 ft	0 ft	15 ft	15 ft
Side Setback, min.					
a. If adjacent to residential use	25 ft	25 ft	25 ft	5 ft	5 ft
b. All other locations	0 ft	0 ft	0 ft		
Street Side Setback, min.	0 sf	10 ft	10 ft	15 ft	15 ft
Open Space/ Landscaping, min.	0%	10%	10%	20%	20%



Source: Terra Nova Planning and Research, Inc.; ESRI, 2021

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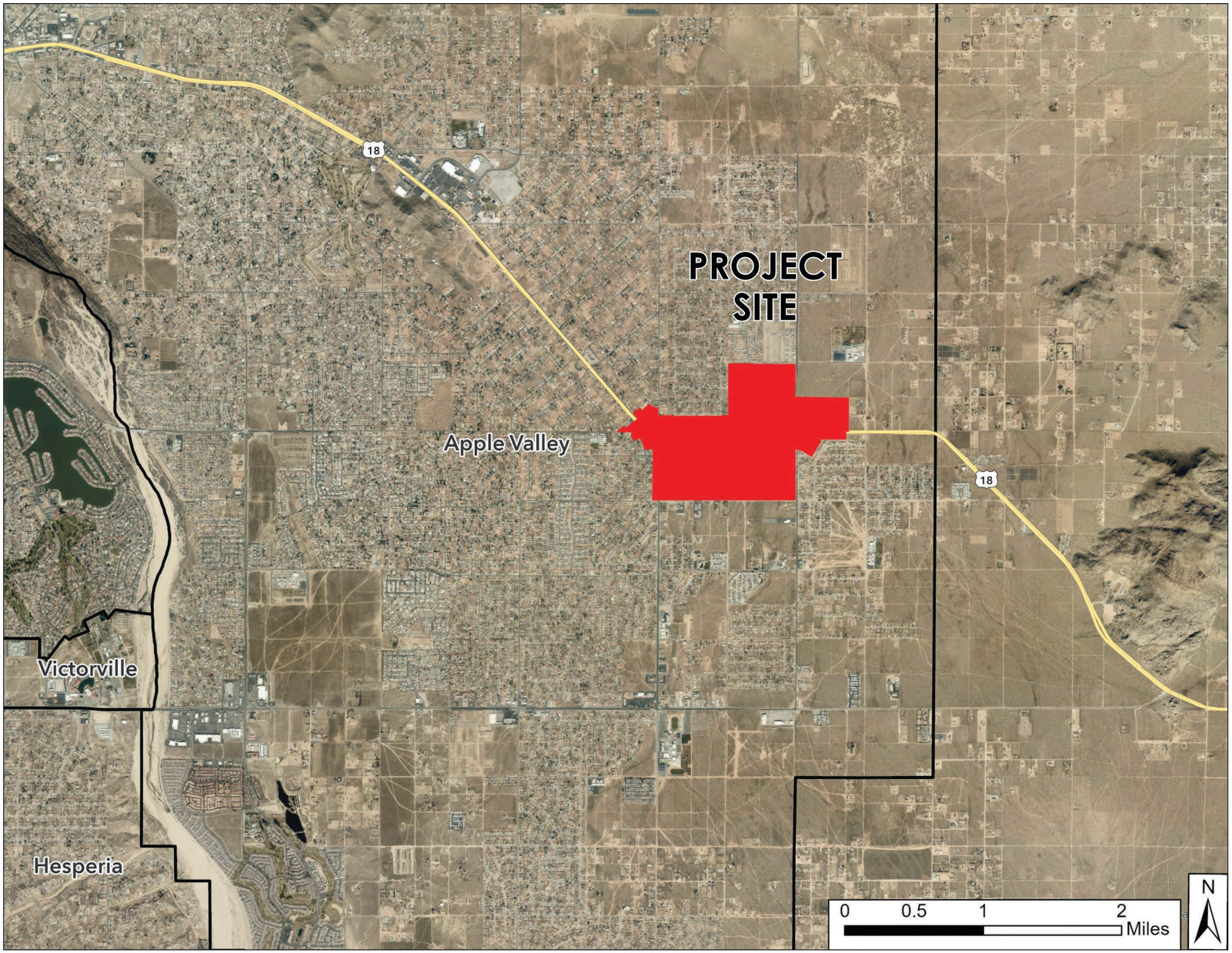
Village Specific Plan
Regional Location Map

Town of Apple Valley

Exhibit
1-1



Source: Terra Nova Planning and Research, Inc.; ESRI, 2021

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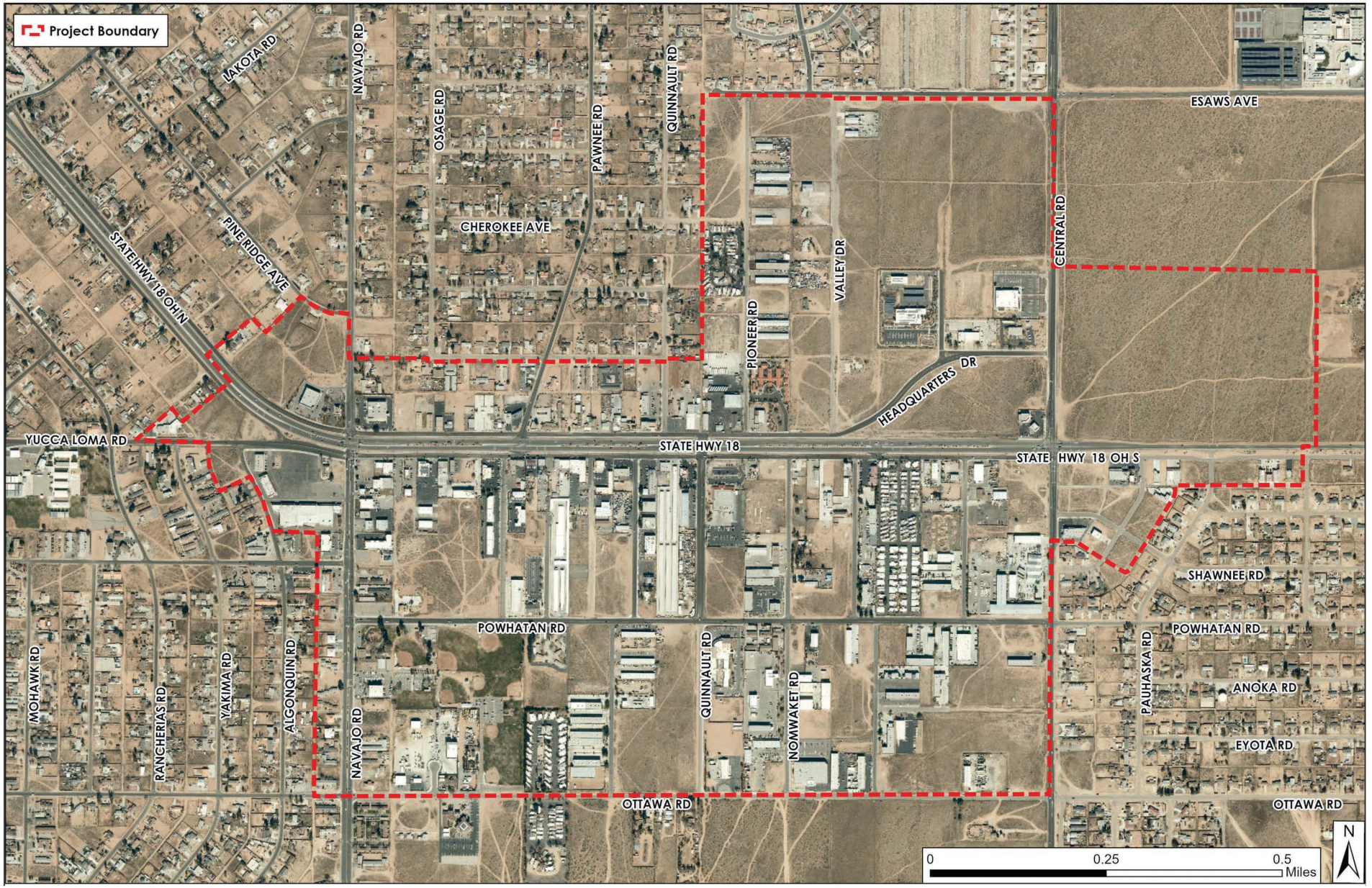
Village Specific Plan
Vicinity Map

Town of Apple Valley

Exhibit
1-2



Source: Terra Nova Planning and Research, Inc.; ESRI, 2021

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Village Specific Plan
Project Location Map

Town of Apple Valley

Exhibit 1-3

Districts

For planning purposes, the Specific Plan divides the Planning Area into five (5) districts, described below and shown in Exhibit 1-4. Table 1-3 describes proposed land uses and buildout estimates by district. Buildout estimates assume that underutilized acreage will be redeveloped to maximize its development potential.

District 1: Village Core

District 1 is the heart of downtown and plays a significant role in establishing the Village identity. This centralized District is anchored by Highway 18 and totals 183.55 acres, of which 59.64 acres are developed, 16.33 acres are underutilized, and 107.58 acres are vacant and developable. District 1 is envisioned as the primary commercial and entertainment district with development primarily oriented towards Highway 18 to support the corridor's function as a downtown "main street." The development of District 1 is intended to create a vibrant pedestrian environment through outdoor dining, interesting store displays, architectural detailing, public art, gathering spaces, and other pedestrian-oriented features. The flexibility of development standards in this District also promotes both vertical and horizontal mixed-use developments within walking distance of the downtown.

District 2: Village Services South

Located south of District 1, District 2 is the largest of the five districts totaling 210.98 acres, of which 95.78 acres are developed, 23.78 acres are underutilized, and 91.42 acres vacant and developable. This District is one of two commercial service districts in the Planning Area that supports a mix of commercial retail, office/professional and commercial services. Compared to the northern commercial service district (District 3), District 2 is further removed from residential uses which increases opportunities for quasi-industrial uses that may require a large production area or storage yards. District 2 also includes Powhattan Road and Ottawa Road, which are intended to serve as secondary east-west alternatives to Highway 18 and will be improved with landscaping and pedestrian infrastructure that provides safe connection to District 1 from southern businesses and residential areas.

District 3: Village Services North

District 3 is the second commercial service district that encompasses 88.24 acres north of District 1, of which 28.87 acres are developed, 11.06 acres are underutilized, and 48.31 acres vacant and developable. Similar to District 2, this District supports a mix of retail, office/professional and commercial services with immediate access to the Village core. However, this District is bounded on the north and west by single family residential neighborhoods that may be sensitive to certain types of non-residential land uses due to noise, odor, and

visual impacts. Development of this District will demonstrate how to properly transition non-residential uses to residential uses through thoughtful design and development standards.

District 4: Residential and Recreation
District 4 is in the southwest corner of the Planning Area totaling 50.28 acres, of which 40.10 acres are developed, 7.20 acres are underutilized, and 2.98 acres vacant and developable. Development of this District demonstrates how to enhance the connections between existing residential uses and public parks and other services. This District also provides examples of redevelopment opportunities that increase residential densities through lot consolidation and bring residents closer to jobs and shopping opportunities in District 1 and District 2.

District 5: Residential
District 5 totals 23.28 acres and is the only District that is entirely vacant. Uses surrounding this District include single family residential to the north, vacant lands to the east, and District 3 to the south and west. This District is intended for higher density residential and supporting public services, such as parks and schools. In consideration of surrounding uses, District 5 development standards are designed to create a buffer between low density residential to non-residential uses through smooth transitions from lower densities to the north to higher densities to the south and west. Types of residential uses envisioned for this District include townhomes, condominiums, and low-rise apartments.

Circulation Improvements
The Specific Plan proposes the following circulation improvement concepts (Exhibit 1-5).

Highway 18 (Central Road to Navajo Road)
The Highway 18 corridor between Central and Navajo Roads currently consists of a 4-lane highway with two (2) two-way frontage roads that separate high-speed through traffic from local traffic accessing commercial sites. Multimodal facilities (i.e., sidewalks, ramps, bike lanes, pedestrian amenities) are incomplete or absent. This configuration has resulted in inefficient intersection movements, access challenges, and safety concerns. The Specific Plan circulation concept reconfigures the frontage roads to single-directional single-lane roadways and provides angled parking along most of the highway frontage. Two (2) new intersections are proposed, at Yucca Loma and Highway 18, and at Headquarters/Hitt Road and Highway 18. The circulation concept includes two (2) options: it either results in roundabouts at the intersections of Highway 18 and Central Road, Headquarters Drive/Hitt Road, Quinnault Road, Pawnee Road, Navajo Road and Yucca Loma; or the continuation of signalized intersections at these locations, with improved

crosswalks and access, to the extent possible. Both alternatives provide a complete sidewalk network and buffered bike lanes. Where Quinnault Road is offset at Highway 18, a dogleg option is proposed on the north side of the Highway.

Realignment of Yucca Loma Road and Navajo Road
The existing intersection of Yucca Loma and Navajo Roads is immediately south of the signalized intersection of Yucca Loma and Highway 18, which can lead to confusing and dangerous turning maneuvers. Under the proposed Specific Plan concept, Yucca Loma intersects with Highway 18 at a new intersection (whether roundabout or signalized) west of Navajo Road and terminates at Navajo Road north of Highway 18 (at Arapaho, extended). Between Navajo Road and Algonquin Road, land currently required for Yucca Loma will be available for development, and for a multi-use trail which will connect to the existing multi-use trail to the west of the Planning Area.

Complete Street Improvements
The Specific Plan also promotes the concept of "complete streets" throughout the Planning Area, by designating a hierarchy of non-vehicular improvements, ranging from off-street bike lanes to sidewalks and public spaces. The vision of the Specific Plan is to allow all types of movement throughout the area, not only the current vehicle-focused transportation system currently in place, by assuring the completion of sidewalks, trails, and alleys that allow safe non-vehicular access for pedestrians, bikes, and other alternative transportation.

General Plan Amendment

Specific Plan approval will require a General Plan Amendment (GPA). Existing General Plan land use designations in the Planning Area are shown in Exhibit 2.12-1. They include General Commercial (C-G), Service Commercial (C-S), Mobile Home Park (MHP), Medium Density Residential (R-M), Estate Residential (R-E), Public Facilities (P-F), and Open Space (O-S). The proposed GPA will change all General Plan designations in the Planning Area to "Village Specific Plan."

Zone Change

Specific Plan approval will require a Zone Change. Existing zoning designations are shown in Exhibit 2.12-2. They include General Commercial (C-G), Service Commercial (C-S), Village Commercial (C-V), Mobile Home Park (MHP 5-15 du/ac), Multi-Family Residential (R-M 4-20 du/ac), Estate Residential (R-E 1 du/1 to 2.5 gross ac), Public Facilities (P-F), and Open Space-Recreation (OS-R). Table 1-4 summarizes existing land uses by current zoning designation. The Zone Change will change current zoning designations to Village Specific Plan, Districts 1 through 5 (described above and shown in Exhibit 1-4).

Table 1-3
Proposed Project Land Use Buildout

District	Acres					Residential (dwelling units)				Commercial/Service/Office/Public Facility (square feet)			
	Developed Acres			Vacant Acres	Total Acres	Existing Units	Under-utilized Potential[1]	Vacant Potential[2]	Total Units at Buildout[4]	Existing sq. ft.	Under-utilized Potential[1]	Vacant Potential[3]	Total sq. ft. at Buildout[4]
	Developed	Under-Utilized[4]	Total Developed										
District 1: Village Core	59.64	16.33	75.97	107.58	183.55	63	42	180	259	543,437	310,038	2,147,072	2,907,393
District 2: Village Services North	95.78	23.78	119.56	91.42	210.98	89	0	0	1	1,029,533	517,961	1,991,144	3,455,669
District 3: Village Services South	28.87	11.06	39.93	48.31	88.24	41	0	0	0	181,088	240,822	1,052,200	1,458,519
District 4: Residential & Recreation	40.10	7.20	47.30	2.98	50.28	96	144	60	246	69,322	0	0	69,322
District 5: Residential	0	0	0	23.28	23.28	0	0	466	466	0	0	0	0
Land Use Total Acres:	224.40	58.36	282.76	273.57	556.33	---	---	---	---	---	---	---	---
Street ROW Total Acres:	94.82	0	94.82	0	94.82	---	---	---	---	---	---	---	---
Grand Total:	**319.22**	**58.36**	**377.58**	**273.57**	**651.16**	**289**	**186**	**705**	**971**	**1,823,380**	**1,068,821**	**5,190,416**	**7,890,903**

Estimates based on a number of sources, including Google Earth, ESRI, San Bernardino County Assessor, and Town housing data. Potential uses for vacant and/or underutilized acres assumes District 1 is mixed use residential and commercial/service uses (see footnote 1), Districts 2 and 3 are all commercial/service uses, and Districts 4 and 5 are residential uses.

[1] For District 1, assumes the west end signature project (Franklin, 5 parcels, approx. 8.38 acres categorized as "underutilized") will develop 25% residential (2.095 acres) and 75% commercial (6.285 acres), the east end signature project (30 acres, all vacant land) will develop 30% residential (9 acres) and 70% commercial (21 acres), and remaining underutilized acreage will develop as commercial. Combined, the west and east end signature projects are 11.09 acres residential and 27.29 acres commercial.

[2] Future residential development potential assumes maximum density of 20 DU/AC.

[3] Commercial development potential assumes existing development has occurred at maximum allowed Floor Area Ratio (FAR) of 0.5 (acres x 43,560 sf x 50%).

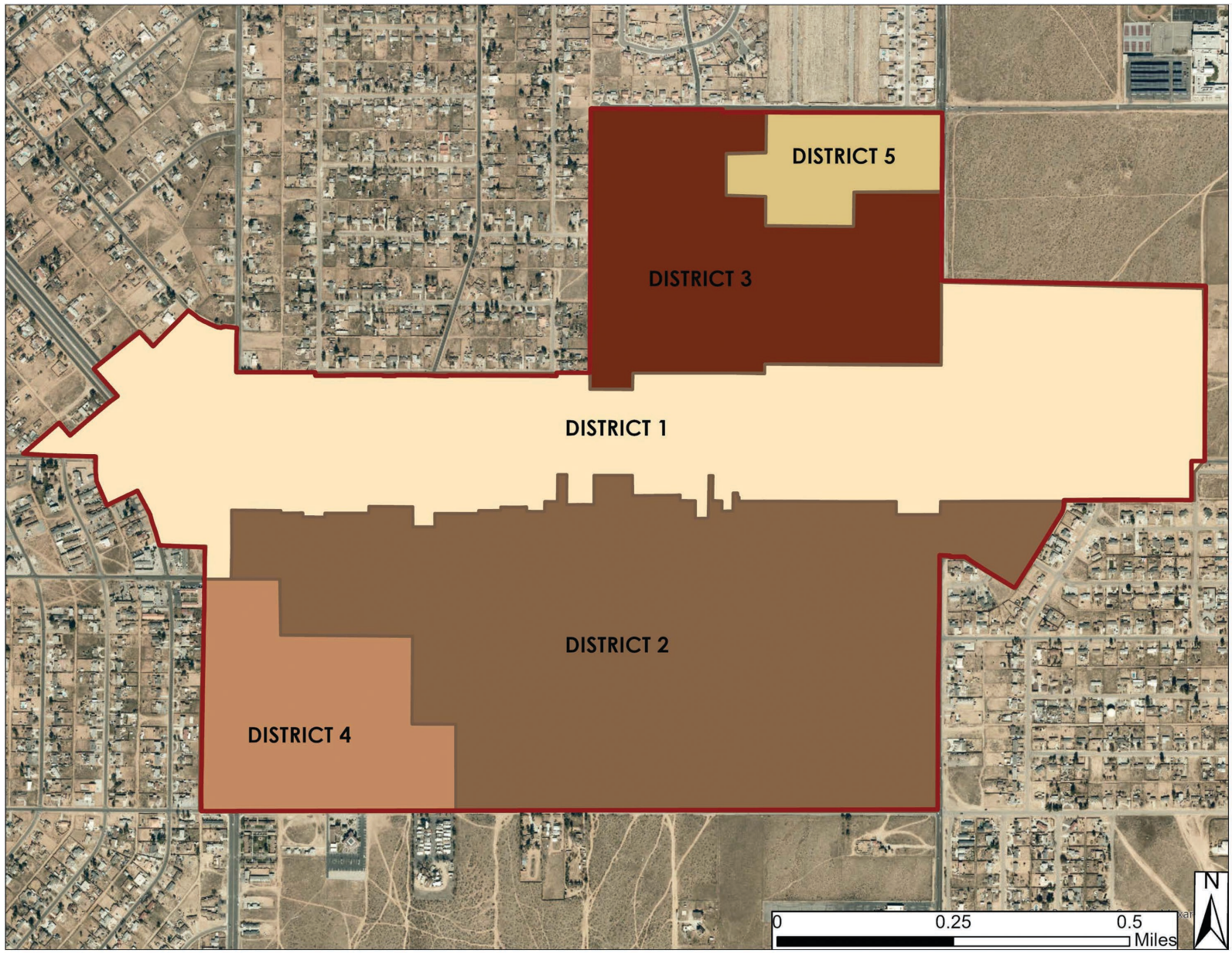
[4] Underutilized acres currently have either commercial/retail/service square feet or residential units on site. Redevelopment of underutilized sites assumes all existing square feet or units would be removed from that site. For scenarios where underutilized acres are redeveloped, the total square feet or residential units is the sum of existing + underutilized + vacant – existing underutilized square feet or units.

Existing mobile home parks are planned to be redeveloped as either commercial space or multi-family units. No new MHP are proposed.

Table 1-4
Existing Zoning Designations Land Use Buildout

Zoning Designation	Developed Acres	Vacant Acres	Total Acres	Existing Dwelling Units[1]	Potential Dwelling Units[3]	Total Dwelling Units
Residential						
Mobile Home Park (MHP, 5-15 du/ac)	17.5	0.0	17.5	173	0	173
Multi-Family Residential (R-M, 2-20 du/ac)	25.2	25.0	50.2	115	500	615
Estate Residential (R-E, 1 du/1 to 2.5 gross ac)	1.0	0.0	1.0	1	0	1
Residential Subtotal:	43.7	25.0	68.7	289	500	789
Commercial				**Existing Sq. Ft.[2]**	**Potential Sq. Ft.[4]**	**Total Sq. Ft.**
General Commercial (C-G) (max. FAR 0.5)	29.1	115.3	144.4	240,981.0	2,511,446.7	2,752,427.7
Service Commercial (C-S) (max. FAR 0.5)	107.0	118.4	225.3	975,576.0	2,577,775.8	3,553,351.8
Village Commercial (C-V) (max. FAR 0.5)	55.1	14.9	70.0	421,117.0	324,362.9	745,479.9
Commercial Subtotal:	191.2	248.6	439.7	1,637,674.0	5,413,585.3	7,051,259.3
Public Facility						
Public Facilities (P-F) (max FAR 0.5)	29.1	0.0	29.1	185,706.0	0.0	185,706.0
Public Facility Subtotal:	29.1	0.0	29.1	185,706.0	0.0	185,706.0
Open Space						
Open Space - Recreation (OS-R)	18.8	0.0	18.8	---	---	---
Open Space Subtotal:	18.8	0.0	18.8	---	---	---
Land Use Total Acreage:	282.8	273.6	556.3			
Street Right-of-Way Total Acreage:	94.8	0.0	94.8			
TOTAL:	**377.6**	**273.6**	**651.2**			

[1] estimate based on Google Earth
[2] estimate based on Microsoft Maps US Building Footprints dataset
[3] future residential development potential assumes maximum density of 20 DU/AC (vacant acres x 20 du).
[4] future commercial development potential assumes maximum allowed Floor Area Ratio (FAR) of 0.5 (vacant acres x 43,560 sf x 50%).
Source: Apple Valley Zoning Code GIS database



Source: Terra Nova Planning and Research, Inc.; ESRI, 2021

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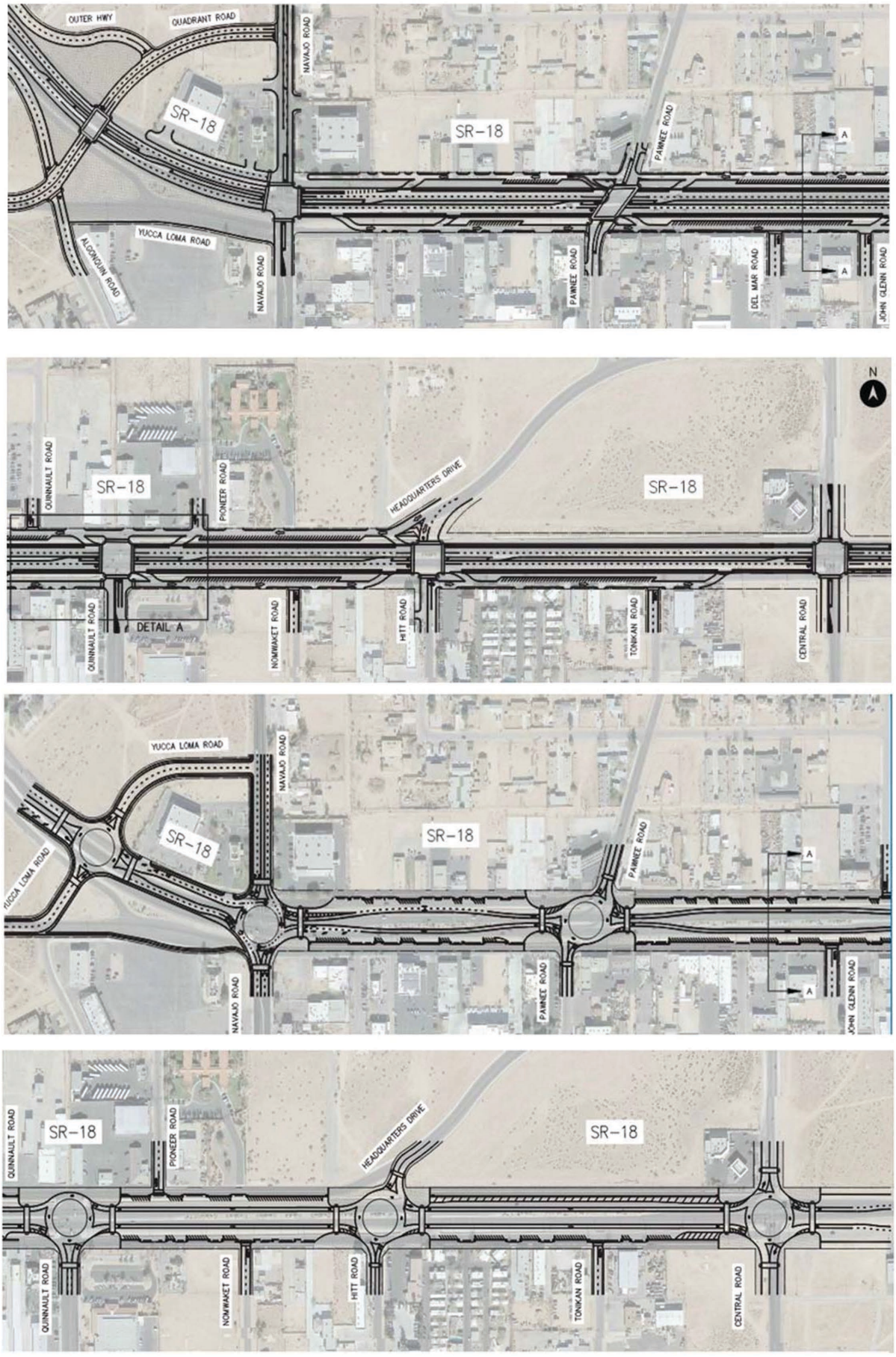
Village Specific Plan
Proposed Districts Map

Town of Apple Valley

Exhibit
1-4



Source: David Evans and Associates, Inc, 2021

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Village Specific Plan
State Highway 18
Conceptual Circulation Plans

Town of Apple Valley

Exhibit
1-5

1.4 Purpose and Need

The Village commercial district is optimally located along State Highway 18, the region's principal arterial highway, and serves both the local and regional markets. However, there are opportunities to broaden the Village's customer base by better defining it as a cohesive and identifiable shopping, dining, and entertainment destination that celebrates the Town's history. It is currently constrained by the physical configuration of Highway 18 and its frontage roads and an incomplete multimodal network that have resulted in access difficulties, parking limitations, and safety concerns. Additional opportunities for improvement and investment are available elsewhere in the Planning Area on infill lots, underutilized parcels, and larger undeveloped parcels.

The proposed Specific Plan identifies community design preferences for improvements and provides land use planning and design guidance to achieve those outcomes. It provides community leaders with a well-defined and practicable strategy with incremental actions the Town can take to re-energize the Village Planning Area and enhance its historic identity.

1.5 Statement of Project Objectives

Pursuant to CEQA Guidelines Section 15124(b), the project description includes a statement of objectives. The purpose of the objectives is to assist the Town in developing a reasonable range of project alternatives to evaluate in this EIR. These objectives are intended to explain the purpose of the project, and to aid the decision-makers in preparing findings or a statement of overriding considerations, if necessary.

The project objectives identify the purpose of the Project. The Specific Plan identifies the following objectives:

1. Create a vibrant neighborhood that will stand the test of time.

2. Expand the identity of the Village from Highway 18 throughout the Village boundary.

3. Have a cohesive and harmonious look and feel, with inviting streetscapes and attractive building façades.

4. Enhance connectivity and access throughout the Village.

5. Create a sense of place with interesting public spaces and paseos to increase walkability.

6. Be a convenient place for locals and visitors to stop, shop, and do business.

7. Be a safe and comfortable place for pedestrians, cyclists, and motorists.

8. Attract an eclectic mix of retail, services, specialty shops, and restaurants.

9. Strengthen partnerships between the Town, the Village Property and Business Improvement District (PBID), and business and property owners to fund and implement improvements.

1.6 CEQA Process

Lead Agency

CEQA defines the "Lead Agency" as the public agency which has the principal responsibility for carrying out or approving a project which may have a significant effect on the environment (State CEQA Guidelines, §15367). The Lead Agency for this EIR is the Town of Apple Valley. The Lead Agency contact person and mailing address regarding the Project are:

Daniel Alcayaga, Planning Manager
Town of Apple Valley
14955 Dale Evans Parkway
Apple Valley, California 92307

Mr. Alcayaga's telephone number and email address are:
(760)240-7000 ext. 7200; dalcayaga@applevalley.org

Environmental Impact Report

In accordance with Sections 15063, 15064 and 15065 of the State CEQA Guidelines, the Town prepared an Initial Study and Notice of Preparation to identify potentially significant impacts associated with the proposed Project. Based on the preliminary assessment, the Town determined that an EIR should be prepared to evaluate the potential environmental effects associated with the implementation of the Project (refer to Appendix A).

This EIR has been prepared in accordance with CEQA (as amended), pursuant to State CEQA Guidelines §15121 (Informational Document) and the Town's Rules to Implement CEQA:

- *An EIR is an informational document which will inform public agency decision makers and the public generally of the significant environmental effects of a project, identify possible ways to minimize the significant*

effects, and describe reasonable alternatives to the project. The public agency shall consider the information in the EIR along with other information which may be presented to the agency.

- *While the information in the EIR does not control the agency's ultimate discretion on the project, the agency must respond to each significant effect identified in the EIR by making findings under Section 15091 and if necessary by making a statement of overriding consideration under Section 15093.*

- *The information in an EIR may constitute substantial evidence in the record to support the agency's action on the project if its decision is later challenged in court.*

1.6.1 Notice of Preparation

The first step in the development of an EIR is conducting a preliminary assessment of the project and the issuance of a Notice of Preparation (NOP) of an Environmental Impact Report to solicit input from agencies and other parties of interest, including the general public.

The NOP was released on November 19, 2021, and the 30-day public review period concluded on December 20, 2021. Per CEQA Guidelines Section 15082(c), a scoping meeting was conducted for the Project because it is of areawide significance. No agencies or interested parties attended the scoping meeting, held on December 2, 2021.

The NOP (see Appendix A) was submitted to the San Bernardino County Clerk for 30-day posting. The NOP was also submitted to the State of California Governor's Office of Planning and Research, State Clearinghouse (SCH), which circulated the NOP to state agencies for a 30-day review and comment period. A public notice was also published in the Apple Valley News, a newspaper of general circulation, on November 19, 2021. Comment letters were received from the San Bernardino County Department of Public Works, and from Mitchell M. Tsai (see Appendix A).

Comments from the San Bernardino County Department of Public Works related to the presence of County flood control facilities in and around the Planning Area. Comments from Mr. Tsai focused on local hire policies and COVID-19 impacts. The parties who provided comments will receive proper notification and Draft EIR materials to review during the public comment period process.

1.6.2 Draft EIR and Recirculated Draft EIR

The Town of Apple circulated the Draft EIR for this Project from April 4, 2022 through May 19, 2022. Based on comments received on the EIR (please see Appendix A), and in an abundance of caution to assure that the public and decision makers have every opportunity to consider and review the Draft EIR, the Town is recirculating the EIR with changes incorporated due to these comments. Comments were received which resulted in changes to mitigation measures in Section 2.5, Biological Resources, and minor typographic changes in Section 2.4, Air Quality. Corresponding changes in the Environmental Matrix have also been made for consistency. All additions are provided in this document in **bold text**; all deletions are provided in ~~strike through text~~. The balance of the document is identical to the originally circulated Draft EIR.

1.6.3 Final EIR

Following the public review and comment period for this Recirculated Draft EIR, the Town will prepare written responses to any additional written comments received. Where necessary, the Recirculated Draft EIR may be revised, as appropriate, and together with the Response to Comments, will constitute the Final EIR. In accordance with State CEQA Guidelines Sections 15090-15097, the Apple Valley Town Council will be the final authority certifying the Final EIR during a noticed public hearing.

Following Final EIR certification, the Town may proceed with consideration of the proposed Project approval action. CEQA also requires the adoption of findings prior to approval of a project where a certified Final EIR identifies significant unmitigated environmental effects that would be caused by implementation of a project. If the project that is approved would result in significant unmitigated effects that are identified in the Final EIR and that cannot be avoided or substantially lessened, the Town shall state in writing in a "statement of overriding considerations" the specific reasons to support its action based on the Final EIR and/or other information in the record.

If the project is approved, the Town would file a Notice of Determination (NOD) with the County Clerk and State Clearinghouse within five working days following project approval.

1.6.4 Mitigation Monitoring and Reporting

CEQA requires lead agencies to adopt a Mitigation Monitoring and Reporting Program (MMRP) at the same time the Final EIR is certified. The MMRP is a verification tool for use by the Lead Agency that lists the mitigation program task, entity responsible for implementation, timing of compliance, and record of date

of compliance. Once the Final EIR and MMRP are certified, the mitigation measures become conditions of the project.

1.6.5 Organization of the Draft EIR

The organization of the Draft EIR is as follows:

Environmental Matrix - Summary of Project Impacts and Mitigation

Section 1 – Introduction and Project Description. The section includes a description of the proposed Project and summarizes construction and operational characteristics of the proposed Project. Areas of controversy are also identified. This section describes the CEQA process and the organization of this document.

Section 2 – Environmental Setting, Impacts, and Mitigation Measures. The environmental setting discussion provides important background data and information on all CEQA analysis categories on a regional and area-wide basis. This section of the EIR serves to establish the physical context within which the Project is being considered and analyzed. It also presents the physical and regulatory setting by environmental resource category, identifies impact significance criteria, and analyzes potential impacts of the Project, including potential cumulative impacts. Mitigation measures and monitoring and reporting programs are identified, where applicable. Section 2 analyzes the following resource areas:

- Introduction, Section 2.1
- Summary of Environmental Impact Analysis, Section 2.2
- Aesthetics, Section 2.3
- Air Quality, Section 2.4
- Biological Resources, Section 2.5
- Cultural Resources, Section 2.6
- Energy, Section 2.7
- Geology and Soils, Section 2.8
- Greenhouse Gas Emissions, Section 2.9
- Hazards and Hazardous Materials, Section 2.10
- Hydrology and Water Quality, Section 2.11
- Land Use and Planning, Section 2.12
- Noise, Section 2.13
- Population, Housing, and Socio-Economic Resources, Section 2.14
- Public Services, Section 2.15
- Recreational Resources, Section 2.16
- Transportation and Traffic, Section 2.17
- Tribal Cultural Resources, Section 2.18
- Utilities and Service Systems, Section 2.19

Impact Categories Not Further Analyzed
The Initial Study[1] prepared for the Notice of Preparation and this EIR evaluated each of the analysis categories set forth in Appendix G of the CEQA Guidelines. Three (3) CEQA analysis categories were determined to be not impacted by the proposed Project: *Agricultural and Forestry Resources*, *Mineral Resources,* and *Wildfire*. There are no agricultural or forestry uses, zones, or designations, and no mining operations or land zoned for mineral extraction in the Planning Area or Project vicinity. The Project area is not located in or near a state responsibility area or lands classified as very high fire hazard severity zones. These analysis categories are not further analyzed in this EIR.

Section 3 – Project Alternatives Analysis. This section describes alternatives to the proposed Project that have the potential to further reduce significant impacts associated with the proposed Project and compares their impacts to those of the Project. This section also identifies which alternative is environmentally superior on a categorical basis and overall.

Section 4 – Unavoidable Significant Impacts. This section discusses significant environmental effects that cannot be avoided if the Project is implemented, and significant irreversible environmental changes associated with the Project. This section also provides a summary of any significant unavoidable cumulative impacts that are discussed in the resource sections.

Section 5 – Irreversible and Irretrievable Commitment of Resources. This section evaluates the Project's effects on natural resources, including energy and water, and the level of commitment of these resources associated with the Project.

Section 6 – Growth Inducing Impacts. This section discusses the Project's potential to induce growth both locally and regionally.

Section 7 – Organizations, Persons, and Documents Consulted. This section describes and lists the various parties, agencies, documents, and other resources used in preparing the subject EIR.

Technical Appendices - provide information in support of the above sections and are identified in the Table of Contents.

[1] See Appendix A of this Draft EIR.

1.7 Responsible and Cooperating Agencies

Under CEQA, provision is made for state agencies to act as "Responsible Agencies." Per California Public Resources Code Section 21069, a "Responsible Agency" is a public agency, other than the Lead Agency, which has responsibility for carrying out or approving a project. The authority of responsible agencies that may have responsibility for carrying out or approving a project and for complying with CEQA is limited to that part of the project that they will be called upon to carry out or approve (Public Resources Code Sections 21140(c), 21153(c); CEQA Guidelines Sections 15041(b), 15042). In this case, responsible agencies include, but are not limited to the California Department of Transportation, the County of San Bernardino, and the Regional Water Quality Control Board.

1.8 Project's Relationship to Other Plans

The proposed Project is related to or must accommodate other plans developed in the Town and region. Local plans include the Apple Valley General Plan, Apple Valley Climate Action Plan Update, Village State Route-18 Corridor Enhancement Plan, and Apple Valley Local Hazard Mitigation Plan. Regional plans include the Mojave Desert Air Quality Management District (MDAQMD) Rule Book and 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Other relevant plans are described in Section 2 of this EIR, where appropriate.

1.9 Permits, Approvals, Easements

The Town is the CEQA Lead Agency and is empowered with regulating land use and other activities within its corporate boundaries. The Project is a Town-sponsored action that serves to implement the Town General Plan and facilitates processing and approval of conforming development plans. The subject EIR is also used by the Town and may be used by others to authorize the issuance of roadway encroachment permits, demolition permits, grading and building permits, and other authorizations.

1.10 Project Alternatives

California Environmental Quality Act (CEQA) Guidelines Section 15126.6 states that an Environmental Impact Report (EIR) must describe and evaluate a reasonable range of alternatives to a project that would feasibly attain most of the project's basic objectives, but that would avoid or substantially lessen any identified significant adverse environmental effects of the project. The EIR should also evaluate the comparative merits of the project. Specifically, Section 15126.6 sets forth criteria for selecting and evaluating alternatives. The Draft EIR, as demonstrated in Section 2, determines that potential significant impacts will result

from greenhouse gas emissions. Therefore, the alternatives provided in this EIR are designed to reduce these potential impacts.

Section 3, Project Alternatives Analysis, evaluates two (2) alternatives to the proposed Project and the comparative merits of each. Potential environmental impacts associated with each alternative evaluated in Section 3 are compared to the impacts of the Project. The alternatives are Alternative 1: No Project/Existing Zoning Alternative, and Alternative 2: Reduced Intensity Alternative. The alternatives were developed to avoid or minimize impacts associated with implementation of the proposed Project, and in consideration of existing General Plan land use designations.

Alternative 1: No Project/Existing Zoning Alternative

Based on the existing zoning designations within the Specific Plan Area, this Alternative considers the build out of the Planning Area as currently designated. Under this Alternative, land uses would develop as currently zoned, and the street system would build out consistent with General Plan roadway classifications.

Alternative 2: Reduced Intensity Alternative

Under this Alternative, the Districts would build out with land uses and improvements consistent with the Specific Plan's standards and guidelines, but at a lower density of dwelling units and lower intensity of square footage. For purposes of this Alternative, it has been assumed that residential development would occur at a density of 10 units per acre (50% reduction in density), and commercial square footage would be reduced to a Floor Area Ratio (FAR) of 0.2. The residential density is consistent with past higher density projects built in Town and would likely result in a mix of single-family homes and apartments. The commercial FAR in this Alternative is consistent with the average FAR of existing development within the Planning Area.

1.11 Other Alternatives Considered but Not Further Analyzed

In addition to the two alternatives studied in the EIR, the Town also considered changes in land use designations within the 5 districts established in the Specific Plan, including an increase in residential development potential. This alternative was considered but not further analyzed because the Town's goals and vision for the Village is the strengthening of the Village as an economic development opportunity for the Town's long term growth, and for the preservation of a central downtown main street.

TOWN OF APPLE VALLEY VILLAGE SPECIFIC PLAN

RECIRCULATED DRAFT ENVIRONMENTAL IMPACT REPORT

2. ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

2.1 Introduction

This section of the EIR provides an overview of the regional environmental setting in which the proposed Village Specific Plan is located, the impacts resulting from implementation of the Project, and mitigation measures required to reduce these impacts to less than significant levels. As prescribed by CEQA, the analysis is conducted on a categorical basis. Each discussion describes the thresholds of significance considered in the analysis, regulatory framework, environmental setting, and existing conditions in the Planning Area. These discussions are the basis for the analysis of Project impacts, including a determination of the level of impact (less than significant, less than significant with implementation of mitigation measures, or significant and unavoidable). Mitigation measures are provided to reduce impacts to the greatest possible. Where feasible mitigation measures are not possible, or where feasible mitigation measures do not reduce the impacts of the Project to less than significant levels, the impact is determined to be significant and unavoidable.

2.2 Summary of Environmental Impact Analysis

The following resource topics are assessed for potential impacts associated with the proposed Project:

- Aesthetics, Section 2.3
- Air Quality, Section 2.4

- Biological Resources, Section 2.5
- Cultural Resources, Section 2.6
- Energy Resources, Section 2.7
- Geology and Soils, Section 2.8
- Greenhouse Gas Emissions, Section 2.9
- Hazards and Hazardous Materials, Section 2.10
- Hydrology and Water Quality, Section 2.11
- Land Use and Planning, Section 2.12
- Noise, Section 2.13
- Population, Housing, and Socio-Economic Resources, Section 2.14
- Public Services, Section 2.15
- Recreational Resources, Section 2.16
- Transportation and Traffic, Section 2.17
- Tribal Cultural Resources, Section 2.18
- Utilities and Service Systems, Section 2.19

As analyzed in the Initial Study/Notice of Preparation, the Project will not impact *Agriculture and Forestry Resources, Mineral Resources,* and *Wildfire*; therefore, these three sections will not be discussed further in the EIR. Individual questions within each of the above subsections for which No Impact was determined in the Initial Study/Notice of Preparation are identified in each subsection of Section 2.

Threshold of Significance: This subsection identifies the CEQA thresholds that are applicable to the resource topic and the Project.

Regulatory Framework: This subsection provides a brief discussion of federal, State, regional, and local regulations and policies that are applicable to the resource topic and the Project.

Environmental Setting: This subsection provides an overview of the regional environmental setting in which the proposed Project is located, with particular emphasis on the environmental constraints and resources most likely to be affected by implementation of the Project.

Existing Conditions: This subsection describes the existing physical environmental conditions at and in the immediate vicinity of the Project with respect to each resource area, at an appropriate level of detail to understand the impact analysis.

Impacts and Mitigation Measures: This subsection analyzes the specific impacts of the proposed Project on each question provided in Appendix G of the CEQA Guidelines, as amended in 2020. Where necessary, mitigation measures are included to reduce identified significant impacts to less than significant levels to the greatest extent possible. If impacts cannot be reduced to less than significant levels, the analysis determines impacts to be significant and unavoidable.

Cumulative Impacts: This subsection addresses the proposed Project's cumulative impacts, when considered with General Plan build out or other factors identified for each resource area.

2.3 Aesthetics

2.3.1 Introduction

This section evaluates potential impacts of building out the proposed Project on aesthetics, visual, and scenic resources, including potential loss of views, direct impacts to scenic resources, and effects of increased lighting on motorists, residents, commercial and institutional uses, and open space in and near the Planning Area. Specific Plan and relevant General Plan policies and standard Town requirements are evaluated as to their effect of mitigating or avoiding any potentially significant effects.

2.3.2 Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, impacts related to aesthetics would be significant if the proposed Project would:

a) Have a substantial adverse effect on a scenic vista.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.

c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings. (Public views are those that are experienced from publicly accessible vantage points). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area.

The Initial Study determined that the Project would result in "No Impact' for threshold question b) above, because there are no significant trees, rock outcroppings or historic buildings that will be impacted by the proposed Project. Therefore, this threshold question is not analyzed further in this EIR.

2.3.3 Regulatory Framework

Federal

There are no applicable federal standards relating to aesthetics that apply to the proposed Project.

State

There are no applicable state standards relating to aesthetics that apply to the proposed Project.

Regional/Local

Town of Apple Valley General Plan

The 2009 Apple Valley General Plan regulates the visual and aesthetic characteristics of new development and redevelopment throughout the Town and Project Planning Area through land use maps, goals and policies. The following General Plan Land Use Element goals and policies provide guidance on the aesthetic quality of the Planning Area.

Goal 1 The Town shall respect its desert environment.

Policy 1.D Areas of biological or aesthetic significance shall be protected from development.

Goal 2 A well planned, orderly development pattern that enhances community values, and assures development of adequate infrastructure.

Policy 2.C The Town shall require quality design in all development and redevelopment proposals and shall encourage the enhancement of existing development.

Goal 3 Minimal impact to existing neighborhoods.

Policy 3.B Specific Plans shall be required for development proposals that include one or more of the following:
a. A combination of residential, recreational, commercial and/or industrial land use designation (except in the Mixed Use land use designation); or
b. Variations from development standards in the applicable Zone.

Goal 4 Safe, attractive and well served residential areas in keeping with the desert environment and its open characteristics.

Policy 4.C The Town shall establish development standards and corresponding enforcement programs for existing and new residential development that will provide for visually attractive and safe residential neighborhoods.

Program 4.C.1
The Development Code shall maintain prohibitions on unsightly outdoor storage and shall encourage property maintenance.

Policy 4.D Development projects are encouraged to design varied front yard setbacks and lot patterns reflective of the site's topography and other natural features.

Policy 4.E The Town shall encourage new development that emulates the character of existing neighborhoods, and shall discourage walled communities in inappropriate areas.

Policy 6.C The Town shall encourage the development and/or redevelopment of The Village.

Town of Apple Valley Municipal Code
The Town's Development Code (Title 9 of the Municipal Code) imposes requirements on light and glare such that it is directed away or shielded to prevent impacts on streets and adjoining properties (Municipal Code Section 9.70.020). It also establishes standards and guidelines the regulate visual and aesthetic characteristics of buildings, accessory structures, and other improvements, including those pertaining to setbacks, building height and mass, landscaping, open space, signage, and other aspects of development.

2.3.4 Environmental Setting

The Town of Apple Valley is in the high desert region north of the San Bernardino Mountains. The Town's topography is characterized by gently sloping alluvial fans ranging in elevation from approximately 3,400 feet near the base of the Fairview Mountains to the northeast to 2,700 feet along the Mojave River to the west. Mountains, peaks, hillsides, and knolls occur in and surround the Town, primarily on the north, south and east. The Town is surrounded by the Turtle Mountains on the north, Granite Mountains on the east, and Juniper Flat foothills located within the San Bernardino Mountains on the south. Within the Town boundary, Bell Mountain rises to 3,897 feet on the north side and Catholic Hill to 3,645 feet in the central portion.

Scenic vistas in Apple Valley include the San Bernardino Mountains to the south, the summit of Bell Mountain to the north, and the summit of Fairview Mountain (4,288 feet above sea level) to the northeast. Mountainous areas are comprised of various rock formations and diverse vegetation that contribute to the scenic value of the region. In some areas near the Town's western boundary, the Mojave River is surrounded by mountains, hillsides, and riparian areas that are considered scenic resources.

2.3.5 Existing Conditions

The Project Planning Area, which contains the downtown Village and surrounding land, is part of the central, urbanized core of Apple Valley. It was originally developed beginning in the 1940s with rural residential properties, mobile home parks, and small retail buildings centered around Highway 18. Development accelerated into the late 1960s, and more single-story, free-standing commercial buildings and civic facilities were added.

Today, about 58% of the Planning Area is developed with residential, commercial retail, service commercial (light industrial), and institutional land uses. Most buildings are single-story, and common architectural themes include Western, eclectic, and Mission. Along the northern frontage of Highway 18, most buildings are free-standing, with common Western-themed elements such as false fronts, pent roofs, and wide verandas supported by square wooden posts with triangular brackets. There is also a Mission-style adobe building likely built before 1952. A larger complex near Pioneer Road known as Town's End, features a popular local farmer's market. Town's End exhibits an early industrial look with partial stadium-style roof attached to an older warehouse-type building, rural artifacts such a tall water tank and a windmill, along with other structures enclosed by a mix of decorative wrought iron, dog-ear, and corrugated metal fences. Behind the northern Highway 18 frontage are mostly post-WWII Ranch-style residences, one-story multi-family residences, a one-story motel, and a mobile home park.

Buildings along the southern side of Highway 18 are generally more eclectic in vintage and design. At the eastern end is a large, rectangular steel warehouse with a corrugated metal roof of older vintage. To the west is a mobile home park that predates 1952. Near the middle portion of the Highway is a series of attached storefronts of modest scale, mostly constructed after 1969 with different styles in material and veneers of brick, stucco, and flagstone. The free-standing buildings toward Navajo Road generally appear modern, some of which are recently built. Buildings behind the southern frontage are generally tall one-story or two-story, utilitarian-looking warehouse-type commercial buildings, many of which have corrugated metal walls and roofs. There are also a few residences, churches, mobile home parks, a fire station, and a community park.

Based on the field surveys and public outreach conducted during the Specific Plan preparation, the Village Planning Area faces several aesthetic issues. Some buildings appear dilapidated or abandoned. The signage along Highway 18 is not coordinated and varies by block or even by building. There is also a lack of well-designed and maintained landscaping, street furniture, and public spaces for gathering and pedestrian activity.

Located in the urban core of Apple Valley, scenic vistas are somewhat distant from the Planning Area, as it is more than two miles from the nearest mountains to the east and four miles from the Mojave River to the west. Scenic vistas include the Granite Mountains to the east, Juniper Flat foothills to the south, Bell Mountain and Catholic Hill to the northwest, and Fairview Mountain to the northeast.

Visual resources in the Village Planning Area also include four Historic Points of Interest identified by the Town—the Pink House, the Conrad Publishing House, El Pueblo Shops, and James A. Woody Community Center (see Section 2.6, Cultural Resources, of this EIR for more information).

Concepts and Terminology

The following section describes the terms used in this aesthetics evaluation. For analysis purposes, a variety of conceptual development plans and improvement guides have been selected to determine the potential effects of the proposed Project on local aesthetic resources and are shown on Exhibits 2.3-1 through 2.3-5.

Aesthetics resources are typically defined as both the natural and built environments of the surrounding landscapes that influence the public's enjoyment and appreciation of the environment. A visual or aesthetic impact may occur depending on the extent to which a project's presence would alter the visual character of the area in which it is located.

Visual Character

Visual character includes attributes such as form, line, color, and texture, and is used to describe, not evaluate; that is, these attributes are neither considered good nor bad. However, a change in visual character can be evaluated when it is compared with the viewer response to that change. Changes in visual character can be identified by how visually compatible a proposed project would be with the existing condition by using visual character attributes as an indicator. For this project, the following attributes were considered:

Dominance is position, size, or contrast;
Scale is apparent size as it relates to the surroundings;
Form is visual mass or shape;
Color is reflective brightness (light, dark) and hue (red, green); and
Continuity is uninterrupted flow of form, line, color, or textural pattern.

The visual character of the Planning Area, described above, is generally influenced by the Town's history, Apple Valley Ranchos development (1940s-50s), and post-World War II growth. Building colors, forms, materials, and design elements are largely consistent with these themes.

Visual Quality

Visual quality is evaluated by identifying the vividness, intactness, and unity present in the Village Planning Area. Public attitudes validate the assessed level of quality and predict how changes to the Planning Area can affect these attitudes. This process helps identify specific methods for addressing each impact that may occur as a result of the Project. The three criteria for evaluating visual quality are defined below:

> **Vividness** is the extent to which the landscape is memorable and is associated with distinctive, contrasting, and diverse visual elements.
> **Intactness** is the integrity of visual features in the landscape and the extent to which the existing landscape is free from non-typical visual intrusions.
> **Unity** is the extent to which all visual elements combine to form a coherent, harmonious visual pattern.

The Village corridor in the Planning Area is a historically distinguishable district. However, much of its signage, architectural elements, landscaping, and public amenities are disjointed, inconsistently applied, incomplete, or absent. A unified program of design elements, as proposed by the Village Specific Plan, would enhance the corridor's visual quality and strengthen its identity as a unique destination in Apple Valley.

Affected Viewers

Travelers through the Planning Area, and residents and neighbors within and adjacent to it, have views within and around the Planning Area. They may see some of their views affected by implementation of the proposed Specific Plan. New development and redevelopment projects are expected to occur throughout the Planning Area, except current public park lands. The highest traveler volume through the Planning Area will be on Highway 18, where motorists generally slow down after entering the Planning Area due to multiple signalized intersections, and could have some opportunities to appreciate any scenic resources of the corridor. The circulation plan in the Specific Plan (Chapter 5 Infrastructure) outlines two alternatives for Highway 18, using either roundabouts or traffic signals to further slow traffic, improve intersection operations, and enhance access and pedestrian safety.

Visual Sensitivity

Visual sensitivity is a measure of the viewer's recognition of a particular object. It has three attributes: activity, awareness, and local values. Activity relates to the preoccupation of viewers – are they preoccupied, thinking of something else, or are they truly engaged in observing their surroundings. The more they are observing their surroundings, the greater the sensitivity they will have to changes

in visual resources. Awareness relates to the focus of the view – the focus is wide, and the view is general, or the focus is narrow and the view specific. The more specific the awareness, the more sensitive a viewer is to change.

Pass-through Traffic on Highway 18 within the Planning Area occurs at moderate speeds, drivers are focused on roadway maneuvers, and there is limited pedestrian and cyclist activity. Providing travelers with opportunities to appreciate local scenic and aesthetic resources may encourage more pedestrian and visitor activity along the corridor. A focus of the Specific Plan is slowing and consolidating vehicular traffic on Highway 18 and expanding pedestrian and cyclist activity through infrastructure and circulation improvements, so that local businesses and attractions can be better appreciated. Features such as the proposed roundabouts, in which public art and landscaping will be featured, could provide an important improvement to visual sensitivity.

2.3.6 Project Impacts

a) Have a substantial adverse effect on a scenic vista?

The Planning Area encompasses 651± acres, with 378± acres of developed land and 274± acres of vacant undeveloped land. Vacant lands are comprised of larger sites generally north of Highway 18 and east of Valley Drive and smaller infill lots across the Planning Area.

As noted, the Planning Area is in the Town's urban core, more than four miles from the Mojave River, two miles from the nearest Granite mountains to the east, and farther away from mountains in other directions. Scenic vistas seen from the Planning Area are generally limited to mid- and top-range views of the Granite Mountains, and more distant mid- and top-range views of the Juniper Flat foothills to the south, Bell Mountain and Catholic Hill to the northwest, and Fairview Mountain to the northeast. Only mountain ridges are visible from some locations. Due to distance, views of the mountains from within the Planning Area are not a defining characteristic of the Planning Area or adjacent lands. No other notable or unique landforms or scenic features are within or visible from the Planning Area.

The proposed Village Specific Plan will facilitate new development in areas that are currently vacant and redevelopment in existing urbanized areas within the Planning Area. The redevelopment or development of new manmade structures, including buildings, streets, signage, walls, and landscaping, has the potential to disrupt or block views of the scenic vistas and natural landscapes (see Specific Plan Sections 2.5.2.1, 3.1, 3.2, and 3.5).

The Specific Plan sets a vision to revitalize the Town's historic downtown while preserving its rustic hometown charm; specifically, the Plan envisions a creative, cohesive, and harmonious look and feel, with inviting streetscapes and attractive building façades. The Specific Plan sets four objectives based on consultation with the Town, stakeholder interviews, community workshops, and participants in an online survey. Two of the objectives, Historic Preservation and Urban Design: Identity + Image + Sense of Place, direct the Specific Plan to retain the scale and the historic character of the Village through high quality design and continuity where new construction complements the existing built environment. Chapter 3, Development Standards, of the Specific Plan sets forth height limits, controls on mass and scale, and additional height determination considerations to protect existing views and maintain existing scenic vistas. Specifically, it limits building heights to 25 or 35 feet depending on the location, which is consistent with existing development in and around the Planning Area. It encourages varied rooflines, recessed walls, arcades and galleries, and other design elements intended to reduce the visual impacts of building mass. The Plan mandates high quality design that is context-sensitive and respects and blends into the natural environment, such as using desert appropriate plants and xeriscape practices in landscaping (see Specific Plan Section 4.1 through 4.3).

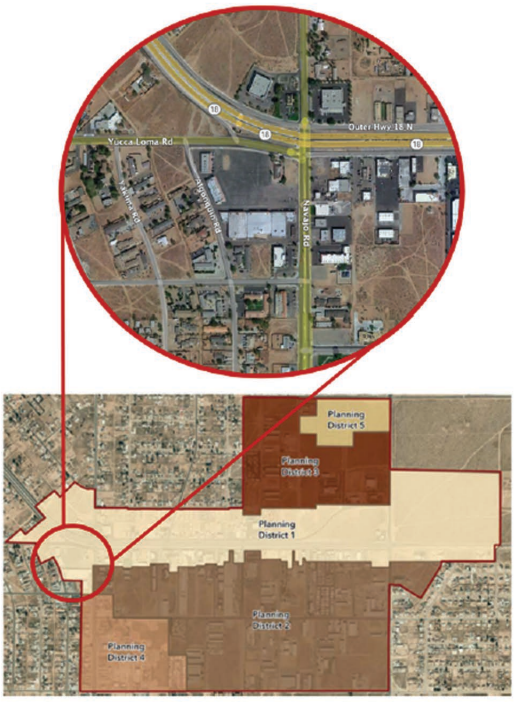
During preparation of the Specific Plan, a series of exhibits were generated to show conceptual development plans and improvement guides for the Planning Area. They show potential Project visual impacts on several development and redevelopment sites within the Planning Area. Exhibits 2.3-1 through 2.3-5 demonstrate the potential effects of future development in District 1 (West End Signature Project, North Highway Frontage Redevelopment, Highway 18 Infill, and Streetscape Improvements), and Districts 3 and 5 (North Residential + Service Integration Project). They are based on the Specific Plan design standards, guidelines and development concepts and represent realistic depictions of the effects of these conceptual development plans and improvement guides. Field surveys were conducted and photos taken to help establish views. Original site plans and architectural renditions were also designed pursuant to the Specific Plan standards and guidelines and provide realistic development plans for these sites.

As shown in Exhibits 2.3-1 through 2.3-5, future development may block the limited mountain views in some areas. However, views of the surroundings will include high quality, thoughtfully designed architectural, landscaping, and streetscaping features in an existing urban environment. The vision, objectives, standards, and guidelines contained in the Specific Plan will limit the potential impacts on scenic vistas. It should also be noted that development proposals in the Planning Area will be subject to project-specific environmental review, which will further avoid,

minimize, and mitigate potential impacts to any scenic resources. As a result, impacts on scenic vistas caused by implementation of the proposed Village Specific Plan will be less than significant.

CONCEPTUAL DEVELOPMENT PLAN

WEST END SIGNATURE PROJECT



BUILDOUT POTENTIAL

Acreage: 13.3 AC

Residential: 38 units
- Two-Story Flats: 22 units
- Live/Work Units: 16 units
- Garage Parking: 76 spaces
- Guest Parking: 11 spaces

Commercial/Retail: 71,000 SF
- Parking: 284 spaces

Source: Terra Nova Planning and Research, Inc.; Town of Apple Valley Village Specific Plan, 2022

01.25.22

CONCEPTUAL DEVELOPMENT PLAN

NORTH HIGHWAY FRONTAGE REDEVELOPMENT

Source: Terra Nova Planning and Research, Inc.; Town of Apple Valley Village Specific Plan, 2022 01.25.22

TERRA NOVA® PLANNING & RESEARCH, INC.

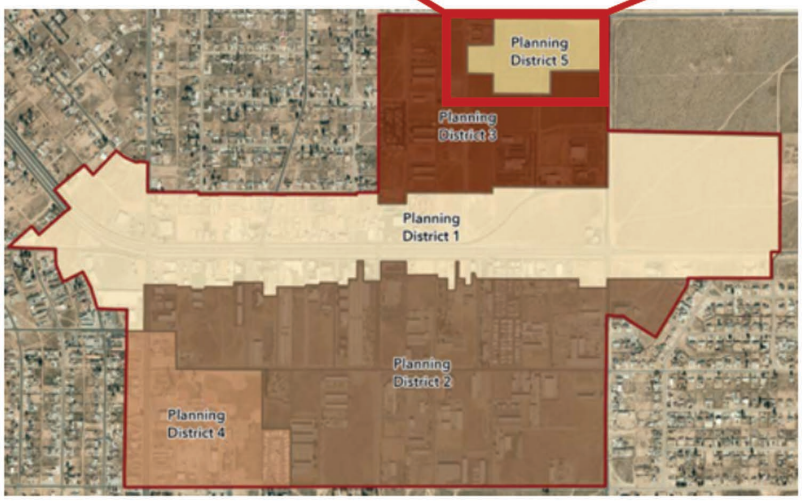
Village Specific Plan
North Highway Frontage Redevelopment

Town of Apple Valley

Exhibit 2.3-2

Conceptual Development Plan

North Residential + Service Integration



Buildout Details

Acreage: 29.3 AC

Residential: 226 units

- Duplex: 67 units
- 4-Plex: 64 units
- Townhouses: 162 units
- Garage Parking: 586 spaces
- Guest Parking: 146 spaces

Source: Terra Nova Planning and Research, Inc.; Town of Apple Valley Village Specific Plan, 2022 01.25.22

TERRA NOVA® PLANNING & RESEARCH, INC.

Village Specific Plan
North Residential and Service Integration

Town of Apple Valley

Exhibit 2.3-3

IMPROVEMENT GUIDE

HIGHWAY 18 INFILL IMPROVEMENTS

S. Highway 18 looking east between Bank of America and AVC Tech Services

Southeast corner of Navajo and Highway 18, vacant lot

Source: Terra Nova Planning and Research, Inc.; Town of Apple Valley Village Specific Plan, 2022

01.25.22

TERRA NOVA®
PLANNING & RESEARCH, INC.

Village Specific Plan
Highway 18 Infill Improvements

Town of Apple Valley

Exhibit 2.3-4

IMPROVEMENT GUIDE

HIGHWAY 18 STREETSCAPE IMPROVEMENTS

North Highway 18 looking east

Southwest corner of Highway 18 and Navajo, looking northwest

Source: Terra Nova Planning and Research, Inc.; Town of Apple Valley Village Specific Plan, 2022 01.25.22

TERRA NOVA® PLANNING & RESEARCH, INC.

Village Specific Plan
Highway 18 Streetscape Improvements

Town of Apple Valley

Exhibit 2.3-5

c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Visual character includes the existing look, feel, and quality of urbanized and natural areas. Much of the Planning Area is already developed with various land uses, except some larger vacant parcels along the perimeter of the Planning Area (Districts 1, 2, 3, and 5). In addition, smaller parcels along Highway 18 and scattered in the Planning Area are available for infill development, and underutilized areas where land use efficiencies have not been fully achieved in each of the five districts have redevelopment potential. The Planning Area is located in a primarily urban environment, and therefore potential conflicts with applicable regulations are analyzed below.

Development Code and Specific Plan Standards

The proposed Project provides its own development standards that will supersede those in the Development Code, but development projects will be required to adhere to other applicable requirements set forth in the Town's Municipal Code. Development standards and guidelines of the proposed Specific Plan are consistent with and will enhance the existing visual character of the Planning Area. For example, the Specific Plan proposes an architectural theme that balances preservation and innovation with a blend of Western, Spanish Mission, and Industrial styles that create an "urban rustic" character. The development standards (Chapter 3) and design guidelines (Chapter 4) serve to achieve the objectives and vision set in Chapter 2, The Village, which includes a creative, cohesive, and harmonious look and feel, with inviting streetscapes and attractive building façades. Chapter 6, Administration & Implementation, includes a Village Public Art Program, which requires the Town to establish a committee and restricted fund through development fees to manage public art in the Planning Area. The program will implement the on-site public art requirement set forth in Chapter 3, which requires future development to install a public art projects in or near the development site or pay in-lieu fees toward art projects on public lands, including street parkways, parks and plazas, and roundabouts, if they are implemented.

Chapter 5, Infrastructure, requires that streets continue to be improved with curb, gutter, and landscaping that enhance visual character along public rights-of-way. Future development facilitated by the Specific Plan will be subject to rigorous regulatory review by the Town staff, Planning Commission, and/or Town Council. Architectural and landscape design for all new projects, major remodels

and administrative design review applications will also be regulated by the Specific Plan and Town staff. Conflicts of the proposed Project with Development Code regulations governing scenic quality, therefore, will be less than significant.

General Plan

The proposed Specific Plan implements and is consistent with General Plan goals, policies, and programs governing scenic quality (listed in Section 3.2.3). The Specific Plan Design Guidelines (Chapter 4) prescribe building materials that are durable with colors and textures that are appropriate for the desert environment, which is consistent with the General Plan Land Use Element Goal 1. The Specific Plan mandates high quality design that is context-sensitive and respects and blends into the natural environment (Section 4.1 through 4.3), which is consistent with General Plan Policy 2.C and supports Goals 3 & 4. General Plan Policy 4.E encourages new development that emulates the character of existing neighborhoods, which is emphasized in the Specific Plan's vision to revitalize the Town's historic downtown while preserving its rustic hometown charm and two of the objectives, Historic Preservation and Urban Design: Identity + Image + Sense of Place. The proposed Project is not expected to conflict with General Plan guidelines governing scenic quality. Impacts will be less than significant.

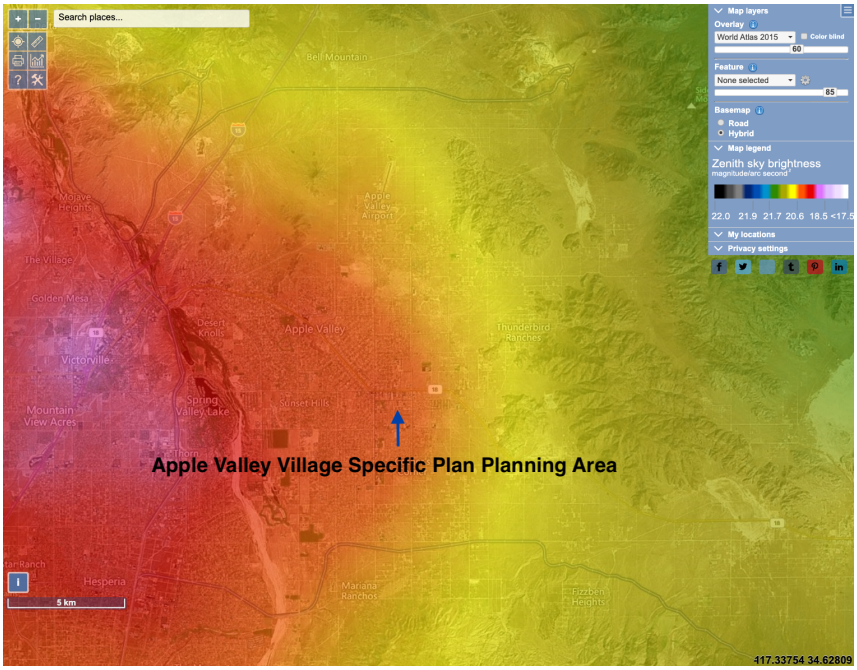
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?

Light and glare impacts are associated with increased urbanization and, without proper regulation, will continue to increase with the buildout of the Planning Area. Within the Planning Area, most lands are developed, and daytime and nighttime skies are already affected by moderate light and glare, as evident on the 2015 satellite data image of light pollution levels provided below.[1] The color scheme in the image shows the night sky brightness and indicates light pollution levels. The orange shading over the Planning Area generally represents a grey, bright sky, discolored near the horizon in the Town's direction.

The Apple Valley Village Specific Plan will facilitate land uses (residential, commercial, institutional) and development patterns in the Planning Area similar to those that exist today, and future lighting sources will be comparable to those currently in the Planning Area. However, vacant land will be developed and additional light from new buildings, improvements, and vehicles will be generated as buildout occurs.

[1] World Atlas 2015 zenith brightness, www.lightpollutionmap.info, accessed January 19, 2022.

Dark skies will diminish with more traffic, buildings, streetlights, and indoor illumination. The Specific Plan provides regulations and guidance for reducing light and glare caused by new and remodeled development (see Specific Plan Sections 3.2 and 4.2 through 4.4). Section 3.2.8, Lighting emphasizes the performance standards set forth in the Town Development Code. The Project promotes low lighting levels in all types of outdoor application, as sets forth in Section 4.4.3, On-Site Lighting, of the Specific Plan. Section 4.2.2, Building Materials, requires building surfaces with a matte finish to prevent reflection and glare. Section 4.3, Landscape Design Guidelines, requires that reflective surfaces be shielded to reduce glare.



In summary, the proposed Specific Plan introduces standards and guidelines to prevent excessive lighting and maintains current regulations on light and glare including Municipal Code Section 9.70.020. The Specific Plan and the Town Municipal Code prohibit light spillage onto neighboring properties or the street. Therefore, implementation of the Specific Plan is expected to have a less than significant impact on light and glare impacts.

2.3.7 Mitigation Measures

The Apple Valley Village Specific Plan will facilitate continued development, redevelopment, and urbanization in the Planning Area. It provides a vision, objectives, standards, and guidelines to reduce potential aesthetic impacts and enhance the scenic value of the Planning Area. The Specific Plan and Municipal Code mandate project-specific design review that will control design aesthetics, scale, and mass of new and redevelopment project sites. Therefore, the proposed Project serves to avoid, minimize, and mitigate the potential adverse effects of continuing urbanization on the Planning Area's visual and other aesthetic resources through design. Impacts on aesthetic resources are expected to be less than significant, and no mitigation measures are required.

2.3.8 Significance After Mitigation

Mitigation measures are not required. Impacts are less than significant.

2.3.9 Cumulative Impacts

The General Plan EIR states that continued development facilitated by the General Plan will result in cumulative impacts to the Town's visual resources, including mountain vistas and other natural forms that form the Town's visual character. Because the General Plan provides policies and programs for the thoughtful evaluation of potential impacts on viewsheds and scenic resources associated with new development and restricts development on hillsides and in open space and conservation areas, and the Specific Plan is consistent with these policies and programs, cumulative impacts to visual resources are expected to be less than significant.

Compared to the General Plan, maximum buildout of the proposed Specific Plan would result in a 23% increase in the number of dwelling units and a 9% increase in commercial square footage, but the allowable land uses would be consistent with the current General Plan designations. The proposed Specific Plan provides design regulation and guidance for future development and redevelopment in the Project Planning Area, and augments additional regulation provided by the Town Municipal Code. As demonstrated in Section 2.3.6 above, impacts of the proposed Specific Plan would be less than significant. Therefore, any aesthetics impacts resulting from implementation of the Specific Plan will not contribute considerably to cumulative impacts on the aesthetic resources of Apple Valley.

2.4 Air Quality

2.4.1 Introduction

The following section describes existing air quality in the Mojave Desert Air Basin (MDAB) and analyzes the potential impacts associated with buildout of the Village Specific Plan. A variety of local and regional data and information, ranging from research and analysis conducted for the Planning Area to regional-scale planning and environmental documents, have been used in researching and analyzing the Project and its potential effects on air quality.

2.4.2 Thresholds of Significance

The following thresholds are from the significance criteria listed in the CEQA Environmental Checklist included in Appendix G of the CEQA Guidelines. The project would have a significant effect on air quality if the proposed Project were to:

a) Conflict with or obstruct implementation of the applicable air quality plan?

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

c) Expose sensitive receptors to substantial pollutant concentrations?

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

2.4.3 Regulatory Framework

Federal and State

Clean Air Act

Federal and state agencies have adopted air quality standards for a variety of pollutants. The Federal Clean Air Act (FCAA) requires the U.S. Environmental Protection Agency (U.S. EPA) to identify National Ambient Air Quality Standards (NAAQS), or "national standards" to protect public health and welfare. The California Clean Air Act (CCAA) became effective on January 1, 1989 and mandated health-based air quality standards at the state level. The California Air Resources Board (CARB) is responsible for enforcing state standards, which are generally more stringent than federal standards. One of the means standards are

applied is through State Implementation Plans (SIP), which are prepared to assist regional air quality management districts in meeting the federal and state ambient air quality standards in accordance with the deadlines specified in the FCAA and emission reduction targets of the CCAA.

Criteria Pollutants

Federal and state air quality standards established for specific pollutants, which are called "criteria pollutants," are designed to protect the general population and especially that segment of the population that is most susceptible to respiratory distress or infection, including the elderly, children, asthmatics, or those weak from disease or illness. Criteria pollutants and their typical sources and health effects are as follows:

Ozone (O_3) is a pungent, colorless, toxic gas, and a component of photochemical smog. It is formed when byproducts of combustion react in the presence of sunlight. This process takes place in the atmosphere where nitrogen oxides combine with reactive organic gases, such as hydrocarbons. Exposure to ozone can result in diminished breathing capacity, increased susceptibility to infections, and inflammation of the lung tissue. Children and people with pre-existing lung disease are most susceptible to the effects of ozone. Apple Valley is in the portion of the MDAB that is in non-attainment for both the Federal and state standards for 8-hour O_3.

Carbon Monoxide (CO) is a colorless, odorless, toxic gas and a byproduct from incomplete combustion of fossil fuels, most notably from automobiles and other motor vehicles. Carbon monoxide passes through the lungs directly into the blood stream and reduces the amount of oxygen reaching the vital organs, such as the heart, brain, and tissues. In high concentrations, carbon monoxide can contribute to the development of heart disease, anemia, and impaired psychological behavior. Individuals that have heart and blood diseases, smokers, fetuses, and people with chronic hypoxemia are most susceptible to the effects of CO. Apple Valley is in the portion of the MDAB that is in attainment for CO.

Nitrogen Oxide (NO_x) includes nitric oxide (NO), nitrogen dioxide (NO_2), and nitrous oxide (N_2O), which combined are known as nitrogen oxides. These oxides are produced at high temperatures during combustion as byproducts of motor vehicles, power plants, and off-road equipment. NO_x contributes to the formation of ozone serving as the primary receptor of ultraviolet light and initiating the photochemical reaction. Short-term exposure to nitrogen dioxide can result in airway constriction and diminished lung capacity and is highly toxic by inhalation. Populations living near roadways are more likely to experience effects of nitrogen oxides due to elevated exposure to motor vehicle exhaust. Apple Valley is in the portion of the MDAB that is in attainment for NO_x.

Sulfur Dioxide (SO_2) results from the combustion of high sulfur content fuels, such as coal and petroleum. Sources include motor vehicle fuel combustion, chemical manufacturing plants, and sulfur recovery plants. Sulfur dioxide is a colorless, pungent, extremely irritating gas that can cause airway constriction and severe breathing difficulties in asthmatics. High levels of exposure can cause fluid accumulation in the lungs, damage to lung tissue, and sloughing off of cells lining the respiratory tract. The MDAB is in attainment for SO_2.

Particulate Matter (PM_{10} and $PM_{2.5}$) consist of fine suspended particles of ten microns or smaller in diameter, and are the byproducts of road dust, sand, diesel soot, windstorms, and the abrasion of tires and brakes. The elderly, children, and adults with pre-existing respiratory or cardiovascular disease are most susceptible to the effects of PM. Elevated PM_{10} and $PM_{2.5}$ levels are also associated with an increase in mortality rates, respiratory infections, occurrences and severity of asthma attacks and hospital admissions. The MDAB is a non-attainment area for PM_{10} and $PM_{2.5}$ (state). MDAB is in attainment for $PM_{2.5}$ at the Federal level.

Volatile Organic Compounds (VOC) are also known as Reactive Organic Gas (ROG). This class of pollutants has no state or federal ambient air quality standards and is not classified as criteria pollutants; however, they are regulated because they are responsible for contributing to the formation of ozone. They also contribute to higher PM_{10} levels because they transform into organic aerosols when released into the atmosphere. VOCs pose a health threat when people are exposed to high concentrations. Benzene, for example, is a hydrocarbon component of VOC emissions known to be a carcinogen.

Lead (Pb) occurs in the atmosphere as particulate matter resulting from the manufacturing of batteries, paint, ink, and ammunition. Exposure to lead can result in anemia, kidney disease, gastrointestinal dysfunction, and neuromuscular and neurological disorders. Fetuses, infants, and children are especially susceptible to health risks associated with exposure to lead by impacting the central nervous system and cause learning disorders. The Mojave Desert Air Basin (Basin) is currently in compliance with Federal and State standards for lead and monitoring is only conducted periodically since the primary sources of atmospheric lead (leaded gasoline and lead-based paint) are no longer available in the State.

The air quality of a particular locale is considered to be in attainment if the measured ambient air pollutant levels for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles) are not exceeded and all other standards are not equaled or exceeded. Attainment also assumes the national standards (other than O_3, PM_{10}, and those based on annual

averages or arithmetic mean) are not exceeded more than once per year. The O_3 standard is in attainment when the fourth highest eight-hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than one.

The following table shows the state and national ambient air quality standards for criteria pollutants.

Table 2.4-1
State and National Ambient Air Quality Standards

Pollutant	State Standards		National Standards	
	Averaging Time	Concentration	Averaging Time	Concentration
Ozone (O_3)	1-hour 8-hour	0.09 ppm 0.07 ppm	1-hour 8-hour	--- 0.070 ppm
Carbon Monoxide (CO)	1-hour 8-hour	20 ppm 9.0 ppm	1-hour 8-hour	35.0 ppm 9.0 ppm
Nitrogen Dioxide (NO_2)	1-hour AAM	0.18 ppm 0.030 ppm	1-hour AAM	0.10 ppm 0.053 ppm
Sulfur Dioxide (SO_2)	1-hour 24-hour	0.25 ppm 0.04 ppm	1-hour 3-hour	75 ppb 0.14 ppm
Particulate Matter (PM_{10})	24-hour AAM	50 µg/m^3 20 µg/m^3	24-hour AAM	150 µg/m^3 ---
Particulate Matter ($PM_{2.5}$)	AAM 24-hour	12 µg/m^3 ---	AAM 24-hour	12 µg/m^3 35 µg/m^3
Lead	30-day Avg.	1.5 µg/m^3	3-month Avg.	0.15 µg/m^3
Visibility Reducing Particles	8-hour	10-mile visibility	---	---
Sulfates	24-hour	25 µg/m^3	---	---
Hydrogen Sulfide	1-hour	0.03 ppm	---	---
Vinyl Chloride	24-hour	0.01 ppm	---	---

Sources: California Air Resources Board, Ambient Air Quality Standards 5/4/16. Accessed 10/28/21
Notes: ppm = parts per million; ppb= parts per billion; µg/ m^3 = micrograms per cubic meter of air; AAM = Annual Arithmetic Mean.

Criteria Air Pollutants

Currently, air quality in the MDAB exceeds state and federal standards for fugitive dust (PM_{10}) and 8-hour ozone (O_3). Ambient air quality in the MDAB, including the Project area, does not exceed state and federal standards for carbon monoxide, nitrogen dioxides, sulfur dioxide, $PM_{2.5}$ or lead. The following table shows the basin's state and federal attainment status for criteria pollutants.

Table 2.4-2
Mojave Desert Air Basin Designation Status

Criteria Pollutant	State Designation	Federal Designation
Ozone – 8-hour	Nonattainment	Nonattainment – "Severe-15"
Carbon Monoxide	Attainment	Attainment
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
PM_{10}	Nonattainment	Nonattainment – "Moderate"
$PM_{2.5}$	Attainment	Attainment
Lead	Attainment	Attainment

Source: EPA Green Book, January 2022; CARB 2020.

Toxic Air Contaminants (TAC)

The US EPA regulates TACs through technology-based requirements that are implemented by state and local agencies. California regulates TACs through the air toxics program and the Air Toxics "Hot Spots" Information and Assessment Act.[1] The CARB works alongside the Office of Environmental Health Hazard Assessment (OEHHA) to identify TACs, and adopt Air Toxic Control Measures (ATCMs) to reduce the identified TACs. Where there are federal standards, CARB must, at minimum, adopt the standards established by the US EPA.

Regional and Local

Mojave Desert Air Quality Management District Guidelines

Regional and local agencies have also assumed some responsibility for assuring that state and federal air quality standards are achieved. The California Air Resources Board is responsible for control of mobile emission sources, while the local Air Pollution Control Districts (APCDs) are responsible for control of stationary sources and enforcing regulations. Apple Valley is located within the Mojave Desert Air Basin (Basin), which is under the jurisdiction of the Mojave Desert Air Quality Management District (MDAQMD). MDAQMD has adopted various plans that provide strategies for the attainment of State and Federal air quality standards, including:

- Mojave Desert Planning Area PM10 Attainment Plan (1995);
- Southeast Desert Modified Air Quality Maintenance Area Ozone Plan (2004);
- MDAQMD Federal 8-Hour Ozone Attainment Plan (Western Mojave Desert Non-Attainment Area) (2008);
- 8-Hour Ozone SIP: Western Mojave Desert Nonattainment Area (2016).

[1] AB 2588.

The Town of Apple Valley is subject to the provisions of the MDAQMD Rule Book[2], which sets forth policies and other measures designed to help the District achieve federal and state ambient air quality standards. These rules, along with the MDAQMD CEQA and Federal Conformity Guidelines[3], are intended to satisfy the planning requirements of both the federal and state Clean Air Acts.

The MDAQMD has established thresholds for certain criteria pollutants and monitors daily pollutant levels and meteorological conditions throughout the District. Based on the District's emission thresholds for criteria pollutants, any project would be considered to have significant impacts to air quality if the daily emissions exceed the values shown in the table below during construction or operation:

Table 2.4-3
Emission Thresholds for MDAQMD

Criteria Pollutant	Annual Threshold (tons/year)	Daily Threshold (pounds)
Carbon Monoxide (CO)	100	548
Oxides of Nitrogen (NO_x)	25	137
Volatile Organic Compounds (VOC)	25	137
Oxides of Sulfur (SO_x)	25	137
Particulate Matter (PM_{10})	15	82
Particulate Matter ($PM_{2.5}$)	12	65
Hydrogen Sulfide (H_2S)	10	54
Lead (Pb)	0.6	3

Source: MDAQMD CEQA and Federal Conformity Guidelines, 2016.

The MDAQMD has adopted rules to limit air emissions. Many of these rules were put in place as required measures specified in the various SIPs and air quality plans. These MDAQMD rules are specifically for regulation of fugitive dust and emissions from fossil fuel combustion. Excerpts of these rules are presented below. The full and official text of these rules and others are available on the MDAQMD website.

Rule 402: Nuisance

A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or

[2] Mojave Desert Air Quality Management District Rule Book," prepared by the Mojave Desert Air Quality Management District, September 2005.

[3] Mojave Desert Air Quality Management District California Environmental Quality Act and Federal Conformity Guidelines," prepared by the Mojave Desert Air Quality Management District, August 2016.

annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

Rule 403: Fugitive Dust

(a) A person shall not cause or allow the emissions of fugitive dust from any transport, handling, construction or storage activity so that the presence of such dust remains visible in the atmosphere beyond the property line of the emission source. (Does not apply to emissions emanating from unpaved roadways open to public travel or farm roads. This exclusion shall not apply to industrial or commercial facilities).

(b) A person shall take every reasonable precaution to minimize fugitive dust emissions from wrecking, excavation, grading, clearing of land and solid waste disposal operations.

(c) A person shall not cause or allow particulate matter to exceed 100 micrograms per cubic meter when determined as the difference between upwind and downwind samples collected on high volume samplers at the property line for a minimum of five hours.

(d) A person shall take every reasonable precaution to prevent visible particulate matter from being deposited upon public roadways as a direct result of their operations. Reasonable precautions shall include, but are not limited to, the removal of particulate matter from equipment prior to movement on paved streets or the prompt removal of any material from paved streets onto which such material has been deposited.

(e) Subsections (a) and (c) shall not be applicable when the wind speed instantaneously exceeds 40 kilometers (25 miles) per hour, or when the average wind speed is greater than 24 kilometers (15 miles) per hour. The average wind speed determination shall be on a 15 minute average at the nearest official air-monitoring station or by wind instrument located at the site being checked.

(f) The provisions of this rule shall not apply to agricultural operations.

~~**Rule 403.2: Fugitive Dust Control for the Mojave Desert Planning Area**~~
~~(Pertinent parts of the regulation are listed below.)~~

(C) Requirements

(1) The owner or operator of a source in an affected source category shall comply with the applicable requirements contained in this subsection unless and until the owner or operator has applied for and obtained a District-approved ACP [Alternative PM10 Control Plan] pursuant to section (G).

(2) The owner or operator of any Construction/Demolition source shall:
   (a) Use periodic watering for short-term stabilization of Disturbed Surface Area to minimize visible fugitive dust emissions. For purposes of this Rule, use of a water truck to maintain moist disturbed surfaces and actively spread water.
   (b) Take actions sufficient to prevent project-related Trackout onto paved surfaces;
   (c) Cover loaded haul vehicles while operating on Publicly Maintained paved surfaces;
   (d) Stabilize graded site surfaces upon completion of grading when subsequent development is delayed or expected to be delayed more than thirty days, except when such a delay is due to precipitation that dampens the disturbed surface sufficiently to eliminate Visible Fugitive Dust emissions;
   (e) Clean-up project-related Trackout or spills on Publicly Maintained paved surfaces within twenty-four hours; and
   (f) Reduce non-essential Earth-Moving Activity under High Wind conditions. For purposes of this Rule, a reduction in Earth-Moving Activity when visible dusting occurs from moist and dry surfaces due to wind erosion shall be considered sufficient to maintain compliance.

(3) The owner/operator of a Construction/Demolition source disturbing 100 or more acres shall, in addition to the provisions of subsection (2):
   (a) Prepare and submit to the MDAQMD, prior to commencing Earth-Moving Activity, a dust control plan that describes all applicable dust control measures that will be implemented at the project;
   (b) Provide Stabilized access route(s) to the project site as soon as is feasible. For purposes of this Rule, as soon as is feasible shall mean prior to the completion of Construction/Demolition activity;
   (c) Maintain natural topography to the extent possible;
   (d) Construct parking lots and paved roads first, where feasible; and
   (e) Construct upwind portions of project first, where feasible.

(5) The Owner or Operator of a site undergoing weed abatement activity shall not:
   (a) Disrupt the soil crust to the extent that Visible Fugitive Dust is created due to wind erosion.

Rule 404: Particulate Matter Concentration

A person shall not discharge into the atmosphere from any source, particulate matter except liquid sulfur compounds, in excess of the concentration at standard conditions, shown in Table 404(a) Where the volume discharged is

between figures listed in the table, the exact concentration permitted to be discharged shall be determined by linear interpolation.

(b) The provisions of this rule shall not apply to emissions resulting from the combustion of liquid or gaseous fuels in steam generators or gas turbines.

(c) For the purposes of this rule, emissions shall be averaged over one complete cycle of operation or one hour, whichever is the lesser time period.

Refer to the official text of the Rule at the MDAQMD website to see Table 405(a).

Town of Apple Valley General Plan

Chapter III (Environmental Resources) of the Town of Apple Valley General Plan includes the following goals and policies that pertain either directly or indirectly to air quality:

Goal 1 To preserve and enhance local and regional air quality.

Policy 1.A The Town shall cooperate with the Mojave Desert Air Quality Management District to assure compliance with air quality standards.

Policy 1.B The Town shall proactively regulate local pollutant emitters by coordinating and cooperating with local, regional, and federal efforts to monitor, manage and decrease the levels of major pollutants affecting the Town and region, with particular emphasis on PM10 and ozone emissions, as well as other emissions associated with diesel-fueled equipment and motor vehicles.

Policy 1.C The Town shall coordinate land use planning efforts wo assure that sensitive receptors are reasonable separated from polluting point sources including mineral extraction operations.

Policy 1.D All proposals for development activities within the Town shall be reviewed for their potential to adversely impact local and regional air quality and shall be required to mitigate any significant impacts.

Policy 1.E The use of clean and/or renewable alternative energy sources for transportation, heating and cooling, and construction shall be encouraged by the Town.

Policy 1.F The Town shall support, encourage, and facilitate the development of projects that enhance the use of alternative modes of transportation, including pedestrian-oriented retail and activity centers, dedicated bicycle paths and lanes, and community-wide multi-use trails.

Policy 1.G Future residential, commercial, and industrial development and remodeling projects shall strive to exceed Title 24 standards by 15% and/or achieve LEED certification or similar performance standards for buildings.

Policy 1.H Residential, commercial, and industrial projects that reduce vehicle miles traveled (VMTs) by providing alternative transportation options, home office and live/workspaces, and/or promote employees living close to work are preferred.

Policy 1.I The Town shall continue to reduce waste generation, enhance recycling, or reuse programs, and expand grey water systems for landscape irrigation.

2.4.4 Environmental Setting

Air quality in the region is a function of the amount of pollutants emitted and dispersed as well as the climatic, meteorological, and geophysical conditions that reduce or enhance the formation of pollutants.

Apple Valley is in a high desert region with hot summers, mild winters, and very little annual rainfall. Temperatures in the low-lying areas of Apple Valley range from the lower teens during winter months to highs above 100°F during summer months. The Town experiences average rainfall of approximately 7.5 inches per year, with the surrounding mountains receiving substantially more precipitation. The air quality of the MDAQMD is impacted by both fugitive dust from local sources and occasionally by region-wide wind-blown dust during moderate to high wind episodes.

Apple Valley is located in the portion of the Basin that is in nonattainment for both the Federal and State standards for ozone and PM10. Thus, the Basin currently exceeds several State and Federal ambient air quality standards and is required to implement strategies to reduce pollutant levels to acceptable standards

2.4.5 Existing Conditions

The Specific Plan area and the Town of Apple Valley are located within the Mojave Desert Air Basin (MDAB) and under the jurisdiction of the Mojave Desert Air Quality Management District (MDAQMD). In the Project area, air quality is regulated by the MDAQMD, as well as federal and State policy.

Air quality in the Mojave Desert Air Basin has been impacted by emissions associated with increased development, population growth, and vehicle emissions. Although air pollution is emitted locally from various sources, the most evident degradation of regional air quality, with the exception of fugitive dust, is due to sources outside the area, including the San Bernardino and Los Angeles County air basins.

Air Quality Monitoring

The MDAQMD operates and maintains regional air quality monitoring stations at numerous locations throughout its jurisdiction. The nearest monitoring station is the Victorville Park Avenue monitoring station, which collects O_3 and PM_{10} data because these pollutants are local criteria pollutants of concern. This station is approximately 7 miles west of the Project area.

Table 2-4.4 shows the maximum concentration of ozone and particulate matter and the number of days exceeding federal and state standards at the Victorville Park Avenue monitoring station from 2018 through 2020. Recorded data from 2018 through 2020 indicate that ozone levels in the Apple Valley area are relatively stable, though they have exceeded the 8-hour standards more frequently than the 1-hour standard. There was insufficient data for the state PM10 standards; however the maximum concentration for federal PM_{10} standards has increased, most substantially from 2019 to 2020. This increase in PM_{10} concentration is most likely due to a singular high wind event because the standard was exceeded the same number of days in 2019 and 2020.

Table 2.4-4
Ambient Air Quality Monitoring Data
Victorville Park Avenue Monitoring Station

Ozone	**2018**	**2019**	**2020**
State 1-hour > 0.09 ppm	5	3	4
State 8-hour > 0.07 ppm	56	34	38
Federal 8-hour > 0.07 ppm	55	29	35
State 1-hour Max. Concentration	0.107	0.104	0.112
State 8-hour Max. Concentration	0.097	0.082	0.095
Federal 8-hour Max. Concentration	0.096	0.081	0.094
Particulate Matter 10	**2018**	**2019**	**2020**
State 24-hour; Days > 50 micrograms/cubic meters	*	*	*
Federal 24-hour; Days > 150 micrograms/cubic meter	1	1.9	1.9
State 24-hour Max. Concentration	*	*	*
Federal 24-hour Max. Concentration	165.2	170.0	261.4

Source: iAdam: Air Quality Data Statistics, California Air Resources Board; https://www.arb.ca.gov/adam.
* Insufficient or no data available to determine the value.

2.4.6 Project Impacts

The following air quality analysis assumes that buildout of the Specific Plan would occur in 2040. This analysis is based on projected land uses included in the Project Description as well as traffic trips information provided by David Evans and Associates (2021). Operational emissions were calculated by using California Emissions Estimator Model (CalEEMod) version 2020.4.0. CalEEMod is a computer program that can be used to estimate anticipated emissions associated with land development projects in California. The model calculates criteria pollutant emissions, including CO, PM_{10}, $PM_{2.5}$ and the ozone precursors ROG and $NO_{x,}$). CalEEMod output tables are provided in Appendix B of this EIR.

The following assumptions were entered into the CalEEMod software:

- Buildout year: 2040
- Land use types and square footages were derived from the proposed Land Use Table (Table 1-3 in Section 1 of this EIR). Five land use categories were selected in CalEEMod based on the project-specific Traffic Report (see Appendix D) that represent the Planning Area in generalized terms because buildout specifics are currently unknown. These land uses include "General Office Building," "Apartments low Rise," "Strip Mall," "High Turnover (Sit Down Restaurant)," and "Research & Development."
- Due to the unknown certainty of future land uses and their distribution within the Planning Area, it is unrealistic to assume trip lengths or to apply trip reductions from hypothetical land use synergies. Therefore, mobile emissions were analyzed qualitatively as opposed to quantitatively using land use trip rates cited in the Traffic Study and controlled with default trip mileage and distribution rates in CalEEMod.

a) Conflict with or obstruct implementation of the applicable air quality plan?

The Specific Plan area is located within the MDAB, which is governed by the MDAQMD. MDAQMD is responsible for monitoring criteria air pollutant concentrations and establishing management policies for the MDAB. All development within the MDAB, including the proposed Specific Plan, is subject to the following plans that establish control strategies and guidance on regional emission reductions for air pollutants:

- Mojave Desert Planning Area PM10 Attainment Plan (1995);
- Southeast Desert Modified Air Quality Maintenance Area Ozone Plan (2004);

- List and Implementation Schedule for District Measures to Reduce PM Pursuant to Health & Safety Code §39614(d) (2005);
- 8-Hour Reasonably Available Control Technology – State Implementation Plan Analysis (RACT SIP Analysis) (2006);
- Mojave Desert Smoke Management Program (2006);
- MDAQMD Federal 8-Hour Ozone Attainment Plan (Western Mojave Desert Non-Attainment Area) (2008);
- 8-Hour Reasonably Available Control Technology – State Implementation Plan Analysis (RACT SIP Analysis) (2015), and
- 8-Hour Ozone SIP: Western Mojave Desert Nonattainment Area (2016).

The MDAQMD works directly with the Southern California Association of Governments (SCAG), county transportation commissions, and local governments, and cooperates actively with all state and federal government agencies. SCAG adopted the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (2020 RTP/SCS) to comply with metropolitan planning organization (MPO) requirements under the Sustainable Communities and Climate Protection Act. The Growth Management chapter of the RTP/SCS forms the basis of land use and transportation controls of air quality plans.

A project is considered to be "in conformity" if it complies with all applicable District rules and regulations, complies with all proposed control measures that are not yet adopted from the applicable plan(s), and is consistent with the growth forecasts in the applicable plan(s). A non-conforming project would be one that increases the gross number of dwelling units, increases the number of trips, and/or increases the overall vehicle miles traveled in an affected area relative to the applicable land use plan. Conformity with growth forecasts can be established by demonstrating that the Project is consistent with the land use plan that was used to generate the growth forecast.

The 2020 SCAG RTP/SCS forecasts the Town of Apple Valley will have 37,400 households and a population of 101,400 by 2045.[4] According to the 2009 General Plan, the Town has the potential to accommodate 31,716 additional dwelling units and 96,829 additional residents within the Town boundaries through General Plan buildout.[5] There are currently 289 dwelling units and approximately 850 residents in the Planning Area. Buildout of the Planning Area under existing General Plan land use designations could result in a total of 789 dwelling units and approximately 2,370 residents. The proposed Project could allow up to 971

[4] 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) Final Growth Forecast by Jurisdiction.

[5] Apple Valley General Plan, Table II-3 and page II-12.

additional dwelling units and 2,920 residents, which represents a household and population increase of 23% within the Planning Area. However, this increase represents only 2% of SCAG's household and population projections for the Town of Apple Valley, which is within and only a small percentage of SCAG's regional projections.

The size and composition of the population has a direct effect on the amount of air quality emissions, insofar as an increase in population results in a correlated increase in the level of air quality emissions. However, State legislation, such as SB 375 and AB 32, as well as regional and local programs and policies have shown that with proper land use planning, adherence to building codes, especially Title 24, and opportunities for alternative modes of transportation, this trend can be reversed. The proposed Specific Plan includes policies and programs that would reduce this impact, such as the design of "complete streets," added pedestrian and bike facilities, multi-modal transportation and sustainable design standards. In addition, any future project as a result of the proposed Specific Plan would adhere to the General Plan policies designed to reduce air quality impacts, including Policy AQ 1.D, which states that the Town shall review all development proposals for potential adverse effects on air quality and requires mitigation of significant impacts. All future projects will be implemented in accordance with all applicable MDAQMD rules and regulations to ensure impacts to air quality are reduced to the greatest extent possible. Actions include, but are not limited to, the preparation of a standard dust control management plan, and the enforcement of mitigation measures if criteria pollutant thresholds are exceeded during construction activities. The General Plan policies and MDAQMD rules and regulations were designed to ensure the Town's compliance with air quality management plans, regardless of changes in population projections.

In conclusion, the Town's compliance with General Plan policies and standard MDAQMD rules and regulations will ensure that buildout of the Specific Plan is in accordance with applicable air quality management plans. Impacts will be less than significant.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

The potential for air quality degradation in the Town of Apple Valley and region will increase with implementation of the proposed Specific Plan. Air pollutants will come from a variety of sources including grading activities, off-road vehicle activity, construction, vehicle emissions and high winds. Pollutant emissions generated by vehicular traffic are expected to result in the most significant impacts. Operation of existing and new facilities, which require the utilization of natural gas and electricity, will also contribute to the degradation of air quality.

Pollutants of primary concern in Apple Valley are ozone (O_3) and particulate matter (PM_{10}). For State designations, the MDAB is in non-attainment for ozone (O_3) and PM_{10}. For national area designations, the MDAB is in non-attainment (Severe-15) for the federal 8-hour ozone standard, and moderate non-attainment for the federal 24-hour PM_{10} standard.

Construction Emission Impacts

Construction activities that would occur over the next 20 years in accordance with the proposed Specific Plan would cause temporary, short-term emissions of various air pollutants. The use of construction equipment would inevitably result in the emissions of ROG and NO_x, which are ozone precursors, as well as particulate matter. Project information regarding specific development projects would be needed in order to quantify and analyze the level of impact associated with construction activity.

Buildout of the Specific Plan will result in a mix of small- and medium-scale projects that will be required to adhere to the Town's procedures and regulations as they relate to CEQA analysis and mitigation. It is possible that the construction of some larger projects could substantially increase criteria pollutants through the year 2040. Actual significance would be determined on a project-by-project basis as future development applications are submitted.

In addition, the General Plan Air Quality Element would serve to control construction emissions, including the coordination and cooperation with MDAQMD in monitoring and management of major pollutants that affect the Town (Policy AQ 1.A), and the Town reviewing all development proposals for potential adverse effects on air quality and requiring mitigation of significant impacts (Policy AQ 1.D). All new development within the Planning Area shall also adhere to MDAQMD rules and regulations for all construction related activities. MDAQMD Rules that are currently applicable during construction include: Regulation XI (Source Specific Standards); Rule 1103 (Cutback and Emulsified Asphalt); Rule 1113 (Architectural Coatings); and Regulation IV (Prohibitions); and Rule 403~~.2~~ (Fugitive Dust Control for the Mojave Desert Planning Area). Should additional or modified rules be adopted, development projects will be required to conform to them, if they are proposed after those rules are adopted.

In summary, the current General Plan policies and programs will apply to all future projects under the proposed Specific Plan and ensure that potential construction emissions from new development will be mitigated to the greatest extent feasible in accordance with MDAQMD requirements. Impacts will be less than significant with implementation of standard regulations and project-specific mitigation measures.

Operational Emission Impacts

Daily activities of future projects will result in the emission of air quality pollutants from the use of electricity and natural gas, and from area sources and moving sources. Emissions from natural gas occur from the combustion of natural gas within the Planning Area for operational activities such as heating and cooking. The use of electricity within the Planning Area results in offsite emissions from the production of electricity. Although emissions associated with electricity do not occur within the physical boundary of the Planning Area, they are considered as part of the operational impacts from buildout of the Specific Plan. Area source emissions include the use of consumer products, the application of architectural coatings, hearth fuel combustion, and fuel used for landscaping purposes. Moving sources include emissions from vehicles at buildout of the proposed Specific Plan.

Table 2.4-5 shows the criteria pollutants emission for buildout of the Specific Plan. Although operational emissions of the Specific Plan would exceed established daily thresholds for CO, NOx, ROG, PM_{10}, and $PM_{2.5}$, the MDAQMD does not currently recommend quantified analyses of construction and/or operational emissions from multiple development projects nor provides methodologies or thresholds of significance to be used to assess the significance of cumulative emissions generated by multiple cumulative projects. However, it is recommended that an individual project's potential contribution to cumulative impacts be assessed utilizing the MDAQMD daily significance thresholds, as shown in Table 2.4-2. If an individual development project generates less than significant construction or operational emissions, then the development project would not generate a cumulatively considerable increase in emissions for those pollutants for which the basin is in nonattainment

Table 2.4-5
Operational Emissions Summary
Village Specific Plan Buildout
(lbs./day)

	CO	NO_x	ROG	SO_x	PM_{10}	$PM_{2.5}$
Area	84.32	9.78	251.56	0.06	1.16	1.16
Energy	46.32	56.97	6.29	0.34	4.34	4.34
Mobile[1]	2,708.43	392.79	332.62	5.89	768.80	207.35
TOTAL:	**2,839.07**	**459.54**	**590.47**	**6.29**	**774.30**	**212.85**
MDAQMD Threshold	**548**	**137**	**137**	**137**	**82**	**65**
Exceeds Threshold	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**

Source: CalEEMod Version 2020.4.0. See Appendix B for detailed output tables. Value shown represents the average emissions of summer and winter outputs.
1. Mobile emissions are overstated because they do not account for future land use synergies that would reduce trip lengths and frequencies. Emissions are shown for qualitative analysis.

A significant impact could occur if the Project would make a considerable cumulative contribution to federal or state non-attainment pollutants. The Planning Area is classified as a "non-attainment" area for PM_{10} and ozone. Cumulative air quality analysis is evaluated on a regional scale (rather than a neighborhood scale or city/town scale, for example) given the dispersing nature of pollutant emissions and aggregate impacts from surrounding jurisdictions and air management districts. Any development project or activity resulting in emissions of PM_{10}, ozone, or ozone precursors will contribute, to some degree, to regional non-attainment designations of ozone and PM_{10}.

In accordance with General Plan policies (Policy AQ 1.D), development projects proposed within the Planning Area will be reviewed on a project-by-project basis for their potential to result in a cumulatively considerable contribution to non-attainment criteria pollutants under CEQA. Subsequent CEQA documentation prepared for individual projects would have project-specific data and would be required to address, and to the extent feasible, mitigate any significant air quality impacts to a less than significant level. Therefore, with implementation of the proposed Specific Plan programs and guidelines and existing General Plan policies and programs, air quality impacts are expected to be reduced to less than significant levels on a case-by-case basis.

c) Expose sensitive receptors to substantial pollutant concentrations?

Sensitive receptors can include uses such as residences, schools, playgrounds, childcare centers long-term health care facilities, rehabilitation centers, and retirement homes. MDAQMD has established that impacts to air quality are significant if there is a potential to contribute or cause localized exceedances of the NAAQS and CAAQS. Collectively, these are referred to as Localized Significance Thresholds (LSTs). LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest residence or sensitive receptor. LSTs were developed in response to environmental justice and health concerns raised by the public regarding exposure of individuals to criteria pollutants in local communities.

The potential impact of air pollutant emissions at sensitive receptors will be assessed at an individual project level as directed by General Plan policy AQ 1.D to determine if a project would exceed the MDAQMD localized significance thresholds during construction and/or operation. As discussed above, mitigation will be required for future projects under the Specific Plan if they would expose sensitive receptors to substantial pollutant concentrations.

"Hot Spot" Analysis

During the operational phase of the Specific Plan, traffic may have the potential to contribute to local area air quality impacts, most notably the creation of CO "hot spots" at heavily congested intersections. Because CO is produced in greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, these hot spots have the potential to exceed the state and/or federal 1-hour or 8-hour ambient air standards. It should be noted that the MDAQMD has not established CO hotspot methodology. As a result, the screening criterion recommended by the SCAQMD has been utilized, which recommends an evaluation of potential localized CO impacts when a project causes the level of service (LOS) at a study intersection to worsen from C to D, or if a project increases the traffic volume (or demand) to capacity (V/C) ratio at any intersection rated D or worse by 2 percent or more after mitigation.

As discussed in Section 2.17 Transportation and Traffic, the Traffic Analysis[6] conducted for the Specific Plan (Appendix D) studied 16 intersections in the Planning Area. The intersection capacity analysis found that the Specific Plan's circulation plan can accommodate the vehicular traffic generated by the land uses proposed for the Specific Plan area except for one intersection, Navajo Road at Powhattan Road West, which would fail to meet the Towns LOS D policy without mitigation. Mitigation was set forth in the Traffic Analysis requiring the installation of a traffic signal (when warranted) coordinated with the existing traffic signal at Navajo Road and Powhattan Road East. After mitigation, all intersections would be operating at LOS D or better and therefore, the proposed Specific Plan would not result in the creation of an unmitigated CO hotspot. Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations as the result of Specific Plan traffic, and impacts would remain less than significant.

Health Impacts

It is not scientifically possible to calculate the degree to which exposure to various levels of criteria pollutant emissions will impact an individual's health. There are several factors that make predicting a project-specific numerical impact difficult:

- Not all individuals will be affected equally due to medical history. Some may have medical pre-dispositions and diet and exercise levels tend to vary across a population.
- Due to the dispersing nature of pollutants, it is difficult to locate and identify which group of individuals will be impacted, either directly or indirectly.

[6] Village Specific Plan Traffic Analysis, prepared by David Evans and Associates, Inc. December 14, 2021.

- There are currently no approved methodologies or studies to base assumptions on, such as baseline health levels or emission level-to-health risk ratios.

Due to these limitations, the extent to which the Specific Plan or an individual project poses a health risk is uncertain but unavoidable. It is anticipated that the impacts associated with all criteria pollutants will be less than significant with adherence the Town's environmental review process, and that health effects will also be less than significant

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The occurrence and severity of odor impacts depend on numerous factors, including nature, frequency, and intensity of the source; wind speed and direction; and sensitivity of the receptors. Land uses that are sources of odor include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, transfer stations, and fiberglass molding. The Specific Plan does not allow such land uses.

The Specific Plan will be developed with a mix of uses including residential, office, service commercial, restaurant and retail uses and has the potential to result in short-term odors associated with operation of heavy equipment during grading, excavation, and other construction activities. Odors from paints, coatings, and asphalt also will be emitted during construction. However, construction-related odors will be temporary and quickly dispersed below detectable levels as distance from the construction area increases. Existing regulations such as MDAQMD Rule 402, Nuisance, would continue to minimize odor impacts. The proposed Specific Plan does not propose or allow any new land uses that may generate significant odor. At buildout, residential units will generate typical odors from cooking and other household activities but will not generate objectionable odors. Therefore, impacts from objectionable odors are expected to be less than significant.

2.4.7 Mitigation Measures

The proposed Specific Plan would not conflict with applicable air quality management plans because the buildout population is consistent with SCAG forecasts with only a 2% marginal increase. While the overall operational emissions at Specific Plan buildout would exceed MDAQMD's significance thresholds, the proposed Specific Plan includes principles, objectives, standards and guidelines that are expected to reduce emissions associated with future development and

require mitigation of significant impacts at individual project level. In addition, the Town's compliance with General Plan policies and standard MDAQMD rules and regulations will ensure future impacts remain less than significant. No additional mitigation measures are required.

2.4.8 Significance After Mitigation

Mitigation will be determined on a project-level basis.

2.4.9 Cumulative Impacts

The mitigation measures will be implemented by future projects under the proposed Specific Plan will ensure impacts to air quality will be reduced to the greatest extent possible. Due to the nature of air quality impacts, all future development within the Specific Plan area will be analyzed on a case-by-case basis and mitigated accordingly. As described above, cumulative impacts are not expected to be significant in the context of MDAQMD thresholds, which are project-specific. Project-level impacts after mitigation are expected to be less than significant.

2.5 Biological Resources

2.5.1 Introduction

The following provides an overview of the existing biological resource conditions within the Project area and surrounding region and an analysis of potential biological resource impacts that would result from implementation of the proposed Apple Valley Village Specific Plan. The regulatory environment and thresholds of significance are described. The Project's potential biological impacts are discussed, and mitigation measures are set forth, as necessary. The section concludes with a discussion of cumulative impacts.

This section is based in part on the Apple Valley Multispecies Habitat Conservation Plan and Natural Community Conservation Plan (Apple Valley MSHCP/NCCP), which is in the adoption process as of this writing. Once adopted, the Apple Valley MSHCP/NCCP will guide the Town's conservation efforts in the Plan Area, allowing for the preservation of open space, protection of threatened and endangered species, and maintenance of the high-desert character.

2.5.2 Thresholds of Significance

The following thresholds of significance or criteria are from Appendix G of the CEQA Guidelines, which is used to determine if and to what extent a project may have a potentially significant impact on biological resources. The proposed Project would have a significant effect on biological resources if it is determined that the Project will:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

2.5.3 Regulatory Framework

Federal

Endangered Species Act (ESA)

The United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service are the designated federal agencies accountable for administering the ESA. ESA defines species as "endangered" or "threatened" and provides regulatory protection at the federal level.

Section 9 of the ESA prohibits the "take" of listed (i.e. endangered or threatened) species. The ESA definition of take is "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct." Recognizing that take cannot always be avoided, Section 10(a) includes provisions for take that is incidental to, but not the purpose of, otherwise lawful activities. Specifically, Section 10(a)(1)(A) permits (authorized take permits) are issued for scientific purposes. Section 10(a)(1)(B) permits (incidental take permits) are issued for the incidental take of listed species that does not jeopardize the species. Section 10(a) of the ESA also establishes standards for the content of habitat conservation plans, such as the Apple Valley Multispecies Habitat Conservation Plan and Natural Community Conservation Plan (Apple Valley MSHCP/NCCP).

Section 7(a)(2) requires federal agencies to evaluate a proposed project with respect to species currently listed or proposed to be listed, and their respective critical habitat (if applicable). Federal agencies must employ programs for the conservation of listed species and are prohibited from authorizing, funding, or carrying out any action that would jeopardize a listed species or destroy or modify its critical habitat. As defined by the ESA, "individuals, organizations, states, local governments, and other non-federal entities are affected by the designation of critical habitat only if their actions occur on federal lands, require a federal permit, license, or other authorization, or involve federal funding."

Migratory Bird Treaty Act (MBTA)

Treaties signed by the U.S., Great Britain, Mexico, Japan, and the countries of the former Soviet Union make it unlawful to pursue, capture, kill, or possess, or attempt to engage in any such conduct to any migratory bird, nest, egg, or parts thereof listed in this document. As with the ESA, the MBTA also allows the Secretary of the Interior to grant permits for the incidental take of these protected migratory bird species.

Section 404 of the Clean Water Act

This section of the Clean Water Act (CWA), administered by the US Army Corps of Engineers (USACE), regulates the discharge of dredged and fill material into "Waters of the United States" (WOTUS). The USACE has created a series of permits that authorize certain activities within waters of the U.S. The USACE delineates non-wetland waters in the Arid West Region by identifying the ordinary high-water mark (OHWM) in ephemeral and intermittent channels (USACE, 2008a). The OHWM is defined in 33 CFR 328.3(e). The subject Project site is not located within federal jurisdictional waters and, therefore, a CWA 404 permit is not required.

Wetlands and Other Special Aquatic Sites

Wetlands are defined at 33 CFR 328.3(b) as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas." Special aquatic sites are geographic areas, large or small, possessing special ecological characteristics of productivity, habitat, wildlife protection, or other important and easily disrupted ecological values. There are no wetlands or special aquatic sites within or near the subject property.

State

California Endangered Species Act (CESA)

The California Endangered Species Act (CESA) is similar to the federal ESA, but it is administered by the California Department of Fish and Wildlife (CFDW). The CDFW is authorized to enter into "memoranda of understanding" with individuals, public agencies, and other institutions to import, export, take, or possess state-listed species except as otherwise provided by state law. Unlike the federal ESA, the CESA applies the take prohibitions to species currently petitioned for state listing status (candidate species). Lead agencies are required to consult with CDFW to ensure that actions are not likely to jeopardize the continued existence of any state-listed species or result in the destruction or degradation of occupied habitat.

The Native Plant Protection Act (NPPA)

The NPPA includes measures to preserve, protect, and enhance rare and endangered native plant species. Definitions for "rare" and "endangered" are different from those contained in CESA. However, the list of species afforded protection in accordance with the NPPA includes those listed as rare and endangered under CESA. NPPA provides limitations on take as follows: "no person will import into this state, or take, possess, or sell within this state" any rare or endangered native plants, except in accordance with the provisions outlined in the act. If a landowner is notified by CDFW, pursuant to section 1903.5, that a rare or endangered plant is growing on their property, the landowner shall notify CDFW at least 10 days prior to the changing of land uses to allow CDFW to salvage the plants.

Natural Community Conservation Planning (NCCP) Program

California's NCCP program, which is managed by the CDFW, is intended to conserve multiple species and their associated habitats, while also providing for compatible use of private lands. Through local planning, the NCCP planning process is designed to provide protection for wildlife and natural habitats before the environment becomes so fragmented or degraded by development that species listing is required under CESA. Instead of conserving small, often isolated "islands" of habitat for just one listed species, agencies, local jurisdictions, and/or other interested parties have an opportunity through the NCCP to work cooperatively to develop plans that consider broad areas of land for conservation that would provide habitat for many species. Partners enroll in the programs and, by mutual consent, areas considered to have high conservation priorities or values are set aside and protected from development. Partners may also agree to study, monitor, and develop management plans for these high value "reserve" areas.

The NCCP provides an avenue for fostering economic growth by allowing approved development in areas with lower conservation value. The Project site is in a combined Habitat Conservation Plan (HCP)/NCCP (see Apple Valley Multispecies Habitat Conservation Plan and Natural Community Conservation Plan, below).

Sections 1600-1603 of the State Fish and Game Code

The California Fish and Game Code, Sections 1600 through 1603, regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or wildlife resources. Under state code, CDFW jurisdiction is assessed in the field based on one, or a combination of criteria (CDFW 2005b). The Project is not expected to significantly impact natural drainages, streambeds or lakes, including those supporting sensitive fish and wildlife species.

Section 2081 of the California Fish and Game Code

Under Section 2081 of the California Fish and Game Code, the CDFW authorizes individuals or public agencies to import, export, take, or possess state endangered, threatened, or candidate species in California through permits or memoranda of understanding. These acts, which are otherwise prohibited, may be authorized through permits or "memoranda of understanding" if (1) the take is incidental to otherwise lawful activities, (2) impacts of the take are minimized and fully mitigated, (3) the permit is consistent with regulations adopted in accordance with any recovery plan for the species in question, and (4) the applicant ensures suitable funding to implement the measures required by the CDFW. The CDFW shall make this determination based on the best scientific information reasonably available and shall include consideration of the species' capability to survive and reproduce.

Section 3505.5 of the State Fish and Game Code

Section 3505.5 makes it unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds-of-prey, e.g.: owls, hawks, eagles, etc.) or to take, possess, or destroy the nest or eggs of any bird-of-prey.

Regional/Local

West Mojave Habitat Conservation Plan

Developed by the Bureau of Land Management, the West Mojave Conservation Plan encompasses 9.3 million acres of land within San Bernardino (including Apple Valley), Kern, Los Angeles, and Inyo counties. This plan provides a comprehensive strategy to conserve and protect state and federally listed species, as well as other special status species and their habitats. Conservation of lands for specifically covered species, like the Desert Tortoise, Mojave Ground Squirrel, Le Conte's Thrasher, Burrowing Owl, etc., is mandated in the framework of this plan. The approved West Mojave HCP has only completed National Environmental Policy Act (NEPA) certification and thus is currently only applicable to federal lands. Local, state, and federal entities are in the process of developing a private lands counterpart to the West Mojave Plan, such as the Apple Valley MSHCP/NCCP discussed below.

Apple Valley Multispecies Habitat Conservation Plan and Natural Community Conservation Plan (Apple Valley MSHCP/NCCP)

The Apple Valley MSHCP/NCCP is intended to serve all of the Town of Apple Valley and portions of San Bernardino County as a Multispecies Habitat Conservation Plan (MSHCP) under the FESA and as a Natural Community Conservation Plan (NCCP) under the CESA. The Plan Area is entirely within San Bernardino County, between the City of Victorville to the west, the City of Hesperia to the southwest, Lucerne Valley to the southeast, and Barstow to the

north. The Plan is being collaboratively developed by the Town and County with joint participation of CDFW, the USFWS, and the Bureau of Land Management (BLM). The requested state and federal permits would authorize incidental take of covered species caused by the impacts from covered activities for a period of 30 years and include minimization and mitigation measures to offset the impacts of the taking of covered species. The Apple Valley MSHCP/NCCP is currently going through the CEQA process, during which the Town, as the lead agency, will prepare an EIR to evaluate the effects of covered activities in the implementation of the Apple Valley MSHCP/NCCP.

The Apple Valley MSHCP/NCCP covers 222,369 acres (347 square miles) and stretches from the San Bernardino Mountains in the south to Stoddard Mountain in the north, and from the Granite Mountains in the east to the Mojave River Corridor and I-15 in the southwest and west, respectively. The Plan Area is at the intersection of three landscape-level linkages that are critical to landscape connectivity in the larger region: the San Bernardino—Granite Mountain Linkage, the Wild Wash Linkage, and the Mojave River Corridor. The portions of these linkages that fall within the Plan Area are a central part of the MSHCP/NCCP conservation strategy.

The species proposed for coverage under the MSHCP/NCCP include four state and/or federally listed species and five special status species and/or state fully protected species. The proposed covered activities include the land uses in the Town of Apple Valley General Plan and the San Bernardino County General Plan, such as residential development, commercial and mixed-use development, industrial development, specific plan development, operation and maintenance of existing public facilities, capital improvements (new public facilities, new roads), as well as land management activities required to implement the MSHCP/NCCP. The proposed Village Specific Plan and its implementation will be a covered activity upon adoption of the Apple Valley MSHCP/NCCP.

Proposed mitigation includes site-specific measures as well as management of public conservation lands and acquisition of private lands through various mechanisms, including purchase of land in fee title from willing sellers and establishment of permanent conservation easements. The Town, as the lead agency, is also considering establishing a nonwasting endowment (where conservation actions are funded by the interest earned, not the principal) to fund conservation actions on conserved lands in the Plan Area.

Town of Apple Valley General Plan

Chapter III (Environmental Resources) of the Town of Apple Valley General Plan includes the following goals and policies that pertain either directly or indirectly to biological resources and are relevant to the proposed Project:

Open Space & Conservation Element

Goal 1 The Town will conserve and protect natural resources in perpetuity.

Policy 1.B Encourage the preservation, integrity, function, productivity and long-term viability of environmentally sensitive habitats, wildlife corridors, and significant geological features within the Town.

Program 1.B.1

The Town shall protect and preserve significant habitats, wildlife corridors, and geological features as described in the Apple Valley MSHCP.

Goal 2 The Town shall encourage the preservation of significant native trees, native vegetation, landforms and wildlife habitat.

Policy 2.B The Town will only allow types and patterns of development that will minimize destruction of, or damage to, significant biotic resources, such as wildlife corridors along the Mojave River.

Policy 2.C The Town will encourage the planting and preservation of native species of trees and plants to enhance the environment.

Program 2.C.1

Drought tolerant landscaping materials and design features shall be incorporated into parks, roadway medians, common area landscaping, public facilities, and other appropriate open space lands to retain and preserve the natural environment.

Biological Resources Element

Goal 1 Establish a pattern of community development that supports a functional, productive, and balanced relationship between the manmade environment and the natural environment.

Policy 1.A Habitat for endangered, threatened, and sensitive species shall continue to be protected and preserved as Open Space by the Town.

Program 1.A.4
Once the Western Mojave Habitat Conservation Plan and/or the Apple Valley MSHCP have been finalized, they shall be used to maintain an accurate and regularly updated map of sensitive plant and animal species and for management of biological resources within the Town.

Program 1.A.6
Biological resource surveys and assessments shall continue to be required by Town staff as part of the application process for new development especially within or adjacent to linkage corridors or, special survey areas and potential jurisdictional areas.

Policy 1.B The Town shall promote the use of native vegetation for landscaping to enhance and create viable habitat for local species.

Program 1.B.1
The Town shall require developers to recover, preserve, or utilize native vegetation within the project or shall require that viable vegetation is transplanted to other appropriate sites in conformance with its Native Plant Ordinance.

Program 1.B.2
Native and drought tolerant plant materials, including vegetation that provides or enhances habitat for local species, shall be incorporated into project landscaping and design.

Goal 2 The Town shall work with local, state, and regional agencies to protect, preserve, and manage biological resources, especially threatened, endangered, and sensitive plants and wildlife species and their habitats.

Policy 2.D The Town shall work with CDFG and USFWS to ensure that state and federal protections required by the Migratory Bird Treaty Act addressed during the planning process.

Policy 2.E The Town shall work with CDFG, RWQCB and ACOE to ensure that state and federal jurisdictional areas are properly identified.

Chapter 9.76 of Town of Apple Valley Municipal Code
Chapter 9.76, Plant Protection and Management, contains provisions on removal and transplanting of desert native plants and trees, the removal permit issuance, and construction standards for new development concerning desert

native plants onsite. The chapter also regulates transplanting of specified desert native plants, riparian plant conservation, and protection and treatment of Joshua Trees.

2.5.4 Environmental Setting

The Town of Apple Valley lies in the southern portion of the Mojave Desert, between the City of Victorville on the west, City of Hesperia on the southwest, and the community of Lucerne Valley on the southeast. The Mojave Desert is considered a high desert with elevations ranging from 2,000 to 5,000 feet above mean sea level (MSL). The climate in the local area is representative of a high desert ecosystem, including extreme fluctuations of daily temperature, strong seasonal winds, and less than 5 inches of annual precipitation. Generally, terrain within the boundary of Apple Valley consists of lower elevations ranging from 2,550 to 3,186 feet above MSL, while the Sphere of Influence (SOI) contains elevated terrain as high as 4,800 feet. The lowest elevation around the Town is associated with the Mojave River on the west side of Town. The mountain drainages and ephemeral streams associated with the Mojave River have contributed to the topography of the region.

The Mojave River is a federally regulated waterway that contains several associated tributary dry washes, including the Bell Mountain/Knolls wash, which contains a partially lined concrete drainage basin that ultimately drains into the Mojave River. Other watercourses in the Town and its SOI flow into the Apple Valley Dry Lake, which is north of the Planning Area. Most of these are considered ephemeral as they rarely contain overland water flow and generally have poorly defined banks.

Natural communities in the Apple Valley area include Saltbush Scrub, Mojave Riparian Forest, Wash Vegetation, Sandfield Plant Community, Joshua Tree Woodlands, Creosote Bush Scrub, Mojave Mixed Woody Scrub, Montane Woodlands, and non-native communities. Primary habitat is found within fragmented communities of Creosote Bush, Saltbush, and Mojave Mixed Woody Scrubs. Common animal species in and around Apple Valley include invertebrates (insects and spiders), amphibians (frogs and toads), reptiles (lizards and snakes), birds (abundant with 301 species documented) and mammals (small and large species).[1]

[1] Town of Apple Valley General Plan and Annexations 2008-001 & 2008-002 Environmental Impact Report (SCH# 2008091077), prepared by Terra Nova Planning & Research, Inc., certified August 11, 2009.

There are approximately 30 sensitive species found in the Apple Valley area, including state and/or federally listed species such as the desert tortoise, Mojave ground squirrel, willow flycatcher, and Least Bell's vireo. These listed species are protected by the state and/or federal Endangered Species Acts (ESAs).

2.5.5 Existing Conditions

The proposed Village Specific Plan encompasses 651± acres with 283± acres of developed land, 95± acres of street right-of-way, and 274± acres of vacant undeveloped land. Vacant lands are comprised of larger sites generally north of Highway 18 and east of Valley Drive and smaller infill lots across the Planning Area. The Specific Plan Planning Area is not located within or near valuable habitats that support special status species as designated in the General Plan (General Plan Exhibit III-6, Habitat Areas Requiring Additional Habitat Study), which are generally associated with the Mojave River and hillsides/mountains on the west and north sides of the Town.

Biological resources in most of the Planning Area have been affected by urban development and habitat fragmentation, area roadways and traffic, and introduction of non-native plant and domestic animal species. The majority of the Specific Plan Planning Area is classified as Urban/Rural in the Town's General Plan (Exhibit III-5, Natural Communities by Vegetation Type), and only the northeast portion (north of Highway 18 and east of Central Road) contains Saltbush Scrub vegetation. Saltbush Scrub vegetation is found on the east side of the Town and SOI. It is generally comprised of fourwing saltbush (*Atriplex canescens*), Allscale (*Atriplex polycarpa*), and Shadscale (*Atriplex confertifolia*). This vegetation type may also contain Joshua Tree (*Yucca brevifolia*), Cheesebush (*Ambrosia salsola*), Anderson Boxthorn (*Lycium andersonii*), and Cholla (*Cylindropuntia sp.*). Special status species associated with the Saltbush Scrub habitat include Joshua Tree (*Yucca brevifolia*), San Emigdio Blue (*Plebulina Emigdionis*) butterfly, and Mojave ground squirrel (*Spermophilus Mojavensis*). Of these, the Mojave ground squirrel is state listed as threatened; and the Western Joshua Tree recently was listed as a candidate species for listing in California. The Joshua Tree is also protected under the Town's Municipal Code (Chapter 9.76).

The Project Planning Area does not contain federal land, and thus is not subject to the West Mojave Habitat Conservation Plan. The entire Planning Area will be covered under the Apple Valley MSHCP/NCCP upon its adoption.

Overall, the Project Planning Area is considered to have relatively low conservation value given the extent of existing development, urban setting, and fragmented natural habitats. Saltbush Scrub vegetation occurs on the

northeastern parcel (approximately 58 acres) in the Planning Area, which is one of the largest undeveloped parcels in the Planning Area. Future development will be subject to provisions of the Apple Valley MSHCP/NCCP, which will likely protect larger habitats of Saltbush Scrub vegetation and associated special-status species that are of higher quality (not subject to fragmentation nor close to urban development).

2.5.6 Project Impacts

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

Biological resources and habitat in the Project Planning Area have been affected by extensive urban development, including residential, commercial, and light industrial development, and roadways and traffic. Native habitat has been eliminated or deeply fragmented in almost all areas but the northeast corner of Central Road and Highway 18, which largely retains native soils and vegetation of the Saltbush Scrub community but is also bounded by major roadways and existing urban development on the west and south and transected by dirt trails/roads. Sensitive species are not known to occur on this parcel or any other portions of the Planning Area.

Nonetheless, the proposed Specific Plan would facilitate future urban development that could disturb or permanently remove sensitive species and/or their habitats that may be in the Planning Area. Potential impacts would be reduced or mitigated to less than significant levels through a variety of mechanisms, including adherence to guidelines and provisions of the Apple Valley MSHCP/NCCP upon its adoption, compliance with the MBTA, and use of habitat-enhancing landscaping. The Town will also continue to implement Municipal Code Chapter 9.76, which protects specified native desert plants, including Joshua Trees, and addresses acceptable methods of removal and/or transplanting. Future development projects causing their removal or transplanting would be subject to the provisions of the Municipal Code and the State of California.

Future development and redevelopment projects facilitated under the proposed Specific Plan will be evaluated on a project-by-project basis for potential adverse impacts to sensitive species and required to conduct site-specific biological surveys and implement mitigation measures, as needed (Mitigation Measure BIO-1), to minimize potential impacts. The Town will also

require migratory bird surveys in compliance with the MBTA (Mitigation Measure BIO-2). With implementation of Mitigation Measures BIO-1 and BIO-2, potential Project-related impacts to sensitive species would be less than significant.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

The Mojave River is located more than three miles to the west of the Specific Plan Planning Area. According to the General Plan (Exhibit III-4, Streams, Washes, and Waterways), jurisdictional waters are generally located in the western and northern portions of the Town. Non-jurisdictional waters are found on the southeast and northeast sides of the Town, generally in the form of ephemeral drainages with rare overland water flow and generally poorly defined banks. One non-jurisdictional water is mapped within the Planning Area, in the southeastern corner near Central Road. It is the northerly terminus of a stream-like feature originating from the mountains south of Town. This drainage is typically dry but may be associated with intermittent flooding (see 2.5.6.c below). Given the nature of ephemeral desert washes and drainages, the drainage may have moved, been modified due to surrounding development, or gone extinct.

No riparian habitats or sensitive natural communities are known to occur in the Planning Area. However, future development projects facilitated by the Specific Plan could potentially disturb these resources and will be required to conduct site-specific biological studies, as needed, to identify potential impacts to riparian habitats or natural communities, if applicable (Mitigation Measure BIO-1). Project-specific mitigation measures would be required, where necessary, to reduce potential impacts to less than significant levels. Development projects would also be subject to the provisions of Municipal Code Chapter 9.76.030 which addresses riparian plant conservation. With implementation of Mitigation Measure BIO-1 and the riparian plant ordinance, impacts on riparian habitat or other sensitive natural communities would be less than significant.

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

Wetlands are defined at 33 CFR 328.3(b) as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands

generally include swamps, marshes, bogs, and similar areas." Wetlands and other special aquatic sites possess special ecological characteristics of productivity, habitat, wildlife protection, or other important and easily disrupted ecological values.

As discussed above in Section 2.5.6.b, the General Plan does not identify any U.S. Army Corps of Engineers (USACE) or California Department of Fish and Wildlife (CDFW) jurisdictional waters or wetlands within the Specific Plan Planning Area.

The USFWS National Wetlands Inventory mapping database identifies and maps potential surface water and wetlands as a single feature.[2] The maps are prepared from high altitude imagery based on visible vegetation, hydrology, and geography. On-the-ground site inspection frequently results in classification revisions. In the Planning Area, the inventory identifies one Riverine habitat, which overlaps with the non-jurisdictional water mapped by the General Plan (Exhibit III-4) and described in Section 2.5.6.b, above. The mapped habitat is part of a 42.81-acre area classified as Riverine (R) Intermittent (4) Streambed (SB) Seasonally Flooded (C), and mostly overlaps with existing developments east of Malaki Road south of Powhatan Road. Based upon on-site visits and review of aerial photos during development of the proposed Specific Plan, the mapped habitat is either non-existent or has been heavily modified to lose its original form and function. The area is not a state or federally protected resource, and therefore, impacts of the proposed Project will be less than significant.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

Much of the Specific Plan Planning Area is developed; the remaining vacant parcels are partially surrounded by development and/or transected with dirt trails/roads. Therefore, given the general urban context and site conditions, the Planning Area is not used or considered suitable as a wildlife corridor. Larger vacant parcels, such as the parcel northeast of Central Road and Highway 18, may have some potential to serve as migratory corridors for the movement of migratory bird species protected under the MBTA, as discussed above in Section 2.5.6.a. However, wildlife (other than birds) movement between these areas is largely prevented by existing intervening development, including buildings, roads, walls and fences.

[2] USFWS National Wetlands Inventory, www.fws.gov/wetlands/Data/Mapper.html, accessed June 2020.

The habitat value of scattered undeveloped parcels is considered diminished by the edge effects of surrounding development, such as trash dumping, off-road vehicle use, and the presence of domestic pets. The undeveloped lands are not known to serve as wildlife nursery sites but may serve as nesting sites for birds. Future development facilitated by the proposed Specific Plan could impact nesting birds if construction occurs during nesting seasons; however, implementation of MBTA surveys (Mitigation Measure BIO-2) would reduce potential impacts to less than significant levels.

The proposed Specific Plan would not expand development beyond lands designated for urban uses under the current General Plan and will not interfere with current or future policies and programs aimed at preservation of wildlife corridors. The Apple Valley MSHCP/NCCP will establish guidelines for the preservation and maintenance of wildlife movement corridors within the Town and vicinity. The Specific Plan Planning Area is not located in or near important linkage areas, such as the Mojave River corridor, washes between Turtle and Black Mountains, Fairview Mountain, the Granite Mountains, and the Juniper Flat foothills located within the San Bernardino Mountains. With implementation of Mitigation Measure BIO-2, Project-related impacts on wildlife movement, corridors, and nursery sites will be less than significant.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

The proposed Specific Plan will not interfere with any Town policies regarding the preservation or protection of biological resources. Future development resulting from the Specific Plan will be required to adhere to Apple Valley MSHCP/NCCP provisions and guidelines. The proposed Specific Plan landscaping guidelines prioritize native and other drought-tolerant species that are not known to be invasive, consistent with the goals, policies, and programs in the Town's General Plan (Chapter III, Open Space & Conservation and Biological Resources Elements). Future projects will also be subject to provisions in the Municipal Code Chapter 9.76 regarding protection of specified desert native plants and trees, including Joshua Trees. No significant impact would occur.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

The CEQA review process for the Apple Valley MSHCP/NCCP is currently underway, and future development facilitated by the Specific Plan will be required to adhere to the requirements of the MSHCP/NCCP when adopted. No conflict with any habitat conservation plan is expected as a result of the Specific Plan. No significant impact would occur.

2.5.7 Mitigation Measures

Compliance with the following mitigation measures, provisions and requirements of the Apple Valley MSHCP/NCCP upon its adoption, the Migratory Bird Treaty Act, and existing General Plan and Development Code requirements, will ensure that any potential impacts to sensitive species resulting from the proposed Project will be mitigated to less than significant levels.

BIO-1 Site-Specific Biological Surveys

Prior to **grading or any other ground-disturbing activity, including vegetation removal or other** development actions, development projects proposed on vacant parcels, or as deemed necessary by the Town, shall be required to conduct site-specific biological studies in compliance with standard survey methodologies and the Apple Valley MSHCP/NCCP. Species-specific and/or resource-specific surveys may be required and shall comply with applicable protocols of CDFW, USFWS, and/or other appropriate regulatory agencies**, as follows:**

- **Burrowing Owl surveys shall be conducted consistent with the CDFW Staff Report on Burrowing Owl Mitigation, or the standard in place at the time that surveys are required, including habitat assessments, surveys and impact assessments, to the standards and utilizing the protocols included in the Staff Report.**
- **Desert Tortoise pre-construction surveys shall be conducted no more than 48 hours prior to the initiation of ground disturbance, and in accordance with the standards and protocols provided in the US Fish and Wildlife Service 2019 Desert Tortoise Survey Methodology, or the standard in place at the time that surveys are required. If the species is detected, a take permit shall be secured by the development's proponent, consistent with State and federal requirements.**
- **Mohave Ground Squirrel pre-construction surveys shall be conducted following the standards and protocols of the CDFW Mohave Ground Squirrel Survey Guidelines, or the standard in place at the time that surveys are required.**

If biological resources are present that would be significantly impacted by a project, mitigation measures shall be implemented to reduce impacts on sensitive species/habitat to less than significant levels.

BIO-2 Nesting Bird Surveys

For any grading or other site disturbance or tree or vegetation removal occurring during the nesting season **typically** between February 1st and August 31st, a qualified biologist shall conduct at least one nesting bird survey, and more if deemed necessary by the consulting biologist, ~~immediately prior to initiation of project-related ground disturbing activities,~~ **and shall be required to conduct the initial field survey no more than 3 days prior to the initiation of ground disturbance.** If nesting birds are present, no work shall be permitted near the nest until the young birds have fledged**, as determined by the qualified biologist**. ~~While there is no established protocol for nest avoidance, when consulted, t~~ **T**he CDFW ~~generally~~ recommends avoidance buffers of about 500 feet for birds-of-prey, and 100-300 feet for songbirds. **A smaller or larger buffer may be determined by the qualified biologist.**

2.5.8 Significance After Mitigation

Impacts to biological resources associated with the proposed Project will be reduced to a less than significant level with adherence to the mitigation measures set forth above.

2.5.9 Cumulative Impacts

The General Plan EIR determined that future development facilitated by the General Plan could have a cumulative impact on biological resources through habitat loss and fragmentation. However, preservation of designated open space lands within the General Plan Planning Area, and the development of the Apple Valley MSHCP/NCCP, with its associated requirements for the protection of species of concern, will limit cumulative regional disruption of wildlife movement. Development proposals under the General Plan are required to adequately mitigate impacts to wildlife and habitat before development is permitted. The implementation of the Specific Plan will be subject to these requirements. Therefore, impacts would be reduced such that the Specific Plan's contribution to cumulative biological resource impacts would not be cumulatively considerable. Compared to the General Plan, maximum buildout of the proposed Specific Plan would result in a 23% increase in the number of dwelling units and a 9% increase in commercial square footage, but it would result in the same ground surface disturbances as the current General Plan

designations. The Project, therefore, would result in only a limited increase in overall development density but would not contribute considerably to cumulative impacts on biological resources in Apple Valley.

Using the summary of projections method to analyze cumulative impacts set forth in State CEQA Guidelines Section 15130 (b)(1)(B), impacts have been assessed on both a regional and local level. The primary document used to determine cumulative impacts was the Town of Apple Valley General Plan and interim materials of the Apple Valley MSHCP/NCCP, which is designed for the long-term protection and regulation of biological resources in the Project area. Along with the West Mojave Habitat Conservation Plan that has jurisdiction over federal lands, these broad-scale plans ensure that continuing urbanization will have a less than substantial cumulative impact on biological resources.

The Project Planning Area consists of developed and undeveloped areas and is surrounded by urban development and/or fragmented undeveloped lands. Onsite habitat quality suggests a low potential for the Planning Area to sustain populations of sensitive species. The proposed Specific Plan will facilitate new development in already urbanized areas of Town and contribute to urbanization trends occurring throughout the high desert region, including the conversion of vacant land to development and permanent removal or alteration of native plants and habitat.

However, the proposed Specific Plan land uses will not affect lands currently preserved as open space for sensitive habitat or identified to contain valuable habitat, and future development will adhere to Apple Valley MSHCP/NCCP provisions and guidelines to minimize impacts to sensitive species. The Town will continue to require project-specific biological evaluations and mitigation measures, where necessary, for individual projects to minimize impacts at the local level. Therefore, the impacts of the Specific Plan on biological resources would not be cumulatively considerable.

2.6 Cultural Resources

2.6.1 Introduction

This section evaluates the potential for the proposed Project to result in adverse impacts to cultural resources. Cultural resources include Native American tribal cultural resources, archaeological resources, historic resources, and human remains. Mitigation measures to reduce impacts to a less than significant level are identified, where appropriate. This section is based primarily on the Town of Apple Valley General Plan and EIR, and the Cultural Resources Survey report prepared for the Project by CRM TECH[1], which is Appendix C of this EIR.

2.6.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, the Project would have a significant effect on cultural resources if it would:

a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5.

c) Disturb any human remains, including those interred outside of formal cemeteries.

2.6.3 Regulatory Framework

Federal

National Historic Preservation Act

The National Historic Preservation Act (NHPA) was established in 1966 by the Advisory Council on Historic Preservation (ACHP) with the goal of encouraging federal agencies to factor historic preservation into federal project requirements. ACHP is an independent federal agency that promotes the preservation, enhancement, and productive use of the nation's historic resources and advises government leaders on national historic preservation policy. The ACHP defines "historic properties" as "any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places."

[1] "Historical/Archaeological Resources Sensitivity Assessment, The Village Specific Plan and EIR, Town of Apple Valley," CRM TECH, December 31, 2020, Updated January 31, 2022.

Section 106 of the NHPA applies when two (2) thresholds are met: 1) there is a federal or federally licensed action, including grants, licenses, and permits, and 2) that action has the potential to affect properties listing in or eligible for listing in the National Register of Historic Places. Section 106 requires each federal agency to identify and assess the effects of its actions on historic resources. If it is determined that a proposed action has the potential to affect historic properties, the federal agency must identify the appropriate State Historic Preservation Officer/Tribal Historic Preservation Officer (SHPO/THPO) to consult with during the process.

National Register of Historic Places

Authorized under the NHPA, the National Register of Historic Places is the nation's official list of cultural resources that qualify for preservation. Properties listed in the National Register include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archaeology, engineering, and culture. Eligibility criteria, as outlined in 36 CFR 60.4, are very similar to those for the California Register of Historical Resources (below).

State

California Public Resources Code

According to Public Resources Code Section 5020.1, "historical resources" include, but are not limited to, an object, building site, area, place, record, or manuscript that is historically or archaeologically significant. If a Lead Agency determines that an archaeological site is a historical resource, the provisions of Public Resources Code (PRC) Section 21084.1 and CEQA Guidelines Section 15064.5 would apply. If an archaeological site does not meet the CEQA Guidelines criteria for a historical resource, then the site may meet the threshold of PRC Section 21083 regarding unique archaeological resources.

In addition, PRC Section 5097.98 states that if Native American human remains are identified within a project area, the landowner must notify and consult with the Native American Most Likely Descendant (MLD), as identified by the Native American Heritage Commission (NAHC), to develop a plan for proper treatment and/or removal of the human remains and associated burial artifacts. These procedures are also addressed in Section 15046.5 of the CEQA Guidelines and within the California Health and Safety Code.

California Health and Safety Code

California Health and Safety Code Section 7050.5 requires that when human remains are discovered outside a dedicated cemetery, no further disturbance or excavation can occur until the remains have been examined by the County

coroner. If the coroner determines that the remains are those of a Native American, he or she must contact the Native American Heritage Commission (NAHC) within 24 hours. The NAHC is then required to contact the Most Likely Descendant. The MLD may recommend the manner in which he or she wishes to treat or dispose of the human remains.

CEQA Guidelines

The California Environmental Quality Act (CEQA) prescribes how the Local Agency must address issues related to archaeological and historic resources. The CEQA Guidelines state that the term "historical resources" applies to any such resources listed in or determined to be eligible for listing in the California Register of Historical Resources. The definition also includes resources included in a local register of historical resources or identified as significant in an historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code.

California Register of Historical Resources

CEQA Guidelines mandate that "generally a resource shall be considered by the lead agency to be 'historically significant' if the resource meets the criteria for listing on the California Register of Historical Resources" (Title 14 CCR Section 15064.5(a)(3)). A resource may be listed in the California Register if it meets any of the following criteria:

a) is associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States,
b) is associated with the lives of persons important to local, California or national history,
c) embodies the distinctive characteristics of a type, period, region, or method of construction or represents the work of a master or possesses high artistic values, or
d) has yielded, or has the potential to yield, information important in prehistory or history of the local area, California, or the nation.

Regional/Local

Apple Valley General Plan

The Apple Valley General Plan (2009) Cultural Resources Element includes goals, policies, and programs that address the protection and conservation of cultural and/or historical resources. Those that are relevant to the proposed Project include:

Goal All elements of the Town's cultural heritage, including archaeological and historic sites, artifacts, traditions and other elements, shall be professionally documented, maintained, preserved, conserved, and enhanced.

Policy 1.A Early in the planning process, the Town shall implement its obligation to identify, document and assess archaeological, historical and cultural resources that proposed development projects may affect.

Program 1.A.1
Where proposed development or land uses have the potential to adversely impact sensitive cultural resources, it shall be subject to evaluation by a qualified specialist, comprehensive Phase I studies, and appropriate mitigation measures shall, as necessary, be incorporated into project approvals.

Policy 1.C The Town shall, to the greatest extent possible, protect sensitive archaeological resources from vandalism and illegal collection.

Program 1.C.1
Any information, including mapping, that identifies specific locations of sensitive cultural resources, shall be maintained in a confidential manner, and access to such information shall be provided only to those with appropriate professional or organizational ties.

Apple Valley Landmarks and Points of Interest
Section 2.24.050 of the Apple Valley Development Code grants the Town Council the authority to declare landmarks and points of interest, after public hearings held by the Council or Historical Advisory Committee. Per Section 2.24.040, a historic, cultural, or natural landmark is a building, structure, site archaeological excavation, or object that is unique or significant because of its location, design, setting, arterials, workmanship, or aesthetic feeling, and/or:

1) is associated with events that have made a significant contribution to the Nation, State, or community, and/or;
2) is associated with lives of persons who made a significant contribution to the Nation, State, or local history, and/or;
3) reflects or exemplifies a particular period of the National, State, or local historic, and/or;
4) embodies the distinctive characteristics of a type, period, or method of construction, and/or;
5) presents the work of a master builder, designer, artist, or architect whose individual genius influenced his or her age; or that possesses high artistic value, and/or;

6) has yielded or may be likely to yield information important to National, State, or local history or prehistory.

Per Section 2.24.045, a historic, cultural, or natural point of interest is any real property or object:

1) that is the site of a building, structure, or object that no longer exists but was associated with historic events, important persons, or embodied a distinctive character or architectural style, and/or;
2) that has historic significance but has been altered to the extent that the integrity of the original workmanship, materials, or style has been substantially compromised.

Section 2.24.065 requires the Historical Advisory Committee to maintain and make available to the public a list of all declared landmarks and points of interest. The list currently includes eighteen (18) sites.

2.6.4 Environmental Setting

Archaeological Context

The prehistory of the Mojave Desert region dates to around 8,000 B.C. or earlier. The Mojave River, San Bernardino Mountains, and other mountains in the region offered dependable sources of water and subsistence resources for small, mobile groups of hunters and gatherers. Over time, they became broad-based foragers, increasingly relying on ground foods and small and large game animals. Later foraging patterns were more geographically restrictive due to increasing population density and other variables.

Prehistoric artifacts found in the region are typically related to subsistence activities and include points, flaked stone crescents, pottery, mortars and pestles, and scrapers. The artifacts suggest that early inhabitants relied on seeds, plant pulp, and small game animals. Ancient occupation sites included the banks of the Mojave River, rock shelters, and hills and mountains.

Ethnohistorical Context

The Apple Valley area was once occupied by the Serrano and Vanyume peoples. Little is known about the Vanyume today. Their numbers dwindled rapidly between 1820 and 1834, when much of the Native population in southern California was moved to various missions, and they virtually disappeared well before 1900. The Serrano people largely occupied the San Bernardino Mountains, but their territory also extended into the San Bernardino Valley, southern Mojave Desert, and mountain ranges to the east. They settled on elevated terraces, hills, and ridges where water flowed from the mountains.

Between the 1810s and 1834, the Spanish established a mission on the southern edge of Serrano territory, and most of the Serrano in their western territory were removed to nearby missions. Those in the eastern territory (San Bernardino Mountains) were displaced or died in punitive expeditions in 1866-1870. Today, descendants of the Serrano are affiliated with the San Manuel Band of Mission Indians, Morongo Band of Mission Indians, or Serrano Nation of Indians.

Historic Context

Spanish explorer Francisco Garces was the first European visitor to the Victor Valley in 1776. The earliest Euroamerican settlements appeared as early as 1860. However, the region remained only sparsely populated until the second half of the 20th century. The first settlers to establish long-term residency in present-day Apple Valley were Silas Cox in 1860 and John Brown in 1870, who used the area for cattle grazing and ranching. With the completion of the Santa Fe Railway in the 1880s, settlement in the Victor Valley peaked in the 1910s. Early settlements included apple orchards on the east side of the Mojave River, other agricultural endeavors, and ranches. During the 1930s and 1940s, the Town emerged as a vacation destination for Hollywood celebrities and a film production site. The post-World War II era was a period of sustained growth. In 1945, Newton Bass and Bernard "Bud" Westlund acquired, marketed, and developed thousands of acres, creating the community of Apple Valley. The Town was incorporated in 1988 with a population of approximately 41,000.

2.6.5 Existing Conditions

The Planning Area remained undeveloped until the 1940s and 1950s when mobile homes, rural residences, and commercial buildings on Highway 18 began to develop. The most recent development (fast food restaurants and chain stores) has occurred in the western end of the Village and in the northeastern end in the vicinity of Headquarters Drive (fire station, water district offices, County offices).

Cultural Resources Assessment

A historical/archaeological resources assessment was prepared by CRM TECH for the proposed Project in January, 2022.[2] The study describes previously identified cultural resources in the Planning Area and assesses the potential for as-yet documented resources to be encountered during future buildout. It is based on various record searches, historical background research, and a field survey. Its findings are summarized below.

[2] Ibid.

California Historical Resources Information System

The South Central Coastal Information Center (SCCIC) searched the California Historical Resources Information System (CHRIS) for previously identified cultural resources and existing cultural resources reports within ¼-mile of the Planning Area. Thirteen (13) past cultural resources studies have included portions of the Planning Area, covering roughly one-third of its total acreage; all occurred between 2001 and 2013.

Two (2) sites of historical origin were recorded within the Planning Area, as described in the following table. Both sites were determined not to be eligible for the National Register of Historic Places or California Register of Historical Resources at the time of their recordation.

Table 2.6-1
Recorded Sites of Historical Origin in the Planning Area

Site Number[1]	Name and Location	Description
Site 36-020567	Chief Desert Lodge (northwest corner of Highway 18 and Navajo Road)	Circa 1947. Once consisted of six two-unit bungalows and a caretaker's residence, all of which have been demolished.
Site 36-029693	Refuse Scatter with associated building remnants (field north of Fire Station No. 1 on Headquarters Drive)	Remnants are still present
[1] California Historical Resources Inventory		

No CHRIS records of prehistoric cultural resources were identified within the Planning Area or the ¼-mile scope of the records search. It should be noted that records that had not been digitized were unavailable to SCCIC staff due to facility closures related to the COVID-19 pandemic, and SCCIC cautioned that the records search results "may or may not be complete."

Apple Valley Historical Points of Interest

The Town has designated eighteen (18) sites as Historical Points of Interest. Four (4) of them, described below, are in the Planning Area boundaries.

Table 2.6-2
Town Designated Historical Points of Interest in the Planning Area

Site	Description
El Pueblo Shops 21810 Outer Highway 18 North	Constructed in the late 1940s. Two strip-type buildings facing each other across a lawn and trees. Contained a variety of shops and businesses. Recent influx of antique stores has marked recent revitalization of the complex.
Conrad Publishing House 21825 Outer Highway 18 South	Original portion constructed by Warren White in 1951 for Lloyd R. Conrad's printing and publishing business. Additions were made as business grew.
James A. Woody Community Center 13467 Navajo Road	Construction began in 1950 and was completed in 1951. Financed through fundraisers and built by volunteers. Served as a social gathering space.
Apple Valley's Pink House 13733 Navajo Road	Former home of Apple Valley founder Newton Bass. Designed by Hugh Gibbs. Includes design elements similar to those of the Apple Valley Inn.

Sacred Lands File Search

In October 2020, CRM TECH sent a written request to the California Native American Heritage Commission (NAHC) for a records search in the commission's Sacred Lands File. The NAHC reported the presence of unspecified Native American cultural resource(s) in the general vicinity of the Planning Area but did not provide additional details. Sacred Land File searches are conducted at a broad scale, and the reported resource(s) may be miles from the Planning Area. The NAHC recommended contacting the Chemehuevi Indian Tribe for further information and provided a list of additional Native American contacts who may have knowledge about cultural resources in the area. The Town initiated contact with these tribes, as discussed further in Section 2.18, Tribal Cultural Resources.

Historical Background Research

Historical maps and aerial photographs of the Planning Area show that cultural resources most likely date to the post-World War II era. No man-made features were noted in or near the Planning Area in the mid-19th century. Between the 1890s and 1930s, the only man-made feature known to be present was a road to the Big Bear Valley in the San Bernardino Mountains, which later evolved into Highway 18. By the 1950s, some development had occurred in the Planning Area along the Highway 18 corridor. Between 1952 and 1969, development accelerated to include commercial buildings, mobile home parks, and civic facilities, including a community center and fire station.

Field Survey

A field survey of the Planning Area confirmed that the bulk of the commercial buildings along Highway 18 between Navajo and Central Roads, and the areas behind the highway frontage, date primarily to the post-World War II era. Most are modest free-standing, single-story structures. Western-themed design elements are found on the facades of several commercial buildings along Highway 18; features include false fronts, wide verandas, square wooden posts with triangular brackets, and pent roofs. Development of recent origin, including shopping centers, warehouse style structures, and residential buildings, occurs in the western Planning Area toward Navajo Road. No potential indicators of prehistoric human use were observed in the Planning Area.

2.6.6 Project Impacts

a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5.

As described in Section 2.6.5, two (2) sites of historic origin were recorded in the Planning Area. However, both sites were determined not eligible for listing under the National Register of Historic Places or California Register of Historical Resources. Historic resources in the Planning Area are primarily single-story commercial buildings, a few single- and multi-family residences, and other buildings such a community center that date to the post-World War II era. The Planning Area may also include buildings constructed as late as 1970, the current age threshold for a property to be recorded and evaluated as a potential "historical resource" under Section 106 and CEQA Guidelines. Potential historical resources include four (4) properties that are locally recognized as Historical Points of Interest by the Town of Apple Valley, and all buildings and other notable built-environment features that are at least 50 years of age and retain at least a recognizable level of historical characteristics.

The proposed Project is a policy document that will not, in and of itself, result in physical changes to a historical resource. However, it will facilitate development and redevelopment in the Planning Area that could potentially impact "historical resources," either directly or indirectly. Potential impacts will need to be determined through site-specific cultural resource surveys for individual projects (Mitigation Measure CUL-1). Any ground-disturbing activities in the Planning Area that inadvertently encounter buried cultural material that may be historical in age will need to be halted within 50 feet of the find until a qualified archaeologist can evaluate the nature and significance of the discovery (Mitigation Measure CUL-2). With implementation of these mitigation measures, Project-related impacts to historical resources will be less than significant.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5.

Existing records of the California Historical Resources Information System identify no archaeological sites or other cultural resources from the prehistoric period within the Planning area. No potential indicators of prehistoric human use were observed during the field survey. The NAHC reported the presence of unspecified Native American cultural resource(s) in the general vicinity of the Planning Area, but their exact location and proximity to the Planning Area is unknown. Known prehistoric sites in inland southern California suggest that Native American settlements more likely occurred in sheltered areas near the base of hills and/or on elevated terraces, hills, and finger ridges near permanent or reliable sources of water. Given the location of the Planning Area on the open valley floor 4± miles east of the Mojave River and 3± miles south of the Holocene-age Apple Valley Dry Lake, it would not have provided a favorable setting for habitation by prehistoric populations. Previous ground disturbances in the Planning Area also reduce the potential for sensitive or significant archaeological remains of prehistoric origin to occur in the Planning Area.

Nonetheless, the proposed Project is a policy document that will facilitate development and redevelopment of the Planning Area. Approximately 58% (377± acres) of the Planning Area is already developed. Developed lands are less likely to harbor archaeological resources due to previous ground disturbance. The remaining 42% (274± acres) of the Planning Area is vacant and could be subject to ground disturbance during build out. Potential impacts will need to be determined through site-specific cultural resource surveys for individual projects (Mitigation Measure CUL-1). Ground-disturbing activities such as demolition, grading, and excavation could potentially unearth previously unknown cultural resources of prehistoric age. Should such an event occur, such activities will need to be halted within 50 feet of the find until a qualified archaeologist can evaluate the nature and significance of the discovery (Mitigation Measure CUL-2). With implementation of these mitigation measures, Project-related impacts to archaeological resources will be less than significant.

c) Disturb any human remains, including those interred outside of formal cemeteries.

The Planning Area is not known to contain formal cemeteries or burial sites, and it is unlikely to have contained any permanent Native American settlements. The proposed Project is a policy document that will not physically impact human remains. However, it will facilitate development and redevelopment in the

Planning Area, and the potential exists for human remains to be unearthed during ground-disturbing activities, such as grading and excavation.

California Health and Safety Code Section 7050.5 requires that, in the event that human remains are discovered, all excavation shall stop and the County coroner shall inspect the site. Should the remains be identified as Native American by the coroner, the NAHC is required to contact the Most Likely Descendant, and that descendant may recommend appropriate burial. This requirement, reflected in Mitigation Measure CUL-3, will assure that Project-related impacts associated with the disturbance of human remains are less than significant.

2.6.7 Mitigation Measures

CUL-1 Pre-Construction Surveys

The Town shall require intensive-level cultural resources surveys by qualified archaeologists, historians, and/or architectural historians, where deemed necessary. Studies should include in-depth records search at the SCCIC, historic background research, intensive-level field survey, and consultation with Native American representatives and/or other relevant parties, as well as impact evaluation and mitigation programs, as needed. The Town shall monitor and enforce recommended mitigation measures.

CUL-2 Archaeological and/or Tribal Resource Procurement and Documentation

Should unknown archaeological or tribal cultural resources become unearthed, the area of potential resources shall be cordoned off within 50 feet of the find and protected from further disturbance until a qualified archaeologist can investigate the discovery. The qualified archaeologist shall prepare a findings report summarizing the methods and results of the investigation, including an itemized summary and detailed analysis of recovered artifacts upon completion of field and laboratory work. The report shall include an interpretation of the cultural activities represents by the artifacts and discussion of their significance. The submittal of the report to the Town and Tribal representative, as appropriate, along with final curation of the recovered artifacts, will signify completion of the monitoring program and, barring any unexpected findings of extraordinary significance, the mitigation of potential project impacts on cultural and tribal resources.

CUL-3 Human Remains

Should buried human remains be discovered during grading or other construction activity, in accordance with State law, the County coroner shall be contacted. If the remains are determined to be of Native American heritage, the Native American Heritage Commission (NAHC) and the appropriate local Native American Tribe shall be contacted to determine the Most Likely Descendant (MLD).

2.6.8 Significance After Mitigation

With implementation of Mitigation Measures CUL-1 through CUL-3, Project-related impacts will be less than significant.

2.6.9 Cumulative Impacts

The Apple Valley General Plan EIR (2009) determined that future ground disturbing activities associated with General Plan buildout have the potential to discover, damage, and/or destroy historic and archaeological resources of cultural importance. However, implementation of General Plan policies and programs, including requirements for site-specific cultural resource surveys for proposed projects, would protect and preserve cultural resources such that no significant cumulative impacts would result.

Compared to the General Plan, maximum buildout of the Planning Area according to the proposed Project would result in a 23% increase in the number of dwelling units and a 9% increase in commercial/service/office/public facility square footage. The increase could result in greater disturbances to ground surfaces in the Planning Area, but they would occur on the same sites and soils as the General Plan, and actual levels of disturbance would depend on site-specific parameters. Development and redevelopment projects would be subject to the same mitigation measures identified the General Plan and State law, including preparation of site-specific cultural resource surveys, cessation of ground-disturbing activities and contacting a qualified archaeologist if cultural resources are discovered, and compliance with California Health and Safety Code requirements if human remains are discovered. With implementation of these mitigation measures, the proposed Project would not contribute considerably to cumulative impacts on cultural resources.

Cumulative impacts have been assessed using the summary of projections methods set forth in State CEQA Guidelines Section 15130(b)(1)(B). The primary documents used to determine cumulative impacts were the Town of Apple Valley General Plan (2009) and its EIR.

2.7 Energy Resources

2.7.1 Introduction

This section of the EIR describes existing conditions with regard to energy resources within the Apple Valley Village Specific Plan Planning Area and analyzes the potential impacts of the Specific Plan on these resources. This analysis was prepared pursuant to Appendix G of the CEQA Guidelines, as amended.

A wide range of data and information, ranging from research to regional scale planning and environmental documents, have been used in researching and analyzing the Specific Plan and its potential effects. Specifically, this section evaluates the demand for energy resources attributable to implementation of the Specific Plan during construction and operation, demonstrates whether the current and planned electrical, natural gas, and petroleum-based fuel supplies and distribution systems are adequate to meet the Specific Plan's forecasted energy consumption, and determines the impacts based on the use and conservation of energy resources as a result of the Specific Plan.

2.7.2 Thresholds of Significance

The following analysis criteria and thresholds are contained in Appendix G of the CEQA Guidelines. A project would have a significant impact relating to energy resources if it would:

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

The Initial Study determined that the Project would result in "No Impact" for threshold question b), above. Therefore, it is not analyzed further in this EIR.

2.7.3 Regulatory Framework

Federal

National Energy Policy Act of 2005

The National Energy Policy Act of 2005 sets equipment energy-efficiency standards, seeks to reduce reliance on nonrenewable energy resources, and

provides incentives to reduce current demand on these resources. The act provides for incentives for high-efficiency (including electric) vehicles, new and existing homes, commercial buildings, and manufacturers of high-efficiency appliances. It also addresses combined heat and power, appliance labeling, research and development, efficiency in federal and public facilities, building energy codes, public housing, and other efficiency topics.

State

California 2008 Energy Action Plan Update

The 2008 update to the 2005 Energy Action Plan II is the State's principal energy planning and policy document. The updated document examines the State's ongoing actions in the context of global climate change. The Energy Action Plan II continues the goals of the original 2003 Energy Action Plan, describes a coordinated implementation plan for state energy policies, and identifies specific action areas to ensure that California's energy resources are adequate, affordable, technologically advanced, and environmentally sound. In accordance with this plan, the first-priority actions to address California's increasing energy demands are energy efficiency and demand response (i.e., reduction of customer energy usage during peak periods to address system reliability and support the best use of energy infrastructure). Additional priorities include the use of renewable sources of power and distributed generation (i.e., the use of relatively small power plants near or at centers of high demand). To the extent that these actions are unable to satisfy the increasing energy demand and transmission capacity needs, clean and efficient fossil-fired generation is supported.

The California 2008 Energy Action Plan Update examines policy changes in the areas of energy efficiency, demand response, renewable energy, electricity reliability and infrastructure, electricity market structure, natural gas supply and infrastructure, research and development, and climate change.

Assembly Bill 32 (2006) and Senate Bill 32 (2016)

In 2006, the Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020 and 80% below 1990 levels by 2050. In 2016, the Legislature enacted SB 32, which established an interim reduction target of 40% below 1990 levels by 2030. In accordance with AB 32 and SB 32, the California Air Resources Board (CARB) prepares scoping plans to guide the development of statewide policies and regulations for the reduction of GHG emissions. Many of the policy and regulatory concepts identified in the scoping plans focus on increasing energy efficiencies and the use of renewable resources and reducing the consumption of petroleum-based fuels (such as gasoline and diesel). As such, the State's GHG

emissions reduction planning framework creates co-benefits for energy-related resources. Additional information on AB 32 and SB 32 is provided in Section 2.9, Greenhouse Gas Emissions, of this EIR.

California Building Standards

Part 6 of Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards. Part 6 establishes energy efficiency standards for residential and non-residential buildings constructed in California to reduce energy demand and consumption. Part 6 is updated periodically to incorporate and consider new energy efficiency technologies and methodologies.

The 2019 California Energy Code (Title 24, Part 6), which became effective on January 1, 2020, further reduces energy consumption in California. The 2019 edition is the last of three updates to move California toward achieving the Zero Net Energy (ZNE) goal by the year 2020. The 2019 update to the Building Energy Efficiency Standards focuses on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings. The most significant efficiency improvements to the residential standards include the introduction of photovoltaic into the prescriptive package, and improvements for attics, walls, water heating, and lighting. The most significant efficiency improvements to the nonresidential standards include alignment with the ASHRAE 90.1 2017 national standards.

Title 24 also includes Part 11, the California Green Building Standards (CALGreen). The CALGreen standards took effect in January 2011 and instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential, and State-owned buildings, as well as schools and hospitals. The 2019 CALGreen standards, effective on January 1, 2020, clarifies and updates many previously implemented regulations, including: Storm Water Pollution Prevention Plan; backlight, uplight and glare reference standards; showerhead flow rates; resilient flooring systems; Minimum Efficiency Reporting Value (MERV) ratings for air filters; and commissioning reference standards.

Integrated Energy Policy Report

The California Energy Commission (CEC) is responsible for preparing integrated energy policy reports, which identify emerging trends related to energy supply, demand, conservation, public health and safety, and maintenance of a healthy economy. The CEC's 2015 Integrated Energy Policy Report discusses the State's policy goal to require that new residential construction be designed to achieve zero net energy (ZNE) standards by 2020 and that new non-residential construction be designed to achieve ZNE standards by 2030.

Regional and Local

San Bernardino County Regional Greenhouse Gas Reduction Plan

In response to emission reduction targets set by AB 32, a project partnership led by the San Bernardino County Transportation Authority (SBCTA) has compiled an inventory of GHG emissions and developed reduction measures that could be adopted by the 25 Partnership Jurisdictions of San Bernardino County, including the Town of Apple Valley. The Regional Greenhouse Gas Reduction Plan (2021) is pending approval from the San Bernardino Council of Governments (SBCOG); once adopted, the plan will serve as the basis for jurisdictions in the County to develop a more detailed community level climate action plan (CAP). The GHG inventory revealed that with a few exceptions, in 2016 and in 2030, the largest sources of regional GHG emissions are combustion of transportation fuels and electricity and natural gas used by residential and commercial buildings.

Town of Apple Valley Climate Action Plan

The Apple Valley Climate Action Plan (CAP) was originally adopted in 2010 and designed to be revised every 3 years to respond to advances in technology and emerging policy reforms, and to build upon the successes of Apple Valley's efforts to reduce greenhouse gas emissions. The 2019 CAP Update is Apple Valley's comprehensive strategy to reduce greenhouse gas (GHG) emissions in response to the challenges of climate change. The 2019 CAP Update provided myriad GHG reduction measures in transportation, energy efficiency, and renewable energy for both municipal and community-wide activities.

Town of Apple Valley General Plan

The General Plan Energy and Mineral Resources Element sets forth goals, policies and programs that assist the Town in ensuring the availability, conservation, and management of its resources. The goals, policies, and programs also encourage the development of balanced, innovative and long-term strategies to improve energy efficiency, expand the use of renewable resources, and create opportunities for more local control of energy production, distribution, and consumption. The following policies on energy resources are relevant to the Project:

Goal Assure the long-term availability and affordability of energy and mineral resources through conservative consumption, efficient use and environmentally sensitive management practices.

Policy 1.A The community and all economic sectors shall be urged to conserve energy, with particular focus on the inclusion of energy saving measures in transport systems, and in the planning and construction of urban uses.

Program 1.A.1
While considering the future development of more stringent local energy performance standards, the Town shall continue to rigorously enforce all state mandated energy-conserving development and building codes/regulations.

Program 1.A.3
The Town shall periodically assess the local transportation system with a view to gaining greater efficiency in the movement of people and goods through the community. Opportunities to expand the public transport system, using buses equipped with bicycle racks and fueled by compressed natural gas or hydrogen, will be maximized. Widespread use of pedestrian pathways and alternative means of transport, such as bicycles and electric or hybrid vehicles, will be facilitated and encouraged.

Program 1.A.4
The Town shall strive for efficient community land use and transportation planning and design, and shall assure the provision of convenient neighborhood shopping, medical and other professional services appropriately located to minimize travel and facilitate the use of alternative means of transportation.

Policy 1.B Promote building design and construction that integrates alternative energy systems, including but not limited to solar, thermal, photovoltaics and other clean energy systems.

Program 1.B.3
The Town shall encourage building design that takes advantage of shade, prevailing winds and sun screens. Energy efficient lighting and installation of colored "cool roofs", cool pavement and strategically planted shade trees should also be encouraged. The Town shall support the installation of solar panels on carports and over parking areas where appropriate.

2.7.4 Environmental Setting

Primary energy sources include nuclear energy, fossil energy (oil, coal and natural gas), and renewable sources such as wind, solar, geothermal, and hydropower. These primary sources are converted to electricity, a secondary energy source, which flows through power lines and other transmission infrastructure to end users.

The Town of Apple Valley is in one of the key regions sought by renewable energy developers: the sparsely populated, but ecologically important Mojave and Colorado/Sonoran Desert area covering roughly 22.6 million acres. The area

hosts abundant solar, wind, and geothermal resources. To protect the area and streamline the permitting process, the California Energy Commission, the California Department of Fish and Wildlife, U.S. Bureau of Land Management, and U.S. Fish and Wildlife Service developed the Desert Renewable Energy Conservation Plan (DRECP) that identifies areas in the desert appropriate for the utility-scale development of wind, solar, and geothermal energy projects.

Renewable energy projects in and around the Town of Apple Valley range from smaller scale solar systems in residential and commercial uses to utility-scale projects such as the High Desert Solar Project on the border of Adelanto and Victorville, that includes a 100 MWac PV system with a 50 MWac energy battery storage system (MWac means megawatt AC output capacity).

Electricity

Electricity, a consumptive utility, is a man-made resource. The delivery of electricity involves many system components, including substations and transformers that decrease transmission line power (voltage) to a level appropriate for on-site distribution and use. Conveyance of electricity through transmission lines is typically responsive to demand. The production of electricity requires the consumption or conversion of energy resources (e.g., water, wind, oil, gas, coal, solar, geothermal, and nuclear resources) into electric energy. In California, the main sources of electric generation are natural gas (48.35%), renewables (33.35%), large hydro (9.40%), and nuclear (8.53%). Among renewables, solar (15.43%), wind (7.18%), and geothermal (5.94%) are the main sources, while small hydro and biomass make up a smaller percentage.[1]

Energy capacity, or electrical power, is generally measured in watts, while energy use is measured in watt-hours. Residential, commercial, and industrial sectors are the three main consumers of electricity. According to the California Energy Commission (CEC), statewide electricity consumption in 2020 was approximately 279,510 gigawatt-hours (GWh) and is projected to increase to a high of 321,300 GWh in 2030.[2,3] The Statewide Electricity Annual Consumption per capita is also projected to grow from approximately 7,300 kWh in 2019 to a high of approximately 8,050 kWh in 2030.[4] The average annual electricity

1 2020 Total System Electric Generation by California Energy Commission, https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2020-total-system-electric-generation, accessed October 27, 2021.

2 California Energy Consumption Database, Electricity Consumption (GWh), http://www.ecdms.energy.ca.gov/Default.aspx, accessed October 27, 2021.

3 Adopted 2019 Integrated Energy Policy Report, California Energy Commission, February 20, 2020.

4 California Energy Demand 2018-2030 Revised Forecast, California Energy Commission, February 2018. Figure 3.

demand growth in California from 2016 to 2030 is expected to range from 0.99 to 1.59 percent, while peak annual electricity demand growth is expected to range from 0.30 to 1.52 percent from 2017 to 2030.[5]

Natural Gas

Natural gas is a combustible mixture of simple hydrocarbon compounds (primarily methane) that is used as a fuel source. Natural gas consumed in California is obtained from naturally occurring reservoirs, mainly located out of the state and delivered through high-pressure transmission pipelines. The natural gas transportation system is a nationwide network, and therefore, resource availability is typically not an issue at the local level.

Natural gas satisfies almost one-third of the state's total energy requirements and is used in electricity generation, space heating, cooking, water heating, industrial processes, and as a transportation fuel. Natural gas is measured in terms of cubic feet. According to the CEC, statewide natural gas consumption in 2019 was projected to be approximately 13,000 million therms and is projected to drop to just less than 12,800 million therms in 2030, both in the mid-demand scenario.[6]

Wind and Solar Energy

The desert region of San Bernardino County is home to the first large scale solar projects in the state and were constructed during the late 20th century. Today, the County regulates new renewable energy projects with a focus on environmental compatibility. The County promotes community-oriented renewable energy, which is roughly defined as systems with at least half of the energy produced serving the local community rather than being sold to the grid. The County General Plan limits utility-oriented renewable energy generation projects on private land to certain site types such as waste disposal, mining, and Resource Conservation and Recovery Act sites.

For smaller scale projects, the use of solar photovoltaic systems on residential rooftops, commercial and industrial buildings, institutional uses, and covered parking structures has increased in the High Desert region in recent years.

Geothermal Energy

Geothermal energy is produced by the heat of the earth and is often associated with volcanically or seismically active regions. California contains the largest amount of geothermal electric generation capacity in the United States.

[5] California Energy Demand 2018-2030 Revised Forecast, California Energy Commission, February 2018. Table ES-1.

[6] Adopted 2019 Integrated Energy Policy Report, California Energy Commission, February 20, 2020.

There are a total of 40 operating geothermal power plants in California with an installed capacity of 2,712 megawatts. Approximately 11,345 gigawatt-hours (GWh) of electricity were produced from geothermal sources in California in 2020.[7] Currently, there is no operating geothermal power plant in San Bernardino County.

Transportation Energy

Transportation energy sources primarily include petroleum (gasoline and diesel), natural gas, hydrogen fuel cells, and electricity. The state is developing flexible strategies to reduce petroleum consumption. Over the last decade, California has implemented several policies, rules, and regulations to improve vehicle efficiency, increase the development and use of alternative fuels, reduce air pollutants and GHGs from the transportation sector, and reduce vehicle miles traveled (VMT). Accordingly, gasoline consumption in California has declined. The CEC predicts that the demand for gasoline will continue to decline over the next ten years and there will be an increase in the use of alternative fuels, such as natural gas, biofuels, and electricity.

According to the CEC, the gasoline demand forecast ranges from 12.3 billion to 12.7 billion gallons in 2030.[8] Current statewide diesel consumption is projected to increase to 4.7 billion gallons in 2030.[9]

2.7.5 Existing Conditions

Electricity

The CEC estimated that total electricity consumption for San Bernardino County was 15,968.52 million kWh in 2020.[10] According to the Town of Apple Valley Climate Action Plan (CAP, 2019 Update), Town-wide electricity consumption in Apple Valley in 2019 was reported to be 329,848,695 kWh. This includes all electricity consumed by municipal buildings, residential, commercial, agricultural, and industrial land uses, as well as streetlights and traffic signals.[11] It can be assumed that current electricity usage per capita is close to the 2019 level, if not less, due to the increased energy efficiency standards of the California Building and Energy Codes.

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7 California Geothermal Energy Statistics & Data, California Energy Commission website, https://ww2.energy.ca.gov/almanac/renewables_data/geothermal/index_cms.php, accessed October 27, 2021.

8 P. 72, Revised Transportation Energy Demand Forecast, 2018-2030, California Energy Commission, February 2018.

9 P. 73, Revised Transportation Energy Demand Forecast, 2018-2030, California Energy Commission, February 2018.

10 California Energy Consumption Database, Electricity Consumption (GWh), http://www.ecdms.energy.ca.gov/Default.aspx, accessed October 27, 2021.

11 Town of Apple Valley Climate Action Plan 2019 Update, adopted May 2021.

Southern California Edison (SCE) provides electricity service to the Town of Apple Valley and many of the surrounding areas, serving approximately 15 million people in a service area of approximately 50,000 square miles. SCE generates power from a variety of energy sources, including natural gas, large hydroelectric, nuclear, and renewable sources (which include small hydroelectric, solar, wind, geothermal, biomass, and biowaste sources).

Apple Valley Choice Energy (AVCE) is a community choice aggregation program created by the Town of Apple Valley to provide more affordable electricity and cleaner energy choices. Launched in April 2017, AVCE service is available to all municipal, commercial, and residential customers within the Town limits. AVCE rates are set by the Town Council, reviewed annually to provide stability to customers, and typically lower than the SCE per kWh rate. The AVCE power mix is cleaner than SCE power, though still delivered through SCE facilities. SCE remains the utility provider and bills customers using AVCE's lower electricity rates. Customers are automatically enrolled into AVCE and have the options to upgrade to More Choice (50% renewable energy content), Your Choice (solar/wind power generators), or to opt out of AVCE.

Most power lines in the Specific Plan area are overhead. North of Highway 18, power lines generally run along the back of lots through an electrical easement, connecting with the back of properties. South of Highway 18, the power lines are generally larger and typically run along the back of lot without a dedicated easement. Some streets (such as Nomwaket Road) have power lines running along the street behind drainage ditches. The current electricity demand of the Planning Area is adequately served by SCE and AVCE. The projected consumption at Specific Plan buildout is discussed in Section 2.7.6, Project Impacts.

Natural Gas

Southwest Gas Corporation (SWG) provides natural gas service to the Town and the Planning Area through a series of pipelines of various sizes and pressure capabilities. SWG provides natural gas service to more than 2 million customers in Arizona, Nevada, and portions of California. It has a network of high-pressure natural gas corridors, and the nearest two are generally on the border of the Planning Area along Central Road (8 inch and 12 inch) and Ottawa Road (8 inch). Distribution lines ranging from 2 to 8 inches in diameter are located within most public rights-of-way.

According to the Town of Apple Valley Climate Action Plan 2019 Update, Town-wide natural gas demand in Apple Valley in 2019 was 15,526,732 therms. This includes natural gas consumed by municipal buildings, residential, commercial,

and industrial land uses, as well as power plants.[12] Similar to statewide predictions, it can be assumed that the annual consumption of natural gas per capita in the Town will be comparable to 2019 or even decline like the statewide trend since the late 1990s. Currently, the natural gas demand of the Planning Area is adequately serviced by SWG; projected demand at Specific Plan buildout is discussed in Section 2.7.6, Project Impacts.

Wind and Solar Energy

There are no wind turbines in the Planning Area and vicinity. Solar photovoltaic systems are becoming more popular in California and are particularly applicable to Apple Valley given the abundant solar radiation in the region. Between 2017 and 2019, the Town issued 1,272 solar permits as well as two for fuel cells and one for hydrogen generation. The California Green Building Standards Code continues to encourage the incorporation/readiness of PV systems on new and existing buildings.

Transportation Energy

In the Town and Planning Area, most transportation energy is provided by petroleum in the form of gasoline and diesel fuel. Alternative fuels such as natural gas, biodiesel, hydrogen, and electricity are also gaining popularity. According to the 2019 CAP, the 2019 community wide vehicle miles traveled (VMTs) was estimated at 925.55 million miles. While the proposed Specific Plan will result in new development and/or redevelopment that could induce an increase in VMTs compared to current conditions, higher fuel efficiency technologies and standards are expected to result in less fuel consumption for the same or even higher VMTs. In addition, the proposed Specific Plan will encourage mixed-use development and improve multi-modal access in the Planning Area, which could potentially reduce VMTs (see Section 2.17, Transportation and Traffic, for more analysis of VMTs).

2.7.6 Project Impacts

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

The proposed Project has the potential to accommodate an additional 682 residential units and 6,067,523 square feet of commercial/service/office/public uses in the Planning Area at full buildout. Future development facilitated by the Specific Plan would contribute to the need for additional energy supplies.

[12] Ibid.

Construction Energy Demand

During construction of future development and redevelopment projects facilitated by the proposed Project, energy would be consumed in three general forms:

(1) petroleum-based fuels used to power off-road construction vehicles and equipment, construction worker travel to and from the project site, and delivery and haul truck trips (e.g., hauling of demolition material to off-site reuse and disposal facilities);
(2) electricity associated with the conveyance of water that would be used during project construction for dust control (supply and conveyance) and electricity to power any necessary lighting during construction, electronic equipment, or other construction activities necessitating electrical power; and
(3) energy used in the production of construction materials, such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as lumber and glass.

Fuel consumed by construction equipment, including gasoline and diesel, would be the primary energy resource expended during construction as the Planning Area builds out. Electricity would be consumed to a lesser extent. Construction processes typically would not involve the consumption of natural gas. Energy consumption would vary by project. All consumption would be temporary and would cease upon the completion of construction.

As discussed in Section 2.9, Greenhouse Gas Emissions, construction components, including equipment, fuels, materials, and management practices, would be subject to current SCAQMD rules and regulations, such as source-specific standards that reduce greenhouse gas emissions from engines and limit equipment idling durations. Future development projects will be subject to the state's Low Carbon Fuel Standard for construction equipment and other heavy-duty vehicle efficiency standards which will help maximize fuel efficiency and reduce wasteful fuel consumption.

While it is not possible to model construction fuel demand at the program level without project-specific construction details, such demand will be analyzed in project-specific CEQA environmental reviews. Implementation of project-specific reviews and mitigation measures, where appropriate, will assure that energy consumption would not be wasteful or inefficient.

Operational Energy Demand

Long-term operation of the proposed Project will consume electricity, natural gas, and transportation-related energy sources such as gasoline and diesel.

When compared to buildout under the current General Plan land use designations, the proposed Specific Plan would result in an increase in housing units and commercial square footage at build out (See Table 1-1 Proposed Project Buildout Summary and Table 3-1 for details). However, according to the Specific Plan Air Quality Analysis (see Appendix B of this DEIR), the proposed Project will result in a reduction of 25.7% in vehicle miles traveled (VMT) at buildout compared to buildout under the current General Plan, likely due to the different land use mixes, the increased connectivity, and the inclusion of mixed-use development. Note that the Air Quality Analysis did not account for efficiencies in land use planning that can further reduce overall VMT, such as synergistic land uses in mixed use development proposed in the Specific Plan; therefore, the Project buildout VMT modeled in the Air Quality Analysis is a conservative estimate.

The annual demand for electricity (in kWh) and natural gas (in therms) was estimated for the proposed Specific Plan and is presented below in Tables 2.7-1 through 2.7-3.

Table 2.7-1
Energy Consumption Factors

Land Use	Electricity	Natural Gas
Apartments Low Rise	4,170 kWh/unit/year	151.30 therms/unit/year
General Office Building	9.19 kWh/SF/year	0.034 therms/SF/year
Research & Development	9.92 kWh/SF/year	0.032 therms/SF/year
Strip Mall	12.14 kWh/SF/year	0.022 therms/SF/year
High Turnover (Sit Down Restaurant)	46.16 kWh/SF/year	2.73 therms/SF/year

Source: CalEEMod Version 2020.4.0 Outputs, see Appendix B of this DEIR.

Table 2.7-2
Annual Electricity Demand at Specific Plan Buildout

Land Use	Existing Zoning (kWh/year)	Proposed Specific Plan (kWh/year)
Apartments Low Rise	3,290,090	4,049,020
General Office Building	-	21,755,200
Research & Development	-	23,483,300
Strip Mall	87,856,800	33,528,400
High Turnover (Sit Down Restaurant)	-	18,212,200
TOTAL	**91,146,890**	**101,028,120**

Source: CalEEMod Version 2020.4.0 Outputs, see Appendix B of this DEIR.

Table 2.7-3
Annual Natural Gas Demand at Specific Plan Buildout

Land Use	Existing Zoning (therms/year)	Proposed Specific Plan (therms/year)[1]
Apartments Low Rise	119,372	146,908
General Office Building	-	81,217
Research & Development	-	765,522
Strip Mall	159,251	60,775
High Turnover (Sit Down Restaurant)	-	1,076,027
TOTAL	**278,623**	**2,130,448**

Source: CalEEMod Version 2020.4.0 Outputs, see Appendix B of this DEIR.
1. Difference is due to rounding.

Implementation of policies and guidelines in the proposed Specific Plan would help reduce energy consumption associated with future development. Specific Plan Chapter 4 Design Guidelines includes measures to promote energy efficiency in lighting. Future development will be subject to the latest requirements of the California Energy Code and Green Building Standards Code (California Building Code Parts 6 & 11). Tables 2.7-2 and 2.7-3 show that the proposed Specific Plan would result in a slight increase of electricity demand and a substantial increase in natural gas demand compared to buildout under the existing zoning designations, due to the increased potential housing units and commercial/service/office/public area. However, these projections do not take into account the energy savings mandated through regulations such as the Green Building Standards Code (Title 24), which is incorporated in the Apple Valley Municipal Code and requires zero-net-energy construction for new residential buildings starting in 2020 and for new commercial buildings starting in 2030.

The proposed Specific Plan land use plan promotes mixed use development and the siting of residential, shopping, dining, and employment centers in proximity to one another. Its design guidelines encourage the use of paseos, gathering spaces, and connectors that join various land uses and encourage walkability. The Specific Plan circulation plan aims to reduce vehicle travel miles through efficiencies in the circulation system and multi-modal transportation improvements, including a complete and coordinated network of paths, sidewalks, and bikeways that encourages alternative modes of transportation and reduces reliance on automobiles. As discussed above, the increased land use efficiencies of the proposed Project would have a positive impact on reducing overall VMTs and thus reducing fuel demand.

In addition, the Town would ensure that future CEQA documentation be prepared for individual projects (with project-specific data), as needed, that would specifically mitigate any potential energy impacts to less than significant levels. The impacts are considered less than significant because the proposed Specific Plan would implement new policies and guidelines and maintain current regulations designed to minimize wasteful, inefficient, or unnecessary consumption of energy. Implementation of the California Building Code and other relevant regulations will ensure impacts related to energy efficiency are less than significant.

2.7.7 Mitigation Measures

Implementation of General Plan policies and programs, Climate Action Plan reduction measures, and proposed Specific Plan guidelines will ensure that the use of energy resources in the Planning Area is efficient and that impacts to energy resources from the proposed Specific Plan are less than significant. No additional mitigation measures are required.

2.7.8 Significance After Mitigation

There will be less than significant impacts on energy resources, and no mitigation is required.

2.7.9 Cumulative Impacts

Potential cumulative impacts on energy resources would result if the proposed Project, in combination with past, present, and future projects, would result in the wasteful or inefficient use of energy. This could result from development that would not incorporate sufficient building energy efficiency features or achieve building energy efficiency standards, or that would result in unnecessary use of energy during construction and/or operation. Projects within the areas served by the energy service providers would be applicable to this analysis. Projects that involve major construction, such as transportation infrastructure, could contribute to a cumulative impact; however, the impact of these projects would be limited because they would typically not involve substantial ongoing operational energy use.

Like most active development projects in the Town, buildout of the proposed Specific Plan would result in an increase in the consumption of electricity, natural gas, and transportation-related energy. Future projects under the Specific Plan would contribute incrementally to local and regional increases in energy consumption. However, they would not result in wasteful, inefficient, or unnecessary use of energy due to design features, insofar as future

development will be required to install energy efficient appliances and efficient water fixtures, and achieve zero-net-energy design/readiness through the installation/readiness of PV solar panels. Future projects would be subject to the California Building Code, including California Energy Code and CALGreen, an evolving set of energy efficiency standards for commercial and residential buildings implemented to minimize the wasteful and inefficient use of energy.

Future development would be subject to even more stringent requirements, such as the objectives set in the AB 32 Scoping Plan (CARB 2017) that would seek to make all new commercial buildings zero net energy consumers by 2030.[13] Furthermore, many federal, state, and local regulations would aim to reduce the transportation fuel demand of cumulative projects and thus reduce cumulative energy demand of the projects. Therefore, the cumulative impacts of the proposed Project on energy resources are considered less than significant.

[13] Zero Net Energy, California Public Utilities Commission Energy Division; http://www.cpuc.ca.gov/ZNE/, accessed October 27, 2021.

2.8 Geology and Soils

2.8.1 Introduction

This section of the EIR describes existing conditions with regard to geology and soils within the Apple Valley Village Specific Plan Planning Area and analyzes the potential impacts of regional and local geology and soils to development with the proposed Specific Plan. A wide range of data and information, ranging from research conducted in the Planning Area to regional-scale planning and environmental documents, have been used in researching and analyzing the Specific Plan and its potential effects. These include detailed analysis of regional and local geology, soils, and seismic conditions.

2.8.2 Thresholds of Significance

Based upon Appendix G of the CEQA Guidelines, the proposed Specific Plan would be significantly affected by soils and/or geological conditions if it would:

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

   i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.
   ii) Strong seismic ground shaking.
   iii) Seismic-related ground failure, including liquefaction.
   iv) Landslides.

b) Result in substantial soil erosion or the loss of topsoil.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

The Initial Study determined that the Specific Plan would result in "No Impact" for threshold questions a) i, iv, and f) above. Therefore, they are not analyzed further in this EIR.

2.8.3 Regulatory Framework

Federal

There are no federal regulations that affect soils and geology.

State

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (Public Resources Code Sections 2690 to 2699.6) was enacted, in part, to address seismic hazards not included in the Alquist-Priolo Act, including strong ground shaking, landslides, and liquefaction. Under this Act, the State Geologist is assigned the responsibility of identifying and mapping seismic hazards. California Geological Survey (CGS) Special Publication 117, adopted in 1997 by the State Mining and Geology Board, constitutes guidelines for evaluating seismic hazards other than surface faulting, and for recommending mitigation measures as required by Public Resources Code Section 2695(a). In accordance with the mapping criteria, the CGS seismic hazard zone maps use a ground shaking event that corresponds to 10 percent probability of exceedance in 50 years.

Like the Alquist-Priolo Act, the Seismic Hazards Mapping Act of 1990 is intended to reduce damage resulting from earthquakes and California cities and counties are required to regulate development within mapped Seismic Hazard Zones. Under the Seismic Hazards Mapping Act, permit review is the primary mechanism for local regulation of development. Specifically, cities and counties are prohibited from issuing development permits for sites within Seismic Hazard Zones until appropriate site-specific geologic and/or geotechnical investigations have been conducted and measures to reduce potential damage have been incorporated into the development plans.

California Building Codes

The California Building Code (CBC), which is codified in CCR Title 24, Part 2, was promulgated to safeguard the public health, safety, and general welfare by establishing minimum standards related to structural strength, egress facilities, and general building stability. The purpose of the CBC is to regulate and control

the design, construction, quality of materials, use/occupancy, location, and maintenance of all building and structures within its jurisdiction. Title 24 is administered by the California Building Standards Commission, which by law is responsible for coordinating all building standards.

The 2019 CBC is based on the 2018 International Building Code (IBC) published by the International Code Conference. In addition, the CBC contains necessary California amendments that are based on the American Society of Civil Engineers (ASCE) Minimum Design Standards 7-05. ASCE 7-05 provides requirements for general structural design and includes means for determining earthquake loads, as well as other loads (e.g., flood, snow, wind) for inclusion in building codes. The provisions of the CBC apply to the construction, alteration, movement, replacement and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout California. The earthquake design requirements take into account the occupancy category of the structure, site class, soil classifications, and various seismic coefficients, all of which are used to determine a Seismic Design Category (SDC) for a project. The SDC is a classification system that combines the occupancy categories with the level of expected ground motions at a given site, and ranges from SDC A (very small seismic vulnerability) to SDC E/F (very high seismic vulnerability and near a major fault). Design specifications are then determined according to the SDC.

California Code of Regulations, Title 14, Division 2, Chapter 8, Article 10
These regulations govern the exercise of city, county, and state agency responsibilities to identify and map seismic hazard zones and to mitigate seismic hazards to protect public health and safety in accordance with the provisions of Public Resources Code, Section 2690 et seq. (Seismic Hazards Mapping Act).[1]

Regional and Local

Town of Apple Valley General Plan
The Town's General Plan Chapter IV, Environmental Hazards, includes a Geotechnical Element that provides information on the geological and seismic conditions and hazards that affect the Town and its SOI. Goals, policies, and programs are provided to reduce potential impacts, such as loss of life and property damage, including requiring technical analysis/soil studies and mitigation measures for development proposed in identified hazard areas. The following goal, policies, and programs are relevant to the proposed Project:

[1] "Guidelines For Evaluating And Mitigating Seismic Hazards in California", Special Publication 117, 2008.

GOAL The protection and safety of human life, land, and property from the effects of seismic and geotechnical hazards shall be increased.

Policy 1.D The Town shall actively support and participate in local and regional efforts at groundwater conservation and recharge, in order to minimize the potential impacts of subsidence due to extraction of groundwater.

Policy 1.E In areas identified as being susceptible to rockfall, landslide, liquefaction and/or other associated hazards as depicted in the General Plan EIR, development shall be required to prepare detailed technical analysis, which shall include mitigation measures intended to reduce potential hazards below levels of significance.

Program 1.E.1
The Town shall contract with a state-certified geologist and/or geological engineer to review and determine the adequacy of geotechnical studies for proposed projects.

Policy 1.F Development in areas susceptible to collapsible or expansive soils as shown in soils mapping in the General Plan EIR shall be required to conduct soil sampling and laboratory testing and to implement mitigation measures that reduce potential hazards below levels of significance.

Program 1.F.1
The Town Building and Safety Division shall review soils studies conducted for proposed projects, determine their adequacy, and enforce the implementation of mitigation measures.

Policy 1.H To minimize the potential for localized collapse of soils, new septic tank leach fields, seepage pits, drainage facilities, and heavily irrigated areas shall be located away from structural foundations and supports.

Program 1.H.1
The Town shall require that plans indicating the location of leach fields, seepage pits, drainage facilities, and water-dependent landscaping be included in all development applications to allow Town staff to evaluate the potential for ground saturation.

2.8.4 Environmental Setting

Regional Geology and Soils

In the high desert region, the Town of Apple Valley generally sits on gently sloping alluvial fans ranging in elevation from approximately 3,400 feet near the base of the Fairview Mountains to the northeast to 2,700 feet along the Mojave River to the west. The Town is also surrounded by the Turtle Mountains on the north, Granite Mountains on the east, and Juniper Flat foothills located within the San Bernardino Mountains on the south. Within the Town boundary, Bell Mountain rises at 3,897 feet on the north side and Catholic Hill at 3,645 feet in the central portion.

Large active fault systems in the region influenced the geological formation of the Town through uplift and mountain building, landform compression and extension, subsidence, and ground rupture. The fault systems continue to cause geological hazards related to major groundshaking on the nearby Helendale Fault, San Andreas Fault, and the North Frontal Fault. Consequently, mountains in and around the Town consist of rocks that have been sheared and intensely fractured under the strain of tectonic movement. As local mountains rose, the valley was formed by many generations of overlapping alluvial fans.

Six types of geologic deposits underlie the Apple Valley area, each of which contains one or more soil/geologic units as listed from youngest to oldest and discussed below.

- Artificial fills: generally occur on roadway, bridge, and railway embankments, levees, graded developments and mining areas, and their size, age and composition vary widely.
- Very young or recent alluvium (current or recently active): includes very young wash deposits that line active drainage courses and washes and gullies, modern colluvium lining drainage deposits in hillside areas, wind deposits throughout Apple Valley, and Playa deposits in the dry lake areas in the Town and vicinity.
- Young alluvial and landslide deposits (0 to 11,000 years old): includes young alluvial fan deposits that blanket most of the valley with unconsolidated to moderately consolidated silt and sand with scattered gravel, young wash deposits occurring as unconsolidated sand and gravel along a slightly elevated terrace adjacent to the Mojave River and within Arrastre Canyon, young alluvial valley fill forming an elevated terrace above the Mojave River floodplain and the relatively steep bluffs north of Yucca Loma Road, and landslide deposits consisting of blocks of intact bedrock and/or rubble in the western part of the Granite Mountains.

- Older alluvial fan deposits (11,000 to 1 million years old): older alluvial deposits occur as scattered remnants of erosion along the flanks of the Ord Mountains to the south and in the Desert Knolls area, or as isolated patches in the Black Mountain area. Very old alluvial deposits may be arranged in beds and exhibit a reddish color on the upper part in a large area north of Bell Mountain Wash and within isolated patches southwest of the Black Mountains and within the Ord Mountains.
- Sedimentary rocks (10 to 26 million years old): include sandstone, pebbly sandstone, and conglomerate of the Miocene-age Crowder Formation and occur in narrow, exposed bands along the base of the Ord Mountains, and along the eastern side of the Mojave River.
- Crystalline rocks (65 to 225 million years old): include plutonic rocks in the Ord Mountains, Granite Mountains, Bell Mountain, and Catholic Hill, volcanic rocks in small isolated patches forming jagged, blocky outcrops on Bell Mountain and Catholic Hill, as well as in the Sidewinder and Black Mountains, and metasedimentary rocks in the western part of the Ord Mountains and as small patches in the hills north of the Desert Knolls area.

Regional Faulting and Seismicity

Apple Valley is located near the boundary between the North American and Pacific tectonic plates, which is characterized by the San Andreas Fault Zone. As shown in General Plan Exhibit IV-3, no faults are located within the Town boundary, but several active faults pass through its Sphere of Influence (SOI), including the Helendale fault and the North Frontal fault zone. The North Frontal fault has the potential to generate the strongest seismic shaking in Apple Valley. The General Plan also provides information about other major faults in the region that are most likely to impact Apple Valley.

North Frontal Fault

Due to its proximity closest to Apple Valley, the North Frontal fault has the potential to generate the strongest seismic shaking in the Town. It is a partially blind reverse fault zone comprised of several fault splays, some of which interact with other faults that traverse the region. The North Frontal fault trends south along the eastern flank of the San Bernardino Mountains and runs approximately 40 miles long in total. The most significant interaction is with the Helendale fault, which offsets and divides the North Frontal into two main segments, known as the East and West segments. The West segment is less than a half mile from Apple Valley at the closest point and runs approximately 22 miles long.

The North Frontal fault is considered active based on its movements within the last 10,000 years. It has been attributed a slip rate of approximately 0.5 mm per year, although the fault has not been studied in detail and its parameters are not well understood. Based on the length of the West segment, it is considered

capable of generating a maximum magnitude 7.2 earthquake. This maximum earthquake would generate peak ground accelerations in the Town of between 0.4g and 1.1g. The East segment could generate a magnitude 6.7 earthquake and cause ground shaking of about 0.14g to 0.26g in the Town.

Helendale Fault
The Helendale fault is the westernmost of the right-lateral strike-slip faults in the Eastern California Shear Zone, which accommodates approximately 9 to 23% of the total movement along the North American/Pacific plate boundary. The Helendale fault is 56 miles long and seems to form a continuous fault south of the South Lockhart fault and extends to the northeast of the Town within the SOI.

The Helendale fault has an annual slip rate calculated at 0.8 mm/year and a recurrence interval for large surface-rupturing events of 3,000 to 5,000 years. Based on currently available data, the California Geological Survey estimates that the combined Helendale-South Lockhart faults could generate a maximum earthquake of magnitude 7.3 with horizontal peak ground accelerations of between 0.3g and 0.75g in Apple Valley.

San Andreas Fault
Located approximately 23 miles southwest of Apple Valley, the San Andreas, a right-lateral transform fault, is considered a "Master Fault" that controls the seismic hazard for central and southern California. As the longest fault in California, it extends approximately 750 miles from Cape Mendocino in northern California to the Salton Sea in southern California. While not among the closest faults to Apple Valley, the San Andreas Fault is considered to have a high probability of causing an earthquake in the near future and able to generate peak ground accelerations estimated between 0.25g and 0.48g in Apple Valley.

Lenwood – Lockhart – Old Woman Springs Faults
Lenwood fault is also a right-lateral strike slip fault in the Eastern California Shear Zone, running approximately 47 miles long with a slip rate of about 0.8 mm/year. Lenwood fault is estimated to have a recurrence at 4,000 to 5,000 years between major surface ruptures. Lockhart fault runs approximately 44 miles long north of the Lenwood fault, with an estimated interval of between 3,000 and 5,000 years for major surface-rupture. The Old Woman Springs segment is considered an active fault about 6 miles long. It is the main trace in a complex fault system where the Eastern segment of the North Frontal Fault Zone and the Lenwood fault intersect. The Lenwood and Lockhart faults essentially form a continuous, 90-miles long system. Should the Lenwood and Lockhart faults, together with the Old Woman Springs fault, rupture together in a magnitude 7.5 maximum earthquake, such an event would generate peak ground accelerations of about 0.19g to 0.42g in Apple Valley. If only one of these faults ruptures, it would be a smaller magnitude event and cause lesser ground motions in Apple Valley.

Cleghorn Fault
The Cleghorn fault runs approximately 19 miles long south of Apple Valley near the San Andreas Fault Zone. It is considered to have a slip rate of 2 to 4 mm/year and capable of generating a magnitude 6.5 earthquake with horizontal peak ground accelerations of between about 0.11g and 0.33g in the Apple Valley area.

Cucamonga Fault
The Cucamonga fault zone runs approximately 16 miles long further southwest of Apple Valley below the San Andreas Fault Zone. It has a slip rate of between approximately 2.0 and 5.0 mm/year and an estimated average recurrence interval of 625 years. Based on the length of the Cucamonga fault, it is thought capable of generating a maximum magnitude 6.9 earthquake with peak horizontal ground acceleration of between about 0.15g and 0.28g in Apple Valley.

Landers (or Kickapoo) Fault
The Landers fault referred to a group of faults that ruptured in the 1992 Landers earthquake (magnitude 7.3), but now refers to the Kickapoo fault discovered in that earthquake. These faults are part of the Eastern Mojave Shear Zone and estimated to have intervals of thousands of years between major ruptures. A Landers-type earthquake when multiple faults rupture together would cause horizontal ground accelerations of between 0.14g and 0.27g in Apple Valley.

Sierra Madre Fault
The Sierra Madre fault zone/complex and extends approximately 47 miles along the base of the San Gabriel Mountains from the San Fernando Valley to San Antonio Canyon; from there it continues southeastward as the Cucamonga fault. The Sierra Madre fault has an estimated slip rate of approximately 0.6 mm/year and a recurrence interval of about 8,000 years. Recent studies suggest that the Sierra Madre fault may be near the end of its cycle, and therefore may generate an earthquake in the near future. The Sierra Madre fault is estimated to be capable of producing a magnitude 7.2 earthquake with peak horizontal ground accelerations of between about 0.14g and 0.21g in Apple Valley.

Gravel Hills – Harper Lake Fault
This fault zone runs northeast of Apple Valley and is between 31 and 44 miles long, depending on how many fault segments are included and considered active. The fault zone has an estimated annual slip rate of 0.9 mm/year and a recurrence interval of about 3,500 years between earthquakes. The combined fault segments are estimated to be capable of generating 7.1 magnitude earthquake with peak horizontal ground accelerations of between 0.11g and 0.20g in Apple Valley.

Geologic Hazards

Seismically Induced Hazards

Due to many active faults in the region, the most significant potential geologic hazard facing the entire Town is seismically induced ground shaking. The extent of potential effects and damage can be hard to predict, as they vary on earthquake intensity, distance from the epicenter, composition of soils and bedrock, building design and other factors. Ground shaking can also pose various hazards when coupled with certain soil conditions, including settlement, liquefaction, and landslides.

Strong ground shaking has the potential to cause local or regional settlement of the ground surface and associated ground failure, when loose granular, cohesionless soil grains become tightly packed due to the collapse of voids and pore spaces. Local conditions such as recently deposited alluvial sediments and artificial fills that are not properly compacted can exacerbate the settlement risk and potential damage to buildings and subsurface utility pipelines.

Liquefaction generally occurs when three conditions are met simultaneously: 1) strong ground shaking over a relatively long period; 2) unconsolidated granular soil/sediments; and 3) shallow groundwater within 50 feet of the ground surface. While Apple Valley can be subject to strong ground shaking of long durations and has loose granular sediments along major drainages, groundwater table is below 50 feet of the ground surface in most of the Town, except the Mojave River floodplain. With potential water-saturated sediments within 50 feet of the surface, the Mojave River floodplain could be subject to liquefaction (General Plan Exhibit IV-2).

Earthquake-induced landslides and rockfalls can occur in hillside and mountainous areas in the Town, generally in undeveloped areas on the west and north sides of the Town including Bell Mountain and Catholic Hill (General Plan Exhibit IV-2).

Soil Related Hazards

Compressible soils are those that could compress under the weight of proposed fill embankments and structures, and usually occur in Holocene-age unconsolidated sediments with low density, though also found in upper weathered part of older alluvium, colluvium/slope wash that collects near the base of natural slopes, and slope failure debris. Potential hazards associated with compressible soils can be prevented through engineering methods as recommended in a site-specific geotechnical study.

Collapsible soils can undergo substantial and rapid settlement under relatively light loads when saturated, leading to a rearrangement of their grains and a loss of cohesion or cementation. Soil collapse is generally associated with recent Holocene-age deposits that have accumulated in an arid or semi-arid environment, as well as wind-deposited sand and silts. In Apple Valley, areas underlain by young and very young alluvial sediments may be susceptible to soil collapse.

Expansive soils have the potential to substantially change in volume in response to changes in moisture content, and typically contain significant amount of clay minerals which can give up (shrink) or absorb water (swell). Swelling of expansive soils can induce upward pressures that damage structures and other surface improvements. In Apple Valley, expansive soils may occur in pockets in alluvial sediments underlying the valley and canyon areas, within Apple Valley Dry Lake and on older fan deposits.

The Town lies in an area of extreme topographic relief between the valley and the surrounding mountains and thus is subject to natural erosion, runoff, and sedimentation. Human activities can accelerate these processes through agricultural or land development and grading that may alter natural drainage patterns. Apple Valley is also subject to strong winds associated with the Cajon Pass and climatic differences between the high desert, the mountains, and the inland valleys south of the pass. Wind erosion of sandy surface soils that are common in the Town poses an environmental hazard with destructive forces and health risks associated with respiratory discomfort and infections. Typical measures to control or manage wind erosion include watering construction sites and the use of wind barriers and vegetative ground cover.

Ground Subsidence

Ground subsidence is the gradual settling or sinking of the ground surface with little or no horizontal movement. Subsidence can be caused by extraction of oil, gas or groundwater in sediment-filled valleys and floodplains, and may exhibit earth fissures, sinkholes or depressions, and disruption of surface drainage. Subsidence can result in structural damage to structures that are sensitive to slight changes in elevation (e.g. larger buildings) and infrastructure, changes to surface drainage, and reductions in aquifer storage capacity.

Apple Valley overlies the southern portion of the Mojave River Groundwater Basin, one of the largest groundwater reservoirs in southern California with an estimated storage capacity of nearly five million acre-feet. Natural recharge of the basin comes primarily from the Mojave River and also from runoff that flows from upper reaches of tributary washes. Water extraction has exceeded natural recharge over many decades, leaving the basin in a state of overdraft.

Subsidence studies conducted by the U.S. Geological Survey and the Mojave Water Agency (MWA) show that the closest subsidence area to Apple Valley is located approximately seven miles northwest. Subsidence has not been detected to date within Apple Valley. MWA continues to implement groundwater conservation and recharge activities in the Apple Valley area, which contribute to the management of ground subsidence.

2.8.5 Existing Conditions

Local Soils and Soil Hazards

The entire Specific Plan Planning Area is underlain by young alluvial fan deposits (Qyf), which range from a few years old up to about 15,000 years in age and cover most of the valley with unconsolidated to moderately consolidated silt and sand with scattered gravel. Qyf may contain cobbles and boulders in deposits in and near the mountains, as well as in more deeply incised drainage channels. The Planning Area is not in or near any mountains, nor are there any deep natural drainage channels in the Planning Area.

The composition of Qyf is unconsolidated to moderately consolidated silt and sand, which makes this soil type potentially susceptible to collapse and compression. This potential is exacerbated when additional weight loads and/or pressure is applied. In the Planning Area, expansive soils may occur in pockets in alluvial sediments and would need to be determined by site-specific geotechnical studies associated with individual projects.

The Planning Area is mostly developed, with 274± acres of vacant undeveloped land out of 651± acres in total (42%). The Planning Area generally has an average slope of about 0.4%,[2] . The area is subject to erosion by water because it occurs at a low point, and flows from the south traverse the area. Drainage improvements will be required for the entire Planning Area and individual development sites as detailed in the proposed Specific Plan, which will alleviate soil erosion by runoff (also see Section 2.11, Hydrology).

The Planning Area is also subject to strong winds typical in the high desert region, and faces wind erosion hazards. Watering construction sites and the use of wind barriers and vegetative ground cover are standard measures employed to reduce wind erosion. Future development in the Planning Area is expected to manage wind erosion through watering construction sites and the use of wind barriers and vegetative ground cover.

[2] Apple Valley Village Corridor Enhancement Plan Drainage Study, prepared by David Evans and Associates, January 23, 2019.

Geologic Hazards

Faults and Seismicity

There are no active faults mapped in or near the Planning Area. However, the Planning Area is in a seismically active area and subject to potential impacts of many local and regional faults. Major faults that are likely to impact the Planning Area include the Helendale fault, San Andreas fault, North Frontal fault, Cleghorn fault, Cucamonga fault, and others discussed in detail in Section 2.9.4 above.

The North Frontal fault is closest to and therefore has the potential to generate the strongest seismic shaking in the Planning Area. Located approximately 3.86 miles southeast of the Planning Area, the West segment of the North Frontal fault zone is considered capable of generating a maximum magnitude 7.2 earthquake and peak ground accelerations of between 0.4g and 1.1g in the Planning Area. The East segment could generate ground shaking of about 0.14g to 0.26g in the Planning Area.

The Helendale fault extends south of the South Lockhart fault and runs roughly five miles northeast of the Planning Area. The combined Helendale-South Lockhart faults are estimated to be capable of generating a maximum magnitude 7.3 earthquake with horizontal peak ground accelerations of between 0.3g and 0.75g in the Planning Area.

Other active faults are located farther away from the Planning Area and have the potential to generate earthquakes of lower maximum magnitude and horizontal peak ground accelerations compared to the North Frontal fault and Helendale fault. These faults include the San Andreas fault, Lenwood – Lockhart – Old Woman Springs faults, Cleghorn fault, Cucamonga fault, Landers (or Kickapoo) fault, Sierra Madre fault, and Gravel Hills – Harper Lake fault.

Seismically Induced Hazards

The entire Planning Area is subject to potential strong ground shaking from earthquakes generated by active faults in the region. The Planning Area may be susceptible to seismically induced settlement where underlain by young, unconsolidated alluvial deposits and improperly compacted artificial fill. The Planning Area is generally level and is not in or near a mountainous or hillside area. Therefore, it is not subject to seismically induced rockfalls or landslides (General Plan Exhibit IV-2).

Liquefaction can occur when these conditions are met simultaneously: strong ground shaking, shallow ground water (within 50 feet of the ground surface), and presence of liquefaction-prone soils. According to the General Plan, the

Planning Area is in an area where the water table is below 50 feet of the ground surface. The Planning Area is not in or near an area designated with a potential for liquefaction, which is generally along the Mojave River floodplain (General Plan Exhibit IV-2).

Subsidence

The Planning Area overlies the southern portion of the Mojave River Groundwater Basin, which has been in a state of overdraft. According to the General Plan, subsidence has not been detected in or near the Planning Area. The Mojave Water Agency (MWA) continues to implement groundwater conservation and recharge activities, which contribute to the management of ground subsidence in the region.

2.8.6 Project Impacts

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

ii) Strong seismic ground shaking.

The Planning Area is in a seismically active area where strong ground shaking could occur during an earthquake event on the North Frontal, Helendale, San Andreas, Cleghorn, Cucamonga Faults, or other nearby faults. As described above, these active faults in the Apple Valley area can cause peak horizontal ground accelerations of between 0.11g and 0.75g and maximum magnitudes of up to 8.0 (Table IV-1, General Plan). Seismic ground-shaking could pose hazards to existing and future development in the Specific Plan Planning Area, including damage to building foundations, frames, walls and columns, windows, chimneys, and ceilings, as well as roads and utility infrastructure. Earthquakes of higher magnitude and longer duration could cause more damage, and some buildings, typically older ones, may perform more poorly than others.

Future development and redevelopment facilitated by the proposed Specific Plan will be subject to building standards incorporated by reference in the Municipal Code (Chapter 8.12), including those on seismic safety design. Future projects will be required to comply with the Uniform Building Code/International Building Code and California Building Code (Municipal Code Title 8), which would guide new development and redevelopment to withstand ground shaking and avoid or reduce structural and non-structural damage. Older buildings in the Planning Area are generally more susceptible to ground shaking due to deterioration of building materials and the less stringent building codes at the time of construction.

Redevelopment projects facilitated by the proposed Project would allow older buildings to be replaced with new ones that will be built to current building codes which impose more stringent seismic design standards. Similarly, expansions or substantial improvements of existing buildings are required to meet current building code requirements. Thus, beneficial impacts are expected with redevelopment facilitated by the proposed Specific Plan as vulnerable structures are demolished or improved, and new structures are built to be more resistant to ground-shaking hazards.

For individual development projects in the Planning Area, site-specific geologic and geotechnical analyses should be conducted that address a range of topics, including but not limited to distance to the various faults in the region, local surface and sub-surface soil conditions, potential geologic hazards, proposed land use and development plans, and soil and building measures that reduce potential impacts to less than significant levels, to the greatest extent practicable (Mitigation Measure GEO-1). Probabilistic Seismic Hazard Analysis (PSHA) combines all seismic sources in a region and considers the likelihood (or probability) of certain ground motions from these sources occurring within a given time period. The PSHA is recommended because it allows explicit consideration of the many uncertainties inherent in seismic hazard analysis. The PSHA will generate values for the probability of exceeding a given ground acceleration value during different time periods. The Design Basis Earthquake, defined as having a 10 percent chance of exceedance in 50 years, is used to design structures. In addition, every building must be able to survive the stronger Upper Bound Earthquake, defined as having 10 percent chance of exceedance in 100 years, without collapse.

Implementation of existing regulations and policies, Mitigation Measure GEO-1, and project-specific mitigation measures would reduce potential hazards from ground shaking to less than significant levels.

iii) Seismic-related ground failure, including liquefaction.

The types of ground failure associated with liquefaction may include lateral spreading, flow failure, ground oscillation, loss of bearing strength, and ground lurching. Lateral spreading is the finite, lateral movement of gently to steeply sloping, saturated soil deposits caused by earthquake-induced liquefaction. Other forms of ground failure are discussed in c) below. According to the General Plan Exhibit IV-2, Seismic Related Hazards, the Specific Plan Planning Area is not located in or near areas where local geological and groundwater conditions suggest a potential for liquefaction, principally because the approximate depth to groundwater is greater than 50 feet.

It should be noted local variations in soils, depth to groundwater, and other conditions are likely to be present despite the general conditions described above. Site-specific geotechnical studies for individual projects will need to consider the possibility of localized conditions conducive to liquefaction, along with the historical highs in groundwater levels and future impacts of irrigation (Mitigation Measure GEO-1). If a project site has a potential for liquefaction, the Upper Bound Earthquake should be used in the liquefaction analysis. The studies should also identify appropriate recommendations for earthwork, grading, slopes, foundations, pavements, and other necessary geologic and seismic design considerations. Compliance with Mitigation Measure GEO-1 and existing policies and requirements would ensure identification of potential ground failure hazards on individual development sites and incorporation of site-specific mitigation measures, where necessary, to reduce potential impacts to less than significant levels.

b) Result in substantial soil erosion or the loss of topsoil?

Given the Town's location and climatic setting, wind erosion is a common hazard, including in the Planning Area. Strong, sustained winds can contribute to soil erosion and the generation of fugitive dust, impairing air quality and properties.

The proposed Specific Plan would facilitate new development and redevelopment in the Planning Area. Grading and excavation activities for construction may lead to localized erosion, as wind and water carry loose soils off site. Chapter 8.12 of the Municipal Code (Section J.110) describes the Town's erosion control requirements pertaining to slopes, wind erosion, and water control. In addition, individual projects are required to implement dust control to avoid measurable amounts of dust or dirt beyond the parcel boundary (Municipal Code Section 9.70.020 Performance Standards). Appropriate grading procedures include minimal disturbance of native vegetation, scheduling grading activities to avoid repeated grading, watering graded areas, construction of walls and fences to contain dust and dirt, and revegetation of graded areas. In addition, future development and redevelopment projects would be required to implement erosion control Best Management Practices (BMPs) outlined in the Storm Water Pollution Prevention Plan (SWPPP) that would be developed and implemented as part of construction activities on sites greater than one acre, in compliance with the National Pollutant Discharge Elimination System (NPDES). This is further discussed in Section 2.11, Hydrology and Water Quality, of this DEIR. As the Planning Area builds out, new pavement, buildings, and landscaping can be expected to help stabilize soils and reduce soil erosion from both wind and water.

As described above, implementation of existing Town standard erosion control measures on project-specific plans will ensure the impacts related to soil erosion or loss of topsoil are less than significant.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.

Landslide

As discussed in Section 2.9.2 of this DEIR, the Initial Study determined that no impact will occur regarding landslides because the Planning Area is flat, and not located near any existing slopes.

Liquefaction and Lateral Spreading

See a) iii) above.

Subsidence

Ground subsidence associated with ground water extraction has been a regional issue in the Mojave River Groundwater Basin, including Apple Valley. The basin is in a state of overdraft. According to the General Plan, subsidence studies conducted by the U.S. Geological Survey and the Mojave Water Agency (MWA) show that the closest subsidence area to Apple Valley is located approximately seven miles northwest, but no subsidence has been detected within Apple Valley. Therefore, subsidence associated with ground water extraction should not pose a hazard in the Specific Plan Planning Area. MWA continues to implement groundwater conservation and recharge activities in the Apple Valley area, which contribute to the management of ground subsidence.

The potential for seismically induced ground subsidence should be determined by site-specific geotechnical studies (Mitigation Measure GEO-1). Building and seismic code requirements will ensure that any potential impact associated with ground subsidence is reduced to less than significant levels through conventional site preparation techniques, such as over-excavation, moisture conditioning, and recompaction.

Collapse

Collapse can be triggered by excessive irrigation or change of water tables and accelerated by heavy loads on the ground surface (e.g. vehicle/equipment) and cause rapid ground settlement. As noted, the young alluvial sediments in the Planning Area are prone to collapse, and this propensity should be evaluated by site-specific geotechnical studies for future development (Mitigation Measure GEO-1). Mitigation can be accomplished through a variety

of design and construction methods such as pre-watering of susceptible soils, designing drainage to flow away from structures, avoiding open-bottomed planters adjacent to structures, using roof gutters to direct drainage away from foundations, and limiting the use of irrigation water.

Development facilitated by the Specific Plan will be constructed in conformance with recommendations of project-specific analyses and would not result in unmitigated unstable soils. Implementation of existing policies and Mitigation Measure GEO-1 will ensure impacts regarding unstable soils and associated potential hazards are reduced to less than significant levels.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.

Soils with significant amounts of clay minerals can give up water (shrink) or absorb water (swell). These soils are considered expansive and have the potential to substantially change in volume in response to changes in moisture content. Alluvial sediments underlying the Planning Area are primarily comprised of granular materials, such as silty sand and sand. These soils typically have a low expansion potential, although pockets of fine-grained expansive soils may be present within these units.

Site-specific geotechnical investigations will be required to identify potential expansive soils, if any, and provide mitigation measures to avoid potential hazards. The geotechnical investigations should entail structural design criteria and construction recommendations to ensure the stability and integrity of structures and infrastructure, including the potential for soil expansion and the soil expansion index that needs to be used in the engineering design (Mitigation Measure GEO-1).

Compliance with Mitigation Measure GEO-1 and appropriate construction standards for individual projects would ensure that impacts related to expansive soils remain less than significant.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

The Town owns and operates the local wastewater collection system, which is relatively new and does not cover the entire Town. The Town adopted a Sewer Connection Policy in 2006 that requires new development to connect with municipal sewer facilities where the development site is within one-half mile of

existing sewer facilities, which would cover the entire Village Specific Plan area. Developments located more than one-half mile from existing sewer facilities are required to install dry sewers or interim "Holding Tank Systems" if approved by the Lahontan Regional Water Quality Control Board.

The Apple Valley Sewer System Master Plan identified potential inadequacies in the Town's sewer system based on the 2009 General Plan land use projections. Additional improvements are required, such as increases in the size of certain force mains.

Much of the Specific Plan Planning Area is connected to the municipal sewer system. Development that is not connected to the sewer system relies on septic systems, and soils have adequately supported them for many years. The proposed Specific Plan analyzed sewer infrastructure in the Planning Area and proposed additional sewer facilities in Chapter 6.0, Infrastructure. The Town requires new development in the Village to provide sewer facilities and extend sewer infrastructure as development occurs. The proposed sewer improvements will be constructed on an as needed basis as a condition of approval as development occurs. There will be no impact on soil suitability for septic tanks or alternative wastewater disposal systems.

2.8.7 Mitigation Measures

GEO-1 Proposals for future development and redevelopment under the Apple Valley Village Specific Plan shall include site-specific subsurface geotechnical investigations that address geologic and soil hazards, including ground shaking, settlement, liquefaction, subsidence, collapsible and expansive soils, and other relevant conditions and potential hazards. Seismic-related hazards shall be analyzed using Probabilistic Seismic Hazard Analysis (PSHA). The geotechnical investigations shall provide site-specific mitigation measures, including but not limited to, proper excavation, compaction and foundation design, as well as other standard construction practices.

2.8.8 Significance After Mitigation

With the application of the mitigation measure set forth above and in project-specific geotechnical studies, impacts will be mitigated to a less than significant level.

2.8.9 Cumulative Impacts

A consideration of cumulative effects associated with geotechnical conditions includes the degree to which a project may contribute to the cumulative impacts from seismic events, high groundwater, marginal soils, and other conditions. Most geology and soil hazards associated with development projects in the Planning Area and Town would be site-specific.

The General Plan EIR state that future development facilitated by the General Plan would subject more population and structures to geologic hazards including ground shaking, liquefaction, seismically induced settlement, rock falls, and landslides. However, development in the Town will be designed in accordance with policies and programs set forth in the General Plan, as well as mitigation measures in the General Plan EIR, recommendations of the geotechnical studies prepared for individual projects, and seismic requirements of the Uniform Building Code and/or International Building Code. With the implementation of appropriate design and engineering precautions for future development, the General Plan EIR determined that no significant cumulative impacts associated with geotechnical hazards are expected. Compared to the General Plan, maximum buildout of the proposed Specific Plan would result in a 23% increase in the number of dwelling units and a 9% increase in commercial square footage within the Village, but they would occur in the same location as the current General Plan designations. Because geologic impacts are site-specific, they do not compound or increase in combination with other development projects in neighboring communities. As demonstrated in Section 2.9.8, above, impacts of the proposed Specific Plan would be less than significant with mitigation. The Project, therefore, would not contribute considerably to cumulative impacts on geology and soils in Apple Valley.

2.9 Greenhouse Gas Emissions

2.9.1 Introduction

The following section describes the existing greenhouse gas emissions in the Mojave Desert Air Basin, and analyzes the potential impacts associated with buildout of the proposed Village Specific Plan. A variety of local and regional data and information, ranging from research and analysis conducted for the Planning Area, to regional-scale planning and environmental documents, have been used in researching and analyzing the Specific Plan and its potential effects on greenhouse gases and climate change.

2.9.2 Thresholds of Significance

The following thresholds are contained in the CEQA Environmental Checklist included in Appendix G of the CEQA Guidelines. The Project would have a significant effect on greenhouse gas emissions if the Project were to:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

2.9.3 Regulatory Framework

Federal

U.S. Environmental Protection Agency

The United States Environmental Protection Agency (USEPA) is responsible for implementing federal policy to address global climate change. The USEPA implements several voluntary programs that help to reduce GHG emissions that focus on energy efficiency, renewable energy, methane and other non-CO_2e gases, agricultural practices, and implementation of technologies to achieve GHG reductions.

These voluntary programs include: State Climate and Energy Partner Network, which encourages the exchange of information between federal and state agencies regarding climate and energy; the Climate Leaders program for companies; the Energy Star® labeling system for energy-efficient products; and the Green Power Partnership for organizations interested in buying green power.

In 2009, the USEPA issued a Final Rule for mandatory monitoring and reporting of GHG emissions by fossil fuel suppliers, industrial gas suppliers, direct GHG emitters and manufacturers of heavy-duty and off-road vehicles and vehicle engines that emit 25,000 metric tons or more of carbon dioxide equivalent per year. Implementation of 40 CFR Part 98 is referred to as the Greenhouse Gas Reporting Program (GHGRP).

Especially relevant, the USEPA adopted a Final Endangerment Finding for the six defined GHGs. This Endangerment Finding is required for the USEPA to regulate GHG emissions under Section 202(a)(1) of the Clean Air Act (CAA). In 2010, the USEPA issued a Final Rule (GHG Tailoring Rule) that establishes a common-sense approach to addressing greenhouse gas emissions from stationary sources under CAA permitting programs, including the Prevention of Significant Deterioration (PSD) and title V Operating Permit Programs. The Tailoring Rule set initial emission thresholds– known as Steps 1 and 2 of the Tailoring Rule - for PSD and Title V permitting based on carbon dioxide equivalent (CO_2e) emissions.

In these phases, new construction projects and modifications of existing facilities that are 1) otherwise subject to PSD (for another regulated pollutant) and exceed a CO_2e threshold of 75,000 tons per year, or 2) exceed 100,000 tons per year and 100/250 tons per year on a mass basis (depending on the source category) are subject to permitting requirements. Additionally, operating facilities that emit at least 100,000 tons per year are subject to title V permitting requirements for GHGs. New and existing industrial facilities that meet or exceed that threshold require a permit under the New Source Review Prevention of Significant Deterioration (PSD) and Title V Operating Permit programs. Step 3 of the GHG Tailoring Rule, issued on June 29, 2012, continued to focus GHG permitting on the largest emitters by retaining the permitting thresholds that were established in Steps 1 and 2. Step 3 revised the plantwide applicability limitations (PAL) regulations to allow a source that emits or has the potential to emit at least 100,000 tons per year of CO_2e, but that has minor source emissions of all other regulated NSR pollutants, to apply for a GHG PAL while still maintaining its minor source status[1].

State

Assembly Bill 1493 – The Pavley Bill

California was the first state to establish regulations that require the reduction of emissions of GHGs from motor vehicles. On September 24, 2004, the California legislature adopted the Pavley Bill that requires all motor vehicles of 2009 vintage or later to reduce their greenhouse gas emissions by about 30% by the year 2016.

[1] "Clean Air Act Permitting for Greenhouse Gases," United States Environmental Protection Agency. Website. https://www.epa.gov/nsr/clean-air-act-permitting-greenhouse-gases. Accessed January 2021.

The second phase of the implementation for the Pavley bill was incorporated into Amendments to the Low-Emission Vehicle Program (LEV III) or the Advanced Clean Cars program. The Advanced Clean Car program combines the control of smog-causing pollutants and GHG emissions into a single coordinated package of requirements for model years 2017 through 2025. The regulation will reduce GHGs from new cars by 34% from 2016 levels by 2025.

Assembly Bill 32 - California Global Warming Solutions Act of 2006

On June 1, 2005 Governor Arnold Schwarzenegger issued executive order S-3-05, which calls for reduction in GHG emission to 1990 levels by 2020 and for an 80% reduction below 1990 levels by 2050. Also known as the California Global Warming Solutions Act of 2006 (AB 32) was adopted by the state legislature in 2006. It sets forth a program to achieve 1990 emission levels by 2020 and requires CARB to proclaim 1990 GHG emissions and develop a Scoping Plan, which sets forth GHG reduction methods. CARB has reported that 1990 GHG emissions totaled 427 million metric tons (MMT) for the state of California. Accordingly, to satisfy the requirements of AB 32, California needs to reduce its overall 2020 emissions for all sectors by 169 $MMTCO_2e$, or 28.3 percent below the "business as usual" 2020 projection of 596 million $MMTCO_2e$.

CARB adopted a GHG scoping plan on December 11, 2008. The Scoping Plan includes a cap and trade program, green building strategies, recycling and waste reduction, and Voluntary Early Actions and Reductions. This goal has been met.[2] In November 2017, CARB released the 2017 Climate Change Scoping Plan that not only discusses the 2030 targets, but how to substantially advance toward the State's 2050 climate goal to reduce GHG emissions by 80% below 1990 levels (see Senate Bill 32 below).

Senate Bill 375

California SB 375 was signed by the Governor in September 2008 and is intended to at least in part implement greenhouse gas reduction targets set forth in AB 32 by setting regional "caps" on the GHGs emitted by the transportation sector. The bill encourages regional land use planning to reduce vehicle miles traveled and requires Metropolitan Planning Organizations (MPO) to adopt a sustainable communities strategy as part of their Regional Transportation Plans. The applicable MPO for the Coachella Valley is the Southern California Association of Governments ("SCAG"), which adopted its most recent Regional Transportation Plan and sustainable communities strategy in April 2016. The current reduction targets from SCAG's RTP and SCS are 9% reduction by 2020 and a 16% reduction by 2035, as compared to 2005 emissions levels.

[2] Based upon the 2019 GHG inventory data (i.e., the latest year for which data are available) for the 2000-2017 GHG emissions period, California emitted an average 424.1 $MMTCO_2e$.

Senate Bill 32

Executive Order B-30-15 was issued by Governor Brown on April 29, 2015 establishing a new California goal to reduce greenhouse gas emissions to 40% below 1990 levels by 2030 ensuring the state will continue its efforts to reduce carbon pollution. Most recently, this 40% target was codified through Senate Bill 32 (2016), which adds section 38566 to the Health and Safety Code and requires that CARB ensure statewide GHG emissions meet the 40% reduction target no later than Dec. 31, 2030.

Green Building Code

In January 2010, the State of California adopted the California Green Building Standards Code (CALGreen) per CCR Title 24, Part 11, which establishes mandatory green building standards for all buildings in California. The code covers five categories: planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and indoor environmental quality. These standards include a mandatory set of minimum guidelines, as well as more rigorous voluntary measures, for new construction projects to achieve specific green building performance levels. The City has adopted the California Building Code, 2019 Edition.

Regional and Local

San Bernardino County Regional Greenhouse Gas Reduction Plan

The 2021 San Bernardino County Regional Greenhouse Gas Reduction Plan identifies state GHG reduction measures applicable to participating jurisdictions, as well as local measures selected by each jurisdiction that could reduce future GHG emissions within jurisdictional boundaries. The reduction plan has individual sections for each jurisdiction that detail the jurisdiction's 2016 GHG emissions inventory, 2030 GHG emissions forecast, reduction goal, jurisdiction-selected (or consultant-identified) GHG reduction measures, and related General Plan policies or other ongoing programs in the jurisdiction. The purpose of the plan is to provide participating jurisdictions with relevant information to complete and adopt their own Climate Action Plan (CAP).

Mojave Desert Air Quality Management District (MDAQMD) Guidelines

The MD AQMD has established guidelines for the analysis of project-related emissions. Any project impact is considered to be significant if it triggers or exceeds the most appropriate evaluation criteria:

1. Generates total emissions (direct and indirect) in excess of the thresholds given in Table 6 (shown as Table 2.9-1 below);

2. Generates a violation of any ambient air quality standard when added to the local background;
3. Does not conform with the applicable attainment or maintenance plan(s);
4. Exposes sensitive receptors to substantial pollutant concentrations, including those resulting in a cancer risk greater than or equal to 10 in a million and/or a Hazard Index (HI) (non-cancerous) greater than or equal to 1.

Table 2.9-1
Emission Thresholds for MDAQMD

Criteria Pollutant	Annual Threshold (tons/year)	Daily Threshold (pounds)
Greenhouse Gases ($CO2_e$)	100,000	548,000

Source: MDAQMD CEQA and Federal Conformity Guidelines, 2016.

Town of Apple Valley Climate Action Plan

In May 2021, the Town approved the 2019 Climate Action Plan (CAP) update[3]. The CAP, which was originally adopted in 2010, establishes goals and policies that incorporate environmental responsibility into its daily management of residential, commercial and industrial growth, energy and water use, air quality, transportation, and waste reduction to further their commitment towards reducing GHG emissions.

The original 2010 CAP concluded that Apple Valley must reduce greenhouse gas emissions by a minimum of 112,337 MTCO2e3 by 2020 in order to meet the reduction target of 15% below 2005 levels. To achieve the 2030 target of 449,347 MTCO2e4, which is 40% below baseline emission levels, the Town would need to reduce overall emissions by 299,565 MTCO2e. Results of the greenhouse gas inventory prepared for the 2019 CAP update found that Town-wide CO2e emissions were approximately 597,681 MTCO2e. This means that the Town has exceeded the 2020 target of 15% below 2005 MTCO2e emissions levels by 38,894 MTCO2e. To achieve the 2030 target of 40% below 2005 MTCO2e emissions levels, Town-wide emissions would need to be reduced by an additional 148,334 MTCO2e.

Town of Apple Valley General Plan

Chapter III (Environmental Resources) of the Town of Apple Valley General Plan includes the following goals and policies that pertain either directly or indirectly to greenhouse gases:

Goal 1 To preserve and enhance local and regional air quality.

[3] "Town of Apple Valley 2019 Climate Action Plan Update," prepared by Terra Nova Planning & Research, May 2021.

Policy 1.A The Town shall cooperate with the Mojave Desert Air Quality Management District to assure compliance with air quality standards.

Program 1.A.1
Apple Valley shall adhere to existing and future greenhouse gas and global warming rules, regulations, and requirements to monitor and reduce emissions

Policy 1.E The use of clean and/or renewable alternative energy sources for transportation, heating and cooling, and construction shall be encouraged by the Town.

Policy 1.F The Town shall support, encourage, and facilitate the development of projects that enhance the use of alternative modes of transportation, including pedestrian-oriented retail and activity centers, dedicated bicycle paths and lanes, and community-wide multi-use trails.

Policy 1.G Future residential, commercial, and industrial development and remodeling projects shall strive to exceed Title 24 standards by 15% and/or achieve LEED certification or similar performance standards for buildings**.**

Policy 1.H Residential, commercial, and industrial projects that reduce vehicle miles traveled (VMTs) by providing alternative transportation options, home office and live/work spaces, and/or promote employees living close to work are preferred.

Policy 1.I The Town shall continue to reduce waste generation, enhance recycling or reuse programs, and expand grey water systems for landscape irrigation.

Policy 1.K The Town shall participate in regional greenhouse gas reduction planning efforts.

2.9.4 Environmental Setting

Air pollution is a chemical, physical or biological process that modifies the chemistry and other characteristics of the atmosphere. The primary contributor to air pollution is combustion of fossil fuels used in transportation, power and heat generation, and industrial processes. The byproducts from the combustion of fossil fuels can contain a number of air polluting substances. These emissions are responsible for the poor air quality that is evident in industrial centers worldwide.

Certain gases in the earth's atmosphere, classified as greenhouse gases (GHGs), play a critical role in determining the earth's surface temperature. These gases allow solar radiation into the earth's atmosphere, but prevent radioactive heat from escaping, thus warming the earth's atmosphere. The principal GHGs contributing to the greenhouse effect are CO_2, methane (CH_4), nitrous oxide (N_2O), and fluorinated compounds (hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride). GHG sources include both natural and anthropogenic processes, and some are associated with air pollution. The quantity of greenhouse gases in the atmosphere has increased significantly over a relatively short period, which is believed to cause the global average increase in surface temperatures of 0.7-1.5 °F that were observed during the 20th century.

California is the second largest greenhouse gas contributor in the U.S. and the fifteenth largest in the world.[4] In 2004, California produced 492 million metric tons of CO_2 equivalent ($MMTCO_2e$), which was approximately 7% of all U.S. emissions. However, in 2018, California's total emissions were 425 $MMTCO_2e$, representing an overall decrease of 13.6% since peak levels in 2004.[5] This puts total emissions below the 2020 target of 431 million metric tons.

During the 2000 to 2018 period, per capita GHG emissions in California continued to drop from a peak in 2001 of 14.0 tons per person to 10.7 tons per person in 2018, a 24% decrease. This decrease may be due to the increased use of renewable energy, including solar generation, hydropower, and wind energy and increases in the effectiveness of energy conservation in buildings (Title 24 requirements).

The transportation sector remains the largest source of GHG emissions in the state, accounting for 40% of California's emissions in 2018. Regulations, improved fuel efficiency of the state's vehicle fleet, and higher market penetration of zero-emission vehicles will drive down emissions over time, but population growth, lower fuel prices, improved economic conditions and higher employment rates are potential factors that may increase fuel use.[6]

2.9.5 Existing Conditions

In 2019, the Town exceeded its 2020 target of 15% below 2005 MTCO2e emissions levels by 38,894 MTCO2e. To achieve the 2030 target of 40% below 2005 MTCO2e emissions levels, Town-wide emissions would need to be reduced by an additional 148,334 MTCO2e.

[4] Each Country's Share of CO_2 Emissions updated Aug 12, 2020. https://www.ucsusa.org/resources/each-countrys-share-co2-emissions

[5] "California Greenhouse Gas Emission Inventory for 2000 to 2018," California Air Resources Board, 2020.

[6] Ibid.

The following is a summary of major findings in the 2019 Climate Action Plan Update:

- From 2010 to 2019 the Town's population increased from 63,754 to 74,140.
- From 2010 to 2019 the Town's total GHG emissions decreased from 748,912 tonnes CO2e to 597,681 tonnes CO2e.
- On-Road Transportation emissions accounted for 68% of the Town's total GHG emissions.
- The municipal contribution to the Town's emissions footprint is 1%, or 3,407 tonnes CO2e.
- The Town's per capita GHG emissions in 2019 was 8.06 tonnes CO2e, which is a 3.69 per capita reduction from the 2005 baseline.

2.9.6 Project Impacts

The following greenhouse gas analysis assumes that buildout of the Specific Plan would occur in 2040. This analysis is based on projected land uses included in the Project Description as well as traffic trip information provided by David Evans and Associates (See Appendix D). Operational emissions were calculated by using California Emissions Estimator Model (CalEEMod) version 2020.4.0. CalEEMod is a computer program that can be used to estimate anticipated emissions associated with land development projects in California. The model calculates annual CO_2e emissions for five source categories: area, energy, mobile, waste, and water. CalEEMod output tables are provided in Appendix B.

The following assumptions were entered into the CalEEMod software:

- Buildout year: 2040
- Land use types and square footages were derived from the Proposed Project Land Use Buildout Table (Table 1-3 of this EIR). Five land use categories were selected in CalEEMod based on the project-specific Traffic Report (see Appendix D) that represent the Planning Area in generalized terms, because buildout specifics are currently unknown. These land uses include "General Office Building," "Apartments Low Rise," "Strip Mall," "High Turnover (Sit Down Restaurant)," and "Research & Development."
- Due to the lack of certainty of future specific land uses and their distribution within the Planning Area, it is unrealistic to assume trip lengths or to apply trip reductions from hypothetical land use synergies. Therefore, mobile emissions were analyzed qualitatively as opposed to quantitatively using land use trip rates cited in the Traffic Study and controlled with default trip mileage and distribution rates in CalEEMod.

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

Construction

As described above, the Specific Plan establishes land uses, building densities and intensities, and estimates the build out of the Planning Area based on the development standards included in the Specific Plan. However, development within the Planning Area will be undertaken by individual property owners and developers, as the market allows. It is not known when this development will occur, or how much equipment, personnel, or time would be involved in each project. To attempt to calculate a build out scenario would be highly speculative and would not result in factual analysis. Individual development projects proposed under the Village Specific Plan will be evaluated on a case-by-case basis per CEQA requirements and using project specific project-related information to estimate GHG emissions and determine the level of impact. Project-specific construction GHG emissions will be amortized over a 30-year period and added to the individual project's annual operational emissions, as discussed below.

Operation

There are five emission source categories that contribute either directly or indirectly to operational GHG emissions, including energy/electricity usage, water usage, solid waste disposal, area emissions (pavement and architectural coating off-gassing), and mobile sources. For analysis purposes, GHG emissions were estimated using the CalEEMod software, which bases GHG projections on land use factors for energy use, mobile trips, water use, solid waste generation, and wastewater generation. The same project parameters used for the air quality analysis were used for the GHG analysis. Standard practice is to amortize project construction emissions over a 30-year period and add to the operational emissions total. As noted above, buildout construction emissions will be assessed on a case-by-case basis through the CEQA and Town approval process. For analysis purposes, the total operational emissions were increased by 2% to account for potential amortized construction emissions.

As shown in the table below, annual greenhouse gas emissions at build out of the proposed Specific Plan exceeds MDAQMD annual threshold of 100,000 $MTCO_2e$. It is possible and expected that per capita emissions will decrease over the next 20 years due to future technology improvements, increased use of alternative modes of transportation, improved building efficiency, and increased use of renewable energy sources. However, the elective use of alternative modes of transportation and future efficiency potential cannot be confidently quantified and applied as a mitigation measure. Projects will be evaluated for GHG

emissions as they are proposed in the Planning Area, but the impacts of all projects is expected to exceed the MDAQMD's thresholds of significance. Therefore, operational impacts as they currently stand are not in compliance with AB 32, and impacts will be significant and unavoidable.

Table 2.9-2
Operational GHG Emissions Summary
Village Specific Plan Buildout

	Annual $MTCO_2e$
Area Emissions	435.35
Energy Emissions	29,443.02
Mobile Emissions	91,203.81
Waste Emissions	5,241.83
Water Emissions	8,115.80
Total Operational	**134,439.70**
Plus 2% Construction Amortized	**137,128.49**
MDAQMD Threshold	**100,000**

Source: CalEEMod Version 2020.4.0. See Appendix B for detailed output tables.

Summary

Construction and operational activities would result in the generation and emission of greenhouse gases, which could have significant impacts to air quality locally and regionally. Implementation of the CAP is intended to reduce impacts associated with the emission of greenhouse gases within Town limits to levels that are less than significant. In addition, the proposed Specific Plan includes policies and guidelines to promote energy efficiency, the use of renewable energy sources, and modes of transportation that can further reduce the Planning Area's GHG emissions. General Plan policies and programs on energy and resource conservation, and circulation that help reduce the Town's GHG emissions will continue to be implemented in the Planning Area.

As previously stated, individual projects developed under the proposed Specific Plan will be assessed on a case-by-case basis for potential impacts related to GHG emissions. While implementation of existing General Plan policies and programs and proposed Specific Plan policies and guidelines will help reduce GHG emissions, based on the GHG projections above, it is possible that the proposed Specific Plan would generate GHG emissions that could have a significant and unavoidable impact on the environment. Therefore, impacts are significant and unavoidable.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

As previously discussed, buildout emission projections will exceed MDAQMD thresholds and thus fail to achieve State GHG reduction targets. It is possible that future project GHG emissions could be reduced with technology advancements, best management practices, and adherence to MDAQMD rules and regulations. The proposed Specific Plan includes policies and guidelines consistent with existing General Plan policies that promote GHG reductions through transportation and land use planning, efficient use of energy resources, and adherence to current trends in policies, regulations, and action plans.

Individual development projects proposed under the Specific Plan will be assessed on a case-by-case basis for potential impacts related to GHG emissions. Projects will be required to demonstrate adherence to applicable plans, policies, and regulations adopted for the purposed of reducing GHG emissions. In addition, mitigation measures are available to reduce GHG emissions to the greatest extent possible, and are provided below. Mitigation measures GHG-1 through GHG-3 provide design recommendations and require that individual projects analyze their emissions and incorporate measures, including the reduction measures included in the Town's Climate Action Plan. As noted above, these measures cannot be effectively quantified, but are provided to reduce project impacts to the greatest extent possible.

As noted, while implementation of existing General Plan policies and programs, proposed Specific Plan policies and guidelines, and Mitigation Measures GHG-1 through GHG-3 will help reduce GHG emissions, based on the GHG projections above, it is possible that the proposed Specific Plan would generate GHG emissions that are inconsistent with State reduction targets. Impacts will be significant and unavoidable.

2.9.7 Mitigation Measures

Consistent with and to reinforce existing General Plan policies and programs and proposed Specific Plan policies and guidelines, the following mitigation measures shall apply to future development in the Planning Area:

GHG-1 Energy Efficient Design
Site plans shall incorporate energy-efficient design elements, including appropriate site orientation, possibility for incorporation of active and/or passive solar design, and the use of shade and windbreak trees, to reduce fuel consumption for heating and cooling.

GHG-2 Alternative Energy: Community Wide
To encourage the use of alternative energy sources, installation of electric vehicle charging stations shall be encouraged in all new development and in major retrofits.

GHG-3 CEQA Analysis: Sustainability Plan Measures
Projects that require CEQA analysis shall be required to conduct detailed impact analyses and incorporate mitigation measures into their designs using the Towns' current Climate Action Plan prescribed reduction measures for achieving greenhouse gas emission reduction targets. All proposed mitigation measures shall be reviewed and approved by the Town prior to the issuance of grading or demolition permits.

2.9.8 Significance After Mitigation

Due to the nature of greenhouse gases, all future development within the Specific Plan area will be analyzed on a case-by-case basis and mitigated accordingly in addition to the Plan-wide mitigation measures. However, based on the GHG projections, it is possible that the proposed Specific Plan would generate GHG emissions that could have a significant and unavoidable impact on the environment.

2.9.9 Cumulative Impacts

Cumulative impacts were analyzed on a regional scale due to the dispersing nature and aggregate impacts of the greenhouse gas emissions and the current regulatory context. Thorough analysis of the regional and statewide plans for GHG reductions was used. The geographic scope for the analysis of potential cumulative greenhouse gas impacts is the State of California.

Based on the analysis above, the proposed Specific Plan has the potential to make a cumulatively considerable contribution to GHG levels due to the projected emission levels. Although the proposed Specific Plan policies and guidelines include the best practicable strategies to reduce emissions associated with buildout, and are consistent with State regulations and guidelines, no additional mitigation is currently available to reduce this impact to a less than significant level. Cumulative impacts could be significant and unavoidable.

2.10 Hazards and Hazardous Materials

2.10.1 Introduction

This section describes hazardous materials and other hazards to public health and safety that could result from the proposed Apple Valley Village Specific Plan. Potential construction and operational impacts related to hazards and hazardous materials are analyzed. This analysis also evaluates potential impacts to the Project from regional hazards, including wildfire hazards. Geotechnical hazards are discussed separately in Section 2.8 of this EIR.

In this section, the term "hazardous materials" encompasses both hazardous substances and hazardous wastes. Federal and state laws stipulate that materials and wastes may be considered hazardous if they are specifically listed by statute or if they are toxic, ignitable, corrosive, or reactive. There may be circumstances where past activities, such as industrial or commercial operations on a site, could have resulted in spills or leaks of hazardous materials into the ground, resulting in soil and/or groundwater contamination. Hazardous materials may also be required as part of, or result from, operation of a project or activity. If improperly handled, hazardous materials and waste can cause public health hazards when released into the soil, groundwater, or air.

The four basic exposure pathways through which an individual can be exposed to a chemical agent include: inhalation, ingestion, bodily contact, and injection. A common form of exposure is accidental release of hazardous materials during the construction phase. This type of exposure can cause health hazards for workers and the general public.

2.10.2 Thresholds of Significance

The following thresholds or criteria are derived from Appendix G of the CEQA Guidelines and are used to determine if and to what extent a project may have a potentially significant impact with regard to hazards and hazardous materials. The Project would have a significant effect on or risk exposure to hazards or hazardous materials if it were to:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project area.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

The Initial Study determined that the Project would result in "No Impact" for threshold questions d) and e), above. There are no identified hazardous materials sites in or adjacent to the Planning Area, and the Planning Area is not in the influence area of the Apple Valley airport. Therefore, they are not analyzed further in this EIR.

2.10.3 Regulatory Framework

Federal

U.S. Department of Transportation Hazardous Materials Transport Act (49 USC 5101)

The U.S. Department of Transportation, in conjunction with the U.S. Environmental Protection Agency (USEPA), is responsible for enforcement and implementation of federal laws and regulations pertaining to transportation of hazardous materials. The Hazardous Materials Transportation Act of 1974 directs the U.S. Department of Transportation to establish criteria and regulations regarding the safe storage and transportation of hazardous materials. CFR 49, 171–180, regulates the transportation of hazardous materials, types of material defined as hazardous, and the marking of vehicles transporting hazardous materials.

Federal Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) gives the USEPA the authority to control hazardous waste from "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also sets forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances.

State

California Occupational Safety and Health Act – California Labor Code, Section 6300

The California Occupational Safety and Health Act of 1973 addresses California employees' working conditions, enables the enforcement of workplace standards, and provides for advancements in the field of occupational health and safety. The Act also created the California Occupational Safety and Health Administration (Cal OSHA), the agency with primary responsibility for worker safety in the handling and use of chemicals in the workplace. Cal OSHA's standards are generally more stringent than federal regulations. Under the former, the employer is required to monitor worker exposure to listed hazardous substances and notify workers of exposure.

The regulations specify requirements for employee training, availability of safety equipment, accident-prevention programs, and hazardous substances and hazardous substance exposure warnings. At sites known or suspected to be contaminated by hazardous materials, workers must have training in hazardous materials operations and a Site Health and Safety Plan must be prepared. The Health and Safety Plan establishes policies and procedures to protect workers and the public from exposure to potential hazards at the contaminated site.

California Health and Safety Code, Title 22, Chapter 20 Hazardous Waste Permit Program

Title 22, Chapter 20 Hazardous Waste Permit Program, establishes provisions for the issuance and administration of hazardous waste permits pursuant to the Health and Safety Code. Regulations cover basic permitting requirements, such as application requirements, standard permit conditions, and monitoring and reporting requirements. Hazardous Waste Permits are required for the transfer, treatment, storage, and disposal of any hazardous waste pursuant to Section 66261.3. Owners and operators of certain facilities require hazardous waste facility permits as well as permits under other programs for certain aspects of the facility operation.

California Health and Safety Code, Division 20, Chapter 6.5, Hazardous Waste Control Law

The California Health and Safety Code, Division 20, Chapter 6.5, Hazardous Waste Control Law regulates hazardous wastes generated within the State of California. The law identifies proper guidance for the handling, storage, use, and disposal of hazardous wastes. Additionally, it identifies the need for proper landfill disposal in order to reduce long-term threats to public health and to air and water quality.

Included in this is the preparation of Hazardous Materials Business Plans (HMBPs) (Chapter 6.95 of the Health and Safety Code, Sections 25501 et seq.), which are required of businesses that handle specified quantities of chemicals in accordance with community right-to-know laws. This plan allows local agencies to plan appropriately for a chemical release, fire, or other incidents. Hazardous waste regulations establish criteria for identifying, packaging, and labeling hazardous wastes; dictate the management of hazardous waste; establish permit requirements for hazardous waste treatment, storage, disposal and transportation; and identify hazardous wastes that cannot be disposed of in landfills.

License to Transport Hazardous Materials – California Vehicle Code, Section 32000.5 et seq.

Caltrans regulates hazardous materials transportation on all interstate roads. Within California, the state agencies with primary responsibility for enforcing federal and state regulations and for responding to transportation emergencies are the California Highway Patrol (CHP) and Caltrans. Together, federal and state agencies determine driver training requirements, load labeling procedures, and container specifications for vehicles transporting hazardous materials.

State Water Resources Control Board and Regional Water Quality Control Boards

The State Water Resources Control Board (SWRCB) and nine regional water quality control boards (RWQCBs) are responsible for ensuring implementation and compliance with the provisions of the federal Clean Water Act and the Porter-Cologne Act of 1969. The Porter-Cologne Act is California's statutory authority for the protection of water quality. Along with the SWRCB and RWQCBs, water quality protection is the responsibility of numerous water supply and wastewater management agencies, as well as city and county governments, and requires the coordinated efforts of these various entities. Individual RWQCBs are responsible for identifying, monitoring, and cleaning up leaking underground storage tanks (LUSTs). The SFRWQCB's underground storage tank (UST) cleanup unit provides technical and regulatory oversight for

the investigation and cleanup of sites with leaks from USTs. LUSTs are an important threat to groundwater and pose a potential threat to human health, safety, and the environment.

California Department of Forestry and Fire Protection (CALFire)

The California Department of Forestry and Fire Protection (CALFire) ranks fire hazards of wildland areas in the state using four main criteria: fuels, weather, assets at risk, and level of service. CALFire's Fire and Resource Assessment Program (FRAP) maps identify fire hazard severity zones in the state and local responsibility areas. Wildland fire protection in California is the responsibility of either the state, local government, or the federal government. A designated state responsibility area (SRA) is the area "in which the financial responsibility of preventing and suppressing fires is primarily the responsibility of the state" (Public Resources Code Section 4125). Local responsibility areas (LRA) include incorporated cities, cultivated agricultural lands, and portions of the desert. LRA fire protection is typically provided by local fire departments, fire protection districts, counties, and by CALFire under contract to local government.

Regional/Local

San Bernardino County Fire Protection District

A Certified Unified Program Agency (CUPA) is an agency of a county or city that administers several state programs regulating hazardous materials and hazardous wastes. San Bernardino County Fire Protection District (SBCoFD) is the CUPA for all unincorporated areas and incorporated cities and towns in the County. SBCoFD administers the following programs:

- Hazardous Materials Release Response Plans and Inventory Program
- California Accidental Release Prevention Program, a combination of federal and state programs for the prevention of accidental release of regulated toxic and flammable substances
- Underground Storage Tanks Program
- Aboveground Petroleum Storage Act Program
- Hazardous Waste Generator and Onsite Hazardous Waste Treatment Programs Program
- Hazardous Materials Management Plan (HMMP) and Hazardous Material Inventory Statement (HMIS) in California Fire Code Program

Any business in San Bernardino County subject to any of the CUPA permits is required to file a Business Emergency/Contingency Plan using the California Environmental Reporting System. This submission is used as the basis for the permit application. The Business Emergency/Contingency Plan (Business Plan) is also used to satisfy the contingency plan requirement for hazardous waste

generators. A new business going through the process of obtaining County planning or building approval is required to comply with the Business Emergency/Contingency Plan requirement prior to obtaining final certificate of occupancy and prior to bringing hazardous materials onto the property.

The quantities that trigger disclosure are based on the maximum quantity on site at any time excluding materials under active shipping papers or for direct retail sale to the public. The basic quantities are hazardous materials at or exceeding 55 gallons, 500 pounds, or 200 cubic feet at any time in the course of a year; specified amounts of radioactive materials, and extremely hazardous substances above the threshold planning quantity.

Town of Apple Valley Emergency Operations Plan (2014)

The Town of Apple Valley has developed an Emergency Operations Plan (EOP) to incorporate and coordinate all the facilities and personnel of the Town into an efficient organization capable of responding to any emergency, including hazardous material incidents. The EOP is compliant with the California Standardized Emergency Management System (SEMS), which enables a multiple agency response to an incident, and the National Incident Response Management System (NIMS), which is intended to standardize agency response across federal, state, and local jurisdictions.

Town of Apple Valley General Plan

The Town's 2009 General Plan Chapter IV Environmental Hazards contains a Hazardous and Toxic Materials Element that guides planning and management strategies to effectively address hazardous and toxic materials in Apple Valley. The following applicable goals, policies and programs are relevant to the proposed Project and would help the Specific Plan avoid or reduce potential impacts:

Goal Ensure that the environment and all residents, workers, and visitors are protected from exposure to hazardous materials and wastes.

Policy 1.A The Town shall cooperate with regulators and encourage the enforcement of laws that require all users, producers, and transporters of hazardous materials and wastes to clearly identify such materials, and notify the appropriate county, state and/or federal agencies as required by law.

Policy 1.D The Town shall require all business that use, store, or produce hazardous material to comply with the County's Business Plan.

Program 1.D.1
As part of the development approval process, new businesses handling hazardous materials shall be required to submit a Business Plan for handing, storing, transporting, and disposing of hazardous materials and wastes.

Town of Apple Valley Municipal Code
The Town's Municipal Code Section 9.70.020 – Performance Standards set forth regulations and standards to ensure that the use, handling, storage, and transportation of hazardous materials comply with all applicable requirements of the State Government Code Section 65850.2 and Health and Safety Code Section 25505, and Article 80 of the Uniform Fire Code. Such standards include required setback to pipelines, provisions on underground and above-ground storage tanks, Hazardous Materials Response Plans and conditional use permit requirements for land uses involving hazardous materials in sufficient quantities.

Apple Valley Local Hazard Mitigation Plan
The Town updated its Local Hazard Mitigation Plan (LHMP) in 2017 in an effort to identify hazards, determine their likely impacts, and set mitigation goals and strategies, to expedite the recovery from a disaster to normalcy and increase the Town's resiliency to disasters. The LHMP focused on six hazards that were determined to be most significant to the Town: wildfire, flood, earthquake, erosion, flooding and climate change. The LHMP included a vulnerability assessment and identified mitigation goals and actions for each of the six hazards and those that apply to all hazard such as improving emergency services management capability through implementation of a public notification system and ensuring continual power supply at the Emergency Operations Center.

2.10.4 Environmental Setting

A hazardous material is any substance that, because of its quantity, concentration, or physical or chemical properties, may pose a hazard to human health and the environment. Under Title 22 of the California Code of Regulations (CCR), the term "hazardous constituent" refers to both hazardous materials and hazardous wastes.[1] Both of these are classified according to four properties: (1) ignitability; (2) corrosivity; (3) reactivity; and (4) toxicity.

A hazardous material is defined as a substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to an increase in

[1] California Department of Toxic Substances Control Website, https://www.dtsc.ca.gov/Title22/, accessed October 2021.

mortality or an increase in serious irreversible, or incapacitating reversible illness; or (2) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of or otherwise managed.[2]

Hazardous materials and chemicals are used daily in industry, institutions, businesses, and residences. Some hazardous material sources include businesses such as service stations, medical labs, dry-cleaners, and photo processing centers. Others are large enterprises that may generate large quantities of hazardous waste, such as chemical manufacturers, electroplating companies, or petroleum distilleries. In addition, commonly used household products such as paints, cleaners, oils, batteries, and pesticides contain potentially hazardous ingredients. Accidental spills or leaks, illegal dumping of hazardous waste, illegal storage, or a transportation accident could release hazardous materials in the community.

Both the federal government and the State of California require all businesses that store hazardous materials in excess of specified quantities to report their chemical inventories in a Hazardous Materials Management Plan. Businesses are also required to report releases of toxic chemicals into the air, water, and land, as well as off-site transfers of waste to another location. Facilities that store hazardous materials are required to report on pollution prevention activities and chemical recycling. All of these businesses operate under stringent regulations governing the storage, use, manufacturing, and handling of hazardous materials.

The U.S. Environmental Protection Agency (EPA) maintains and publishes a database that lists properties that handle or produce hazardous materials. The EPA defines a small quantity waste generator as one that produces between 100 and 1,000 kilograms of hazardous waste per month.[3] Small businesses like dry cleaners, auto repair shops, and construction/renovation businesses usually are defined as generators of small quantities of hazardous waste.[4]

State and federal agencies regulate hazardous materials. The Hazardous Waste Control law (Chapter 6.5 of Division 20 of the Health and Safety Code) and Title

2 United States Environmental Protection Agency Website - Resource Conservation and Recovery Act (RCRA) and Federal Facilities, https://www.epa.gov/enforcement/resource-conservation-and-recovery-act-rcra-and-federal-facilities, accessed October 2021.

3 United States Environmental Protection Agency Website - Categories of Hazardous Waste Generators, https://www.epa.gov/hwgenerators/categories-hazardous-waste-generators, accessed October 2021.

4 A Guide for Small Businesses – Managing your Hazardous Waste by United States Environmental Protection Agency (2001).

26 of the CCR list more than 800 potentially hazardous materials and establish criteria for identifying, packaging, and disposing of such wastes. Under these regulations, the generator of any hazardous waste material must complete a manifest that accompanies the material from the point of generation to transportation to the ultimate disposal location, with copies of the manifest filed with State Department of Toxic Substance Control.

2.10.5 Existing Conditions

Generation, Use, and Storage of Hazardous Materials

Potential hazardous/toxic material generators in the Town of Apple Valley include commercial, quasi-industrial, transportation operations, and medical facilities.

The Village Specific Plan Planning Area includes large and small commercial enterprises, such as auto storage and maintenance facilities, metal and wood workshops, gasoline service stations, and restaurants that could generate, use, or store hazardous materials. The Town's Household Hazardous Waste collection facility is on Nomwaket Road in the Planning Area.

There are no sites in the Planning Area on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

Transport of Hazardous Materials

There are three hazardous materials transportation corridors in the Town of Apple Valley. The Atchison Topeka & Santa Fe Railroad, Interstate 15, and Highway 18 have the potential to be involved in the transport of hazardous wastes and materials. Accidental spills, illegal dumping, air emissions, and other uncontrolled discharges into the environment from hazardous/toxic material generators in the Town or transporters through the Town may potentially expose residents or the environment to hazardous and toxic materials.

The potential hazardous material transport route crossing the Specific Plan Planning Area is Highway 18. Other designated truck routes crossing the Planning Area include Navajo Road and Yucca Loma Road. The Hazardous Materials Transportation Act (HMTA) regulates the safe transport of hazardous materials on water, rail, highways, through air, or in pipelines. The Act includes provisions for material classification, packaging, marking, labeling, place carding, and shipping documentation.

Proximity to Schools

The Smart Starts Academy preschool is located at 21482 Yucca Loma Road on the westernmost parcel of the Planning Area. Three other schools are within ¼-

mile of the Planning Area: Yucca Loma Elementary School is 200± feet west of the Planning Area, Rancho Verde Elementary School is ¼-mile to the north, and Granite Hills High School is approximately ¼-mile to the east.

Evacuation Routes

Major emergency evacuation routes in the Town include Central Road, Highway 18, and Bear Valley Road. Highway 18 bisects the entire length of the Planning Area and provides primary access in an emergency for the majority of the Town. Central Road passes through the east side of the Planning Area and also forms part of its eastern boundary.

Wildfire

According to CALFire's Fire and Resource Assessment Program (FRAP) maps, the majority of Apple Valley is in a Local Responsibility Area (LRA), and several small areas in the western and northern edges of Town are in a Federal Responsibility Area (FRA).[5] Within an LRA, the most current FRAP mapping only identifies very high fire hazard severity zones (VHFHSZ) and non-VHFHSZ lands. There are no VHFHSZ or any other fire hazard severity zones designated by CALFire in Apple Valley, including the Planning Area.

2.10.6 Project Impacts

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Hazardous materials are transported through Apple Valley along Highway 18 (partially in the Planning Area) and other designated truck routes and local roads, including Navajo Road and Yucca Loma Road, which pass through the Planning Area. The California Highway Patrol (CHP) and California Department of Transportation (Caltrans) have primary responsibility for enforcing federal and state hazardous materials transport regulations. Future and existing development pursuant to the proposed Specific Plan, although not expected, may utilize or generate hazardous materials or wastes in quantities that would pose a significant hazard to the public or the environment during both construction and operational activities.

Demolition and construction activities associated with new development and redevelopment are not expected to result in the routine use, storage, transport, or disposal of large quantities of hazardous substances. These activities will, however, involve the temporary use of heavy equipment and machinery, which

[5] Fire and Resources Assessment Program (FRAP) FHSZ Viewer, California Department of Forestry and Fire Protection. https://egis.fire.ca.gov/FHSZ/, accessed October 14, 2021.

could contain or use fuels and oils and involve the application of various other products such as paints and adhesives. Demolition projects could generate construction waste that contains asbestos or lead. These hazardous materials could pose risks to construction workers or lead to soil and groundwater contamination, if not properly stored, used, and disposed. The materials are not expected to be in quantities or stored in a manner that pose a significant hazard to the public. Nonetheless, all potentially hazardous materials would be contained, stored, and used in accordance with manufacturers' instructions and handled in compliance with applicable federal, state, and local regulations. Any associated risk would be adequately reduced to a less than significant level on a case-by-case basis through compliance with these standard requirements during construction.

The proposed Specific Plan land use plan does not include heavy industrial or other land uses that would generate or use large quantities of hazardous materials. Existing and future small business operations, individual households, and maintenance activities are likely to utilize hazardous materials in limited quantities, such as paints, thinners, cleaning solvents, fertilizers, pesticides, motor oil, and automotive substances. For residential uses, these hazardous materials would be stored and used at individual sites, in limited quantities, and will not require a hazardous material handling/storage permit. The quantities stored at commercial sites would be comparable to typical commercial uses, and would be regulated by state and local laws, including Fire Department regulations on proper storage and inspection. These regulations, including those imposed by the County of San Bernardino and the County Fire Department, are designed to reduce impacts to less than significant levels.

Existing federal, state, regional, and local regulations provide guidelines to prevent potential risks associated with the handling, storage, and transportation of hazardous and toxic materials. Additionally, regulations such as the Hazardous Material Transportation Act, Resource Conservation and Recovery Act, California Hazardous Waste Control Act, and Certified Unified Program Agency (CUPA), ensure that industrial and commercial users, generators, and transporters provide operational safety and emergency response measures so that no major threats to public health and safety are created. The San Bernardino County Fire Department Household Hazardous Waste (HHW) Program has 14 permanent HHW collection facilities, including one on Nomwaket Road in the Planning Area, and one ABOP (antifreeze, batteries, oil, and paint) collection facility. The program also hosts free HHW collection events in different municipalities, discouraging the dumping of these materials into the garbage, the storm drain, or the ground.

Overall, Project-related impacts would be less than significant since hazardous material use, transport, and disposal would be regulated under existing federal, state, regional, and local regulations.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

Adoption and implementation of the proposed Specific Plan would enable development and redevelopment of a range of land uses in the Planning Area which are not expected to utilize or generate large quantities of hazardous materials. As discussed under a) above, hazardous materials stored at commercial sites would be comparable to typical commercial uses and regulated by state and local law, including Fire Department regulations requiring proper storage and inspection. These regulations, including those imposed by both the San Bernardino County and the County Fire Department, are designed to reduce the risks of upset and/or accidental release of hazardous materials into the environment, thus lowering impacts to less than significant levels.

The Specific Plan Planning Area is not in proximity to, nor does the Specific Plan allow heavy industrial uses in the Planning Area. In District 2 and District 3 of the Planning Area, south and north of Highway 18 respectively, existing and future quasi-industrial uses would be subject to various state and federal regulations regarding storage, use, handling, transport or disposal of hazardous materials and hazardous wastes. District 2 is also further removed from residential uses, which lessens the potential risk and impact regarding hazardous materials. District 3 is adjacent to residential development on its north boundary, and in its northeast corner. Future uses in this area will be required to comply with local, County and State regulations, which are designed to protect sensitive receptors from risk of release of hazardous materials. Should a release occur, the Fire Department is equipped to respond to these incidents, thus reducing their potential impacts. In addition, individual developments may be required to conduct Phase I Environmental Site Assessments to evaluate site-specific conditions and/or implement appropriate avoidance, minimization, and mitigation measures to address site specific conditions regarding hazardous materials.

Compliance with and enforcement of existing laws and regulations concerning the upset and/or accidental release of hazardous materials into the environment, supported by the General Plan's goals, policies, and programs would ensure that the public would not be exposed to any unusual or excessive risks related to upset/accidental conditions involving the release of hazardous

materials into the environment. Project-related impacts are expected to be less than significant.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

Future land uses consistent with the proposed Specific Plan could include commercial uses within one-quarter mile of four existing schools in and near the Planning Area, including Yucca Loma Elementary School, Rancho Verde Elementary School, Smart Starts Academy preschool, and Granite Hills High School. CEQA Guidelines Section 15186, School Facilities, requires that school projects, as well as projects proposed to be located near schools, examine potential health impacts resulting from exposure to hazardous materials, wastes, and substances. Permitting requirements for existing and future individual hazardous material handlers or emitters, if any, would require evaluation and notification where potential hazardous materials handling and emissions could occur in proximity to existing schools.

Currently, there are no plans for a new school to be located within the Planning Area; however, the Specific Plan allows for such uses in Districts 2, 3, 4, and 5 (a Special Use Permit may be required). For new development, any future placement of schools would be required to comply with state statutory and regulatory requirements addressing safety from hazards, including hazardous materials. California Education Code (section 17210 et seq.) outlines the requirements of siting school facilities near or on known or suspected hazardous materials sites, or near facilities that emit hazardous air emissions, handle hazardous or acutely hazardous materials, substances, or waste. The code requires that, prior to commencing the acquisition of property for a new school site, an environmental site investigation be completed to determine the presence of health and safety risks associated with a site.

Any school sites that would be facilitated by the proposed Specific Plan that receive state funding for acquisition and/or construction must go through a comprehensive investigation and cleanup process under oversight of the California Department of Toxic Substances Control. As required by Education Code Section 17213, the written findings of the environmental impact report or negative declaration prepared for a proposed school site must include a statement verifying that the site is not currently or was not formerly a hazardous, acutely hazardous substance release, or solid waste disposal site or, if so, that the wastes have been removed. If hazardous air emissions are identified, the written findings must state that the health risks do not and will not constitute an actual or potential danger of public health to students or staff.

The proposed Specific Plan does not propose any changes to existing federal, state, or local school district policies or procedures that minimize risks to school facilities, students, and faculty. As discussed in a) above, future development project impacts would be managed and mitigated on a case-by-case basis and would comply with existing federal, state, and local laws and regulations concerning the handling, transport, or disposal of hazardous materials. Impacts of the proposed Specific Plan as it pertains to hazardous materials emissions in proximity to a school would be less than significant.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

The Town's Emergency Operations Plan (EOP) (2014) guides its response to large-scale emergencies and disasters. The EOP identified that the Apple Valley Police Department is the lead agency in evacuations. The American Red Cross (ARC) will be notified and work with Town staff if a shelter site is needed. The proposed Specific Plan Planning Area includes several critical facilities designated in the EOP, including James A. Woody Community Center, the animal shelter, and Public Works facility. The proposed Specific Plan will facilitate physical changes in the Planning Area, such as development projects and roadway improvements and realignments which may require temporary lane closures, detours, or re-routing. However, Construction Traffic Control Plans would be required for Specific Plan projects when necessary, and emergency/secondary access would be established and preserved during all construction activities.

Furthermore, the proposed circulation plan, including roadway realignments, is designed to improve existing roadway capacity and access to properties, which will increase traffic safety and enhance access for emergency vehicles at build out. No permanent adverse impact to the emergency evacuation route function of Highway 18 and Central Road will occur. Any temporary impacts will be addressed through Construction Traffic Control Plans as individual projects are proposed. The Specific Plan does not propose any changes to, nor will it interfere with, the Emergency Operations Plan. Project impacts will be less than significant.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

The California Department of Forestry and Fire Protection's (CALFire) Fire and Resource Assessment Program (FRAP) identifies the majority of Apple Valley, including the Specific Plan Planning Area, as a Local Responsibility Area (LRA).[6]

[6] Fire and Resources Assessment Program (FRAP) FHSZ Viewer, California Department of Forestry and Fire Protection. https://egis.fire.ca.gov/FHSZ/, accessed October 14, 2021.

The most current FRAP mapping only identifies very high fire hazard severity zones (VHFHSZ) in an LRA. FRAP does not identify any fire hazard severity zone within the Town, and the Planning Area is not near any fire hazard zone. According to the Town's Local Hazard Mitigation Plan (LHMP, 2017),[7] much of the Town is in a moderate fire hazard severity zone, including the north and southeast portions of the Planning Area. However, the LHMP considers wildfires a significant threat only in the southern foothill area known as Marianas (5± miles from the Specific Plan Planning Area) and the Mojave Riverbed (4± miles away). In addition, the high desert environment does not foster growth of dense vegetation, and the Planning Area is located within the Town's urban core.

The Specific Plan will facilitate development and redevelopment in the Planning Area; however, it is not expected to exacerbate wildfire risks because of its location in the urban core of Apple Valley. In addition, all structures and improvements will be constructed per the latest edition of California Building Code and California Fire Code and will also be subject to review by the Apple Valley Fire Protection District. These existing conditions will ensure risk of loss, injury or death involving wildland fires will be reduced to less than significant levels.

2.10.7 Mitigation Measures

Standard requirements, including those set forth in the California Building Code and the California Fire Code, serve to avoid, minimize and mitigate potential impacts of hazards, hazardous materials and wildfires in and near the Town. Potential impacts would be evaluated on a project-by-project basis by the Town and the Fire District and would be required to meet applicable safety requirements to minimize fire risks and environment impacts. Therefore, mitigation measures are not required.

2.10.8 Significance After Mitigation

Mitigation measures are not required. Impacts would be less than significant.

2.10.9 Cumulative Impacts

Hazardous materials and risk of upset conditions are largely site-specific and would occur on a case-by-case basis for each individual project affected, in conjunction with site disturbance, structure demolition, and development proposals in the Planning Area. All new developments in the Town are required to evaluate potential threats to public safety, including those associated with the accidental release of hazardous materials into the environment during

[7] Town of Apple Valley Local Hazard Mitigation Plan – 2017 Plan Update.

demolition, construction and operation, emergency response, transport/use/disposal of hazardous materials, and hazards to sensitive receptors.

When considered in conjunction with other related development projects in the Town, the proposed Specific Plan will result in a finite increase in the quantities of hazardous materials transported to, used, and stored in the local area. However, Project-related impacts will be less than significant given the limited quantities and nature of hazardous materials that would be used by the allowed land uses and adherence to laws and regulations which will minimize foreseeable upset and accident conditions. The same is true of future development in the Town surrounding the Planning Area, which is generally designated for residential and commercial development. Compliance with local, state, and federal laws pertaining to hazards and hazardous materials at the individual project level will ensure that cumulative impacts would be less than significant and not cumulatively considerable.

2.11 Hydrology and Water Quality

2.11.1 Introduction

This section describes existing hydrological conditions, including groundwater, surface water, water quality, stormwater, and flooding conditions within the Planning Area and evaluates potential impacts to hydrology and water quality that could result from implementation of the Village Specific Plan. This section also describes the regulatory environment and thresholds of significance used to evaluate the proposed Project.

2.11.2 Thresholds of Significance

The following thresholds or criteria are those recommended in §15064.7 of the CEQA Guidelines and Appendix G of the Guidelines, and are used to determine if and to what extent a project may have a potentially significant impact on area hydrology and water resources. The Project would have a significant effect if it would:

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

   i) result in substantial erosion or siltation on- or off-site;

   ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;

   iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

   iv) impede or redirect flood flows.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

The Initial Study determined that the Project would result in "No Impact" for threshold question e) above. Therefore, it is not analyzed further in this EIR.

2.11.3 Regulatory Framework

Federal

Safe Drinking Water Act

The Safe Drinking Water Act (SDWA) was originally passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply and requires many actions to protect drinking water and its sources: rivers, lakes, reservoirs, springs, and groundwater wells.[1] The SDWA is the primary federal law that ensures the quality of drinking water. Under SDWA, the United States Environmental Protection Agency (U.S. EPA) sets national health-based standards for drinking water to protect against both naturally-occurring and man-made contaminants that may be found in drinking water. These National Primary Drinking Water Regulations set enforceable maximum contaminant levels for particular contaminants in drinking water or required ways to treat water to remove contaminants. Each standard also includes requirements for water systems to test for contaminants in the water to make sure standards are achieved. The U.S. EPA also provides guidance, assistance, and public information about drinking water, collects drinking water data, and oversees state drinking water programs.

National Flood Insurance Program

The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP), which provides flood insurance, floodplain management, and flood hazard mapping. Communities subject to flood hazards voluntarily participate in the NFIP by adopting and enforcing floodplain management ordinances to reduce the potential for flood damage. In turn, the NFIP offers federally funded flood insurance to homeowners, renters, and business owners in participating communities. Under this program, FEMA produces Flood Insurance Rate Maps (FIRM) that identify properties and buildings in flood insurance risk areas. Flood hazards related to storm events are generally described in terms of 100- or 500-year floods with a 1 percent and 0.2 percent chance, respectively, of occurring every year.

[1] SDWA does not regulate private wells which serve fewer than 25 individuals.

The Town of Apple Valley are participants in the NFIP. As such, residents within these jurisdictions are eligible to purchase flood insurance if located in areas with a high risk of flooding. FEMA requires each participating jurisdiction to adopt a floodplain management ordinance to ensure that any new construction and/or substantial improvement within a mapped floodplain occurs in a manner that reduces potential damage to the public and property and discourages new development within floodways.

The San Bernardino County Flood Control District (SBCFCD) has the primary responsibility for managing regional drainage in and around Apple Valley and sets forth methodology for analysis and design of flood control structures. SBCFCD is also responsible for regional flood control facilities.

Clean Water Act

The Clean Water Act (CWA) was enacted by Congress in 1972 and is the primary federal law regulating water quality in the United States. Its objective is to reduce or eliminate water pollution in the nation's rivers, streams, lakes, and coastal waters. The CWA prescribes the basic federal laws for regulating discharges of pollutants and sets minimum water quality standards for all "waters of the United States."

Several mechanisms are employed to control domestic, industrial, and agricultural pollution under the CWA. At the federal level, the CWA is administered by the U.S. Environmental Protection Agency (USEPA). At the state and regional level, the CWA is administered and enforced by the State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards (RWQCB). The State of California has developed several water quality laws, rules, and regulations, in part to assist in the implementation of the CWA and related federally mandated water quality requirements. In many cases, the federal requirements set minimum standards and policies, and the laws, rules, and regulations adopted by the State and regional boards exceed the federal requirements.

U.S. Army Corps of Engineers

The U.S. Army Corps of Engineers (USACOE) is a federal agency that serves as a public engineering, design, and construction management agency. The USACOE is responsible for investigating, developing, and maintaining water and environmental resources throughout the nation. The CWA authorizes the USACOE to issue permits for discharges of dredged or fill (collectively referred to as fill) material into "waters of the United States." Projects for which fill permits are issued must be in compliance with USEPA guidelines. The guidelines also prohibit discharges that would cause significant degradation of the aquatic environment

or violate state water quality standards. The CWA grants the USEPA veto authority over the USACOE if it determines that a project will have an unacceptable adverse effect on municipal water supplies, shellfish beds, and fishing areas.

National Pollutant Discharge Elimination System

The CWA has nationally regulated the discharge of pollutants to the waters of the U.S. from any point source since 1972. In 1987, amendments to the CWA added section 402(p), which established a framework for regulating nonpoint source (NPS) stormwater discharges under the National Pollutant Discharge Elimination System (NPDES). The Phase I NPDES stormwater program regulates stormwater discharges from industrial facilities, large and medium-sized municipal separate storm sewer systems (those serving more than 100,000 persons), and construction sites that disturb five or more acres of land. Under the program, the project sponsor is required to comply with two NPDES permit requirements.

The NPDES General Construction Permit Requirements apply to clearing, grading, and disturbances to the ground, such as excavation. Construction activities on one or more acres are subject to a series of permitting requirements contained in the NPDES General Construction Permit. This permit requires the preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) that includes Best Management Practices (BMPs) to be implemented during project construction. The NPDES program provides two levels of control for the protection of water quality: technology-based limits and water quality-based limits. Technology-based limits are based on the ability of dischargers to treat the water, while water quality-based limits are required if technology-based limits are not sufficient to protect the water body. The water quality-based effluent limitations required to meet water quality criteria in the receiving water are based on the National Toxics Rule, the California Toxics Rule, and the Basin Plan (see below under Porter-Cologne Water Quality Control Act).

Regional Water Quality Control Board – 401 Certification

Pursuant to Section 401 of the CWA and EPA 404(b)(1) guidelines, in order for a USACOE federal permit applicant to conduct any activity that may result in discharge into navigable waters, the applicant must provide a certification from the RWQCB that such discharge will comply with State water quality standards. The RWCQB has a policy of no-net-loss of wetlands and typically requires mitigation for all impact to wetlands before it will issue water quality certification. To meet RWQCB 401 Certification standards, it is necessary to address all hydrologic issues related to a project, including:

- Wetlands;
- Watershed hydrograph modification;
- Proposed riverine related modifications; and
- Long term post-construction water quality.

State

State Water Resources Control Board

The State Water Resources Control Board's Division of Drinking Water regulates public drinking water systems in the Project Area through its Southern California Field Operations Branch (FOB), which is responsible for enforcement of the federal and California SDWAs and the regulatory oversight of public water systems to assure the delivery of safe drinking water in this area. FOB staff performs field inspections, issue operating permits, review plans and specifications for new facilities, take enforcement actions for non-compliance with laws and regulations, review water quality monitoring results, and support and promote water system security. In addition, FOB staff are involved in conducting source water assessments, evaluating projects utilizing recycled treated wastewater, and promoting and assisting public water systems in drought preparation and water conservation. The State Water Resources Control Board is also responsible for reviewing and approving applications for changes in ownership of public water systems, as documented in California Health and Safety Code Section 116525. Applicants are required to demonstrate that they possess adequate technical, managerial, and financial capability to assure the delivery of pure, wholesome and potable drinking water as part of the application process.

Urban Water Management Planning Act

Pursuant to the Urban Water Management Planning Act (California Water Code §§ 10610 -10656) urban water suppliers having more than 3,000 service connections or water use of more than 3,000 acre-feet per year (AFY) for retail or wholesale uses are required to submit an Urban Water Management Plan (UWMP) every five years to the California Department of Water Resources (DWR). The Water Conservation Act of 2009 (often referred to as SBX7-7) requires increased emphasis on water demand management and requires the state to achieve a 20 percent reduction in urban per capita water use by December 31, 2020. Retail urban water suppliers are required to report baseline and compliance data in their UWMPs in accordance with the requirements of SBX7-7. UWMPs are prepared by California's urban water suppliers to support their long-term resource planning and to ensure that reliable and adequate water supplies are available to meet existing and future water demands over a 20-year planning horizon during normal, single-dry, and multiple-dry year periods. The final draft of the Liberty Utilities (Apple Valley Ranchos Water) Corp. (also referred to as Liberty Utilities) 2020 Urban Water Management Plan was adopted June 2021.

Regional/Local

California Regional Water Quality Control Board (CRWQCB) – Lahontan Region

The Town is under the jurisdiction of the Lahontan Region of the CRWQCB, which is responsible for the preparation and implementation of the water quality control plan for the basin. The Basin Plan defines the beneficial uses, water quality objectives, implementation programs, and monitoring and assessment programs for the waters in the region. Specifically, the Basin Plan designates beneficial uses for surface water and groundwater; sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's anti-degradation policy; describes implementation programs to protect the beneficial uses of all waters in the region; and describes surveillance and monitoring activities to evaluate the effectiveness of the Basin Plan.

The CRWQCB issues permits (i.e., waste discharge requirements and master reclamation permits) which require that waste and reclaimed water not be discharged in a manner that would cause an exceedance of applicable water quality objectives or adversely affect beneficial uses designated in the Basin Plan. The CRWQCB enforces these permits through a variety of administrative means.

Integrated Regional Water Management Plan

The Mojave Integrated Regional Water Management Plan is a collaborative effort led by 58 municipal water purveyors with authority over water supply and management in the Region, who share a common interest in enhancing water resource management to improve the reliability and sustainability of available resources. Liberty Utilities (formerly Apple Valley Ranchos Water Company) which is the primary water provider for Apple Valley, is partner in this organization. Liberty Utilities is a sub-agency of Mojave Water Agency (MWA), a wholesale water agency Apple Valley. MWA first started addressing and quantifying conservation goals in its 2004 RWMP, which called for a reduction in the water consumption by ten percent in the Mojave River Basin and five percent in the Morongo Area by the year 2020. In 2003, the Alliance for Water Awareness and Conservation (AWAC) was formed by a group of over 20 agencies committed to achieving water conservation goals within MWA service area, including the Town of Apple Valley and Liberty Utilities.

Town of Apple Valley General Plan

Chapters III (Environmental Resources) and IV (Environmental Hazards) of the Town of Apple Valley General Plan include the following goals and policies that pertain either directly or indirectly to hydrology and water quality:

Water Resources Element

Goal A dependable supply of safe, high-quality domestic water to meet the needs of all segments of the community.

Policy 1.A The Town shall coordinate land development and assure a balance of development and water supply that ensures the long-term maintenance of an adequate supply of water, and its continued high quality.

Policy 1.B To ensure that overall and per capita water demand from new development is reduced, the Town shall continue to require the use of drought-tolerant, low water consuming landscaping, intelligent irrigation controllers, and other water-conserving strategies and technologies in irrigated areas.

Policy 1.C The Town shall continue to coordinate with the Building Industry Association and other members of the building industry to encourage the use of faucets, showerheads and appliances that exceed Titles 20 and 24 water efficiency requirements.

Policy 1.D To the greatest extent practicable, the own shall direct new development to provide irrigation systems that are able to utilize reclaimed water, when available, for use in common area and streetscape landscaping.

Policy 1.E To the greatest extent practicable, the Town shall continue to require new development to connect to the community sewer system. Where sewer service is not available and lots are created of less than one (1) acre in size, the Town shall require the installation of "dry sewers" and the payment of connection fees for future sewer main extensions.

Policy 1.F Consistent with community design standards and local and regional drainage plans, the Town shall provide development standards and guidelines for the construction of on-site storm water retention facilities.

Policy 1.G To facilitate the sharing of information on potential groundwater contamination and potential sources, the Town shall confer and coordinate with the California Regional Water Quality Control Board, Apple Valley Ranchos Water Company, Golden State Water Company, other water purveyors that serve the Town and its Sphere of Influence.

Policy 1.H The Town shall confer with appropriate water agencies and purveyors, as necessary, to assure adequate review and mitigation of potential impacts of proposed development on local water resources.

Policy 1.I Existing development shall be encouraged to institute water conservation measures, including the reduction in turf areas and increased use of native and drought-tolerant planting materials, as well as the installation of efficient irrigation systems and controllers.

Flooding and Hydrology Element

Goal Protect lives and property from flooding hazards through a comprehensive system of flood control facilities throughout the Town.

Policy 1.A Upgrade the Town's local and regional drainage system through proactive planning and coordination with other responsible agencies.

Policy 1.B Consistent with their functional requirements, major drainage facilities shall be designed to maximize their use as multi-purpose recreational or open space sites. Major drainage facilities include the Mojave River, debris basins, the Apple Valley Dry Lake, and Master Plan flood control channels.

Policy 1.C The Town shall actively cooperate with FEMA regarding amendments to local Flood Insurance Rate Maps, recognizing the importance of redesignation of the 100-year and 500-year flood plains within the Town boundaries as facility improvements are completed.

Policy 1.D All new development within the Town shall be required to incorporate adequate flood mitigation measures, including the adequate siting of structures located within flood plains, grading that prevents adverse drainage impacts to adjacent properties, and on-site retention of runoff.

Policy 1.E Assure that adequate access is maintained during major storm events, and that safe all-weather crossings over drainage facilities and flood control channels are provided where necessary.

Policy 1.F Pursue all credible sources of funding for local and regional drainage improvements needed for adequate flood control protection.

2.11.4 Environmental Setting

Groundwater

The Project area is located within the South Lahontan Hydrologic Region and Upper Mojave River Valley Groundwater Basin. Recharge of the Upper Mojave River Valley Groundwater Basin occurs from direct percolation of precipitation, ephemeral stream flow, infrequent surface flow of the Mojave River, and underflow of the Mojave River into the basin from the southwest. Recharge from the Mojave River accounts for approximately 80 percent of the total basin natural recharge. Other sources of recharge include infiltration of storm runoff from the mountains and recharge from human activities such as irrigation return flows, wastewater discharge, and enhanced recharge with imported water.

The Mojave Basin Area encompasses a total of 1,400 square miles and has an estimated total water storage capacity of nearly 5 million acre-feet. Pursuant to the Sustainable Groundwater Management Act of 2014 (SGMA), the Upper Mojave River Valley Groundwater Basin was named as an adjudicated groundwater basin and is exempt from the SGMA requirement of developing a Groundwater Sustainability Plan (GSP). As part of the adjudication, the Mojave Water Agency (MWA) was appointed Watermaster of the Mojave Basin. For management purposes, the MWA splits the Mojave River watershed (and associated groundwater resources) into five distinct subareas, including: 1) Oeste, 2) Este, 3) Alto, 4) Centro, and 5) Baja. The Project area is in the Alto Subarea which is generally bounded on the south by the non-water-bearing rocks of the San Bernardino Mountains, by the non-water bearing rocks of the San Gabriel Mountains to the west, and by the Helendale Fault on the north-northeast.

As part of the adjudication, Base Annual Production (BAP) rights were assigned to producers that historically used 10 AFY or more, based on historical production. In addition, MWA (Watermaster) assigned a variable Free Production Allowance (FPA) to each subbasin, which is a percentage of BAP set for each subarea for each year. The current FPA for the Alto Subarea is 55 percent of BAP for municipal and industrial and 70 percent of BAP for agriculture.[2] Production Safe Yield (PSY) is also determined for each Subarea within the Mojave Basin Area, which is assumed to equal the average net natural water supply plus the expected return flow from the previous year's water production. In the event the FPA exceeds the estimated PSY by five percent or more of BAP, MWA recommends a reduction in FPA equal to, but not more than, a full five percent of the aggregate Subarea BAP. Any water user that pumps more than their FPA in any year is required to buy "Replacement Water" equal to the amount of production in excess of the FPA.

[2] Liberty Utilities – Apple Valley Final 2020 Urban Water Management Plan, June 2021.

Replacement obligations can be satisfied either by paying the Watermaster to purchase imported water or by temporarily transferring unused FPA within that Subarea from another party to the Judgment.

Domestic Water Supply

Liberty Utilities provides domestic water service to the majority of Apple Valley, including the Planning Area. The Liberty – Apple Valley system has 20,957 service connections and a total supply of 14,979 acre-feet (AF) as of 2020.[3] The system currently sources 100% of its water from the Mojave groundwater basin from 18 deep wells located throughout the community.

Liberty Utilities does not use surface water or purchased imported water supplies to meet its water demands. However, the MWA imports water from the California State Water Project to spread in the Mojave River to help recharge the ground water. There are potential water supply projects and programs that may allow Liberty Utilities to enhance and augment existing water supplies, including water transfer opportunities and recycled water beneficial uses.

Water Demand

Tables 2.9-1 below shows the recent and projected water deliveries (demand) within the entire Liberty – Apple Valley service area.

Table 2.11-1
Total Recent and Projected Water Deliveries in Liberty Utilities Services Area

Use Type	Actual (2020) and Projected Water Use					
	2020	**2025**	**2030**	**2035**	**2040**	**2045**
Single Family	6,486	7,107	7,579	8,077	8,602	9,156
Commercial	1,736	1,837	1,909	1,984	2,064	2,749
Industrial	2	2	2	2	2	2
Institutional/ Governmental	517	547	568	591	615	640
Landscape	588	622	646	672	699	727
Agricultural Irrigation	4,912	4,950	4,950	4,950	4,950	4,950
Losses	710	751	781	812	844	879
Other (Fire Service/Temp Services	28	30	31	32	34	35
TOTAL	**14,979**	**15,846**	**16,466**	**17,120**	**17,810**	**18,538**

Source: Liberty Utilities 2020 Urban Water Management Plan (Table 4-2 and 4-3)

[3] Liberty Utilities – Apple Valley Final 2020 Urban Water Management Plan, June 2021.

Water Quality

Urban development can result in the degradation of water quality. Apple Valley wells are considered most vulnerable to the following activities: high density housing; septic systems - low and high density; parks; irrigated crops; golf courses; sewer collection systems; gas stations; roads and streets; railroads; storm water injection wells; storm drain discharge points; storm water detention facilities; agricultural and irrigation water wells; historic grazing; historic waste dumps and landfills; machine shops; and leaking underground storage tanks.

Water quality is generally good to excellent in the Town of Apple Valley. Exceptions are generally limited to zones of high mineral concentrations, particularly areas with older alluvium where the groundwater receives very little recharge and limited groundwater movement.

The US EPA sets drinking water standards to control the level of contamination in the nation's drinking water. The USEPA and the SWRCB are the agencies responsible for establishing drinking water quality standards in California. According to the annual Liberty Utilities Water Quality Report, there have been no contaminants detected that exceed any federal or state drinking water standards.[4] Currently, water quality does not affect water supply reliability in the Liberty Utilities service area.

Regional Stormwater Management

The San Bernardino Flood Control District ("Flood Control District") implements broad management functions, including flood control planning, construction of drainage improvements for regional flood control facilities, and watershed and watercourse protection related to those facilities. Regional drainage facilities in the Planning Area and vicinity include rivers, major streams and their tributaries, as well as areas of significant sheet flows. The Flood Control District also has power of taxation, bonded indebtedness, land and water rights acquisition, and cooperative partnerships with local, state, and federal agencies. The San Bernardino County Board of Supervisors is the official decision-making body for the Flood Control District

2.11.5 Existing Conditions

Local Stormwater Management

Although the County Flood Control District holds the primary responsibility for managing regional drainage, the Town retains direct responsibility for local drainage management, including facilities in the Planning Area. Areas that are

[4] Annual Water Quality Report: 2021 Consumer Confidence Report on Water Quality for 2020, prepared by Liberty Utilities.

heavily vegetated or constrained by topography, such as alluvial plains and drainage channels, provide a valuable means of reducing runoff, preserving the capacity of downstream facilities, as well as managing local drainage and open space. The drainage within the Town of Apple Valley, including the Planning Area, is defined by the Apple Valley Master Plan of Drainage.

The elevation of the area within the Village Specific Plan is generally 2,940 feet above sea level, and slopes in a northern direction at an average slope of 0.3% to a low point in the Apple Valley Dry Lake region. There are no storm drain catch basins or storm drain lines within the area, largely due to the low slopes and lack of location to drain any storm drain infrastructure to receiving waters within the region. There are two existing trapezoidal channels with an existing capacity of 77 cfs that run parallel to the north and south of Highway 18, terminating near a wash on the northwest corner of Central Road and Highway 18.

Flood Hazards

Flood Hazard Areas are those areas which have a statistical chance of flooding once in 100 years or which have a 1% chance of occurring in any given year. The flood hazard mapping also depicts areas subject to flooding in a 500-year storm event. The Town participates in the National Flood Insurance Program (NFIP) and therefore, flood insurance is available to any property owner in Town. According to the Town's General Plan and Federal Emergency Management Agency (FEMA) flood zone mapping, the Specific Plan Planning Area is designated Zone D (see Exhibit 2.11-1). Zone D identifies areas of potential but undetermined flood hazards, as no analysis of flood hazards has been conducted. Therefore, the extent to which the Specific Plan Planning Area is at risk of flooding is unknown.

Tsunami Hazards

The Town is approximately 75 miles inland from the Pacific Ocean, and at a high elevation, and is not subject to a tsunami.

Seiche Hazards

A major hazard associated with earthquakes is water inundation resulting from a seiche. A seiche is a standing wave in an enclosed or partly enclosed body of water. In the majority of instances, earthquake-induced seiches do not occur close to the epicenter of an earthquake, but hundreds of miles away. This is due to the fact that earthquake shock waves close to the epicenter consist of high-frequency vibrations, while those at much greater distances are of lower frequency (longer wave length), which can enhance the rhythmic movement in a body of water. The biggest seiches develop when the period of ground shaking matches the frequency of oscillation of the water body, and they create a "sloshing" effect on bodies of water. This effect can cause damage to water reservoirs which could breach and cause flooding. Water reservoirs in the

Planning Area are structurally reinforced and baffled to reduce this potential hazard. However, leakage of water reservoirs in the Planning Area can cause flooding in the surrounding area. Currently there are two reservoirs in Apple Valley, including Apple Pond (Apple Valley North) and Jess Lakes (Apple Valley South). However, these reservoirs are not located in or in proximity to the Planning Area.

Water Shortage Contingency Plan

Liberty Utilities' plan for water usage during periods of shortage is designed to incorporate six standard water shortage levels corresponding to progressive ranges from up to a 10, 20, 30, 40, and 50 percent shortage, and greater than a 50 percent shortage.[5] The following table provides a description of the six water shortage levels, which may be triggered by a shortage in Liberty Utilities' water supply source, depending on the severity of the shortage and its anticipated duration.

Table 2.11-2
Liberty Utilities
Water Shortage Contingency Plan Summary

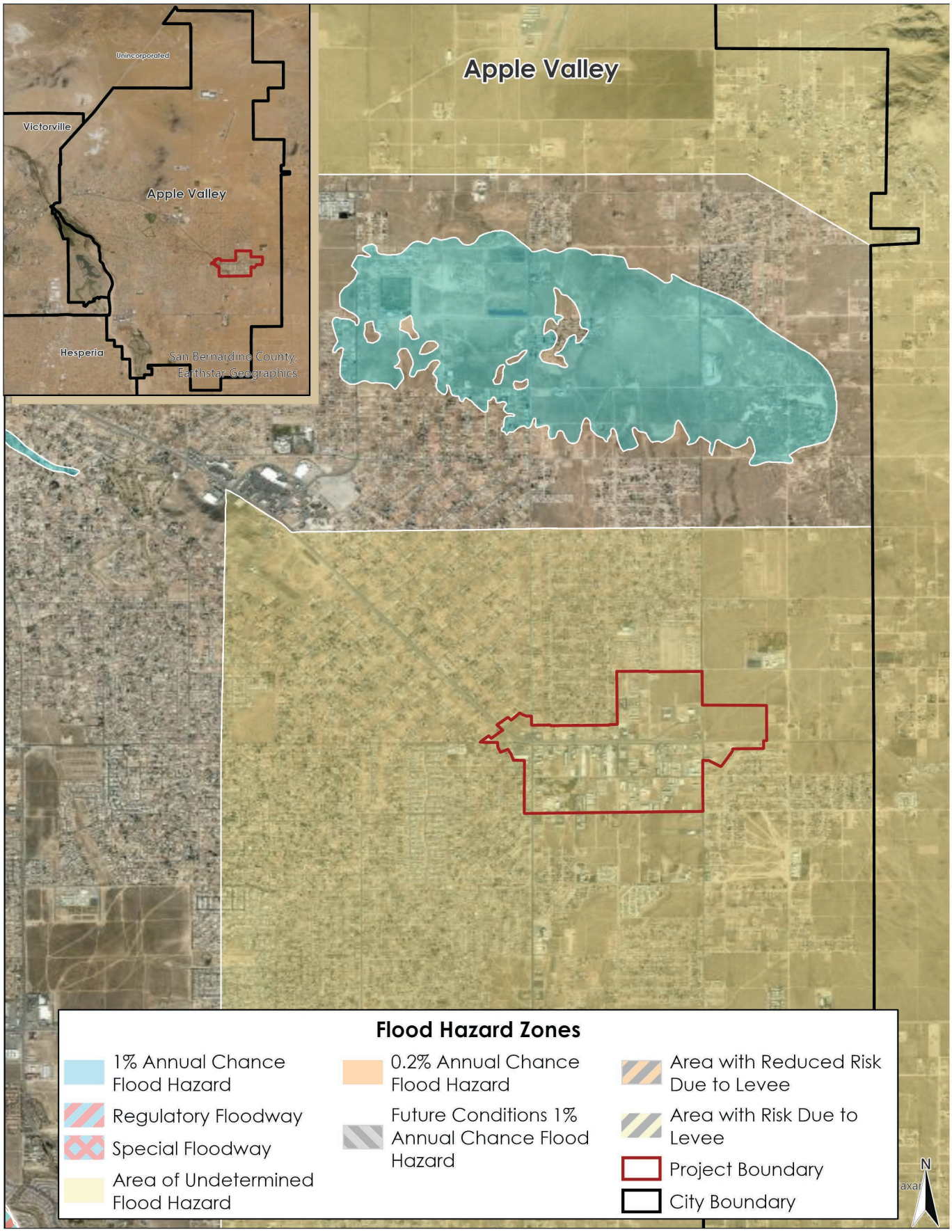
Stage	% Shortage range	Shortage Response Actions
1	Up to 10%	Outdoor irrigation is restricted to no more than three (3) days per week, no more than 10 minutes per day per station, with no watering between 8:00 a.m. and 7:00 p.m. All leaks, breaks, or other malfunction must be repaired within five (5) days of written notification.
2	Up to 20%	In addition to Shortage Level 1; Outdoor irrigation is restricted to no more than two (2) days per week. All leaks, breaks, or other malfunction must be repaired within three (3) days of written notification. All usage in excess of the residential customer's allocation will be charged at the regular Schedule No. 1 quantity rate plus a drought emergency surcharge rate that is calculated from the Tier 1 quantity rate multiplied by a factor of 1.0. All usage for non-residential customers served under Tariff Schedule No. 3 will be charged at the regular Schedule No. 3 quantity rate plus a drought emergency surcharge rate that is calculated as the quantity rate multiplied by a factor of 0.15.
3	Up to 30%	In addition to Shortage Level 2, Liberty Utilities – Apple Valley may add actions if conditions warrant.

[5] Liberty Utilities – Apple Valley Final 2020 Urban Water Management Plan, June 2021

Table 2.11-2
Liberty Utilities
Water Shortage Contingency Plan Summary

Stage	% Shortage range	Shortage Response Actions
4	Up to 40%	In addition to Shortage Level 3; All usage in excess of the residential customer's allocation will be charged at the regular Schedule No. 1 quantity rate plus a drought emergency surcharge rate that is calculated from the Tier 1 quantity rate multiplied by a factor of 1.5. All usage for non-residential customers served under Tariff Schedule No. 3 will be charged at the regular Schedule No. 3 quantity rate plus a drought emergency surcharge rate that is calculated as the quantity rate multiplied by a factor of 0.30.
5	Up to 50%	In addition to Shortage Level 4, Liberty Utilities – Apple Valley may add actions if conditions warrant.
6	>50%	In addition to Shortage Level 5; All usage in excess of residential customer's allocation will be charged at the regular Schedule No.1 quantity rate plus a drought emergency surcharge rate that is calculated from the Tier 1 quantity rate multiplied by a factor of 2.0. All usage for non-residential customers served under Tariff Schedule No. 3 will be charged at the regular Schedule No. 3 quantity rate plus a drought emergency surcharge rate that is calculated as the quantity rate multiplied by a factor of 0.45

* Source: 2020 UWMP, Table 8-1.



Source: FEMA.gov, 2021

11.18.21

TERRA NOVA®
PLANNING & RESEARCH, INC.

Village Specific Plan
State Highway 18
FEMA Flood Map

Town of Apple Valley

Exhibit
2.11-1

2.11.6 Project Impacts

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.

A project would normally have a significant impact on surface water quality if discharges associated with its development would create pollution, contamination, or nuisance as defined in Section 13050 of the California Water Code (CWC) or would cause regulatory standards to be violated, as defined in the applicable National Pollution Discharge Elimination System (NPDES) stormwater permit.

New development or redevelopment facilitated by the Specific Plan will be required to connect to the sanitary sewer and domestic water systems. Liberty Utilities will provide water service, and the Victor Valley Wastewater Reclamation Authority will provide sanitary sewage treatment for the planning. Both these agencies are required to comply with the requirements of the State Regional Water Quality Control Board relating to water quality standards and wastewater discharge requirements.

Future development will also utilize existing Town drainage facilities. The reconstruction of the existing frontage roads along Highway 18 would result in the replacement and/or reconstruction of the existing trapezoid channels. Two alternatives are presented in the Specific Plan for the recommended drainage improvements along the Highway 18 corridor from Navajo Road to Central Road, including 1) drainage improvements for the Highway 18 corridor, and 2) upstream improvements, such as detentions basins to reduce draining flows into the area.

Development projects with a disturbance area of greater than 1 acre will be required to obtain coverage under the SWRCB Construction General Permit. The Construction General Permit requires the development and implementation of a stormwater pollution prevention plan (SWPPP), which would include and specify water quality best management practices (BMPs) designed to prevent pollutants from contacting stormwater and keep all products of erosion from moving off site into receiving waters. BMPs typically include minimizing impervious areas, maximizing permeability, minimizing directly connected impervious areas, incorporating trees and landscaping, and conserving natural areas.

Furthermore, the SWRCB has designated the Town of Apple Valley as a Traditional Small MS4. As part of Phase II regulations promulgated by the U.S. EPA, the SWRCB adopted the Small MS4 Permit, which requires MS4s serving populations of 100,000 people or less to develop and implement a stormwater management plan with the goal of reducing the discharge of pollutants to the maximum extent possible.

Future projects (that create or replace more than 5,000 square feet of impervious surfaces) seeking approvals from the Town are required to integrate source control BMPs and low impact development (LID) designs into the proposed Project to the maximum extent feasible to reduce the potential for pollutants to enter stormwater runoff.

The preparation of Water Quality Management Plans will also be required of any development proposal in excess of 5,000 square feet. WQMPs will identify permanent site design, source control, and treatment control BMPs that would be implemented as part of the project, including maintenance responsibilities and funding sources, and would be signed as a notarized agreement between the Town and the property owner to provide a long-term commitment to its implementation. Preparation and implementation of a WQMP for new development and redevelopment projects satisfies MS4 Permit requirements and allows the Town to comply with the water quality standards for storm water runoff.

Summary

The Town and Regional Water Quality Control Board review would ensure that construction and operational best management practices (BMPs) satisfy local, state, and federal standards. New construction would be required to connect to the existing water and sewer system at the time of development in compliance with applicable standards that minimize impacts to regional groundwater quality. The implementation of existing regulations and guidelines will ensure that existing and future development in the Planning Area will not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. Impacts are expected to be less than significant.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

It is anticipated that water demand from new development facilitated by the Specific Plan will be lower on a unit basis (square foot and dwelling units) than current development, much of which has been built before stricter water use regulations were implemented. The EIR analyzes existing supply compared to existing and future water demand at buildout of the proposed Specific Plan. Existing and potential development area is exclusive of streets and major drainages.

Table 2.11-3
Village Specific Plan Estimated Water Demand at Buildout

Land Use	Annual Water Demand Factor	Existing Development	Existing Water Demand (acre feet per year, or AFY)	Future Development	Additional Water Demand (AFY)	Total Water Demand (AFY) at Specific Plan Buildout
Residential	80,784 gallons per unit	289 units	71.65	682 units	169.08	240.73
Commercial /Service /Office /Public	365,000 gallons per acre	220.2 acres	246.66	238.3 acres	266.94	513.60
Open Space (park)	1,922,302.8 gallons per acre	18.8 acres	110.91	0 acres	0	110.91
Total	-	-	**429.22**	-	**436.02**	**865.24**

Based on Apple Valley Village Specific Plan Existing and Proposed Land Uses Tables.

As indicated in the above table, full buildout of the proposed Specific Plan would require 865.24 AF of water annually, which represents an additional 436.02 AF, or a 101.6% increase from the estimated existing demand (429.22 AF). The net Project water demand of 436.02 AFY represents approximately 2.9% of the 2020 water supply (14,979 AFY) of Liberty Utilities, and less than 2.4% of the 2045 water supply (18,538 AFY) for 2040.[6] According to Liberty's 2020 UWMP, available water supplies are sufficient to meet the anticipated demand for 2020 through 2040 during normal, single dry, and multiple dry water years.

In addition, the proposed Specific Plan includes guidelines that seek to reduce water demand and protect water resources in the Planning Area. Chapter 5 Design Guidelines provides guidance and detailed requirements for landscaping using native drought-tolerant plants and efficient irrigation systems. Future development will also be required to install water-efficient appliances in buildings per the latest California Building Code (Title 20 – Appliance Efficiency Regulations).

In summary, implementation of the proposed Specific Plan would result in increased demand for domestic water as the population increases and development occurs in the Planning Area. The Town will work with Liberty Utilities to assure sufficient water would be available in the future during normal, dry and multiple dry years. Due to sufficient groundwater resources and Specific Plan

[6] 14,979 AFY for 2020 and 18,538 AFY for 2045 are provided in the Liberty Utilities – Apple Valley 2020 Urban Water Management Plan Final Draft, June 2021.

guidelines and existing regulations to conserve water resources, buildout of the proposed Specific Plan would result in less than significant impacts related to water resources; no mitigation is required.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i) result in substantial erosion or siltation on- or off-site;

The Town of Apple Valley and vicinity are subject to erosion, runoff, and sedimentation due to the extreme topographic relief between the valley and the surrounding hills and mountains. Human activities such as agricultural or land development accelerate natural erosion by disturbing the ground surface, which can expose sediment deposits to wind and water transport, alter natural drainage patterns, and increase the potential for erosion and sedimentation.

The Specific Plan will facilitate development projects that will result in grading, excavation, and other modifications to the ground surface, and have the potential to result in erosion and/or siltation on- and off-site. However, the Town requires projects to implement effective erosion control measures. All future projects will be required to implement these measures, including BMPs for both construction and operation of project sites. These BMPs are well established regulations that have been demonstrated to effectively mitigate soil erosion impacts, including hay bales, bioswales and other techniques utilized in projects in Town currently.

The Specific Plan proposes changes to the existing drainage system to facilitate major improvements along Highway 18. However, compliance with federal, state, regional and local regulations and policies at the individual project level would minimize the potential for erosion and siltation in the Planning Area. With implementation of these standard requirements, this impact would be reduced to less than significant levels.

ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;

Local modification to geological conditions, such as an increase in impermeable surfaces, can result in geological changes elsewhere, such as an increase in the potential for flooding and sedimentation downstream.

As noted, the proposed Specific Plan includes development standards and guidelines that are designed to minimize the amount of additional stormwater

runoff from future development. These include requirements for desert/drought-tolerant landscaping and associated opportunities for on-site stormwater retention, and the construction of on-site retention/detention facilities sufficient to contain the increase in generated runoff on site.

In addition, the Specific Plan includes a plan with two options for the conveyance of runoff through the Planning Area. Both options include improvements to the current drainage channels on the north and south side of Highway 18 (see analysis in subsection iii) below). As provided in the Specific Plan, the first option would include double box culverts, while the second would include single box culverts and improvements upstream, outside of the Planning Area. Both options have been demonstrated in the drainage analysis for the Specific Plan to be sufficient to convey regional flows through the Planning Area. As a result of these planned improvements, impacts from surface runoff through the Planning Area will be less than significant.

Therefore, based on established and new standards and guidelines set forth in the proposed Specific Plan, the Plan's implementation will not substantially increase the rate or amount of surface runoff such that it would result in flooding on- or off-site. Therefore, based on established and new standards and guidelines set forth in the proposed Specific Plan, the Plan's implementation will not substantially increase the rate or amount of surface runoff such that would result in flooding on- or off-site.

iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

Implementation of the proposed Project will result in new and/or modified development and improvements that could increase stormwater runoff. The reconstruction of the existing frontage roads along Highway 18 proposed in the Specific Plan would require the removal or reconstruction of the two existing trapezoidal channels along the north and south side of Highway 18. These channels end near a wash on the northwest corner of Central Road and Highway 18. Per the project-specific infrastructure plan contained in the Specific Plan, two alternatives are proposed for the drainage improvements along the Highway 18 corridor from Navajo Road to Central Road:

Alternative 1: The recommended drainage improvements would be to replace the existing channels with larger capacity box culverts in a similar layout to the existing channels. According to the project-specific infrastructure plan Caltrans requires the 25 year storm event to be conveyed under the Highway, so a preliminary box culvert size for an underground storm drain along Highway 18 to

replace the existing drainage ditches, is recommended to be a double 6 foot by 6 foot box culvert. Depth of storm drains will need to be as shallow as possible due to area's mild slopes. Additional catch basins at intersections of local flooding could enhance the existing system. At its outlet, a bio swale and combination basin and/or drywells would provide for some cleanup of the storm water and mitigate some of the volume.

Alternative 2: This alternative would be to provide upstream improvements, such as detention basins to reduce the drainage flows to the Village area. With the reduced drainage flows, the underground storm drain along Highway 18 to replace the existing drainage ditches, would consist of a 54-inch pipe. Currently, the drainage devices upstream are too small to have any effect on storm flows. A few drywells are located in the area upstream to the Village, however drywells are primarily for nuisance flows. Any capacity of storm water captured by drywells would only amount to approximately 0.02% of the storm flows. The construction of upstream basins would reduce the storm flows. There are several areas in and out of the Planning Area that are potential locations for a new basin. The biggest drawback to the upstream basins alternative is the sizable areas of the basins needed to provide mitigation. One-hundred-year storm event mitigation could require a total of 110 to 180 acres. The locations and sizing of the proposed detention basins will require additional analysis.

As discussed under threshold a), above, future retention basins will be required to store the 100-yr storm volume in accordance with Town standards and regulations. Storm drain improvements or replacements will be subject to the guidelines set forth in the Apple Valley Master Plan of Drainage (1989). Any encroachments on the San Bernardino County Flood Control District (SBCFCD) right-of-way or facilities, including but not limited to access, fencing and grading, utility crossings, landscaping, new and/or alteration to drainage connections will require a permit from the SBCFCD prior to start of construction. All future projects will require project level environmental review at which time impacts, the necessity for permits, and mitigation measures would be determined prior to approval.

In addition, the General Plan includes several policies and programs that address continued protection from stormwater exceedances and pollution. Policy 1.D of the Flooding and Hydrology Element requires all new development to incorporate adequate flood mitigation measures, such as grading that prevents adverse drainage impacts to adjacent properties, on-site retention of runoff, and the siting and sizing of adequate structures located within flood plains. Also, Policy 1.A of the Flooding and Hydrology Element supports upgrading the Town's local and regional drainage system through proactive planning and coordination with other responsible agencies.

With adherence to, and implementation of existing General Plan policies and implementation programs, impacts related to the generation of additional runoff, including additional sources of polluted runoff, will be less than significant. Also, said policies and programs also ensure that the capacity of existing and planned drainage facilities will not be exceeded. The Town engineer shall ensure the design of the selected stormwater drainage alternative has adequate capacity to contain current and future runoff resulting from buildout of the Planning Area. Therefore, impacts from the volumes and quality of future runoff will be less than significant. No additional mitigation is required.

iv) impede or redirect flood flows?

As discussed under c)iii, above, the proposed Project may result in major improvements to existing drainage facilities in the Planning Area that would replace the existing channels with larger capacity box culverts or stormwater drainpipes, and employ other means to reduce flooding, including drywells and retention basins. These improvements are meant to improve existing drainage patterns/facilities and will not significantly alter drainage patterns in the Planning Area.

The General Plan includes several policies and programs that address continued protection from stormwater exceedances and pollution (Policy 1.D Flooding and Hydrology) and supports upgrading the Town's local and regional drainage system through proactive planning (Policy 1.A Flooding and Hydrology). In addition, the Town requires thoughtful and effective stormwater management plans that retain runoff onsite, effectively direct flood flows, and include other improvements, as necessary, to ensure that the Town's system of surface and subsurface runoff conveyance is properly constructed and maintained. Adherence to development standards in the proposed Specific Plan, policies in the General Plan, and other regulatory requirements would ensure that no significant impact regarding the redirection or impediment of flood flows would occur.

d) In a flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

The Specific Plan Planning Area is designated Zone D on Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM). Zone D identifies areas of potential but undetermined flood hazards, as no analysis of flood hazards has been conducted. Therefore, the extent to which the Specific Plan Planning Area is at risk of flooding is unknown.

There is no risk of inundation resulting from dam failure as the Planning Area is outside of any dam inundation areas. The Cedar Springs and Mojave Dams in the San Bernardino National Forest southwest of Apple Valley have performed well during seismic events, and neither has experienced failure. Any potential release of floodwaters from the dams is expected to be confined to the Mojave Riverbed (4± miles west of the Planning Area). There is no risk of inundation resulting from seiche because no above-ground water reservoirs or other large bodies of water are in or near the Planning Area. There is no risk of inundation from tsunami because the Planning Area is inland and well outside of any tsunami zones.

The proposed Project will facilitate the development of new buildings and improvements that could use, store, or otherwise be involved with potentially hazardous materials. These facilities would be required to comply with applicable safety regulations and best practices to minimize the release of pollutants during potential flood events. Adherence to development standards in the proposed Specific Plan and other regulatory requirements would ensure that no significant impact regarding release of pollutants due to inundation would occur.

2.11.7 Mitigation Measures

No mitigation measures are required. As noted above, compliance with Town and state regulatory requirements will serve to effectively avoid, minimize and otherwise mitigate potentially significant impacts to water resources or water quality, or from existing and future flood hazards that could result from implementation of the Specific Plan.

2.11.8 Significance After Mitigation

With implementation of existing regulatory processes and procedures, the proposed Specific Plan would not result in any significant impacts to hydrological conditions, water supplies or water quality.

2.11.9 Cumulative Impacts

The geographical context for the consideration of cumulative impacts associated with hydrology and water resources and quality is the Mojave River Basin/watershed, in which the Town is located and from which it derives its water resources. Future development and redevelopment pursuant to the proposed Specific Plan will not expose human lives or property to flooding hazards. Existing regulatory processes and procedures and the proposed Specific Plan's standards and requirements will further serve to avoid, minimize and mitigate these potential hazards. Implementation of the Specific Plan will not result in cumulatively considerable new or ongoing flooding threats or hazards.

The implementation of the proposed Specific Plan will facilitate additional increases in demand for water resources. The Mojave Water Agency and its partners, including Liberty Utilities, closely manage the region's groundwater resources and have made provision for long-term water supplies that will be available to serve the Planning Area and surrounding communities well into the future. The proposed Project serves to avoid the potential adverse effects of existing and future development on theses finite resources. Implementation of the Specific Plan will not result in cumulatively considerable new or ongoing threats to local or regional water supplies.

The implementation of the proposed Project may generate new sources for urban pollutants, which could impact surface water quality and groundwater resources if not properly managed. Future development and redevelopment within the watershed will increase impermeable surfaces and decrease water percolation areas. Existing and future construction activities are regulated under the NPDES and Construction General Permit for the State. SWPPPs are required for construction activities in order to reduce pollutants in storm water during temporary ground-disturbing activities.

The proposed Specific Plan will require the Town to continue to participate in regional planning efforts to effectively manage existing and future urban development and to avoid, minimize and mitigate the potential adverse effects of contaminated runoff, erosion, flooding, and other possible sources of water pollution. The proposed Specific Plan serves to avoid the potential adverse effects of existing and future development on local and regional water quality. Implementation of the Specific Plan will not result in cumulatively considerable new or ongoing threats to local or regional water quality.

2.12 Land Use and Planning

2.12.1 Introduction

The Land Use and Planning section describes existing land uses in the Planning Area and its surroundings and evaluates potential Project impacts on those lands. The Project is analyzed in terms of consistency with General Plan and other land use planning documents. Land use regulations affecting the Project are described, as are the Project's appropriateness, suitability, and compatibility with existing and planned land uses in the vicinity.

2.12.2 Thresholds of Significance

The thresholds of significance analyzed herein have been taken from Appendix G of the State CEQA Guidelines. For purposes of this EIR, the proposed Project would have a significant effect on existing and planned land use if it were to:

a) Physically divide an established community.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

2.12.3 Regulatory Framework

Federal

There are no federal regulations that affect land use in the Planning Area.

State

California Government Code

California Government Code §65450-§65453 permits the adoption and administration of Specific Plans as implementation tools for elements contained within the local General Plan. The Apple Valley General Plan provides guidance for long-term growth and development in the Town through comprehensive plans for future development. Consistency with the General Plan is achieved when the various land uses within the Specific Plan are compatible with the goals, policies, and general pattern of lands uses contained in the General Plan.

Regional/Local

Apple Valley General Plan

The Apple Valley General Plan (2009) establishes the long-term vision for the Town. The General Plan Land Use Element sets forth land use designations, mapping, goals, policies, and programs. The following goals, policies, and programs are applicable to the proposed Project.

Goal 2 A well planned, orderly development pattern that enhances community values and assures development of adequate infrastructure.

Policy 2.C The Town shall require quality design in all development and redevelopment proposals and shall encourage the enhancement of existing development.

Goal 3 Minimal impact to existing neighborhoods.

Policy 3.B Specific Plans shall be required for development proposals that include one or more of the following:

a. A combination of residential, recreational, commercial and/or industrial land use designations (except in the Mixed Use land use designation); or
b. Variations from development standards in the applicable zone.

Goal 5 A broad range of residential product types to serve all members of the community.

Policy 5.E Mixed use projects which integrate residential land uses and commercial or light industrial land uses are encouraged in The Village, on major roadways, and in close proximity to employment centers.

Policy 5.H Encourage rehabilitation and conversion of neighborhoods that are threatened by blighting influences.

Goal 6 Commercial development shall strengthen the local economy and enhance the quality of life.

Policy 6.B The Town shall promote commercial and industrial development that are capable of strengthening the local economy and enhancing the quality of life of Town residents.

Policy 6.C The Town shall encourage the development and/or redevelopment of The Village.

Program 6.C.1
Public facilities in The Village should be designed to include consolidated parking areas, special roadway standards, and prioritized flood control improvements.

Program 6.C.2
The Redevelopment Agency shall consider land purchases or other incentives which allow for the consolidation of smaller, underutilized sites in The Village into larger and more useable parcels, to be marketed to the development community.

Program 6.C.3
Future development and redevelopment of The Village shall be governed by a Specific Plan.

Goal 7 Industrial development which supports a broad-based economy and encourages the jobs-housing balance.

Policy 7.B Service commercial land uses will be encouraged to locate in The Village.

Apple Valley Development Code
The Apple Valley Development Code implements the goals and objectives of the General Plan by regulating the location and use of structures and land through various zoning designations. It is intended to assure orderly and beneficial development, reduce hazards resulting from the inappropriate location or use of improvements, and maintain the Town's distinctive character. The Zoning Map assigns zoning designations to all parcels in the Town. It is consistent with the General Plan and directly corresponds to General Plan land use designations.

Chapter 9.03 of the Development Code establishes provisions and procedures for Specific Plans, including requirements that a Specific Plan be consistent with the General Plan.

2.12.4 Environmental Setting

The Town of Apple Valley is generally a low-density residential community in a rural, semi-rural, and suburban setting. Its physical development has been influenced by natural landforms like the Mojave River, which runs southeast to northwest along the Town's western boundary, and mountains and hills in the north and northeast.

The densest development has occurred along arterial roadways, including the northwest-southeast trending Highway 18. Development generally grows sparser with distance from Highway 18 and other major roads. Major commercial centers include the Village, Civic Center complex area, and the westerly portion of Bear Valley Road. Residential development is concentrated in central and southern Apple Valley, and residential densities range from very low (1 dwelling unit per 5 acres or more) to moderately high (20 dwelling units per acre). The northern portion of Town, generally north of Waalew Road, is largely undeveloped but includes the Apple Valley Airport, and land envisioned for future industrial and commercial development.

Surrounding lands include urban development in the City of Victorville to the west, unincorporated community of Spring Valley Lake to the west, and City of Hesperia to the southwest. The Town is surrounded by unincorporated County land to the north, east, and south, which is undeveloped or sparsely developed with low and very low-density residential development and ranchos.

2.12.5 Existing Conditions

The Project Planning Area includes 651± acres along and adjacent to a 1.5-mile segment of Highway 18. As shown in Table 1-2, approximately 378± acres (58%) are developed, and 273± acres (42%) are vacant. Existing land uses include a mix of retail and service-oriented businesses, mobile home parks and multi-family dwelling units, and public and quasi-public facilities. There are currently approximately 289 dwelling units and 1,823,380 square feet of commercial and public facility development in the Planning Area. Vacant parcels are concentrated in the north, northeast, and south.

Highway 18 Frontage

The Highway 18 frontage in the Planning Area includes the Village commercial district between Navajo and Central Roads, and additional parcels to the east and west. Commercial development is generally more extensive on the north side, in part due to deeper lot configurations. Nearly all buildings are single-story structures, and many are free-standing units built in the post-World War II era, each with its own driveway and parking lot. Some buildings are vacant or appear to have been abandoned. Newer development, including a pharmacy and fast-food restaurant, are to the west at Navajo Road. Undeveloped parcels are at the east and west ends. Current land uses include:

On Highway 18

Land on both sides of Highway 18 is composed of commercial development serving the local market.

- Commercial
  - Retail (gas stations, feed and seed suppliers, furniture stores, antique dealers, thrift shops, auto parts stores, pharmacies)
  - Service (banks, beauty salons, plumbing companies, real estate agencies, dental practices, architectural and law firms)
  - Restaurant (fast-food, sit-down)
- Residential
  - Apple Valley Mobile Home Lodge

North of Highway 18

Land north of Highway 18 is partially developed. Vacant parcels are concentrated to the north and northeast. Current land uses include:

- Service Commercial
  - Light industrial (wood shops, towing companies, self-storage units)
- Residential
  - Pioneer Mobile Home Park
  - Casa Colina, a long-term residential treatment facility
  - Multi-family and a few single-family dwelling units
- Public/Quasi-Public Facilities
  - Fire Station No. 1
  - Mojave Water Agency offices
  - San Bernardino County Transitional Services offices

South of Highway 18

Land south of Highway 18 is more broadly developed with service commercial, residential, and community facilities. Current land uses include:

- Service Commercial
  - Light industrial (self-storage units, auto salvage, metal works, tool and machinery workshops, vehicle storage, maintenance yards)
- Residential
  - Multi-family and a few single-family dwelling units
  - Apple Valley Mobile Home Lodge
  - Apple Valley Ranchos Mobile Home Park
- Pubic/Quasi-Public Facilities
  - James A. Woody Community Center and Park
  - Michael Martin Gymnasium
  - Municipal Animal Shelter
  - Municipal Public Works Corporate Yard
  - Municipal Household Hazardous Waste facility
  - Liberty Utilities offices and yard
  - U.S. Post Office

Vacant Land

The Planning Area includes 273± acres of vacant land. Vacant parcels are scattered throughout, with the largest generally north of Highway 18 and east of Valley Drive. Additional vacant parcels are clustered along Highway 18 west of Navajo Road, and along Powhatan and Ottawa Roads in the southern Planning Area.

Surrounding Land

Land surrounding the Planning Area includes:

- North: largely built out with single-family and equestrian residential dwelling units (1 du/0.4 to 0.9 net acre).

- East: northeast and east are mostly undeveloped with a few scattered single-family dwellings. Land is designated for Single-Family Residential, General Commercial, and Regional Commercial uses. The southeast is built out with single-family (1 du/0.4 to 0.9 net acre) and multi-family (2-20 du/net ac) dwellings and a few vacant parcels designated for the same.

- South: a few single- and multi-family units, Apple Valley Mobile Home Park, and a church; mostly undeveloped and designated for Service Commercial and Multi-Family Residential uses.

- West: built out with multi-family (2-20 du/net ac), equestrian residential (1 du/0.4 to 0.9 net acre), and estate residential (1 du/1 to 2.5 gross acres) dwelling units

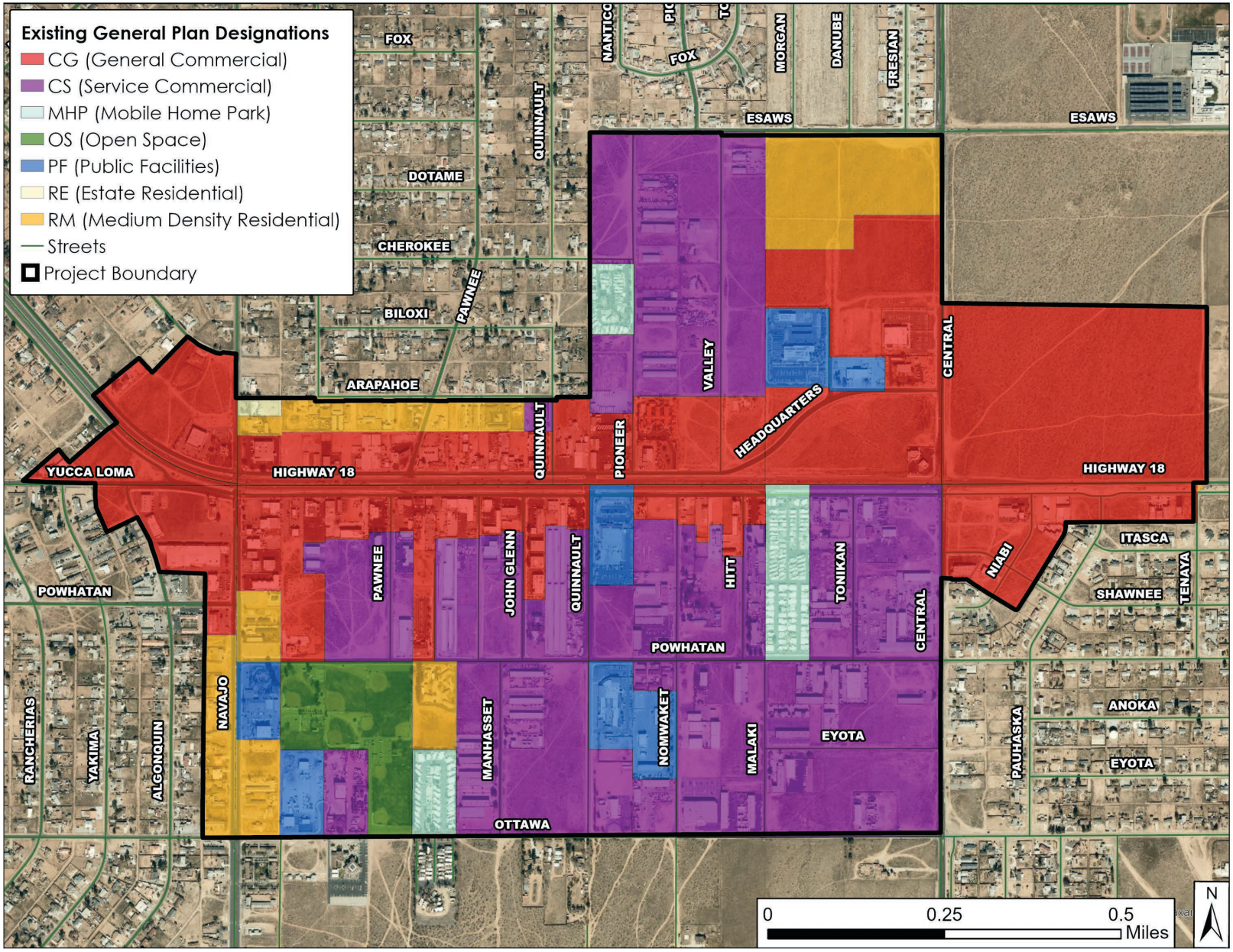
Existing General Plan Designations

The Apple Valley General Plan assigns seven (7) land use designations to the Project Planning Area on a parcel-by-parcel basis. See Table 2.12-1 and Exhibit 2.12-1. Residential densities range from very low (1 du/1 to 2.5 gross acres) to moderately high (20 du/ac). Commercial uses include general and service commercial.

Table 2.12-1
Existing General Plan Designations in the Planning Area

General Plan Designation	Purpose
Residential	
Mobile Home Park (MHP, 5-15 du/ac)	Applies to mobile home parks and mobile home subdivisions.
Medium Density Residential (R-M, 4-20 du/ac)	Promotes a wide range of higher density residential units, including single-family attached and multi-family units such as condominiums, townhomes, and apartments. Projects restricted to senior citizens and providing various levels of care are also appropriate. Should be a buffer between less intense residential designations and commercial or industrial designations, or major roadways.
Estate Residential (R-E, 1 du/1 to 2.5 gross ac)	Allows detached single-family detached homes on 1 to 2.5 gross acres. Access on local roads in new subdivisions should be paved. Multi-use trails should be integrated into all new projects, as appropriate. Animal-keeping for personal use, ranching activities, and home occupations are appropriate. May be appropriate for bed and breakfast and similar use, with approval of a conditional use permit.
Commercial	
General Commercial (C-G)	Allows a broad range of retail uses, as well as office and service land uses. Typical uses serve the needs of residents and businesses in a shopping center setting. General retail stores, including all types of consumer goods, furniture and appliance sales, auto repair, and sales are permitted. Restaurants, both sit-down and fast food, gasoline services, and general office (secondary or retail uses) are permitted. There is no minimum size for project sites, but assemblage of smaller parcels is encouraged.
Service Commercial (C-S)	Assigned to lands in The Village. Intended to serve as a transition designation allowing commercial and industrial land uses on a smaller scale. Necessitates flexibility in development standards due to existing development and infrastructure constraints. Land uses include vehicle sales and service; lumber, home repair and building supply; general retail; warehousing; manufacturing uses completely contains within an enclosed structure. There is no minimum size for project sites, but assemblage of smaller parcels is encouraged.
Public Facility	
Public Facilities (P-F)	Assigned to public and quasi-public land uses, including Town Hall and other Town facilities; fire stations; schools; facilities of the County, State, and federal government; water and sewer district; and utility substations and facilities. There is no minimum size.
Open Space	
Open Space (O-S)	Applied to natural and active open space areas, including lands owned by Town, County, State, and federal agencies for the purposes of recreation or conservation, and golf courses, parks, or other recreational facilities.

Source: Apple Valley General Plan 2009.



Source: Terra Nova Planning and Research, Inc.; ESRI 2021

11.04.21

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Village Specific Plan
Existing General Plan Designations

Exhibit
2.12-1

Town of Apple Valley

Table 2.12-2 describes the buildout potential of the Planning Area under the current General Plan. Approximately 68% of the Planning Area is designated for commercial uses, 11% is designated for residential uses, 4% is designated for public facilities, and 3% is designated for open space. With continued implementation of the General Plan, the Planning Area could accommodate up to 500 additional R-M dwelling units and 5,413,585 more square feet of commercial development.

Table 2.12-2
Existing General Plan Land Use Buildout

	Acres			Dwelling Units/Sq. Ft.		
General Plan Designation	**Developed Acres**	**Vacant Acres**	**Total Acres**	**Existing Dwelling Units[1]**	**Potential Dwelling Units[3]**	**Total Units at buildout**
Residential						
Mobile Home Park (MHP, 5-15 du/ac)	17.5	0.0	17.5	173	0	173
Medium Density Residential (R-M, 4-20 du/ac)	25.2	25.0	50.2	115	500	615
Estate Residential (R-E, 1 du/1 to 2.5 gross ac)	1.0	0.0	1.0	1	0	1
Subtotal:	43.7	25.0	68.7	289	500	789
Commercial				**Existing Sq. Ft.[2]**	**Potential Sq. Ft.[4]**	**Total Sq. Ft. at buildout**
General Commercial (C-G)	84.2	130.2	214.4	662,098.0	2,835,809.6	3,497,907.6
Service Commercial (C-S)	107.0	118.4	225.3	975,576.0	2,577,775.8	3,553,351.8
Subtotal:	191.2	248.6	439.7	1,637,674.0	5,413,585.3	7,051,259.3
Public Facility						
Public Facility (P-F)	29.1	0.0	29.1	185,706	0	185,706
Subtotal:	29.1	0.0	29.1	185,706	0	185,706
Open Space						
Open Space (O-S)	18.8	0.0	18.8	---	---	---
Subtotal:	18.8	0.0	18.8	---	---	---
Land Use Total:	282.8	273.6	556.3	---	---	---
Street Right-of-Way Total:	94.8	0.0	94.8	---	---	---
TOTAL:	**377.6**	**273.6**	**651.2**	**1,823,380**	**5,413,585.3**	**7,236,965.3**

[1] estimate based on Google Earth and online property information
[2] estimate based on Microsoft Maps US Building Footprints dataset
[3] future R-M development potential assumes maximum density of 20 DU/AC
[4] future commercial development potential assumes maximum allowed Floor to Area Ratio (FAR) of 0.5
Source: Apple Valley General Plan GIS database

Existing Zoning Designations

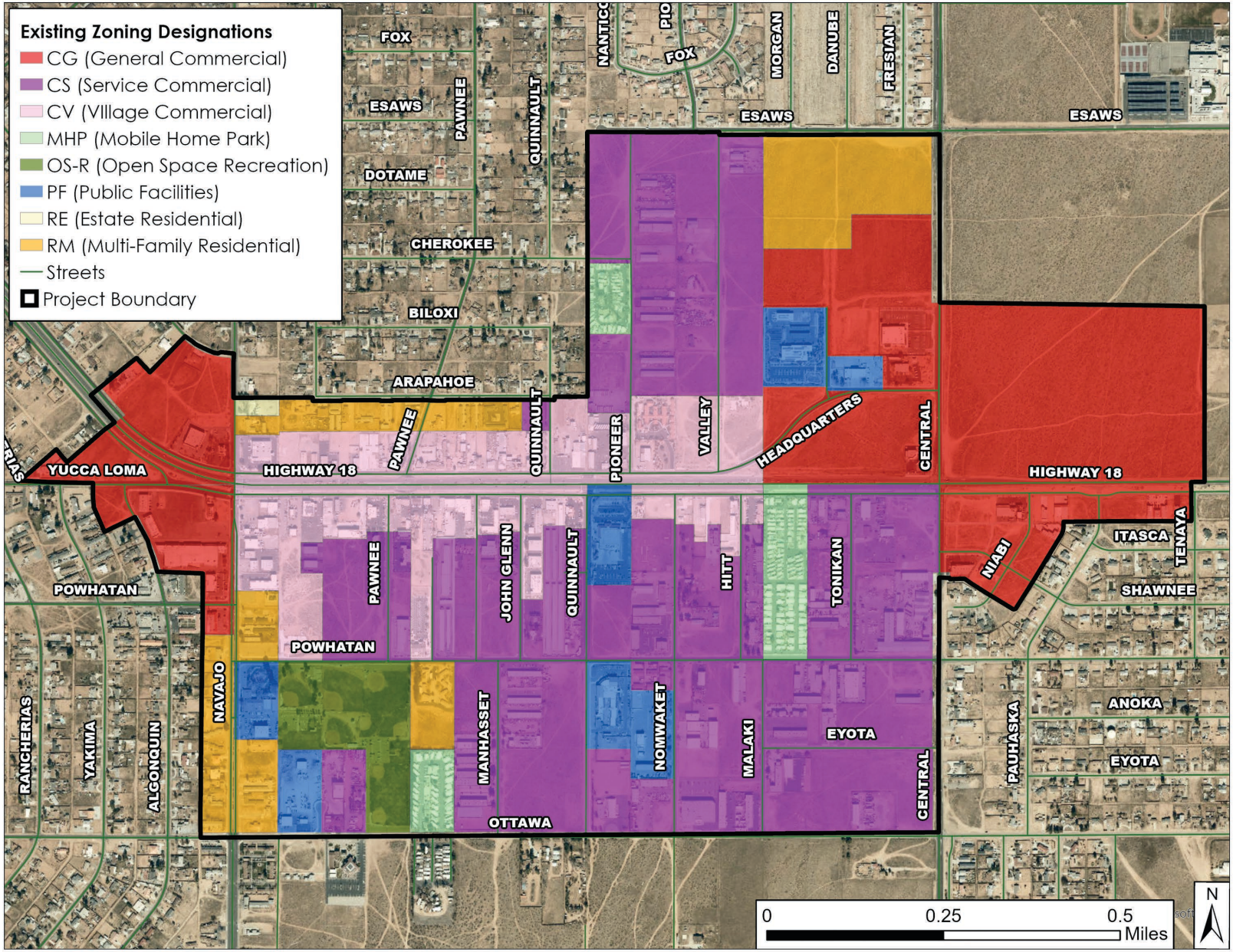
The Development Code and Zoning Map implement the General Plan. They assign eight (8) zoning designations to the Project Planning Area, as described in Table 2.12-3 and shown on Exhibit 2.12-2.

The zoning designations are aligned with and nearly identical to the General Plan designations described above. Like the General Plan, zoning designations are assigned on a parcel basis. The only notable difference is that land designated C-G in the General Plan is assigned one of two zoning designations based on location: General Commercial (C-G) or Village Commercial (C-V). C-V is assigned to the Village core (Highway 18 between Navajo Road on the west and the Apple Valley Mobile Homes Lodge on the east). C-G is assigned outside of the Village core. Maximum floor area ratio (FAR) is 0.5 for each of the commercial categories.

Table 2.12-3
Existing Zoning Designations in the Planning Area

Zoning Designation	Purpose
Residential	
Mobile Home Park (MHP, 5-15 du/ac)	Applies to mobile home parks that existed upon completion of the General Plan. New mobile home parks require a change of zone to assign this designation to a project.
Multi-Family Residential (R-M, 4-20 du/ac)	Provides an area for higher density housing types, including single-family attached and multi-family homes such as duplexes, condominiums, townhouses, apartments, and senior housing developments.
Estate Residential (R-E, 1 du/1 to 2.5 gross ac)	Provides for single-family residential subdivisions with a rural atmosphere and the opportunity for custom homes which will allow equestrian uses and animal keeping. Mut be served by infrastructure and utilities.
Commercial	
General Commercial (C-G) (FAR 0.5)	Intended for the development of a full range of retail stores, offices, and personal and business services, including shopping centers along major highways. A maximum floor area ratio (F.A.R.) of 0.5 is permitted.
Service Commercial (C-S) (FAR 0.5)	Intended to provide an area in which certain light industrial uses may be combined with those commercial activities which are frequently not compatible with conventional retail, service, and office uses. A maximum floor area ratio (F.A.R.) of 0.5 is permitted.
Village Commercial (C-V) (FAR 0.5)	Intended as a vehicle for the revitalization of the "Village." A variety of uses including, but not limited to, food service, office, auto, truck and recreation vehicle sales and service, lumber yards, home repair and building supplies, discount and wholesale sales and light manufacturing are permitted, consistent with the goals, policies, and objectives of the General Plan. A maximum floor area ratio (F.A.R.) of 0.5 is permitted.
Public Facility	
Public Facilities (P-F)	Intended to protect the public health, safety, and welfare by establishing regulations for public services and providing safe, reliable and efficient public services and facilities. Generally contains buildings, infrastructure, resources, or facilities that are significant assets to the community, or are essential in establishing and maintaining services within the Town.
Open Space	
Open Space - Recreation (OS-R)	Intended for privately owned lands that provide a range of active recreational opportunities within the community. These active recreational opportunities are meant to serve the recreational and social interaction needs of Town residents of all ages, economic situations, and physical conditions. A limited number of publicly owned lands may also be included subject to the approval of the Town Council.

Source: Apple Valley Development Code.



Source: Terra Nova Planning and Research, Inc.; ESRI 2021

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Village Specific Plan
Existing Zoning Designations

Town of Apple Valley

Exhibit
2.12-2

Table 2.12-4 describes the buildout potential of the Planning Area under current zoning designations. With continued implementation of current zoning designations, the Planning Area could accommodate up to 500 additional R-M dwelling units and 5,413,585 more square feet of commercial development. Of all new commercial square feet, approximately 324,363 (6%) would be in the Village, and the balance would be elsewhere in the Planning Area.

Table 2.12-4
Existing Zoning Designations Land Use Buildout

	Acres			Dwelling Units/Sq. Ft.		
Zoning Designation	**Developed Acres**	**Vacant Acres**	**Total Acres**	**Existing Dwelling Units[1]**	**Potential Dwelling Units[3]**	**Total Units at buildout**
Residential						
Mobile Home Park (MHP, 5-15 du/ac)	17.5	0.0	17.5	173	0	173
Medium Density Residential (R-M, 4-20 du/ac)	25.2	25.0	50.2	115	500	615
Estate Residential (R-E, 1 du/1 to 2.5 gross ac)	1.0	0.0	1.0	1	0	1
Subtotal:	43.7	25.0	68.7	289	500	789
Commercial				**Existing Sq. Ft.[2]**	**Potential Sq. Ft.[4]**	**Total Sq. Ft. at buildout**
General Commercial (C-G)	29.1	115.3	144.4	240,981.0	2,511,446.7	2,752,427.7
Service Commercial (C-S)	107.0	118.4	225.3	975,576.0	2,577,775.8	3,553,351.8
Village Commercial (V-S)	55.1	14.9	70.0	421,117.0	324,362.9	745,479.9
Subtotal:	191.2	248.6	439.7	1,637,674.0	5,413,585.3	7,051,259.3
Public Facility						
Public Facility (P-F)	29.1	0.0	29.1	185,706.0	0.0	185,706.0
Subtotal:	29.1	0.0	29.1	185,706.0	0.0	185,706.0
Open Space						
Open Space (O-S)	18.8	0.0	18.8	---	---	---
Subtotal:	18.8	0.0	18.8	---	---	---
Land Use Total:	282.8	273.6	556.3	---	---	---
Street Right-of-Way Total:	94.8	0.0	94.8	---	---	---
TOTAL:	**377.6**	**273.6**	**651.2**	**1,823,380.0**	**5,413,585.3**	**7,236,965.3**

[1] estimate based on Google Earth and online property information
[2] estimate based on Microsoft Maps US Building Footprints dataset
[3] future R-M development potential assumes maximum density of 20 DU/AC
[4] future commercial development potential assumes maximum allowed Floor to Area Ratio (FAR) of 0.5
Source: Apple Valley General Plan GIS database

2.12.6 Project Impacts

a) Physically divide an established community?

The Specific Plan is a policy document that will not physically divide an established community. The Planning Area boundaries were carefully considered and do not divide established communities or neighborhoods. Established communities in the Planning Area include the Village commercial area and three (3) mobile home parks: Pioneer Mobile Home Park, Apple Valley Mobile Home Lodge, and Apple Valley Ranchos Mobile Home Park. They are included in their entirety in the Planning Area and treated as whole communities in the proposed Specific Plan.

The Specific Plan is a long-range vision for the development and redevelopment of the entire Planning Area. It sets forth a cohesive set of development standards and guidelines for landscaping, signage, lighting, and other urban design elements to create a unified sense of place. It promotes compatible land uses that minimize impacts to established communities. Specific Plan standards and guidelines are intended to unify, not divide, the community, including connections between Specific Plan Districts through improved sidewalks, crosswalks, bike lanes and roadways. The Project is expected to have a beneficial effect on the cohesiveness of the Planning Area, and impacts will be less than significant.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

The proposed Project establishes planning Districts, development standards, and design guidelines that differ from those currently in effect in the Town's General Plan, Development Code, and Zoning Map.

<u>Apple Valley General Plan</u>

General Plan Amendment
As described in Section 2.12.5, the General Plan Land Use Element currently assigns seven (7) land use designations to the Planning Area on a parcel basis. They allow a range of residential, commercial, public facility, and open space uses. The proposed Specific Plan would remove parcel-level General Plan designations and assign a single "Village Specific Plan" designation to the entire Planning Area. This action would require a General Plan Amendment (GPA).

Consistency with General Plan Policies and Programs

Adopting a Specific Plan for the Planning Area is consistent with General Plan Land Use Element Program 6.C.3 ("Future development and redevelopment of the Village shall be governed by a Specific Plan") and Policy 3.B ("Specific Plans shall be required for development proposals that include one or more of the following: a combination of residential, recreational, commercial and/or industrial land use designations except in the mixed use land use designation, or variations from development standards in the applicable zone"). The Project implements these General Plan policies.

The Specific Plan is also consistent with other General Plan Land Use Element policies and programs, including those that specifically address the Village. They include Policy 6.C ("The Town shall encourage the development and/or redevelopment of The Village"), Program 6.C.1 ("Public facilities in The Village should be designed to include consolidated parking areas, special roadway standards, and prioritized flood control improvements"), and Policy 5.E ("Mixed use projects which integrate residential land uses and commercial or light industrial land uses are encouraged in the Village, on major roadways, and in close proximity to employment centers"). The Project is also consistent with General Plan policies and programs that address land use in broader terms. Its development standards and design guidelines are intended to achieve high-quality design and enhancement of existing development (Policy 2.C) and allow for the rehabilitation and conversion of neighborhoods that are threatened by blighting influences (Policy 5.H). Therefore, impacts of the proposed Project on the General Plan will be less than significant.

<u>Apple Valley Development Code and Zoning Map</u>

Zone Change

As explained above, the proposed Project will require a GPA. To maintain consistency between the General Plan and Zoning Map, a Zone Change (ZC) will also be required. The Zoning Map currently assigns eight (8) zoning designations to the Planning Area on a parcel level basis. The proposed Project would remove existing zoning designations and replace them with Specific Plan Districts 1 through 5, as shown in Exhibit 1-4. The Districts extend across groups of parcels according to a desired theme or vision. Permitted land uses (residential, commercial, and public facility) and maximum residential densities (up to 20 du/ac) are generally the same as currently allowed. The ZC would implement and be consistent with the proposed GPA, and impacts to the Zoning Map would be less than significant.

Proposed Development Standards and Design Guidelines

The Specific Plan provides detailed information about land uses, development standards, and design guidelines that are tailored to the Planning Area. It will replace the Development Code as the planning tool for development and redevelopment in the Planning Area. As described above, adopting a Specific Plan for the Planning Area is consistent with General Plan Land Use Element Program 6.C.3 and Policy 3.B. The development standards allowed in the Specific Plan are not substantially different than those in the Development, and instead are more closely tailored to the Districts of the Specific Plan. Analysis was conducted, as provided in the Specific Plan, to establish differing parking standards for the Planning Area, for example. These parking standards differ from those in the Development Code based on the site-specific analysis provided in the Plan, and allow greater flexibility due to the specialized nature of existing and planned development in the Planning Area. Changes are also proposed to other development standards, to implement the vision of the Specific Plan and tailor future development to that vision. None of the proposed variations to the Town's development standards will substantially alter the ultimate development of the area, and impacts of the Specific Plan on the Development Code would be less than significant.

Buildout Intensity

As shown in the following table, there are currently approximately 289 dwelling units and 1,823,380 square feet of commercial/ service/office/public facility uses in the Planning Area. Under existing zoning designations, the Planning Area could accommodate an additional 500 dwelling units and 5,413,585 square feet of commercial/ service/office/public facility uses. Under the proposed Project, the Planning Area could accommodate an additional 682 dwelling units and 6,067,523 square feet of commercial/ service/office/public facility uses. Therefore, compared to current zoning designations, the proposed Project could result in an increase of 182 dwelling units (23% increase) and 653,938 square feet (9% increase). These are conservative estimates that assume future residential development occurs at maximum allowable densities (20 du/ac) and future commercial development occurs at maximum allowable Floor Area Ratios (0.5).

The Project proposes residential densities (20 du/ac) and commercial FAR (0.5 that are consistent with the existing General Plan and Development Code, and increases would not be such that significant environmental impacts are anticipated. Impacts would be less than significant.

Table 2.12-5
Land Use Buildout, Existing Zoning vs. Proposed Project

		Current Zoning		Proposed Project	
	Existing	Potential New	Maximum Buildout	Potential New	Maximum Buildout
Dwelling Units	289	500	789	682	971
Square Feet of Commercial/Service/ Office/Public Facility	1,823,380	5,413,585	7,236,965	6,067,523	7,890,903

Source: from Tables 1-2 and 1-3 of this DEIR

2.12.7 Mitigation Measures

The Specific Plan is consistent with the General Plan, and will not significantly Development Code standards. Impacts will be less than significant and no mitigation measures are required.

2.12.8 Significance After Mitigation

Impacts will be less than significant.

2.12.9 Cumulative Impacts

Cumulative impacts have been assessed using the summary of projections method set forth in State CEQA Guidelines Section 15130(b)(1)(B). The primary documents used to determine cumulative impacts were the Town of Apple Valley General Plan (2009) and its EIR.

The Apple Valley General Plan EIR determined that future development facilitated by the General Plan would not have a cumulative impact on land use and planning. Future development would be consistent with past land use patterns and uses. Implementation of General Plan policies and programs would assure that future development is thoughtfully designed so that it is compatible with, and minimizes impacts to, adjacent development.

Maximum buildout of the Project Planning Area according to current General Plan land use designations could result in up to 789 dwelling units and 7,236,965 square feet of commercial/service/office/public facility uses. Maximum buildout under the proposed Project could result in up to 971 dwelling units and 7,890,903 square feet of commercial/service/office/public facility uses, an increase of 182 dwelling units (23% increase) and 653,938 square feet of commercial/ service/office/public facility development (9% increase) over the General Plan. This is a limited increase that would not contribute considerably to cumulative

impacts. The Project proposes similar land uses as the General Plan and is consistent with General Plan land uses policies and programs. It minimizes impacts to adjacent lands through compatible land use designations, thoughtful site planning guidelines and development standards, including setback requirements, height restrictions, and architectural and landscaping guidance. Therefore, the Project will not result in cumulatively considerable impacts.

2.13 Noise

2.13.1 Introduction

This section evaluates the potential for noise and groundborne vibration impacts resulting from implementation of the proposed Project, including impacts associated with a substantial temporary and/or permanent increase in ambient noise levels in the vicinity of the Project site; exposure of people in the vicinity of the Project site to excessive noise levels, groundborne vibration, or groundborne noise levels; and whether this exposure is in excess of standards established in the General Plan or noise ordinance.

Information in this section is based on noise and vibration data provided in the Noise Element Update Technical Report prepared for the Town of Apple Valley General Plan EIR (Appendix E of General Plan EIR).

2.13.2 Thresholds of Significance

Standards and guidelines establishing thresholds of significance have been taken from Appendix G of the California Environmental Quality Act (CEQA). Project impacts associated with noise are considered significant if the project would result in:

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;

b) Generation of excessive groundborne vibration or groundborne noise levels;

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.

The Initial Study determined that the Project would result in "No Impact" for threshold question c) above, because the Project area is not located in the vicinity of the Apple Valley Airport. Therefore, it is not analyzed further in this EIR.

2.13.3 Regulatory Framework

Federal

Noise Control Act

The Noise Control Act of 1972 was enacted to promulgate noise emission standards for interstate commerce, assist state and local abatement efforts, and encourage noise education and research.

The Act is implemented by a number of agencies, including the Occupational Safety and Health Administration (OSHA), which limits noise exposure of workers to 90 dB Leq or less for 8 continuous hours or 105 dB Leq or less for 1 continuous hour. The Department of Transportation (DOT) assumed a significant role in noise control through its various operating agencies. Surface transportation system noise is regulated by multiple agencies, including the Federal Transit Administration (FTA), the Urban Mass Transit Administration (UMTA), and the Federal Highway Administration (FHWA).

The federal government actively advocates for local jurisdictions to use their land use regulatory authority to arrange new development in such a way that "noise sensitive" uses are either prohibited from being sited adjacent to a highway or, alternately, that the developments are planned and constructed in such a manner that potential noise impacts are minimized.

Since the federal government has preempted the setting of standards for noise levels that can be emitted by transportation sources, the Town is restricted to regulating the noise generated by the transportation system through nuisance abatement ordinances and land use planning.

State

General Plan Noise Elements

State law requires that all counties and cities develop, in their General Plan, a Noise Element that effectively limits the exposure of sensitive receptors to excessive noise levels. The State of California General Plan Guidelines, published by the California Governor's Office of Planning and Research (OPR), provide guidance for the compatibility of projects within areas of specific noise exposure. The OPR Guidelines identify acceptable and unacceptable community noise exposure limits for various land use categories. Where the "normally acceptable" range is used, it is defined as the highest noise level that should be considered for the construction of buildings which do not incorporate

treatment or noise mitigation. The "conditionally acceptable" or "normally unacceptable" ranges include conditions calling for detailed acoustical study prior to the construction or operation of the proposed Project.

California Noise Control Act of 1973

Pursuant to Sections 46000 through 46080 of the California Health and Safety Code, known as the California Noise Control Act of 1973, the State Legislature found that excessive noise is a serious hazard to the public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. The state has a responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise. It is the policy of the state to provide an environment for all Californians that is free from noise that jeopardizes their health or welfare.

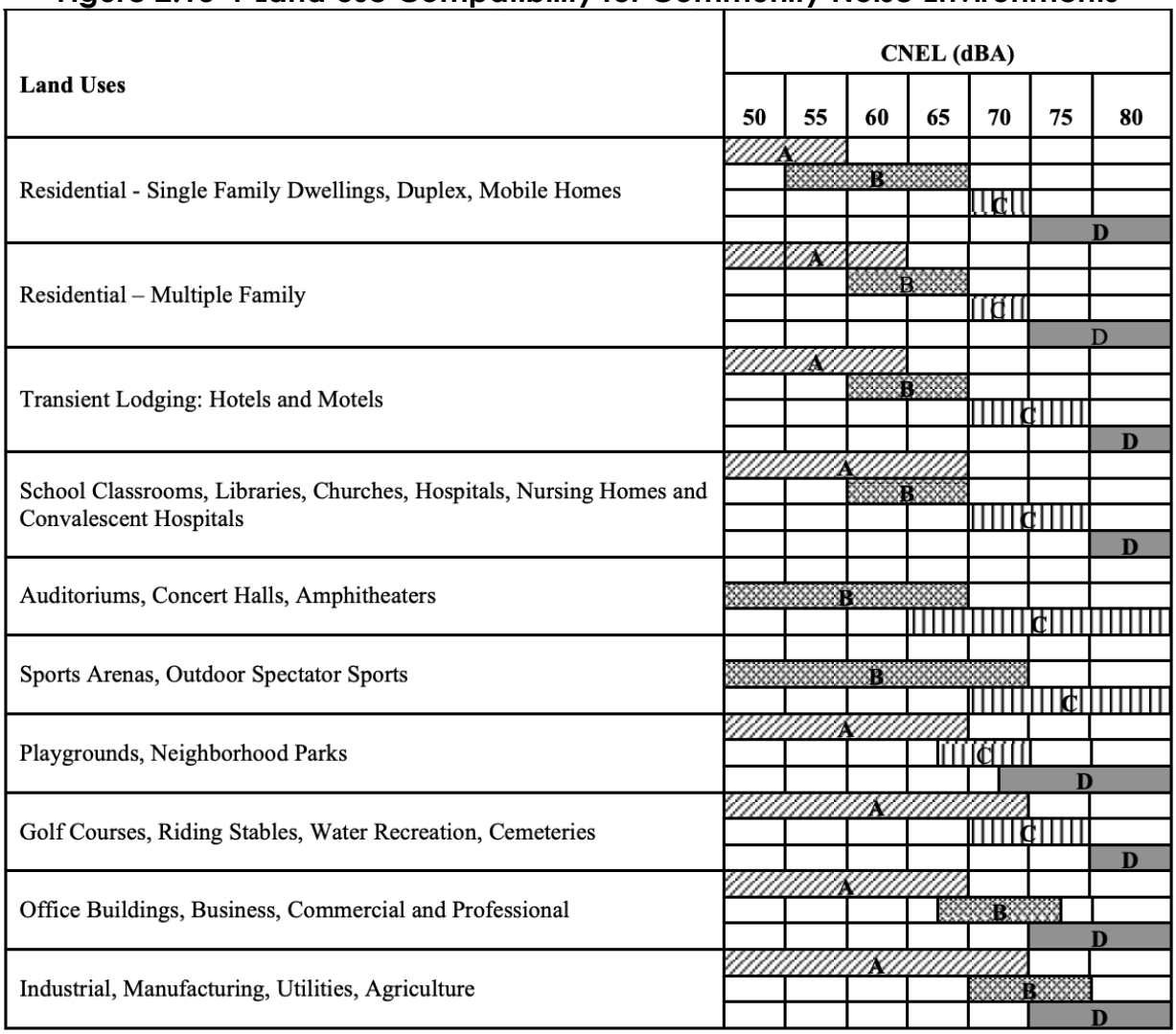
State regulations (8 California Code of Regulations, Section 5095) also address worker exposure to noise levels. These regulations limit worker exposure to noise levels of 85 dBA or lower over an 8-hour period. The state has not established noise levels for non-work-related environments.

Local

Town of Apple Valley General Plan

Figure 2.13-1 below shows the ranges of allowable exterior ambient noise levels for various land uses at General Plan buildout. The Town has consistently implemented these noise levels as provided in General Plan Table IV-4.

Figure 2.13-1 Land Use Compatibility for Community Noise Environments



Source: *California Department of Health Services, "Guidelines for the Preparation and Content of the Noise Element of the General Plan," 1990*

A Normally Acceptable: With no special noise reduction requirements assuming standard construction.

B Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirement is made and needed noise insulation features included in the design

C **Normally Unacceptable**: New construction is discouraged. If new construction does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

D **Clearly Unacceptable**: New construction or development should generally not be undertaken.

The Town's General Plan Noise Element also establishes the following goals and policies to assure a controlled noise environment as the Town grows.

Goal Noise levels that are consistent with the Town's rural character and high quality of life.

Policy 1.A The Town shall adhere to the standards of "Land Use Compatibility for Community Environments."

Program 1.A.1
The Town shall continue to maintain and enforce its Noise Control Ordinance.

Program 1.A.2
The Town shall include noise attenuation in its development review process when development projects are proposed. Design techniques that can alleviate noise include, but are not limited to building setbacks, the installation of wall and window insulation, sound walls and earthen berms.

Program 1.A.3
The mechanical equipment associated with commercial and industrial development, including compactors, trash disposal areas, heating and air conditioning systems shall be located as far as practicable from adjacent sensitive receptors, or from lands designated on the Land Use map for noise sensitive uses.

Policy 1.B New development projects shall assure that exterior noise levels in back yards and/or useable open space do not exceed 65 dBA CNEL, and that interior noise levels are consistent with the requirements of the Building Code.

Program 1.B.5
Residential projects proposed adjacent to any street where the build out noise level at 50 feet from centerline is expected to exceed 65 dBA shall be required to submit a noise analysis in conjunction with entitlement applications.

Program 1.B.6
Commercial and industrial projects proposed adjacent to sensitive receptors, or lands designated for sensitive receptors, including residential, school or hospital sites, shall be required to submit a noise analysis in conjunction with entitlement applications.

Policy 1.C Changes proposed to the Land Use Map shall include consideration of the potential noise impacts associated with such a change.

Policy 1.D The development review and environmental review process shall require all development proposals within the noise impact area of U.S. I-15, State Route 18, the High Desert Corridor or the railroads to mitigate both noise and vibration to acceptable levels through the preparation of focused studies.

Town of Apple Valley Noise Ordinance

Section 9.73 of the Town of Apple Valley Development Code establishes community-wide noise standards and emphasizes the value of an acceptable noise environment. It sets forth regulations for noise measurement and monitoring, special provisions and exemptions to the ordinance. It is intended to regulate excessive noise from existing uses and their activities. Violations are defined as a nuisance, and procedures, remedies and penalties to which violators are subject are included.

Section 9.73 also establishes standards for construction activities, which represent a temporary, but often disruptive, noise source. From 7 a.m. to 7 p.m. weekdays and on Saturdays, the maximum noise levels allowed for mobile and stationary equipment near single-family residential development are 75 dBA Leq and 60 dBA Leq, respectively. These levels are reduced to 60 dBA Leq for mobile equipment, and 50 dBA Leq for stationary equipment during weekday nighttime hours between 7 p.m. to 7 a.m. and all day Sundays and holidays. These levels are increased by about 5 dBA Leq, across the board, for multi-family residential development, and by another 5 dBA Leq for areas characterized as "semi-residential/commercial."

Section 9.73 prohibits operating or permitting the operation of any device that creates a vibration which is above the vibration perception threshold of an individual at or beyond the property boundary of the source if on private property or at one hundred fifty (150) feet (46 meters) from the source if on a public space or public right-of-way.

2.13.4 Environmental Setting

Sound is a pressure wave which is created by a vibrating object. It is technically described in terms of amplitude (loudness) and frequency (pitch).[1] The standard unit of sound amplitude measurement is the decibel (dB). The decibel scale is a logarithmic scale that describes the physical intensity of the pressure vibrations that make up any sound. The pitch of the sound is related to the frequency of the pressure vibration. Since the human ear is not equally sensitive to a given

[1] Noise and its Measurements by EPA (1961).

sound level at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) provides this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear.

Noise is typically defined as unwanted sound. A typical noise environment consists of a base of steady ambient noise that is the sum of many distant and indistinguishable noise sources. Superimposed on this background noise is the sound from individual local sources. These can vary from an occasional aircraft or train passing by to virtually continuous noise from traffic on a major highway. Table 2.13-1 lists representative noise levels in the environment.

Table 2.13-1
Representative Environmental Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110	Rock band
Jet flyover at 1,000 feet		
	100	
Gas lawnmower at 3 feet		
	90	
Diesel truck going 50 mph at 50 feet		Food blender at 3 feet
	80	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawnmower at 100 feet	**70**	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	**60**	
		Large business office
Quiet urban daytime	**50**	Dishwasher in next room
Quiet urban nighttime	**40**	Theater, large conference room (background)
Quiet suburban nighttime		
	30	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	20	
		Broadcast/recording studio
	10	
	0	

Source: California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, September 2013.
https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tens-sep2013-a11y.pdf.

Environmental noise levels are generally considered low when the CNEL is below 45 dBA, moderate in the 45–60 dBA range, and high above 60 dBA. Noise levels greater than 85 dBA can cause temporary or permanent hearing loss.

Generally, a difference of 3 dBA over 24 hours is a barely perceptible increase to most people. A 5 dBA increase is readily noticeable, while a difference of 10 dBA would be perceived as a doubling of loudness. Noise levels from a particular source generally decline as distance to the receptor increases. A commonly used rule of thumb for roadway noise is that for every doubling of distance from the source, the noise level is reduced by about 3 dBA. Noise from stationary or point sources is reduced by about 6 dBA for every doubling of distance. Noise levels may also be reduced by intervening structures; generally, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA.[2]

There are several rating scales to analyze the adverse effect of community noise on people. Since environmental noise fluctuates over time, these scales consider that the effect of noise upon people is largely dependent upon the total acoustical energy content of the noise, as well as the time of day when the noise occurs. Those that are applicable to this analysis are as follows:

- **Leq:** An Leq or equivalent energy noise level is the average acoustic energy content of noise for a stated period of time. Thus, the Leq of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.

- **Lmax:** Is the maximum instantaneous noise level experienced during a given period of time.

- **Lmin:** Is the minimum instantaneous noise level experienced during a given period of time.

- **CNEL:** The Community Noise Equivalent Level is a 24-hour average Leq with a 5 dBA "weighting" during the hours of 7:00 PM to 10:00 PM and a 10 dBA "weighting" added to noise during the hours of 10:00 PM to 7:00 PM to

[2] Highway Traffic Noise Analysis and Abatement Policy and Guidance, U.S. Department of Transportation, https://www.fhwa.dot.gov/environMent/noise/regulations_and_guidance/polguide/polguide02.cfm, accessed October 2021.

account for noise sensitivity in the evening and nighttime, respectively. The logarithmic effect of these additions is that a 60 dBA 24 hour Leq would result in a measurement of 66.7 dBA CNEL.

Fundamentals of Environmental Groundborne Vibration

Vibration is sound radiated through the ground. Vibration can result from a source (e.g., train operations, motor vehicles, machinery equipment, construction equipment, etc.) causing the adjacent ground to move, thereby creating vibration waves that propagate through the soil to the foundations of nearby buildings. This effect is referred to as ground-borne vibration. Ground-borne vibration is measured as peak particle velocity (PPV) in inches per second.[3]

Most perceptible indoor vibration is caused by sources within buildings such as the operation of mechanical equipment, movement of people, or the slamming of doors. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground-borne vibration from traffic is rarely perceptible.

2.13.5 Existing Conditions

Noise Sources

Major noise sources in Apple Valley include vehicular traffic on highways and arterials, as well as aircraft, trains, and industrial operations. The primary noise source in the Specific Plan Planning Area is traffic on Highway 18, which includes trucks and buses. Commercial land uses, particularly warehouse and light industrial sites, can also generate high noise levels from mechanical equipment, truck deliveries, loading and unloading operations, and trash compactors. The Planning Area is approximately 4.5± miles from the Apple Valley Airport and 4.7± miles from the nearest railroad. Therefore, aircraft and rail are not major noise sources in the Planning Area.

The noise impact analysis prepared for the General Plan conducted both short term and long term (24-hour) monitoring at various sites in the Town. Two of the short-term monitoring sites were near the western end of the Specific Plan area, and indicated that residential neighborhoods adjacent to Highway 18 experience exterior noise levels approaching 65 dBA CNEL.

[3] Basic Ground-Borne Vibration Concepts (Chapter 7), https://pdfs.semanticscholar.org/dc7a/51aa1841a144497fa81cf3267fa425ce1604.pdf, accessed October 2021.

The General Plan noise impact analysis also studied existing noise levels along major roadways, and roadway segments that fall in the Specific Plan area are shown in Table 2.13-2. In the Specific Plan area, residential development along major roadways such as Highway 18 and Navajo Road may experience noise levels above the 65 dBA CNEL noise level limits as the 70 dBA CNEL noise contours extend beyond the road right-of-way. These contours represent unmitigated exterior noise levels.

Table 2.13-2
Existing Noise Exposure Adjacent to Specific Plan Area Roadways

Roadway	Segment	CNEL at 100 feet (dBA)	Distance to Contour (Feet)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Central Road	between Highway 18 & Nisqually Road	64.8	RW[1]	96	208	447
Central Road	between Highway 18 & Thunderbird Road	64.5	RW	93	201	432
Navajo Road	between Highway 18 & Nisqually Road	68.5	80	172	370	798
Navajo Road	between Highway 18 & Thunderbird Road	62.9	RW	72	155	335
Highway 18	between Central Road & Joshua Road	65.7	RW	111	239	516
Highway 18	between Navajo Road & Central Road	67.7	71	152	328	706
Highway 18	between Kiowa Road & Navajo Road	69.8	97	209	451	972
Yucca Loma Road	between Kiowa Road & Highway 18	62.2	RW	65	140	301

[1] RW: Noise contour located within the road right of way.
Source: Town of Apple Valley General Plan and Annexations 2008-001 & 2008-002 Environmental Impact Report, Table III-49.

Vibration Sources

Vibration sources in and around the Town include airport and train operations, motor vehicles, machinery equipment, and construction equipment. Vibration from airport and train operations is only perceptible in proximity to the airport or railroad. In the Planning Area, vibration sources include temporary construction equipment and machinery associated with light industrial uses such as metal workshops and auto maintenance. The roadways are generally smooth, and thus vibration associated with motor vehicles is not expected to be perceptible. Without heavy industrial uses, the Planning Area only has the potential to generate minor and occasional vibrations.

2.13.6 Project Impacts

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;

The Specific Plan has the potential to accommodate an additional 682 residential units and 6,067,523 square feet of commercial/service/office/public uses in the Planning Area at full buildout. Buildout of the Planning Area in accordance with the proposed Specific Plan will result in site preparation, demolition, grading, excavation, construction, paving, and related activities that will result in localized and temporary increases in ambient noise levels and may impact sensitive receptors. The Town Development Code Section 9.73.060.F restricts allowable construction hours to between 7:00 a.m. and 7:00 p.m. on weekdays (with exceptions) and establishes noise restriction guidance where construction and demolition occur near residential areas. These restrictions, muffling of construction equipment, and other measures will reduce, to some extent, construction noise impacts on surrounding land uses. Impacts will be temporary and end once construction is complete.

The Specific Plan divides the Planning Area into five districts, each of which has permitted, conditional, and prohibited uses. Compared to the current General Plan land use designations for the Planning Area, the Specific Plan allows the same types of land uses, but provides more flexibility for future development as individual parcels are not designated for a specific land use but need to conform to a range of allowable uses for its District. Still, future development will require Town staff and/or Planning Commission/Council review and noise-emitting uses will need to conduct project-level CEQA environmental review, both of which will ensure land use compatibility and prevent significant noise impacts.

The proposed Specific Plan land uses do not differ from those allowed by the General Plan, but may result in locational shifts of some land uses. As discussed above, each individual project under the Specific Plan will be subject to standard approval processes and CEQA review, which ensure the project will pose no significant impacts, including noise impacts. Therefore, future noise levels generated by the Specific Plan buildout will be comparable to those anticipated in the General Plan noise impact analysis, which is the main data source for the following discussion on noise impacts.

The General Plan noise impact analysis projected future CNEL noise contour boundaries for the 55, 60, 65 and 70 dBA noise levels and the estimated CNEL exterior noise level at 100 feet at build out. Table 2.13-3 shows noise contours for roadway segments in the Specific Plan area. The values shown in Table 2.13-3 are based upon soft site conditions, not accounting for the effects of any noise barriers, topography, or final roadway grades that may affect ambient noise levels.

Table 2.13-3
Anticipated Noise Exposure Adjacent to Specific Plan Area Roadways

Roadway	Segment	CNEL at 100 feet (dBA)	Distance to Contour (Feet)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Central Road	between Highway 18 & Nisqually Road	71.8	131	283	610	1,314
Central Road	between Highway 18 & Thunderbird Road	72.3	143	308	664	1,430
Navajo Road	between Highway 18 & Nisqually Road	71.9	134	289	622	1,341
Navajo Road	between Highway 18 & Thunderbird Road	69.6	94	202	436	940
Highway 18	between Central Road & Joshua Road	67.7	71	152	328	706
Highway 18	between Navajo Road & Central Road	71.8	133	286	615	1,326
Highway 18	between Kiowa Road & Navajo Road	70.8	114	245	528	1,137
Yucca Loma Road	between Kiowa Road & Highway 18	71.8	133	286	616	1,327

Source: Town of Apple Valley General Plan and Annexations 2008-001 & 2008-002 Environmental Impact Report, Table III-50.

The buildout noise levels along several Planning Area roadways are expected to increase by up to 9.6 dBA CNEL at build out, as shown in Table 2.13-4 below. Increases in noise levels are expected to be perceptible to land uses adjacent to six roadway segments in the Planning Area.

Table 2.13-4
Noise Increases Over Existing Conditions Adjacent to Specific Plan Area Roadways

Roadway	Segment	CNEL at 100 feet (dBA)			
		Existing	Buildout	Increase	Potentially Significant Impact?[1]
Central Road	between Highway 18 & Nisqually Road	64.8	71.8	7	Yes
Central Road	between Highway 18 & Thunderbird Road	64.5	72.3	7.8	Yes
Navajo Road	between Highway 18 & Nisqually Road	68.5	71.9	3.4	Yes
Navajo Road	between Highway 18 & Thunderbird Road	62.9	69.6	6.7	Yes
Highway 18	between Central Road & Joshua Road	65.7	67.7	2	No
Highway 18	between Navajo Road & Central Road	67.7	71.8	4.1	Yes
Highway 18	between Kiowa Road & Navajo Road	69.8	70.8	1	No
Yucca Loma Road	between Kiowa Road & Highway 18	62.2	71.8	9.6	Yes

[1]A potential significant impact occurs when the resulting level is greater than 65 dBA and the increase is greater than 3 dBA.
Source: Town of Apple Valley General Plan and Annexations 2008-001 & 2008-002 Environmental Impact Report, Table III-51.

Build out of the proposed Specific Plan will result in overall increases to community noise levels from increased urbanization and associated activities, including short-term construction noise and increases in motor vehicle traffic and other modes of transportation. These impacts may be significant if not mitigated, especially to sensitive receptors along the major roadways in the Planning Area. As shown in Table 2.13-4, noise levels are projected to increase significantly on Central Road, Navajo Road and Highway 18 in the Planning Area. However, the land uses proposed in these areas are commercial and public uses, which will not include sensitive receptors. Based on the General

Plan's CNEL standards, noise levels on these roadways will be Normally Acceptable or Conditionally Acceptable, without mitigation. The proposed residential development at Navajo and Ottawa, and at Central and Esaws, does have the potential to experience higher noise levels above 70 dBA. These noise levels would result in potentially significant impacts to residents of projects in these areas. In order to assure that noise levels for future residential development in the Planning Area remain at acceptable levels, Mitigation Measure NOI-1 has been provided below, requiring the preparation of site and project-specific noise impact analysis for projects in these locations. These noise analyses will consider the specifics of a project, and impose mitigation measures, if necessary, in response to the project's characteristics. Common mitigation measures include building setbacks, wall and window insulation, sound walls, earthen berms and landscape barriers, as detailed in the General Plan Noise Element Program 1.A.2.

The General Plan Noise Element also includes policies and programs that require implementation of noise attenuation (Program 1.A.2) and siting commercial/industrial mechanical equipment away from nearby sensitive receptors (Program 1.A.3) to ensure acceptable noise levels. Policy 1.B and associated programs require a noise analysis during the entitlement process for residential projects near roadway noise contours and commercial/industrial projects proposed near sensitive receptors to ensure noise and vibration impacts are mitigated to acceptable levels. With implementation of the Town's standard requirements and Mitigation Measure NOI-1, potential noise impacts associated with future development in the Specific Plan area will be less than significant.

b) Generation of excessive groundborne vibration or groundborne noise levels;

The Town of Apple Valley has not adopted a significance threshold to assess vibration impacts during construction and operation. The Town's Noise Ordinance prohibits operating or permitting the operation of any device that creates a vibration which is above the vibration perception threshold of an individual at or beyond the property boundary of the source if on private property, or at one hundred fifty (150) feet (46 meters) from the source if on a public space or public right-of-way (Municipal Code Section 9.73.060G).

The FTA Transit Noise and Vibration Impact Assessment Manual (2018) set forth criteria that construction vibration impacts would be significant if vibration levels exceed 100 VdB, which is the general threshold where damage can occur to typical buildings, or 72 VdB at residences during nighttime hours.

Construction Vibration

Construction details and equipment for future project-level developments under the Specific Plan are not known at this time. Construction operations for potential future projects within the Specific Plan area could expose nearby sensitive receivers to a temporary increase in vibration depending on the construction procedures and equipment, soil type, and receptor-building construction. Vibration from construction activities rarely reaches the levels that can damage structures but can achieve the audible and perceptible ranges in buildings close to the construction site.

Site-specific construction-related vibration impacts will be assessed on a case-by-case basis during the project-level review process prior to the issuance of building permits by the Town. Construction activities would be required to comply with all Noise Ordinance requirements for the control of construction vibration. The implementation of relevant General Plan policies and programs and compliance with the standard Town requirements will reduce potential vibration-related impacts to less than significant levels.

Operational Vibration

In an urban environment, the highest operational vibration levels are typically associated with heavy industrial uses, railroads, and freeways. The Planning Area is not located in proximity to the Interstate 15 freeway or railroads, and therefore will not expose sensitive land uses to significant levels of off-site vibration.

The Specific Plan does not propose land uses that would generate significant stationary sources of vibration, such as from heavy equipment operations. Operational-related vibration sources would be limited to electrical and mechanical equipment consistent with existing land uses in the Planning Area. Future commercial/industrial projects proposed near sensitive receptors will be required to prepare focused noise studies and implement mitigation, where necessary, to reduce vibration impacts to less than significant levels (General Plan Program 1.B.6). Therefore, operational vibration impacts are expected to be less than significant.

2.13.7 Mitigation Measures

The Town enforces its Noise Ordinance and "Land Use Compatibility for Community Environments" matrix to ensure acceptable noise levels and impacts for existing land uses and new construction and development. The Town requires preparation of project-level noise studies for residential projects exposed to roadway noise and commercial/industrial projects proposed near sensitive receptors during the entitlement process, such that potential noise impacts will be mitigated to less than significant levels where necessary. The

Specific Plan allows residential development at Navajo and Ottawa, and at Esaws and Central. Therefore, in order to assure that noise levels at these locations remain within Town standards, the following mitigation measure shall be implemented:

NOI-1 Residential development proposed along Navajo Road or Central Road, in Districts 4 and 5, shall be required to prepare a project-specific noise impact analysis to analyze the noise levels resulting from adjacency to these roadways. The noise analyses shall provide interior and exterior noise levels, and shall include mitigation measures, if necessary, to assure that noise levels remain within the Town's acceptable standards for residential land uses.

2.13.8 Significance After Mitigation

With the implementation of Mitigation Measure NOI-1, impacts will be less than significant.

2.13.9 Cumulative Impacts

The General Plan EIR stated that the most significant noise impacts will come from increased traffic volumes, and the most impacted areas will be lands adjacent to major arterials and regional roadways. The General Plan includes various policies and programs which would reduce potential noise impacts to less than significant levels. The General Plan requires that potential noise impacts be considered in the application review process for all proposed projects, and that future development, where necessary, conduct acoustical analyses to properly identify, mitigate, and reduce project-related noise impacts to acceptable levels. Implementation of the General Plan policies and programs will control and minimize impacts to the community noise environment; therefore, the General Plan EIR determined no cumulatively considerable impacts would occur.

Compared to the General Plan, maximum buildout of the proposed Specific Plan would result in a 23% increase in the number of dwelling units and a 9% increase in commercial square footage, but the allowable land uses would be the same as the current General Plan designations. An increase in density may increase noise impacts due to higher vehicle trip generation, although the Specific Plan encourages mixed-use development which may reduce trip generation. As demonstrated in Section 2.13.6 above, impacts of the proposed Specific Plan would be less than significant, with the implementation of Mitigation Measure NOI-1, which addresses specific noise levels associated with the residential land uses proposed in the Planning Area. Elsewhere in the

Planning Area, the character of land uses will remain consistent with that currently occurring, and will not as a result substantially increase noise levels beyond that predicted at General Plan buildout. The Project, therefore, would not contribute considerably to cumulative impacts on noise in Apple Valley.

2.14 Population and Housing

2.14.1 Introduction

This section of the EIR describes existing population and housing in the Project Planning Area. It analyzes the potential impacts of the proposed Project on those resources, including changes in population and the demand for housing.

CEQA does not require consideration of economic or social effects when considering significant impacts on the environment. However, these effects or impacts are considered in the context of their potential linkage or indirect connections between the proposed Project and physical environmental effects. If a project may cause or substantially induce blight or urban decay, these effects are subject to CEQA analysis. Therefore, this section of the EIR also addresses socio-economic resources and environmental justice in the Planning Area.

A wide range of data and information, including regional-scale planning and environmental documents, has been used in researching and analyzing the proposed Project and its potential effects.

2.14.2 Thresholds of Significance

The CEQA Guidelines define the parameters under which the consideration of socio-economic impacts may be included in an environmental evaluation. CEQA Guidelines Section 15131 states that "*[e]conomic or social information may be included in an EIR or may be presented in whatever form the agency desires.*" Section 15131(a) of the Guidelines states that "*[e]conomic or social effects of a project shall not be treated as significant effects on the environment. An EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from the project to physical changes caused in turn by the economic or social changes [emphasis added]. The intermediate economic or social changes need not be analyzed in any detail greater than necessary to trace the chain of cause and effect. The focus of the analysis shall be on the physical changes.*"

CEQA Section 15131(b) also provides that "*[e]conomic or social effects of a project may be used to determine the significance of physical changes caused by the project.*" For example, the level of significance of a physical division of a community from transit facilities could be measured by the social effect on the community.

Cities, counties, and other local governmental agencies play an important role in ensuring environmental justice for all of California's residents. Under state law, "*[E]nvironmental justice" means the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies*" (Gov. Code Section 65040.12, subd. (e).) Fairness in this context means that the benefits of a healthy environment should be available to everyone, and the burdens of pollution or other physical impacts should not be focused on sensitive populations or communities that already are experiencing adverse effects.

Population and Housing

Project impacts to population and housing are analyzed using the thresholds of significance provided in Appendix G of the CEQA Guidelines. Appendix G uses the following questions to evaluate the project's potential impacts.

Would the project:

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Environmental Justice

Currently, CEQA does not use the term "environmental justice" and does not provide formal procedures or thresholds for analysis of environmental justice impacts. However, CEQA does state that economic and social effects may be considered in determining whether a project's physical changes are significant. Therefore, environmental justice impacts are analyzed in a broad context that considers whether the physical changes associated with the Project would result in indirect adverse social or economic impacts to the community.

2.14.3 Regulatory Framework

Population and Housing

Regional/Local

Regional Transportation Plan/Sustainable Communities Strategy

The 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), prepared by the Southern California Association of Governments (SCAG), is a long-range plan for achieving connected transportation projects and investments across a six-county region. It includes a Demographics and Growth Forecast technical report. The report projects employment, population, and household growth at the jurisdictional, county, and regional levels for the purpose of developing long-range regional land use and transportation planning strategies.

Apple Valley General Plan

The Land Use Element of the General Plan provides a comprehensive plan for the general allocation and distribution of land uses throughout the Town. It serves as a statement of standards and targets for housing development and population density. It projected an additional 31,716 dwelling units could be developed by General Plan buildout.[1] Based on the Town's 2008 average household size of 3.053 persons, the additional dwelling units would add 96,829 residents to the Town population. The following Land Use Element goals, policies, and programs are relevant to the proposed Project as it pertains to housing.

Goal 3 Minimal impact to existing neighborhoods.

Policy 3.A The Town will support measures that buffer both new and established residences from commercial, industrial, and agricultural uses.

Policy 3.B Specific Plans shall be required for development proposals that include one or more of the following:

a. A combination of residential, recreational, commercial and/or industrial land use designations (except in the Mixed Use land use designation); or
b. Variations from development standards in the applicable zone.

Goal 5 A broad range of residential housing product types to serve all members of the community.

[1] Apple Valley General Plan, Table II-3.

Policy 5.E Mixed Use projects which integrate residential land uses and commercial or light industrial land uses are encouraged in The Village, on major roadways, and in close proximity to employment centers.

Policy 5.H Encourage rehabilitation and conversion of neighborhoods that are threatened by blighting influences.

The Housing Element of the General Plan is intended to provide citizens and public officials with a comprehensive understanding of existing housing conditions and future housing needs in Apple Valley. It establishes goals, policies, and programs that will enable the City to meet its defined housing goals and helps ensure that all residents can attain safe and decent housing. The following goals, policies, and programs are from the Apple Valley General Plan Housing Element 2021-2029 Update and are relevant to the proposed Project.

Goal 1 Housing of all types to meet the needs of current and future residents in all income levels.

Policy 1.A Maintain a wide range of residential land use designations, ranging from very low density (1.0 dwelling units per 5 acres) to medium density (4-20 dwelling units per acre) and mixed use (4-30 dwelling units per acre), on the Land Use Map.

Program 1.A.2
Locate higher density residential development in close proximity to public transportation, community services, and recreational resources.

Program 1.E.3
New multiple housing projects shall incorporate designs which are compatible with surrounding single-family residential neighborhoods, and provide setbacks and stepbacks to assure compatibility.

Policy 1.G New residential development must assure the provision of infrastructure and public services.

Policy 1.H Encourage energy conservation and passive design concepts that make use of the natural climate to increase energy efficiency and reduce housing costs.

Program 1.H.1
Encourage development that minimizes greenhouse gas emissions consistent with the latest adopted update of the Apple Valley Climate Action Plan.

Environmental Justice

Federal

Fair Housing Act
The federal Fair Housing Act (24 C.F.R. Part 100) prohibits discrimination related to the sale or rental of dwellings, mortgage lending, and the availability of residential real estate-related transactions. It prohibits discrimination in housing due to race, color, national origin, religion, sex, familial status, or disability.

State

California Government Code
Government Code Section 65040.12 defines environmental justice as "the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies."

California Environmental Quality Act
CEQA focuses on whether a project may have a significant effect on the physical environment. It does not use the term "environmental justice"; however, issues associated with environmental justice are reflected in well-established CEQA principles. According to Public Resources Code Section 21083(b)(3), an agency is required to find that a project may have a significant effect on the environment if, among other things, "the environmental effects of a project will cause substantial adverse effects on human beings, either directly or indirectly." CEQA requires that environmental effects considered in an EIR include direct and secondary effects on growth inducement, location of housing and population density (CEQA Section 15358).

Senate Bill 1000 and Assembly Bill 1553
Senate Bill (SB) 1000 (2016) added to the required elements of the general plan in Government Code Section 65302(h) an environmental justice element, or related goals, policies, and objectives integrated in other elements, that identifies disadvantaged areas within the area covered by the general plan if the city, county, or city and county has a disadvantaged community. The element must also identify objectives and policies to reduce the unique or compounded health risks in disadvantaged communities.

Assembly Bill (AB) 1553 requires the Office of Planning and Research (OPR) to provide guidance for local jurisdictions to address environmental justice considerations in planning for the equitable distribution of public facilities and services, industrial facilities, schools and residential dwellings, and transit-oriented development.

"Disadvantaged community" means an area identified by the California Environmental Protection Agency (CalEPA) pursuant to Section 39711 of the Health and Safety Code (defined below) or an area that is a low-income area that is disproportionately affected by environmental pollution and other hazards that can lead to negative health effects, exposure, or environmental degradation. "Low-income area" means an area with household incomes at or below 80 percent of the statewide median income or with household incomes at or below the threshold designated as low income by the Department of Housing and Community Development's list of state income limits adopted pursuant to Section 50093 of the Health and Safety Code.

California Health and Safety Code

Section 39711 of the Health and Safety Code requires CalEPA to identify disadvantaged communities based on geographic, socioeconomic, public health, and environmental hazard criteria. They may include, but are not limited to, either of the following: 1) areas disproportionately affected by environmental pollution and other hazards that can lead to negative health effects, exposure, or environmental degradation, 2) areas with concentrations of people that are of low income, high unemployment, low levels of home ownership, high rent burden, sensitive populations, or low levels of educational attainment.

Regional/Local

Regional Transportation Plan/Sustainable Communities Strategy

SCAG's RTP/SCS, described above, is based on the principles of social equity and environmental justice. The RTP/SCS seeks to improve the region's mobility, safety, health outcomes, air quality, economic productivity, and environmental justice.

Apple Valley General Plan

The Apple Valley General Plan (2009) does not include an Environmental Justice Element or related goals, policies, or programs in other elements because it was adopted prior to SB 1000.

2.14.4 Environmental Setting

Population

According to the U.S. Census, the Town of Apple Valley population was 54,239 in 2000 and 69,135 in 2010. Data from the 2020 Census has not been released yet. The latest (January 2021) population estimate by the California Department of Finance is 74,350.[2]

Housing

The California Department of Finance estimates that there are 27,173 dwelling units in Apple Valley (Table 2.14-1).[3] The average household size is 2.94 persons per household. Local housing products include a mix of single- and multi-family units and mobile homes. The vacancy rate is 7.5%. The General Plan facilitates densities ranging from very low density (1 du/5 ac) to mixed use (4-30 du/ac). In 2020, the median price of existing homes in Apple Valley was $295,579, and the median value of new homes was $439,333.[4]

Table 2.14-1
Apple Valley Housing Characteristics

Unit Type	Number of Units	% of Total Units
Single-family detached	20,903	76.9%
Single-family attached	856	3.2%
Multi-family, 2-4 units	2,513	9.2%
Multi-family, 5+ units	1,461	5.4%
Mobile homes	1,440	5.3%
Total:	27,173	100.0%
Housing Tenure		
Occupied Units	25,138	92.5%
Vacant Units	2,035	7.5%

Source: Table 2: E-5 City/County Population and Housing Estimates, California Department of Finance, January 1, 2021

Employment

An estimated 26,261 Apple Valley residents aged 16 years and over were in the civilian labor force in 2019.[5] As shown below, the three (3) largest employment industry sectors for City residents were: 1) educational services, health care,

2 Table 2: E-5 City/County Population and Housing Estimates, California Department of Finance, January 1, 2021.
3 Table 2: E-5 City/County Population and Housing Estimates, California Department of Finance, January 1, 2021.
4 Inland Empire City Profile 2020, Inland Empire Quarterly Economic Report, Economics & Politics, Inc., October 2020.
5 2019 American Community Survey 5-Year Estimates.

social assistance (25.2%), 2) retail trade (14.9%), and 3) transportation, warehousing, utilities (10.2%). The 2019 median household income in Apple Valley was $54,527.[6]

Table 2.14-2
Apple Valley Employment by Industry

Industry	Number of Employed Persons	% of Total
Agriculture, forestry, fishing, hunting, mining	191	0.7%
Construction	1,767	6.7%
Manufacturing	1,605	6.1%
Wholesale Trade	333	1.2%
Retail Trade	3,901	14.9%
Transportation, warehousing, utilities	2,688	10.2%
Information	390	1.5%
Finance, insurance, real estate, rental, leasing	986	3.8%
Professional, scientific, management, administrative and waste management services	2,370	9.0%
Educational services, health care, social assistance	6,613	25.2%
Arts, entertainment, recreation, accommodation and food services	2,272	8.7%
Other services, except public administration	1,353	5.2%
Public administration	1,792	6.8%
Total:	26,261	100.0%

Source: 2019 American Community Survey 5-Year Estimates, Table S2403

Growth Forecasts

SCAG's growth forecast for Apple Valley population, households, and employment is shown below. SCAG projects the Town's population will grow to 101,400 by 2045. This represents an increase of 27,050 residents, a 36% increase, over the 2021 population.

[6] 2019 American Community Survey 5-Year Estimates.

Table 2.14-3
SCAG Growth Forecasts for the Town of Apple Valley

	2016	2045
Population	74,300	101,400
Households	24,700	37,400
Employment	18,000	30,200

Source: 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy, Demographics and Growth Forecast Technical Report, Southern California Association of Governments, Table 14.

Disadvantaged Communities

CalEPA released its CalEnviroScreen 4.0 mapping tool in October 2021. For each 2010 census tract in California, it aggregates data about pollution exposure, environmental effects of toxic chemicals, health and age sensitivity of the population, and socio-economic characteristics. An overall score, displayed as a percentile amongst all California census tracts, is provided. A percentile close to 0 represents the least disadvantaged communities, and a percentile close to 100 represents the most disadvantaged communities.

As of October 2021, CalEPA is proposing to identify the following as disadvantaged communities: 1) the highest scoring 25% of census tracts and those scoring in the top 5% of the pollution burden indicator, 2) all census tracts currently identified as disadvantaged but not in the highest 25% or scoring in the top 5% pollution burden, and 3) all areas within federally recognized tribal boundaries in California.[7] Apple Valley census tracts do not meet these criteria. Overall percentiles in Apple Valley range from 29 to 65, and pollution burden indicators range from 1 to 40. Therefore, there are no disadvantaged communities in Apple Valley.

2.14.5 Existing Conditions

Population and Housing

The Project Planning Area includes an estimated 289 dwelling units consisting of 173 mobile homes, 115 multi-family units, and 1 single-family unit.[8] Mobile homes are located within three (3) mobile home parks: Apple Valley Ranchos, Apple Valley Homes Lodge, and Pioneer Mobile Home Park. Single- and multi-family units are generally located along Navajo Road and Arapahoe Road. Based on

[7] "Preliminary Designation of Disadvantaged Communities Pursuant to Senate Bill 535," CalEPA, October 2021.

[8] See Tables 1-3 and 2.12-4 of this DEIR.

the Town's average household size of 2.94 persons per household[9], the Planning Area population is currently 850.

Employment

Jobs in the Planning Area represent a broad range of industries, including retail, food service, professional/administrative, transportation/warehousing/utilities, public administration, recreation, and health care. Businesses in the Village and elsewhere along the Highway 18 frontage include gas stations, fast food restaurants, pharmacies, thrift stores, feed and seed stores, antique dealers, plumbers, architectural and law firms, real estate agencies, and health care services. Beyond Highway 18 are light industrial businesses, such as wood shops, towing companies, self-storage units, vehicle maintenance yards, and tool and machinery workshops. Utility and community service providers are employed at Mojave Water Agency, Liberty Utilities, San Bernardino County Transitional Services, Fire Station No. 1, the Town corporate yard and animal shelter, James Woody Park and community center, and Michael Martin gymnasium.

Disadvantaged Communities

There are no disadvantaged communities in the Planning Area, as identified by CalEPA. Census tracts in the Planning Area have relatively low overall CalEnviroScreen 4.0 percentiles ranging from 29% to 33%.

2.14.6 Project Impacts

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

The proposed Project will facilitate future development of new homes and businesses that will directly result in population growth, and the extension of water and sewer infrastructure that could indirectly induce population growth. Potential growth associated with the Project is summarized in the following table and discussed below.

[9] Table 2: E-5 City/County Population and Housing Estimates, California Department of Finance, January 1, 2021.

Table 2.14-4
Proposed Project Buildout Summary

	Residential (dwelling units)	Commercial/ Service/Office/ Public Facility (square feet)	Population[1]
Existing	289	1,823,380	850
Potential new facilitated by Specific Plan	682	6,067,523	2,005
Total at Specific Plan Buildout	971	7,890,903	2,855

[1] Based on 2.94 persons per household, California Dept. of Finance Table E-5, January 1, 2021.
Source: extracted from Table 1-2 of this EIR.

New Homes

Maximum buildout of the Specific Plan could result in up to 682 new dwelling units in the Planning Area. This is a conservative estimate that assumes vacant acres designated for residential development will develop at the maximum density allowed (20 du/ac). It also assumes currently underutilized parcels will be redeveloped to maximize their development potential. It assumes that the east and west end signature projects in District 1, which are designated for mixed uses (residential and commercial), will have residential components of 25% (west end) and 30% (east end) of total acreage, although the future percentage mix is unknown. Nearly all new units would be mixed use units built in District 1 or multi-family units built in Districts 4 and 5.

There are currently 289 dwelling units and approximately 850 residents in the Planning Area. The proposed Project could allow up to 682 additional dwelling units and 2,005 additional residents. For comparison, existing zoning designations could accommodate an additional 500 dwelling units and 1,470 residents in the Planning Area (Tables 1-3 and 2.12-4).

According to the General Plan, the Town has the potential to accommodate 31,716 additional dwelling units and 96,829 additional residents within the Town boundaries through General Plan buildout.[10] The additional housing increase associated with the Project (682 units) accounts for approximately 2% of the Town's estimated future housing capacity, and the Project's additional population (2,005) accounts for 2% of the Town's future population capacity. Therefore, Project-related housing growth is within the projections of the General Plan and constitutes only a small percentage of total anticipated growth.

According to SCAG growth projections (Table 2.14-3), in 2045, the Town of Apple Valley will have 37,400 households and a population of 101,400. The proposed Project's additional housing increase (682 units) and population increase (2,005)

[10] Apple Valley General Plan, Table II-3 and page II-12.

represent only 2% of SCAG's household and population projections. Therefore, Project-related growth is within, and only a small percentage of, SCAG projections.

Housing and population growth in the Planning Area is planned and anticipated by the Town. The proposed Project is intended to guide the future growth of the Planning Area. It is consistent with General Plan Land Use Element goals, policies, and programs. It establishes a land use plan, development standards, and design guidelines that ensure land use compatibility between adjoining parcels and buffers residences from commercial and other uses (Policy 3.A). It provides opportunities for multi-family (up to 20 du/ac) and mixed use residential products (Policies 3.B and 5.E). It allows rehabilitation and redevelopment of neighborhoods in the Planning Area, including those that may be threatened by blight (Policy 5.H).

The Project is also consistent with General Plan Housing Element goals, policies, and programs. It contributes to the Town's range of residential land use designations (Policy 1.A), locates higher density residential development in proximity to public transit and community and recreational resources (Program 1.A.2), ensures compatibility between multi-family residences and surrounding land uses (Program 1.E.3), and encourages energy efficient design that minimizes greenhouse gas emissions (Policy 1.H, Program 1.H.1). Therefore, the impacts of the Project on population growth inducement will be less than significant.

New Businesses

Maximum buildout of the Specific Plan could result in up to 6,067,523 square feet of new commercial/service/office/public uses in the Planning Area (Table 1-2). This a conservative estimate that assumes future development will occur at the maximum Floor Area Ratio (FAR) allowed (0.5). It also assumes that underutilized parcels will be redeveloped to maximize their development potential. It assumes that the east and west end signature projects in District 1, which are designated for mixed uses (residential and commercial), will have commercial components of 75% (west end) and 70% (east end) of total acreage, although the future percentage mix is unknown. When combined with existing conditions, the Planning Area would have a total of 7,890,903 square feet of commercial/service/office/public facility buildings.

There are currently 1,823,380 square feet of commercial/service/office/public facility uses in the Planning Area. The proposed Project could allow up to 6,067,523 additional square feet of these uses. For comparison, existing zoning designations could accommodate an additional 5,413,585 square feet in the Planning Area.

The General Plan determined that the Town has the potential to accommodate approximately 37,205,344 additional square feet of commercial uses within the Town limits through General Plan buildout.[11] The square footage increase associated with the proposed Project accounts for approximately 16% of the remaining square footage capacity cited in the General Plan. Therefore, Project-related commercial/service/office/public facility growth in the Planning Area is within the projections of the General Plan and represents a limited percentage of anticipated commercial growth.

New commercial development will bring jobs to the area. The Specific Plan preserves the small-town character of the Village through a mix of specialty shops, restaurants, and services, and new jobs will be consistent with the retail, service, construction, and other industries currently occurring there. It is anticipated that most new jobs will be filled by current residents of Apple Valley and/or neighboring communities who already live in the region. Economic development and job growth in the Planning Area are planned and anticipated by the Town, and the proposed Specific Plan has been prepared to guide that growth. Therefore, the impacts of Project-generated business growth on population inducement will be less than significant.

Extension of Roads/Infrastructure

The Planning Area is urbanized and well served by existing roads. No major road extensions will be required to serve the Planning Area at buildout. Proposed circulation projects on Highway 18 and Yucca Loma/Navajo Roads will improve existing traffic inefficiencies and access along the Highway 18 frontage but will not extend into undeveloped areas or otherwise induce population growth. No impact will occur.

The Planning Area is well served by water and utility (electric, gas, telecommunications) infrastructure. Parcel-level extensions will be required to serve new development; however, they will have no impact on population growth.

The municipal sewer system is relatively new and does not extend throughout the entire Planning Area. Sewer infrastructure is absent in the northerly and easterly portions of the Planning Area which are largely undeveloped. Section 10.01.040 of the Apple Valley Municipal Code requires connection to public sewer in a variety of circumstances, including where projects are within 200 feet

[11] Apple Valley General Plan Table II-4 (total potential commercial sq. ft. in Town boundaries at buildout = 44,550,054), and Apple Valley General Plan EIR Table III-39 (existing commercial sq. ft. in Town boundaries = 7,344,710).

of a public sewer. However, further extension of trunk lines will be required before all parcels in the Planning Area are within 200 feet of sewer lines. Development and redevelopment projects that are built before sewer extensions will need to install septic systems. Over the long term, sewer extensions could induce population growth on undeveloped parcels east, northeast, and south of the Planning Area. However, growth in those areas would be expected to occur incrementally over many years. Project-related impacts of sewer extensions on population growth will be less than significant.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The Specific Plan is a policy document that does not propose the demolition of existing housing units. However, it could facilitate the redevelopment of underutilized parcels which could result in demolition of existing housing and replacement with new housing or commercial uses. Underutilized parcels are those that are currently developed but do not maximize the parcel's development potential. For example, a 1-acre parcel may contain two dwelling units but is designated for multi-family development up to 20 units per acre. To optimize the parcel's development potential, a developer could demolish the existing units and build up to twenty (20) units onsite.

Table 2.14-5, below, estimates underutilized acreage and the number of dwelling units that potentially could be lost or gained to redevelopment in the Planning Area under the proposed Project. Acreage estimates are based on GIS-based parcel-level analysis. As shown, 58.36± acres (9% of total acres) are considered underutilized. Of these, 31.04± acres (53%) are designated for commercial/industrial/office/retail or public uses, and their redevelopment would have no impact on housing units (except in District 1 where 2± underutilized acres are assumed to redevelop with 42 dwelling units as part of a mixed use development). The remaining 27.32± acres (47%) are designated for residential uses, including mobile home parks and medium density units. They are considered underutilized because they do not currently maximize the assigned densities. To provide a conservative analysis of potential housing losses and gains due to redevelopment in the Planning Area, it is assumed that all existing dwelling units on underutilized parcels will be lost, and those parcels would be redeveloped with either residential or commercial uses at the maximum allowable intensity (20 du/ac for residential land, FAR 0.5 for commercial land). As shown in the table, redevelopment of underutilized parcels is projected to result in a net loss of 23 dwelling units in the Planning Area. Based on the Town's average household size of 2.94 persons, 68 residents could be displaced. These assumptions and estimates have been factored into the proposed Project buildout land use table (Table 1-2).

It is unknown whether or to what extent redevelopment will occur, or the number of dwelling units that would be removed or replaced as the Planning Area builds out. The above analysis estimates that a net loss of 23 units could occur. However, the Specific Plan designates 25± currently vacant acres in the Planning Area for future multi-family residential development, and maximum buildout of those lands would result in 705 new dwelling units. The number of replacement housing units would exceed the number of units lost by 682 units, and the new units could accommodate displaced residents. Furthermore, none of the units which could be lost are currently restricted for lower income households. Should any of these units be affordable housing units in the future, State law requires that the residents be relocated to equivalent housing prior to the demolition of any unit. Therefore, Project-related impacts associated with the displacement of people or housing would be less than significant.

Table 2.14-5
Potential Housing Losses/Gains Due to Redevelopment of Underutilized Land

Existing Land Use Designation by District	Acres		Dwelling Units Potentially Lost/Gained due to Redevelopment of Underutilized Land[1]
	Under-utilized	Total	
District 1			
Commercial/Industrial/Office/Retail	12.23	170.64	42 units gained[2]
Medium Density Residential and Estate Residential	2.63	11.43	9 units lost to commercial development
Mobile Home Park	1.47	1.48	17 units lost to commercial development
Subtotal:	16.33	183.55	26 units lost; 42 units gained (net gain of 16 units)
District 2			
Commercial/Industrial/Office/Retail	11.76	185.08	No residential impact
Public	0	13.05	No underutilized land
Medium Density Residential	4.65	5.48	12 units lost to commercial development
Mobile Home Park	7.37	7.37	76 units lost to commercial development
Subtotal:	23.78	210.98	88 units lost
District 3			
Commercial/Industrial/Office/Retail	7.06	76.13	No residential impact
Public	0	8.11	No underutilized land
Mobile Home Park	4.00	4.00	41 units lost to commercial development
Subtotal:	11.06	88.24	41 units lost
District 4			
Commercial/Industrial/Office/Retail	0	5.58	No underutilized land
Public	0	26.76	No underutilized land
Medium Density Residential	2.51	13.25	15 units lost; 50 units gained (net gain of 35 units)
Mobile Home Park	4.69	4.69	39 units lost; 94 units gained (net gain of 55 units)
Subtotal:	7.20	50.28	54 units lost; 144 units gained (net gain of 90 units)
District 5			
Commercial/Industrial/Office/Retail	0	2.26	No underutilized land
Medium Density Residential	0	21.02	No underutilized land
Subtotal:	0	23.28	No underutilized land
Land Use Total Acres:	58.36	556.33	---
Street ROW Total Acres:	0	94.82	---
Total:	**58.36**	**651.16**	**209 units lost; 186 units gained (net loss of 23 units)**

[1] conservative estimate that assumes all existing dwelling units on underutilized parcels will be lost to redevelopment and new units may be built
[2] on 2.095 acres at the West End signature project

Environmental Justice

The Project Planning Area does not contain any disadvantaged communities, as designated by CalEPA. The Planning Area has relatively low overall CalEnviroScreen 4.0 percentiles ranging from 29% to 33%. Therefore, the Project will have no impact on disadvantaged communities.

The Project will not create or exacerbate conditions associated with environmental justice. Concepts relating to the equitable provision of resources and protection from environmental hazards, that are the hallmarks of environmental justice, are foundational to the Specific Plan. Proposed land uses do not include industrial or other potentially hazardous land uses and will not place residential land uses near such land uses. The Project facilitates higher density residential development in a high-quality transportation corridor with access to public transit. It proposes a complete streets network and multimodal links that reduce mobility barriers and benefit all segments of the population. It increases commercial and mixed uses development opportunities that can be expected to improve the local jobs/housing balance. These principles are addressed in the Project's development standards and guidelines. Project-related impacts associated with environmental justice are expected to be positive.

2.14.7 Mitigation Measures

Impacts associated with population and housing are expected to be less than significant, and no mitigation measures are required.

2.14.8 Significance After Mitigation

Impacts to population and housing will be less than significant.

2.14.9 Cumulative Impacts

Cumulative impacts have been assessed using the summary of projections method set forth in State CEQA Guidelines Section 15130(b)(1)(B). The primary documents used to determine cumulative impacts were the Town of Apple Valley General Plan and its EIR.

The Apple Valley General Plan EIR determined that future development facilitated by the General Plan would not have a cumulative impact on population and housing. Although General Plan implementation would increase population and housing units in Apple Valley, General Plan policies and programs would assure that new residential projects would be consistent with existing types of development, and no cumulative impacts would occur.

Buildout of the Project Planning Area according to current General Plan designations would result in 789 dwelling units and 2,320 residents.[12] Buildout of the Planning Area according to the proposed Specific Plan would result in 971 dwelling units and 2,855 residents. Therefore, the proposed Project would result in 182 more dwelling units and 535 more residents than the General Plan. This is a limited increase that would not contribute considerably to cumulative impacts. Land use designations, residential densities, and the distribution of land uses proposed by the Specific Plan are consistent with the General Plan. While the Project would contribute to growth in the County, region, and Town, its growth is consistent with increases anticipated by the General Plan and regional growth forecasts. Therefore, the Project will not result in cumulatively considerable impacts.

[12] Population projection is based on the Town of Apple Valley average household size of 2.94 persons. Table 2: E-5 City/County Population and Housing Estimates, California Department of Finance, January 1, 2021.

2.15 Public Services

2.15.1 Introduction

The following section describes the existing public services in the Project vicinity and analyzes the potential impacts associated with the proposed Specific Plan Project.

A variety of local and regional data and information, ranging from research and analysis conducted for the Project site, to regional-scale planning and environmental documents, have been used in researching and analyzing the Project and its potential effects on public services.

2.15.2 Thresholds of Significance

Potential impacts to public services are analyzed using the thresholds of significance provided in Appendix G of the CEQA Guidelines. Appendix G uses the following questions to evaluate the Project's potential impacts.

Would the project:

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

- Fire Protection?
- Police Protection?
- Schools?
- Parks? (see Section 2.16, Recreational Resources)
- Other Public Facilities?

2.15.3 Regulatory Framework

Federal

There are no federal regulations governing public services that apply to the proposed Project.

State

Senate Bill 50

Senate Bill 50 (SB 50 or the "Leroy Greene School Facilities Act"), enacted in 1998, represents the most significant school facility finance and developer fee reform legislation for school facilities construction and modernization since the adoption of the 1986 School Facilities Act. Section 65995 of the California Government Code establishes the statutory criteria for assessing construction fees. The legislation recognizes the need for fees to be adjusted periodically to keep pace with inflation; therefore, the State of California Department of General Services State Allocation Board increases the maximum fees according to the adjustment for inflation in the statewide cost index for Class B construction. The payment of school mitigation impact fees authorized by SB 50 is deemed to provide full and complete mitigation of project impacts on school facilities pursuant to Section 65995 of the California Government Code. SB 50 provides that a state or local agency may not deny or refuse to approve the planning, use, or development of real property on the basis of a developer's refusal to provide mitigation in amounts in excess of that established by SB 50.

Regional and Local

Town of Apple Valley General Plan

The Town's General Plan Chapter V, Public Services and Facilities, establishes goals, policies, and programs to address the long-term needs for public services in the Town.

Public Buildings and Facilities Element

Goal 1 Provision of a full range of dependable and cost-effective public buildings, facilities and services that are designed and conveniently located so as to meet the social, economic and functional needs of the entire community.

Policy 1.B The Town shall continue to identify and assess viable mechanisms for long-term funding for construction, maintenance and operation of existing and future public buildings and facilities. This assessment shall include mechanisms that assure that new development provides its fair share of funding for these facilities.

Program 1.B.1

To ensure an on-going funding source for adequate provision of public buildings, utilities and other facilities associated with future development, the Town shall explore the possibility of establishing a New Construction Tax or Development

Impact Fee that provides a rational nexus between development and demand for future facilities.

Schools and Libraries Element

Goal 1 The provision of accessible, safe and conveniently located school, library and other educational facilities that provide a range of adequate and quality services to the Town and community.

Policy 1.B The Town shall assist Apple Valley Unified School District in securing school impact fees from developers, in accordance with state law.

Policy 1.F The Town shall continue to coordinate with the County of San Bernardino to assure that adequate library resources and facilities are available to meet to needs of the community.

Police and Fire Protection Element

Goal The highest possible level of services and quality for fire and police protection to ensure the preservation and protection of the health, welfare and property for all types of development and socio-economic segments of the community.

Policy 1.A The Town shall review all new development proposals, as well as significant remodeling projects to determine potential impacts to public safety and the provision of police and fire protection services.

Program 1.A.1
The Town shall continue to monitor development levels in the Planning Area to assess the need for new fire and police stations.

Program 1.A.2
The Town shall coordinate with the Sheriff's Department and Fire Protection District regarding the optimal location of future police and fire stations, and to ensure that levels of staffing are adequate to meet the demands of new development in the Town.

Program 1.A.3
The Town shall review and modify its structural fire assessment fees annually, or as necessary to ensure that there are adequate funds to cover annual operating costs.

Policy 1.B All proposed development shall be designed to provide unencumbered access for police, fire, and paramedic vehicles, to the satisfaction of the Sheriff's Department and the Fire Marshal.

Policy 1.E The Town shall utilize the process of reviewing development and building plans, and of conducting building inspections, to strictly enforce fire standards and regulations.

Program 1.E.1
The Fire District and the Fire Marshal shall review all development proposals, and project design or conditions of approval, as appropriate, shall incorporate their input.

Policy 1.H The Fire Protection District shall maintain a 6-minute response time, or as close thereto as possible.

Policy 1.I The Fire Protection District shall maintain a level of service that ensures the provision of 1 fire personnel per 1,500 residents, or as close thereto as possible.

Policy 1.J New and substantially remodeled development shall incorporate crime prevention design techniques, including the use of "defensible space," high security hardware, optimal site planning and building orientation, and other design approaches to enhance security.

Policy 1.O The Sheriff's Department shall maintain a level of service that ensures the provision of 1 sworn officers per 1,500 residents, or as close thereto as possible.

2.15.4 Environmental Setting

The Apple Valley Fire Protection District (AVFPD) provides fire protection services to the Town of Apple Valley. The San Bernardino County Sheriff's Department provides police protection services to the Town on a service contract basis. The Apple Valley Unified School District (AVUSD) provides public educational services in the Town. There are many private schools in Town ranging from childcare to K-12 levels. Parks are maintained and operated by the Town, and are addressed in Section 2.16, Recreation.

2.15.5 Existing Conditions

Fire Protection

Apple Valley Fire Protection District (AVFPD) covers 206 square miles in the High Desert area of San Bernardino County. The current population within the Fire District is approximately 90,000. The District currently employs 51 full-time and 3 part-time and reserve personnel. It staffs five fire stations full time, and all stations provide paramedic services.

The District provides paramedic level Advanced Life Support services from all front line fire apparatus. Its fire stations are geographically located to optimize response times within 6 minutes to provide lifesaving care and treatment and stabilize the emergency. Transportation to the hospital is provided by American Medical Response (AMR), a private company. AMR leases Station 333 from the AVFPD, which is located on Highway 18 northwest of the Planning Area.

Fire Station 331 (also known as Fire Station 1) is located at 22400 Headquarters Drive in the northeastern Planning Area. Station 331 is fully staffed and also serves as the AVFPD headquarters.

In addition to firefighting and emergency medical services staff, the Apple Valley Fire Marshal provides project review services for all new development.

Police Protection

The Town of Apple Valley contracts with the San Bernardino County Sheriff's Department for public safety services. The contracted County police force serves as the Town of Apple Valley Police Department, which consists of 51 officers and 13 general employees. In addition to general patrol, the department also includes special teams such as traffic division, retail theft division, and a gang unit. The department also runs a Crime Free Multi-Housing Program which focuses on improving safety in rental properties and a Crime Free Business Program that provides free training to business owners and employees in robbery and burglary prevention and other essential tools. The department also provides youth programs in early career experience and crime prevention and volunteer programs such as Citizens on Patrol that promote public safety and education.

The Apple Valley police station is at 14931 Dale Evans Parkway, approximately two (2) miles northwest of the Planning Area.

Schools

Apple Valley Unified School District (AVUSD) serves over 13,000 students ranging from preschool through twelfth grade, and offers an adult education program

linked with Victor Valley College. AVUSD has five elementary schools serving K-6th grade, five schools serving K-8th grade, two high schools, and three schools for independent study, opportunity and online learning.

The Specific Plan area is within the attendance areas of six schools: Yucca Loma Elementary School, Rancho Verde Elementary School, Sycamore Rocks Elementary School, Vanguard Preparatory, Granite Hills High School and Apple Valley High School. Two schools are within ¼ mile of the Planning Area: 1) Yucca Loma Elementary School, on Yucca Loma Road approximately 250 feet west of the Planning Area, and 2) Granite Hills High School, on Esaws Avenue approximately ¼-mile east of the Planning Area.

The Smart Start Academy preschool is located at 21482 Yucca Loma Road on the westernmost parcel of the Planning Area.

The nearest higher education opportunity to Apple Valley is Victor Valley College (VVC), a 253-acre community college located south of Apple Valley within the City of Victorville. VVC currently (2021) has a total enrollment of 12,231 students. VVC offers a wide range of academic programs and over 80 degrees and certificates.

Parks
Discussion of Town parks is provided in Section 2.16, Recreational Resources, of this DEIR.

Other Public Facilities
Additional public facilities in the Planning Area include James A. Woody Community Center on Navajo Road; Michael H. Martin Gymnasium on Navajo Road; the U.S. Post Office on Highway 18; the Apple Valley Municipal Animal Shelter on Powhatan Road; the Apple Valley Corporate Yard on Nomwaket Road; a Household Hazardous Waste Facility on Nomwaket Road; and San Bernardino County Transitional Assistance Department on Central Road.

2.15.6 Project Impacts

a) ***Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:***

- ***Fire Protection***

- ***Police Protection***
- ***Schools***
- ***Parks (see Section 2.16)***
- ***Other Public Facilities***

Fire Protection Services

Implementation of the proposed Specific Plan could result in the development of up to 682 additional dwelling units and an 6,067,523 additional square feet of commercial/service/ office/public facility uses in the Village area at full buildout, in addition to existing development. It would introduce new structures and additional residents to the Planning Area, thus increasing the demand for fire protection services.

Fire Station 331 is in the northeastern Planning Area and fully staffed to provide firefighting and emergency medical services. Because the Planning Area would have more structures at buildout of the proposed Specific Plan, the potential for structural fires would increase. Therefore, the demand for fire protection services, including fire protection resources such as staff, equipment, and fire stations would increase as buildout of the Planning Area occurs.

Future funding for these additional resources would be provided through property taxes, special taxes, and development impact fees. As a special district, AVFPD is primarily funded through property tax revenues. They are supplemented by special taxes collected on a parcel-level basis per Measure A, approved by voters in the District in 2016. The District also relies on development impact fees (DIF) paid by developers for new development within its boundaries, collected by the Town of Apple Valley, and forwarded to the District. DIF funds are restricted for financing fire suppression facilities and equipment needed to serve new development. The funds help maintain adequate fire protection and emergency/medical services, and would be paid and applicable to new development in the Planning Area.

Future projects will also be subject to review by the Fire Marshall to ensure that they provide adequate access for fire protection crew and equipment and do not interfere with such services. Property taxes, special taxes, and developer impact fees levied on new development in the Planning Area would be utilized to fund the construction of new stations and/or to expand existing facilities to reduce fire services impacts. The funds would also be used to purchase required fire trucks and equipment and hire additional fire fighters as needed. Compliance with the applicable design requirements and payment of the funds described above would ensure that future development facilitated by the proposed Specific Plan would not result in significant adverse impacts to fire protection services.

Construction of new development and redevelopment facilitated by the Specific Plan may temporarily affect emergency and secondary roadway access. However, project-specific construction traffic control plans implemented during construction will assure that impacts to mobility and accessibility in the area will be less than significant. The Specific Plan includes a transportation concept for Highway 18 and Yucca Loma/Navajo Roads that are expected to result in enhanced site access, shorter response times, and improved traffic and pedestrian safety in the Planning Area.

New fire stations or expansion of existing fire facilities could be required as the population and corresponding demand for services increases. Implementation of the General Plan policies and programs (Police and Fire Protection Element) requires the Town to coordinate with the Fire Protection District to provide adequate and timely expansion of fire protection capabilities, services and facilities to meet future development demands. Overall, implementation of existing General Plan policies and standard requirements would ensure that impacts on fire protection services would be less than significant.

Police Protection Services

Implementation of the proposed Specific Plan could result in the addition of approximately 2,005 new residents from the development of 682 additional dwelling units throughout the Planning Area. With 51 officers for a Town population of 74,350,[1] the current officer-to-population ratio is around one officer per 1,458 residents, which exceeds the one officer for every 1,500 residents target set in the General Plan. The addition of 2,005 new residents would increase the population to 76,355, with an officer-to-population ratio of one officer per 1,498 residents, which is still above the one-per-1,500-residents target. Therefore, new development facilitated by the Specific Plan is not expected to result in demand for additional law enforcement officers.

The General Plan Police and Fire Protection Element includes policies that require future development to incorporate crime prevention design techniques such as the use of "defensible space," high security hardware, optimal site planning and building orientation, and other design approaches to enhance security. In addition, the Specific Plan includes mixed-use development and additional multi-family development which will provide "eyes on the street" in the Planning Area. Future projects will also be subject to review by the Police Department to ensure that they provide adequate access for police vehicles and do not interfere with such services.

[1] California Department of Finance Table E-5 City/County Population and Housing Estimates, January 1, 2021.

Funding for police services comes from the Town's general fund, which is maintained through the collection of taxes. In compliance with the Town's development impact fees, each project developed in the Planning Area would be required to pay fees to offset the project-related demand on law enforcement facilities, and will increase property tax revenues to the Town. These fees and tax revenues would help maintain adequate police protection services to the Planning Area.

Based on the analysis above, the proposed Specific Plan is not expected to have significant impacts on police protection services such that new or expanded facilities will be needed. Implementation of existing General Plan policies and programs (Police and Fire Protection Element) will require the Town to coordinate with the Police Department to provide adequate and timely police protection services to meet future development demands. Should new police stations or expansion of existing police facilities be required in the future, each facility would be evaluated on a project-by-project basis to assure that impacts are minimized or mitigated, as needed. Overall, implementation of existing General Plan policies and standard requirements would ensure that impacts on police protection services would be less than significant.

Schools

Implementation of the proposed Specific Plan would result in the development of up to 682 additional dwelling units throughout the Planning Area. The following student generation analysis is based on AVUSD information. As shown in Table 2.15-1 below, each school level has a unique student generation factor. To provide a conservative analysis for the allowed residential density (20 units/acre), assuming maximum buildout of multi-family units, approximately 224 new elementary/middle/high school students would be generated over the buildout period of the proposed Specific Plan.

Table 2.15-1
Specific Plan Projected Student Generation at Buildout

School Level	Generation Factor per Multi-Family Attached Unit	Student Generation at Specific Plan Buildout
Elementary School	0.2009	138
Middle School	0.0468	32
High School	0.0783	54
Total:	0.3260	224

Source: Apple Valley Unified School District - Residential Development School Fee Justification Study (March 2018).

Pursuant to SB 50, AVUSD can collect school impact fees as new development occurs. These fees would serve to fund additional school resources. The payment of such fees is deemed to fully mitigate the impacts of new development on school services, and impacts from Specific Plan buildout on school facilities would be less than significant pursuant to SB 50.

According to the 2018 Fee Justification Study for AVUSD, the District's school facilities in school year 2017/2018 had a capacity of 13,141 students, of which 6,728 were at the elementary school level (K-6), 2,441 were at the middle school level (grades 7 and 8), and 3,972 were at the high school level (grades 9 through 12). These capacities include seats from all new school facility construction projects funded by the State of California and teaching stations purchased by the District without state funding. The projected Specific Plan student generation is well below these additional capacities at each level, and thus buildout of the Specific Plan is not expected to require new school facilities or expansion of existing school facilities other than those already planned by the AVUSD. Overall, buildout of the proposed Specific Plan would result in a less than significant impact related to schools.

Parks

Potential impacts to parks are analyzed in Section 2.16, Recreational Resources, of this DEIR.

Other Public Facilities

Buildout of the Project is projected to result in an additional 2,005 residents (assuming full occupancy) and thus a limited increase in the need for additional community centers and/or other public facilities. The Town assesses Development Impact Fees on each new residential or commercial project, including fees for General Government Facilities, Animal Control Facilities, and Public Meeting Facilities. Under the Specific Plan, the development of new residential units will occur over time and the use of public facilities by Project residents is not expected to require new or expanded facilities that could result in adverse environmental impacts. With the payment of applicable impact fees, Project-related impacts to public facilities will be less than significant.

2.15.7 Mitigation Measures

Future projects under the proposed Specific Plan will be subject to review by the Fire Protection District and Police Department to ensure adequate safety design and emergency access for fire and police vehicles/equipment. Projects will be required to pay development impact fees to mitigate potential impacts on fire, police facilities, and other public buildings and facilities. Impacts to schools will

be mitigated by the payment of school impact fees. Specific Plan buildout is not expected to require additional police personnel or school facilities. Therefore, mitigation measures are not required.

2.15.8 Significance After Mitigation

Mitigation measures are not required. Impacts are less than significant.

2.15.9 Cumulative Impacts

The General Plan EIR stated that demand for services and facilities associated with future development facilitated by the General Plan is expected to increase incrementally and cumulatively. These services and facilities include police and fire protection, school and library services, parks, and recreation facilities. The General Plan EIR determined that buildout of the General Plan can have significant impacts on public services and facilities due to significant increases in demand for fire, police, school and other public services and facilities. The General Plan EIR provided mitigation measures in addition to existing funding mechanisms for public services.

Compared to the General Plan, maximum buildout of the proposed Specific Plan would result in a 23% increase in the number of dwelling units and a 9% increase in commercial square footage, but they would occur in the same location and area as the current General Plan designations. As discussed in Section 2.15.6 above, the Specific Plan will have less than significant impacts on public services and facilities. As described above, all future projects, whether in the Planning Area or elsewhere in Town, will be subject to development impact fee payments for public facilities, and will generate property tax revenues to the Town and Fire Protection District. These fees and taxes are designed to offset the costs of public facilities, not only in the Planning Area, but throughout the Town. As fees and taxes are based on increases in property value and cost-of-living escalators, it is expected that the cumulative impacts of development in the Planning Area, when combined with development elsewhere in Town, will not be cumulatively considerable.

2.16 Recreational Resources

2.16.1 Introduction

This section of the EIR describes and evaluates the potential impacts of the proposed Specific Plan Project to existing and future parks and recreation facilities. The potential for adverse impacts is evaluated based on current facilities and existing use of parks and recreational facilities in the Town of Apple Valley.

2.16.2 Thresholds of Significance

Based upon Appendix G of the CEQA Guidelines, the proposed Apple Valley Village Specific Plan Project would significantly affect parks and recreational facilities if it would:

a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.

b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

2.16.3 Regulatory Framework

Federal

There are no federal regulations applicable to the proposed Project regarding parks and recreational facilities.

State

Quimby Act

California allows a city or county to pass an ordinance that requires, as a condition of approval of a subdivision, either the dedication of land, the payment of a fee in lieu of dedication, or a combination of both for park or recreational purposes (California Government Code, Section 66477). This legislation, commonly called the "Quimby Act," establishes a minimum parkland dedication standard of 3 acres of parkland per 1,000 residents for new subdivision development unless the amount of existing neighborhood and community parkland exceeds that limit.

Regional and Local

Town of Apple Valley Development Code

The Town of Apple Valley Development Code Section 9.71.055(C) sets forth a park standard of five acres of parkland per 1,000 persons within a subdivision. The standard also serves as a requirement for dedication of land under the Quimby Act. Section 9.71.055(D) establishes in-lieu fee standards as an alternative to the dedication of land. Specifically, Section 9.71.055(D) states:

> If a proposed subdivision contains sixty-two (62) parcels (lots) or less, only the payment of fees, as described herein, shall be required. However, when a condominium or apartment project exceeds sixty-two (62) units, dedication of park land within the development and improvement to the land to Town standards as approved by the Planning Commission shall be required, notwithstanding that the total number of parcels may be less than sixty-two (62). If a proposed single-family residential subdivision contains 170 parcels (lots) or less, either the payment of fees, as described herein, or the dedication of park land within the development, as described herein, can be provided as agreed upon by the Town and the developer. Proposed subdivisions which exceed 170 parcels (lots) shall be required to dedicate park land within the development and improve the land to Town standards as approved by the Planning Commission.

Section 9.71.055(E) describes procedures on how private open space for park and recreation purposes can receive credit up to seventy-five (75) percent against the requirement of a dedication for park and recreation purposes, or the payment of fees in lieu, provided the Town finds it is in the public interest to do so, and that certain standards are met as detailed in Section 9.71.055(E.5).

Section 9.71.055(F) provides exemptions from the Quimby Act, including commercial or industrial subdivisions, condominium projects which consist of the subdivision of airspace in an existing apartment building which is more than five years old and does not add new dwelling units, and subdivisions containing less than five parcels and not used for residential purposes.

Town of Apple Valley General Plan

The General Plan Parks and Recreation Element set forth goals, policies, and programs to ensure the planning and provision of adequate parkland and recreational space to meet the needs of the Town. Relevant goals, policies, and programs are as follows:

Goal 1 The maintenance and expansion of a well connected network of high quality parks that provides all segments of the community with a wide range of recreational opportunities.

Policy 1.A The Town shall maintain a standard of 5 acres of parkland per 1,000 residents.

Policy 1.D In addition to Town park requirements, developers of new projects may be required to provide further on-site recreational space/ landscaped open space.

Program 1.D.1
Through a homeowners association, an assessment district or a community facilities district, recreational facilities within housing projects will be maintained by the residents.

Goal 2 Expansion and further development of an integrated and comprehensive bikeway, walking paths and trails system that includes effective signage and supporting facilities to encourage use.

Policy 2.A In addition to connecting homes to schools, the trails system will connect residential areas to commercial centers, workplaces and recreational facilities.

Policy 2.D The Town shall maintain and expand a comprehensive interconnected recreational trails system for bicycles, equestrians and pedestrians, and provide supporting facilities whenever possible.

2.16.4 Environmental Setting

Parks and recreational facilities provide residents, visitors, and the community with both active and passive health and recreational benefits. The high desert and the broader region provide a range of parks and recreational resources such as the Mojave Narrows Regional Park, San Bernardino National Forest, and Rodman Mountains Wilderness Area. Each municipality in the high desert has its own parks and recreation facilities. Generally, parks are classified based on their sizes, as discussed below.

Standard Park Classifications
Parks and open space are an integral part of the urban landscape, providing natural spaces for passive enjoyment and ballfields and courts for a variety of

games and active recreation. The following summarizes the range of typical park types, sizes, and facilities typically developed in the Town of Apple Valley.

Table 2.16-1
Standards for Recreational Service Areas in Apple Valley

Type of Park Area	Acres per 1,000 Persons	Maximum Site Size	Ideal Site Size	Minimum Site Size
Mini-Park/Playground	1 to 5	5 acres	3.5 acres	0.5 acres
Neighborhood Park	2 to 5	20 acres	10 acres	5 acres
Community Park	3 to 5	50 acres	30 acres	20 acres
Special Park	3.0	+100 acres	75 acres	50 acres

Source: Town of Apple Valley General Plan Parks and Recreation Element Table II-12.

2.16.5 Existing Conditions

The Town's Park and Recreation Department is responsible for designing, operating, and maintaining public facilities that include the 11 public parks and playgrounds, Town Hall Recreation Center, James Woody Community Center, a gymnasium, an equestrian center, trails, and numerous ball fields. The Department also provides a full spectrum of recreation, sport, educational and equestrian programs for children, teens, adults, and families. As of October 2021, the Town has a total of 340.87 acres of developed park lands, as summarized in Table 2.16-2 below. Among the developed parks, James A. Woody Community Center is located within the Specific Plan Planning Area (Village Specific Plan District 4) and Yucca Loma Park is immediately west of the Planning Area (Village Specific Plan District 1).

Two parks are proposed as part of approved Specific Plans in other parts of Town, but are not yet developed: the Bridle Path Park (5 acres) and the North Pointe Park (60 acres). In addition to the existing and proposed parks, the Town owns approximately 27 acres of undeveloped lands planned for use as parklands. None of the planned/future park sites are located within the Specific Plan Planning Area. Buildout of planned and future parklands will result in a total of 432.87 acres of parkland.

Table 2.16-2
Town of Apple Valley Developed Parks and Recreational Facilities

Park Facility Name	Parkland Classification	Size (acres)	Location	Amenities
Corwin Road Park	Mini	3.5	Northwest of Planning Area	Playground, BBQ grill, Picnic tables, Shade trees
Mendel Park	Mini	3.5	South of Planning Area	Playground, BBQ grill, Ball fields/courts, Shade structure
Norm Schmidt Memorial Park	Mini	3	West of Planning Area	Playground, BBQ grill, Picnic tables, Ballfields, Shade trees
Yucca Loma Park*	Mini	1.5	Immediately west of Planning Area	Playground, BBQ grill, Picnic tables, Ballfields, Shade trees
Lions Park**	Mini	1.5	Northwest of Planning Area	BBQ grill, Picnic tables, Shade trees
Sycamore Rocks Park*	Neighborhood	9	North of Planning Area	Playground, BBQ grill, Picnic tables, Ballfields, Shade trees
Thunderbird Park*	Neighborhood	7	Northwest of Planning Area	Playground, BBQ grill, Ball fields/courts, Shade structure/trees
Lenny Brewster Sports Center	Community	39	Northwest of Planning Area	Playground, BBQ grill, Picnic tables, Ball fields/courts
Civic Center Park	Community	22	Northwest of Planning Area	Playground, Amphitheatre, Aquatic Center, Dog park, Shade trees
James A. Woody Center	Community	22	In Planning Area District 4	Activity rooms/kitchen, Concession stands, Gym, Playground, BBQ grill, Ball fields/courts, Shade structure, Skate park
Horsemen's Center Park	Special Use	80	Southeast of Planning Area	Equestrian, Moto-cross, Playground, Picnic facilities, Campsites, Hiking trails
Apple Valley Golf Course	Special Use	148.87	Northwest of Planning Area	Ball courts, golf course
Total Developed Parklands		**340.87**		

* Park sites owned by the Apple Valley Unified School District
** Developer owned
Source: Town of Apple Valley General Plan Parks and Recreation Element Table II-11.

The Town currently has a bicycle path system and an equestrian "multi-use" trail system. Multi-use trails (also known as 'Lifeline Trails' in the General Plan Circulation Element) are used for walking, bicycle riding, horseback riding, and

"for any other device moved by human propulsion." In the Planning Area, bikeways are only in two locations: 1) Class II bike lane on both sides of Navajo Road north of Highway 18, and 2) substandard Class I bike path on the south side of Yucca Loma Road west of Algonquin Road. Although this pathway exists, it is in poor condition, has no curbs or rest facilities, and is unmarked. Lifeline Trails are in the westerly portion of the Planning Area on: 1) Navajo Road north of Highway 18, 2) rear property line of parcels fronting on the north side of Highway 18 and Pine Ridge Avenue, terminating at the rear property line of Del Taco, and 3) rear property line of parcels fronting on the south side of Highway 18 and Rancherias Road, terminating at Yucca Loma Road.

In addition, the Planning Area has Bridle Easements/Trails, which are recorded easements that are mapped and known to be used for equestrian use; however, they are not improved or marked. Bridle Trails are located along: 1) rear property line of parcels fronting the north side of Highway 18 and Arapahoe Avenue, 2) rear property line of parcels on east side of Navajo Road, south of Michael Martin Gymnasium, and 3) rear property line of parcels on west side of Navajo Road, south of Powhatan Road.

The Town aims to provide Class-I bike paths or multi-use paths along most major roads, including Highway 18, Navajo Road, Yucca Loma Road, Esaws Avenue, and Central Road in the Planning Area, as provided in the Specific Plan (see Specific Plan Exhibit 5.1).

2.16.6 Project Impacts

a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.

The proposed Specific Plan would facilitate the development of up to 682 additional residential units that would generate approximately 2,005 residents within the Planning Area. With a current Town population of 74,350 and 340.87 acres of developed parkland,[1] the Town currently provides about 4.6 acres of parkland per 1,000 residents, which is slightly below the five acres for every 1,000 residents standard set in the Development Code Section 9.71.055(C). The addition of 2,005 new residents would increase the population to 76,355, which will occur gradually with a comparable timeframe to General Plan buildout. Therefore, it is reasonable to analyze the future population in relation to total parkland areas, including planned and future parklands (432.87 acres), which

[1] California Department of Finance Table E-5 City/County Population and Housing Estimates, January 1, 2021.

would provide about 5.7 acres of parkland per 1,000 residents and exceed the Town's goal of 5 acres per 1,000 residents. Therefore, the Town has sufficient parklands existing or planned to accommodate the residential growth in the Planning Area, and the proposed Specific Plan is not expected to result in a significant demand for new or expanded parks or other recreational facilities.

The Specific Plan will facilitate population growth in the Planning Area, which would incrementally increase the use of existing parks and recreational facilities in Apple Valley. However, the projected Project buildout population (2,005) represents only 2.7% of the current Town population (74,350), 2.0% of SCAG's projected 2045 Town population (101,400), and 1.1% of the anticipated General Plan buildout population (185,858) (see Section 2.14, Population and Housing). This is only a marginal increase in population that is not expected to result in or accelerate substantial physical deterioration of existing parks and recreational facilities.

Additionally, the proposed Project would facilitate a combination of new public recreational improvements such as bike and pedestrian paths, private open spaces and recreational facilities, and payment of in-lieu fees or dedication of land to the Town that would reduce the demand for existing parks and recreational facilities. As the Planning Area is entirely within the Town's jurisdiction, developers will be required to pay the in-lieu parkland fee or dedicate land per Development Code Section 9.71.055, depending on the development type. Exemptions for certain redevelopment projects and partial credit for private park and recreational facilities may apply in the calculation of park in-lieu fees. Implementation of existing requirements in the Development Code would further reduce potential impacts to Town parks and recreation facilities to less than significant levels.

The Specific Plan includes an Active Transportation Plan in its Circulation Plan, which includes an integrated pedestrian and bicycle network of multi-use paths. Multi-use paths are bi-directional off-street paths that can accommodate multiple types of users, including pedestrians, bicyclists, and equestrians (in certain areas). Multi-use paths are proposed on Highway 18, Navajo Road, Central Road, Esaws Avenue and Yucca Loma Road in the Planning Area. The multi-use paths, pedestrian facilities, and bicycle routes will provide both alternative transportation and recreational opportunities for future residents, and further the General Plan's goals and policies for paths and trails.

Residential and mixed-use development within the Planning Area would consist of planned communities through new development or redevelopment. Existing facilities are available within the Planning Area, in the ballfileds, gymnasium and other facilities available at the James A. Woody Community Center. Future

development would dedicate parkland or pay in-lieu fees to the Town and may provide private open space or recreational amenities (i.e., gyms, swimming pools, tennis courts or on-site parks) to residents. Commercial development facilitated by the Specific Plan would utilize and enhance open space and landscaping to provide people with places to sit, relax, and gather. The incorporation of recreational amenities within future development would help offset the demand of future Planning Area residents for the Town's existing parks and recreational facilities. The inclusion of open space and recreational amenities is encouraged and integrated in multiple sections of the Specific Plan, particularly in Districts 4 and 5 where the bulk of new units are anticipated, and would be constructed consistent with Town standards; therefore, impacts are considered less than significant.

b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

As a policy document, the proposed Project will not, in and of itself, result in adverse physical effects on parks and recreation. However, the Specific Plan Circulation Plan includes conceptual design of a new/enhanced multi-modal pathway network that can accommodate pedestrians, bicyclists, and other users in the Planning Area. The Specific Plan also facilitates future development of private open space, recreational facilities, and plazas/courtyards and other passive gathering spaces. Construction and operation of future recreational amenities would be evaluated on a project-by-project basis as projects are proposed. Therefore, impacts of the proposed Project would be less than significant.

2.16.7 Mitigation Measures

Mitigation measures are not required because the Town has adequate existing and planned parks and recreational facilities to accommodate the growth generated by the Specific Plan.

2.16.8 Significance After Mitigation

Mitigation measures are not required. Impacts are less than significant.

2.16.9 Cumulative Impacts

The General Plan EIR stated that demand for parks and recreation facilities associated with future development facilitated by the General Plan is expected to increase incrementally and cumulatively. The General Plan EIR determined

that impacts on parks and recreational resources will be less than significant through the development of additional parkland under the Quimby Act and via supplementary funding sources.

Compared to the General Plan, maximum buildout of the proposed Specific Plan would result in a 23% increase in the number of dwelling units and a 9% increase in commercial square footage, but they would occur in the same location and area as the current General Plan designations. As discussed in Section 2.16.6 above, the Specific Plan will have less than significant impacts on parks and recreational resources. Mitigation measures provided in the General Plan EIR and the recreational facilities planned within the Specific Plan will offset individual and cumulative impacts and ensure that cumulative impacts will not be considerable regarding parks and recreational resources.

2.17 Transportation and Traffic

2.17.1 Introduction

This section of the EIR describes the existing transportation conditions within the Project area and analyzes the potential impacts of the proposed Village Specific Plan Project on traffic, circulation, and emergency access. The analysis is based on a wide range of data and information, including the Project-specific Traffic Impact Analysis[1] prepared by David Evans and Associates in December 2021 (see Appendix D).

2.17.2 Thresholds of Significance

According to CEQA Guidelines Appendix G, the Project would have a significant effect on transportation if it would:

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.

b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b).

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

d) Result in inadequate emergency access.

2.17.3 Regulatory Framework

State

Highway Design Manual

The Highway Design Manual (HDM) (7th Edition, 2019) establishes policies, standards, and procedures to implement State highway design functions of the California Department of Transportation (Caltrans). It addresses a broad range of topics associated with road design and engineering of State highways, and it

[1] "Village Specific Plan Traffic Analysis", prepared by David Evans and Associates, December 14, 2021.

applies to the design of Highway 18 in the Project Planning Area. Topics that are particularly relevant to the proposed Project include pedestrian and bicycle facilities, driveways, bus loading facilities, pavement, drainage, median landscaping, on-street parking, and various types of intersections, including roundabouts.

Regional and Local

Regional Transportation Plan/Sustainable Communities Strategy

The 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), prepared by the Southern California Association of Governments (SCAG), establishes long-range policies, projects, and programs to align and improve transportation and mobility systems, land use planning, and greenhouse gas reductions across SCAG's six-county region. The RTP/SCS is updated every four (4) years and includes regional growth forecasts, a strategic plan, and sustainable communities strategy.

Strategies that are particularly applicable to the proposed Project include: promotion of land use patterns that facilitate multimodal transportation and provide jobs/housing balance, redevelopment of underperforming retail developments, development of infill and redevelopment of underutilized land to accommodate new growth, reduced reliance on solo car trips, and support of sustainable development.

San Bernardino County Congestion Management Plan

The San Bernardino County Congestion Management Program (CMP) (2016 Update) was prepared by the San Bernardino Associated Governments, now known as the San Bernardino County Transportation Authority (SBCTA). Goals of the CMP include maintaining or enhancing the performance of the multimodal transportation system, minimizing travel delay, coordinating transportation strategies across jurisdictional boundaries, and promoting air quality. The CMP also incorporates the goals of the SCAG RTP/SCS, described above. Local agencies work with the County to meet CMP goals.

The CMP roadway system includes freeways, other State highways, and major roadways. Level-of-Service (LOS) standards shall be E for all CMP roadway segments and intersections (except those designated LOS F in the CMP). LOS standards apply to AM and PM weekday peak hours except in recreational areas. State Highway 18 in the Project Planning Area is part of the CMP roadway system.

Victor Valley Area Transportation Study

The Victor Valley Area Transportation Study[2] (2008) is a sub-regional transportation study that recommends a roadway plan to support travel demand in the Victor Valley in 2035 and with General Plan buildout of all jurisdictions in the region. Major components of the Recommended 2035 Plan include construction of a new High Desert Corridor expressway across northern Apple Valley (from Dale Evans Parkway to Highway 18 east of the Village Specific Plan Planning Area), and increased capacity and additional interchanges on Interstate-15.

In the Village Specific Plan Planning Area, the Recommended Plan proposes four (4) travel lanes on Highway 18 and Ottawa Road, and two (2) travel lanes on other roads. No other improvements are recommended in the Planning Area.

Village State Route 18 Corridor Enhancement Plan

The Village State Route 18 Corridor Enhancement Plan (September 2019) addresses transportation challenges related to the configuration of Highway 18 and its frontage roads in the Village. It evaluates existing conditions in the area and provides countermeasures and recommendations to improve overall traffic operations, safety, and multimodal access. The study proposes five (5) project alternatives, including: 1) All Signals, 2) Roundabouts, 3) Michigan U-Turns, 4) Contra Flow Frontage Roads, and 5) Big and Little Highway 18. It evaluates the key benefits and considerations of each alternative and provides detailed cost estimates.

Apple Valley General Plan

The Apple Valley General Plan (2009) Circulation Element establishes a roadway classification system and goals, policies, and programs for the Town's circulation network. The following are applicable to the proposed Project:

Goal The Town shall continue to maintain and expand a safe and efficient circulation and transportation system.

Policy 1.A The street system recommended in the Town's Circulation Map shall be strictly implemented.

Program 1.A.1

Street rights of way shall be provided as follows:

- 142 feet for a Major Divided Parkway
- 128 feet for Major Divided Arterials
- 104 feet for Major Roadways
- 88 feet for Secondary Roadways

[2] "Victor Valley Area Transportation Study," prepared for San Bernardino Associated Governments, Kimley-Horn Associates, Inc., March 2008.

- 60-66 feet for Collector Streets
- 66 feet for Industrial and Commercial Local Streets
- 60 feet for Local Streets
- 50 feet for Rural Streets and Cul-de-Sacs

Program 1.A.2
The minimum lane width for all Town streets shall be designed at 12 feet.

Program 1.A.4
The Town shall require that all intersections maintain a Level of Service D during both morning and evening peak hour.

Policy 1.C Sidewalks shall be provided on Local Streets of 60 feet in width and on all roadways 88 feet wide or wider. In Rural Residential land use areas designated pathways may be provided as an alternate to sidewalks.

Program 1.C.2
Concurrent with construction, all new development proposals located adjacent to public roadways shall be required to install all improvements to their ultimate General Plan half-width.

Policy 1.D Traffic calming devices shall be integrated into all Town streets to the greatest extent possible.

Policy 1.E Bus pullouts shall be designed into all new projects on arterial roadways to allow buses to leave the flow of traffic and reduce congestion.

Policy 1.F Local streets shall be scaled to encourage neighborhood interaction, pedestrian safety and reduced speeds.

Policy 1.H New development proposals shall pay their fair share for the improvement of street within and surrounding their projects on which they have an impact, including roadways, bridges, and traffic signals.

Policy 1.I Pedestrian access shall be preserved and enhanced.

Program 1.I.1
All development and redevelopment proposals shall include enhanced sidewalk, pedestrian walkway, lighting and landscaping designs and assure connections to existing and planned sidewalks and trails except in rural residential land use areas where pathways may be provided as an alternative to sidewalks.

Policy 1.J The Town shall implement a coordinated and connected bicycle lane network consistent with the Bicycle Lane Map in this Element.

Program 1.J.1
New development proposals shall be required to construct bicycle lanes consistent with this Element in conjunction with off-site improvements.

Policy 1.K The Town shall provide for a comprehensive, interconnected recreational trails system suitable for bicycles, equestrians, and/or pedestrians.

Program 1.K.2
New development proposals shall be required to construct recreational trails consistent with this Element in conjunction with off-side improvements.

Policy 1.M Encourage the expansion of an integrated public transit system.

2.17.4 Environmental Setting

The Project Planning Area is in the eastern portion of the Victor Valley which is connected to surrounding areas by Interstate-15, U.S. Route 395, and State Highway 18. I-15 extends in a northeast-southwest trending direction and connects the region to the San Bernardino metropolitan area to the southwest, and Barstow and Las Vegas to the northeast. U.S. Route 395 accesses desert and mountain areas to the northwest. State Highway 18 generally extends east-west, connecting the valley to Big Bear Lake and the Morongo Basin on the east, and desert communities and the Palmdale area to the west.

2.17.5 Existing Conditions

The main components of the Planning Area circulation network are roadways and intersections, parking, pedestrian and bicycle facilities, trails, truck routes, and transit. The Planning Area does not contain airport or railway facilities.

Roads and Intersections
The Planning Area is centered around Highway 18 (Happy Trails Highway) which connects to Victorville and I-15 on the west, and Lucerne Valley, Big Bear, and the Morongo Basin on the east. Between Navajo and Central Roads, Highway 18 is a 4-lane divided highway with two (2) two-way frontage roads (outer Highway 18-North and Outer Highway18-South) that separate high-speed through traffic from local traffic accessing commercial sites. Its right-of-way is 200± feet wide[3], and it is operated and maintained by Caltrans.

[3] "Village Specific Plan Existing Conditions Report, Circulation and Parking," David Evans and Associates, February 16, 2021.

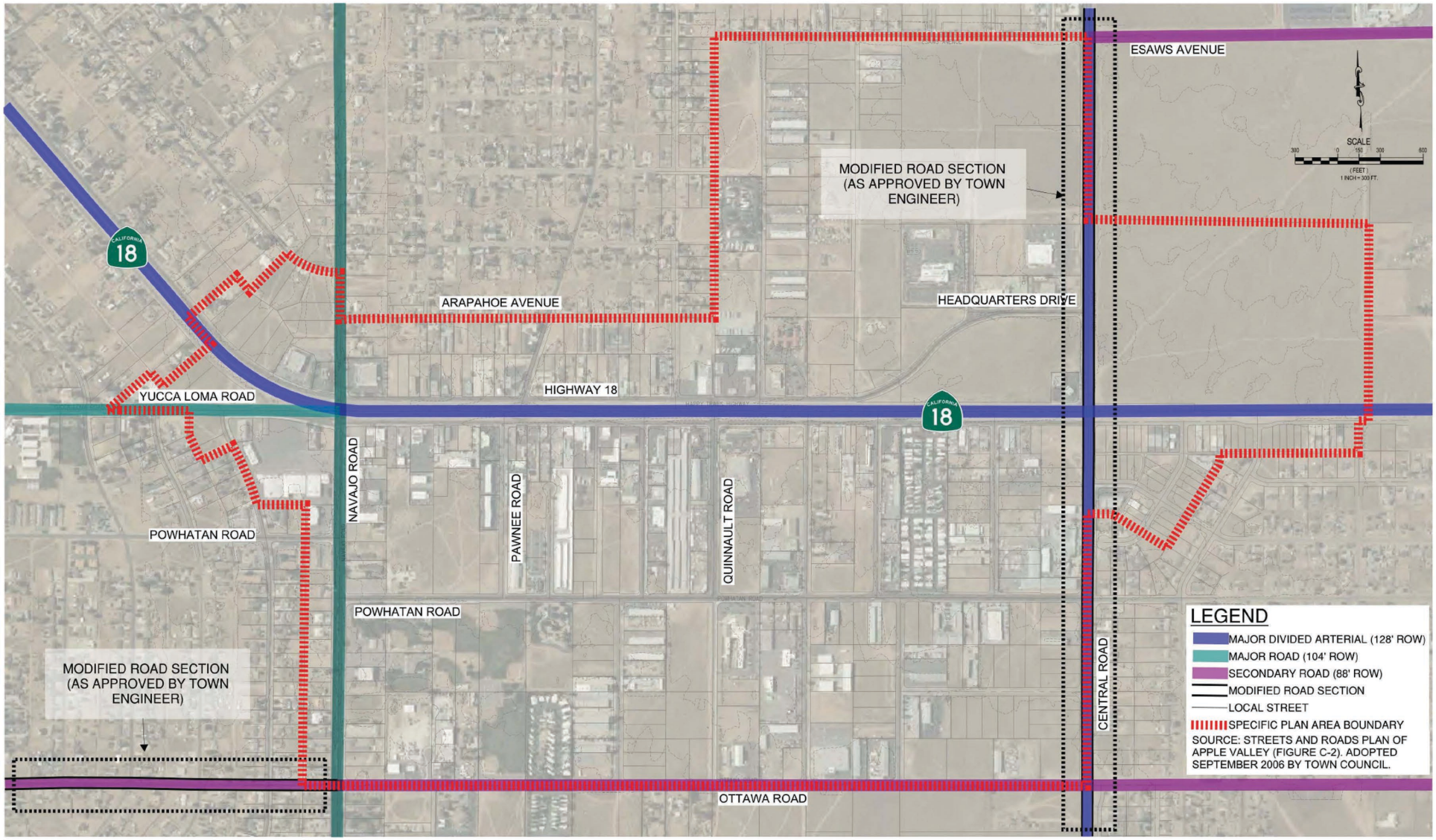
Additional key east-west trending roads include Ottawa and Powhatan Roads south of Highway 18, and Arapahoe Road, Headquarters Drive, and Esaws Avenue north of Highway 18. However, east-west connectivity north of Highway 18 is limited as none of these roads extend across the length of the Planning Area. Key north-south trending roads are Navajo, Pawnee, Quinnault, Pioneer, Nomwaket, and Central Roads. Local roads are the responsibility of the Town of Apple Valley.

The General Plan establishes a street classification system that describes anticipated buildout characteristics and functional capacity of each road in Town, including the number of traffic lanes, right-of-way width, and width of any medians, bike lanes, parkways, and on-street parking spaces. Street classifications for roads in the Planning Area are described below and shown on Exhibit 2.17-1. Corresponding cross sections are shown on Exhibit 2.17-2. As shown, State Highway 18 and Central Road are classified as Major Divided Highways, Navajo and Yucca Loma Roads as Major Roads, Ottawa Road as a Secondary Road, and all other roads as local commercial streets.

Table 2.17-1
General Plan Street Classifications

Street Classification	Road
Major Divided Highway: o 128 ft right-of-way o 6 traffic lanes o two 8-10-ft bike or parking lanes o 12 ft median o 6 ft landscaped parkway o 6 ft sidewalk	State Highway 18 Central Road*
Major Road: o 104 ft right-of-way o 4 traffic lanes o two 8-10 ft bike or parking lanes o 12 ft median o 6 ft landscaped parkway o 6 ft sidewalk	Navajo Road Yucca Loma Road
Secondary Road: o 88 ft right-of-way o 4 travel lanes o two 8 ft bike lanes o 6 ft landscaped parkway o 6 ft sidewalk	Ottawa Road
Local Commercial Street: o 66 ft right-of-way o 2 travel lanes	all other streets

* designated as having a modified road section requiring approval of the Town Engineer, allows for a narrower right-of-way than the standard Major Divided Highway.



Source: David Evans and Associates, Inc., 2021

11.04.21

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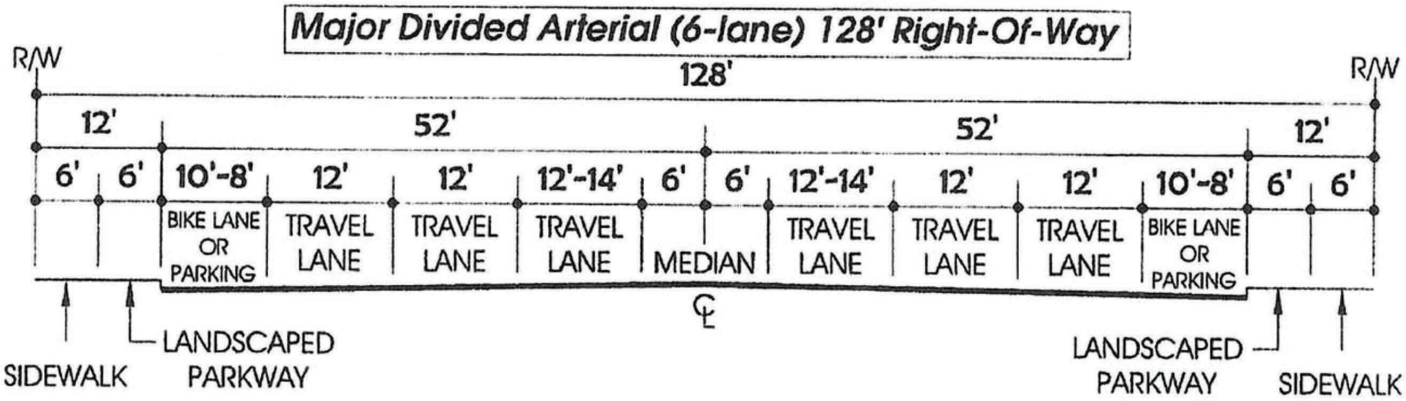
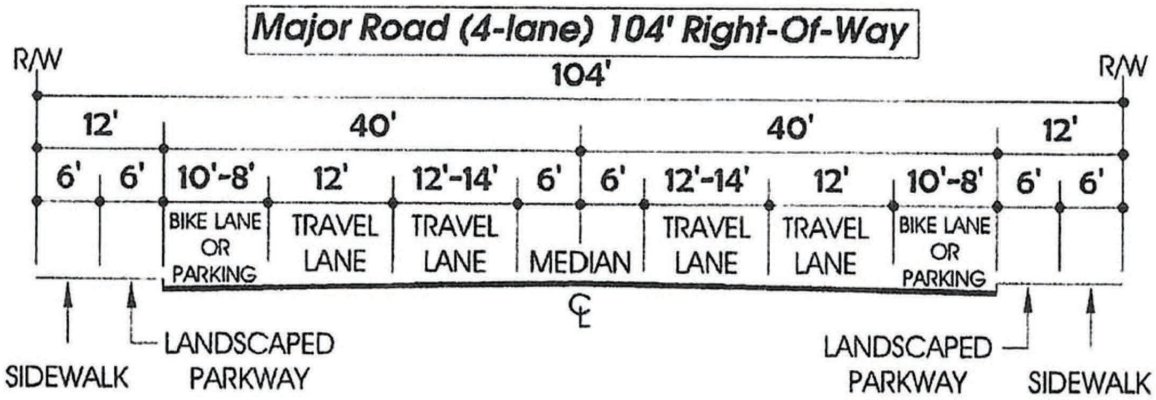
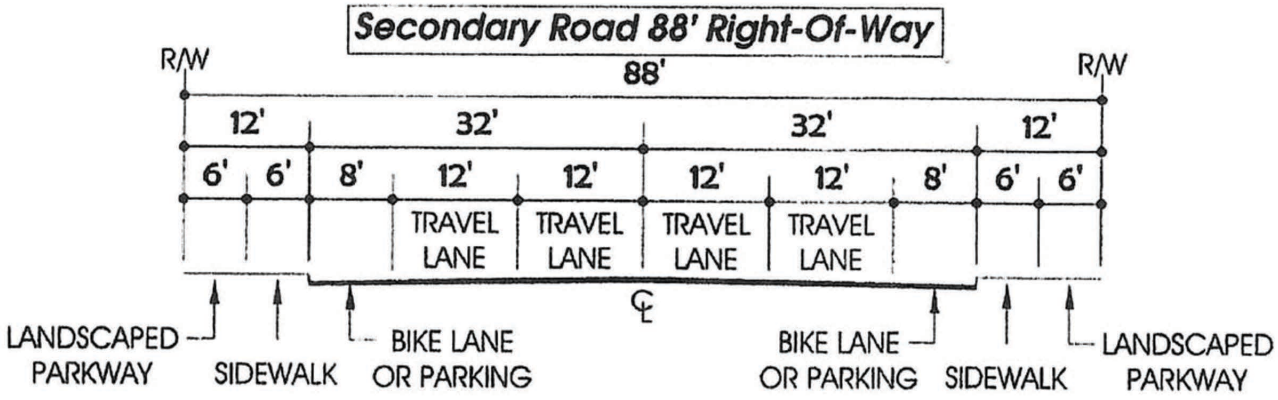
Village Specific Plan
Street Classifications

Town of Apple Valley

Exhibit 2.17-1







Source: David Evans and Associates, Inc.; Town of Apple Valley, 2021 11.04.21

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Village Specific Plan
Street Cross Sections

Town of Apple Valley

Exhibit
2.17-2

Traffic operations are defined in terms of "Level of Service" (LOS). LOS is a qualitative measure of the operation of a roadway segment or intersection and considers speed, travel time, traffic delay, and freedom to maneuver. LOS measurements are described using an alphabetical scale ranging from LOS A to LOS F. LOS A represents the best or free-flowing conditions, and LOS F represents the worst conditions or system failure.

The Town of Apple Valley General Plan Circulation Element Program 1.A.4 requires all intersections to maintain a Level of Service D during both morning and evening peak hours. Intersections and roadway segments that do not meet a minimum of LOS D require improvements or modifications to bring the deficiency to within acceptable LOS thresholds. For intersections, LOS generally measures the number of seconds a vehicle is delayed as it passes through an intersection. For signalized intersections, LOS is directly related to the average control delay per vehicle and correlated to a LOS designation, as shown in the following table.

Table 2.17-2
Signalized Intersection LOS Thresholds

Description	Average Control Delay (seconds), V/C ≤ 1.0	Level of Service, V/C ≤ 1.0	Level of Service, V/C ≥ 1.0
Operations with very low delay occurring with favorable progression and/or short cycle length.	0 to 10.00	A	F
Operations with low delay occurring with good progression and/or short cycle lengths.	10.01 to 20.00	B	F
Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.01 to 35.00	C	F
Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.01 to 55.00	D	F
Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	55.01 to 80.00	E	F
Operations with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths.	80.01 and up	F	F

Source: Highway Capacity Manual (6th edition)

The following table describes existing LOS conditions at sixteen (16) intersections in the Planning Area, as analyzed in the Project-specific Traffic Impact Analysis.[4]. The data are based on traffic counts conducted in 2018 (pre-COVID) and 2021 (adjusted to reflect pre-COVID conditions).

[4] "Village Specific Plan Traffic Analysis", prepared by David Evans and Associates, December 14, 2021.

Table 2.17-3
Intersection Capacity Analysis – Existing Conditions

	Intersection	Intersection Control Type	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Hwy 18 at Navajo Rd.	TS	29.1	C	42.9	D
2	Hwy 18 at Pawnee Rd.	SSSC	11.3	B	11.3	B
3	Hwy 18 at Quinnault Rd. South	TS	13.5	B	16.0	B
4	Hwy 18 at Central Rd.	TS	31.6	C	31.2	C
5	Central Rd. at Esaws Ave.	TS	4.6	A	5.5	A
6	Central Rd. at Headquarters Dr.	SSSC	11.4	B	11.1	B
7	Central Rd. at Powhatan Rd.	SSSC	15.4	C	16.5	C
8	Central Rd. at Ottawa Rd.	SSSC	14.7	B	16.5	C
9	Quinnault Rd. at Powhatan Rd.	SSSC	12.1	B	10.8	B
10	Quinnault Rd. at Ottawa Rd.	SSSC	8.9	A	8.9	A
11	Navajo Rd. at Powhatan Rd West	SSSC	13.5	B	17.8	C
12	Navajo Rd. at Powhatan Rd East	TS	8.3	A	10.4	B
13	Navajo Rd. at Ottawa Rd.	SSSC	16.4	C	27.3	D
14	Hwy 18 at Yucca Loma Rd.	Not applicable – intersections only occur with Specific Plan				
15	Navajo Rd. at Yucca Loma Rd.					
16	Hwy 18 at Hitt Rd/Headquarters					

TS – Traffic Signal Controlled Intersection
SSSC – Side Street Stop Controlled Intersection
Delay – seconds per vehicle
LOS – Level of Service
Source: "Village Specific Plan Traffic Analysis", prepared by David Evans and Associates, December 14, 2021, Table 5.

As shown above, the only intersection of concern is Highway 18 at Navajo Road which is operating at LOS D with an average of about 43 seconds of delay per vehicle and is approaching its regulatory capacity, but not its physical capacity. For signalized intersections, LOS D ranges from an average delay of 35 to 55 seconds per vehicle. Once the delay exceeds 55 seconds, the intersection is deficient with respect to the Town's General Plan Program 1.A.4, which requires all intersections to maintain a Level of Service D during both the morning and evening peak hours. Once the delay exceeds 80 seconds and/or the volume-to-capacity ratio of the intersection exceeds 1.0, the physical capacity of the intersection is reached.

Parking

Section 9.72.020 of the Town Development Code establishes off-street parking requirements by land use. It also addresses special provisions for shared, off-site, valet, and other types of parking.

There are approximately 3,133 marked parking spaces (including disabled spaces) in paved off-street parking lots in the Planning Area.[5] In addition, there is space available for the equivalent of approximately 846 on-street parking spaces on improved streets, with potentially many more along unimproved streets. Parcels with older commercial buildings in the Village have separate parking lots, many of which are limited to narrow areas between the street right-of-way and store front with little to no room for vehicle maneuvering or stacking.

Pedestrian Facilities

According to the General Plan Circulation Element, 6-foot wide sidewalks are required as part of a wider parkway along Major Divided Highways, Major Roads, and Secondary Roads (see Exhibit 2.17-2).

The sidewalk network in the Planning Area is incomplete and, in many locations, absent. Sidewalk gaps adjacent to vacant lots are typical until development occurs; however, gaps in older neighborhoods are often due to outdated rural development codes that did not require sidewalks. Existing sidewalks range from about 4 feet wide on temporary gap closures to 6 feet wide in older commercial areas.[6] Many Americans with Disabilities Act (ADA)-compliant sidewalk ramps are missing. Crosswalks are marked at five (5) intersections.

Bicycle Facilities

The General Plan Circulation Element establishes four (4) bikeway classifications, consistent with Caltrans' Highway Design Manual:

- Shared Roadways (no bikeway designation)
- Class I Bikeway (bike path) – off-street multi-use path
- Class II Bikeway (bike lane) – on-street market bike lane
- Class III Bikeway (bike route) – on-street signed bike route

Caltrans recently added a Class IV Bikeway (separated bikeway) that includes separation between the bikeway and vehicular traffic using grade separation, flexible or inflexible posts, inflexible barriers, or on-street parking.

The General Plan proposes the following future bicycle facilities in the Planning Area at: 1) Class I on Central Road, 2) Class I on Navajo Road south of Highway 18, 3) Class I on Yucca Loma Drive, 4) Class II on Highway 18, 5) Class II on Navajo Road north of Highway 18, 5) Class III on Powhatan Road west of Navajo Road, 6) Class III on Pine Ridge Avenue west of Navajo Road.

[5] "Village Specific Plan Existing Conditions Report, Circulation and Parking," David Evans and Associates, February 16, 2021.

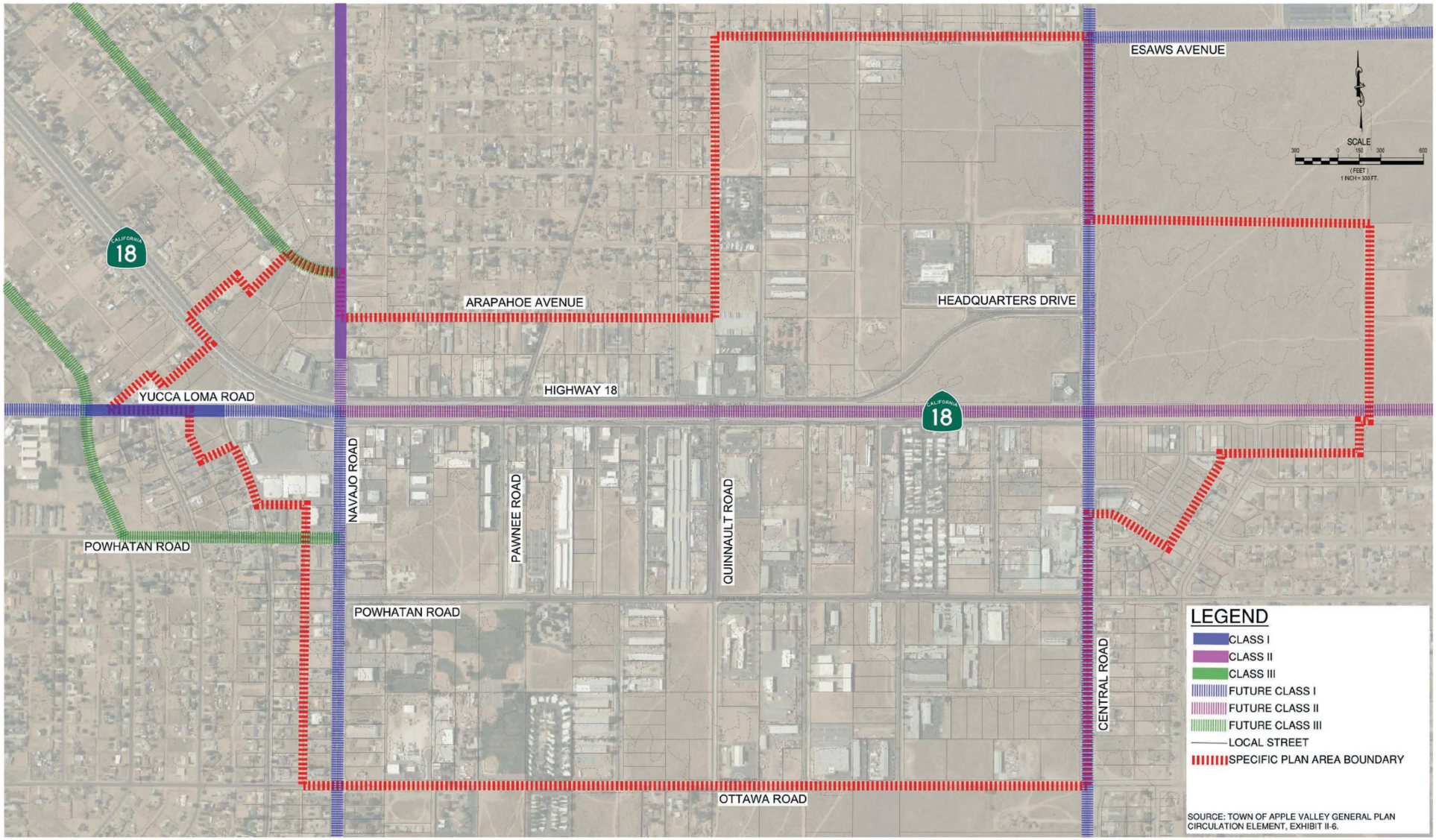
[6] Ibid.

Existing bikeways in the Planning Area are limited to: 1) Class II bike lane on both sides of Navajo Road north of Highway 18, and 2) substandard Class I bike path on the south side of Yucca Loma Road west of Algonquin Road (lacks markings, curbs, rest facilities). See Exhibit 2.17-3.

Trails

The General Plan Circulation Element designates two (2) types of trails: Lifeline Trails and Bridle Easements/Trails. Lifeline Trails are multi-use trails for walking, bicycle riding, horseback riding, and "any other device moved by human propulsion." Bridle Easements/Trails are recorded easements that are mapped and known to be used for equestrian use; however, they are not improved or marked.

In the Planning Area, Lifeline Trails are located at: 1) Navajo Road north of Highway 18, 3) shared rear property line of parcels fronting on Outer Highway 18-North and Pine Ridge Avenue, and 3) shared rear property line of parcels fronting on the south side of Highway 18 and Rancherias Road. Bridle trails are located at: 1) shared rear property line of parcels fronting the north side of Highway 18 and Arapahoe Avenue, 2) shared rear property line of parcels on the east side of Navajo Road south of Michael Martin Gymnasium, and 3) shared rear property line of parcels on west side of Navajo Road and south of Powhatan Road.



Source: David Evans and Associates, Inc., 2021

11.04.21

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Village Specific Plan
Bicycle Facilities and Designations

Town of Apple Valley

Exhibit 2.17-3

Truck Routes

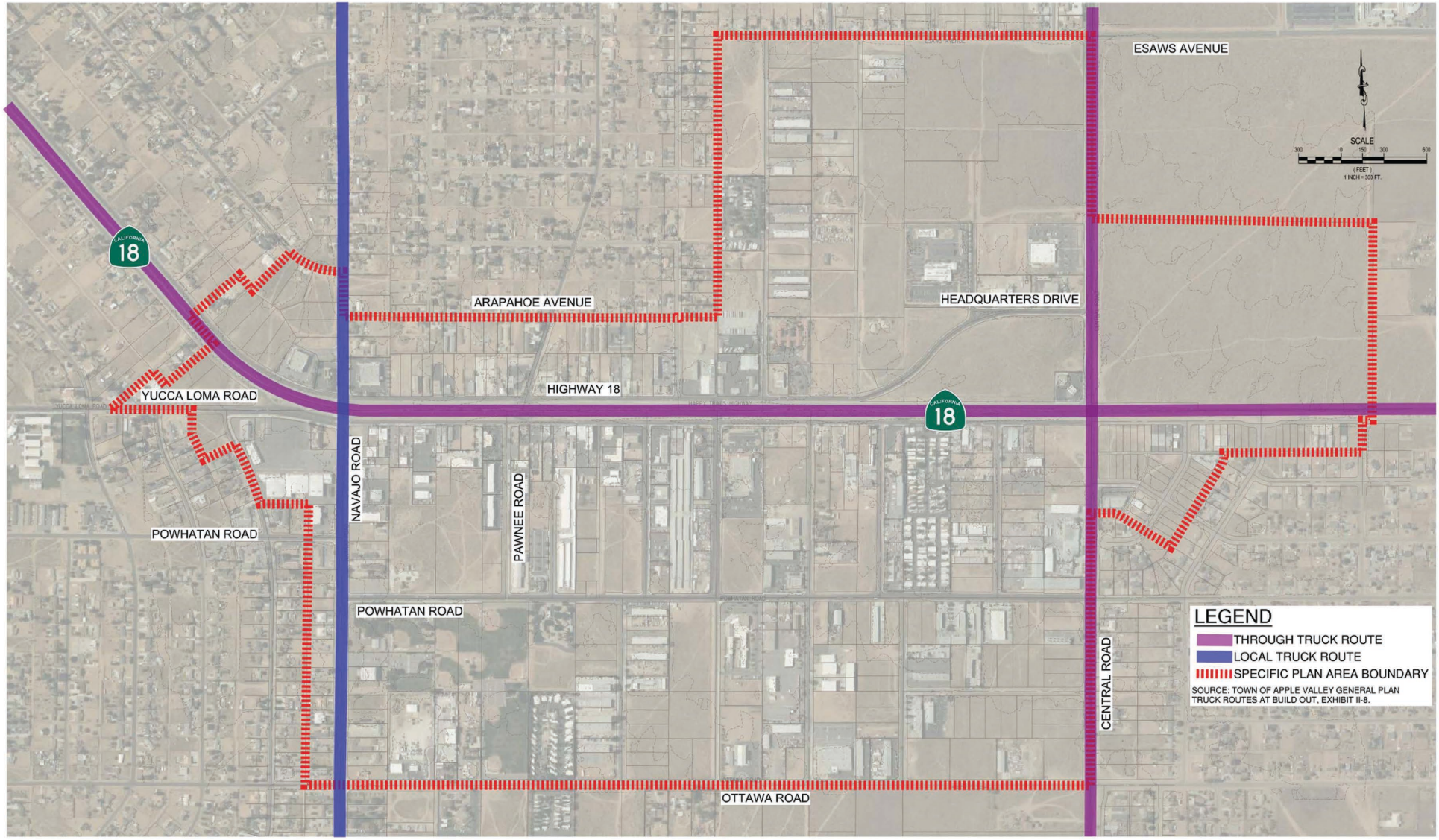
Chapter 12.36 of the Development Code defines and establishes regulations for truck routes. The General Plan designates the location of truck routes throughout the Town. Truck routes in the Planning Area include Highway 18, Central Road, and Navajo Road (see Exhibit 2.17-4).

Table 2.17-4
Street Classifications in the Specific Plan Area

Truck Route Designation	Road
Through Truck Routes: designated streets upon which the unrestricted use of trucks is permitted.	Highway 18 Central Road
Local Truck Routes: designated streets upon which trucks with an origin and/or destination within the Town may operate only between the hours of 7:00 am and 7:00 pm.	Navajo Road
Restricted Streets: all streets other than those designated as Local Truck Routes or Through Truck Routes. Exceptions are provided for trucks making pickups or deliveries of goods, wares, and merchandise to/from businesses and residences to use restricted streets during designated hours. Additionally, trucks may travel on restricted streets by the shortest and most direct route between a Town boundary and destination if such a route is shorter than the route between a destination and the nearest truck route.	all other roads

Transit

The Victor Valley Transit Authority (VVTA) provides public transit services to the Victor Valley region. The Planning Area is well served by public transit, as shown in Exhibit 2.17-5. It is served by five (5) bus routes and ten (10) bus stops. VVTA also provides Direct Access, a curb-to-curb service for individuals meeting ADA requirements, and a no-cost transportation program for low-moderate income seniors or disabled persons. Its Regional Vanpool Program provides subsidies for vanpools of 5 to 15 passengers.



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Source: David Evans and Associates, Inc., 2021

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Exhibit 2.17-4

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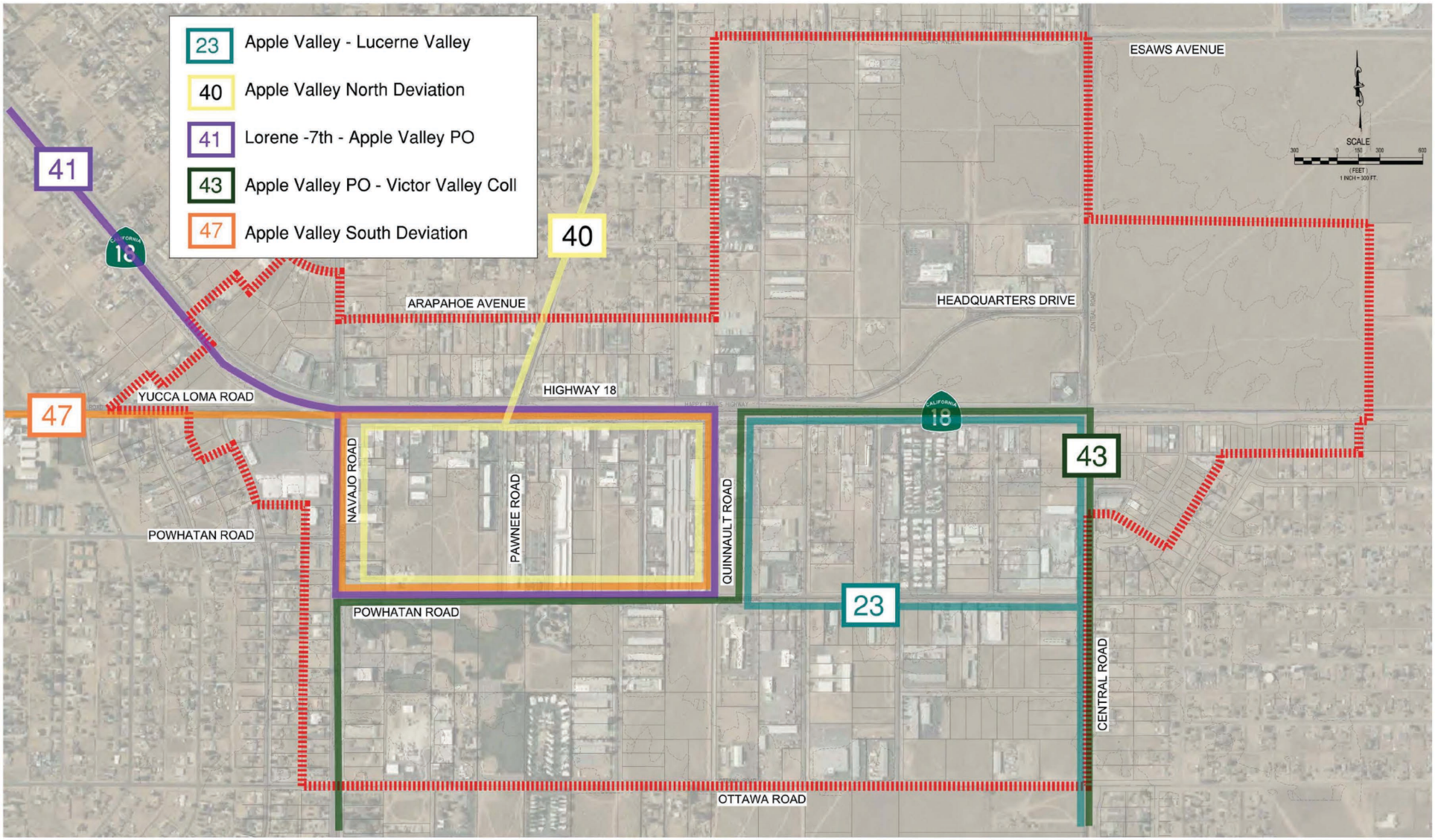
Village Specific Plan
Designated Truck Routes

Town of Apple Valley



Source: David Evans and Associates, Inc., 2021

11.04.21

Exhibit 2.17-5

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Village Specific Plan
Victor Valley Transit Authority (VVTA) Routes

Town of Apple Valley

2.17.6 Project Impacts

Proposed Circulation Plan

The Specific Plan is a policy and development standard document that will allow for the long term development of the Village Planning Area. No immediate development is known or expected, although adoption of the Specific Plan by the Town would be expected to encourage development. Because the Specific Plan is a long term plan, traffic analysis has been undertaken for its buildout, estimated to be about 2040. In addition to the buildout analysis conducted in the Project-specific traffic analysis, an analysis was conducted to determine short-range, mid-range and long-range improvement requirements, to assist the Town in planning for roadway infrastructure within the Planning Area.

The Village Specific Plan Circulation Plan includes two alternative concepts for the Highway 18 circulation system, which were originally developed as part of the Village State Route 18 Corridor Enhancement Plan (2019).[7] The alternatives are described below and shown on Exhibits 2.17-6 through 2.17-9. The main differences between them are roadway configurations and intersection controls.

Alternative 1: All Roundabouts on Highway 18

- Roundabouts would occur at the Highway 18 intersections from the realignment of Yucca Road in the west to Central Road in the east. Multi-lane roundabouts are used at intersections with major thoroughfares (Yucca Loma Road, Navajo Road, Central Road), and single-lane roundabouts are used at intersections with local streets (Pawnee Road, Quinnault Road, Hitt Road/realigned Headquarters Drive).

- Includes 2 realignment projects: 1) realign Yucca Loma Road to Highway 18 and extend Yucca Loma Road to intersection Navajo Road at Arapahoe Avenue, and 2) realign Headquarters Drive to intersect Highway 18 at Hitt Road.

- Outer Highway 18 frontage roads are widened and reconfigured as one-way streets with diagonal parking on one side of each street. Access to and from the frontage roads employs ramps near the roundabout entries/exits.

- Powhatan Road may be potentially widened to 4 lanes and designated a Major Thoroughfare should it be required to relieve traffic demand on Highway 18 due to the constriction of Highway 18 to a single lane in each direction

[7] "Village State Route 18 Corridor Enhancement Plan," Town of Apple Valley, September 2019.

between Navajo and Central Roads. Should this occur, the intersection of Powhatan and Central Roads would need to be signalized.

- New traffic signals would be installed on Ottawa Road at Navajo Road and Central Road and at Central Road/Headquarters Drive. All-way stop control is proposed on Quinnault Road at Powhatan Drive and Ottawa Road.

- Pedestrian crossing enhancements are proposed at roundabouts and at new and existing signalized intersections, as described in the Specific Plan's Active Transportation Plan.

- The narrowing of Highway 18 to a single lane in each direction (and burying the existing drainage channels on both sides of the highway) provides space to improve the frontage roads as described above and to integrate a multi-use path and urban design features within the right-of-way on the south side of Highway 18.

Alternative 2: All Traffic Signals on Highway 18

- Traffic signals provide intersection control along Highway 18. New signalized intersections (with protected pedestrian crossings) are located at the Yucca Road realignment to Highway 18 and at Navajo Road, the intersection of Highway 18 with Pawnee Road, and the intersection resulting from the realignment of Headquarters Drive to Highway 18 at Hitt Road. Additional new traffic signals are identified at Central Road and Powhatan Road, Central Road and Headquarters Drive, and Ottawa Road at Navajo Road and Central Road. All-way stop control is proposed on Quinnault Road at Powhatan Road and Ottawa Road.

- As in Alternative 1, Outer Highway 18 frontage roads are widened and reconfigured as one-way streets with diagonal parking on one side of each street. Access to and from the frontage roads employs ramps before and after each signalized intersection.

- Powhatan Road remains a local street since it is not required to relieve traffic demand from Highway 18.

- Pedestrian crossing enhancements are proposed at new and existing signalized intersections, as described in the Specific Plan's Active Transportation Plan.

- Highway 18 remains a four-lane thoroughfare with left turn bays, so the street does not gain the additional space that Alternative 1 does by reducing the number of through lanes. However, Alternative 2 provides Class II bicycle lanes in each direction of Highway 18 and/or through a multi-use path within space gained by burying the existing drainage channels on both sides on the highway. Bicycle features are described in the Specific Plan's Active Transportation Plan.

Source: David Evans and Associates, Inc., 2021

01.25.22

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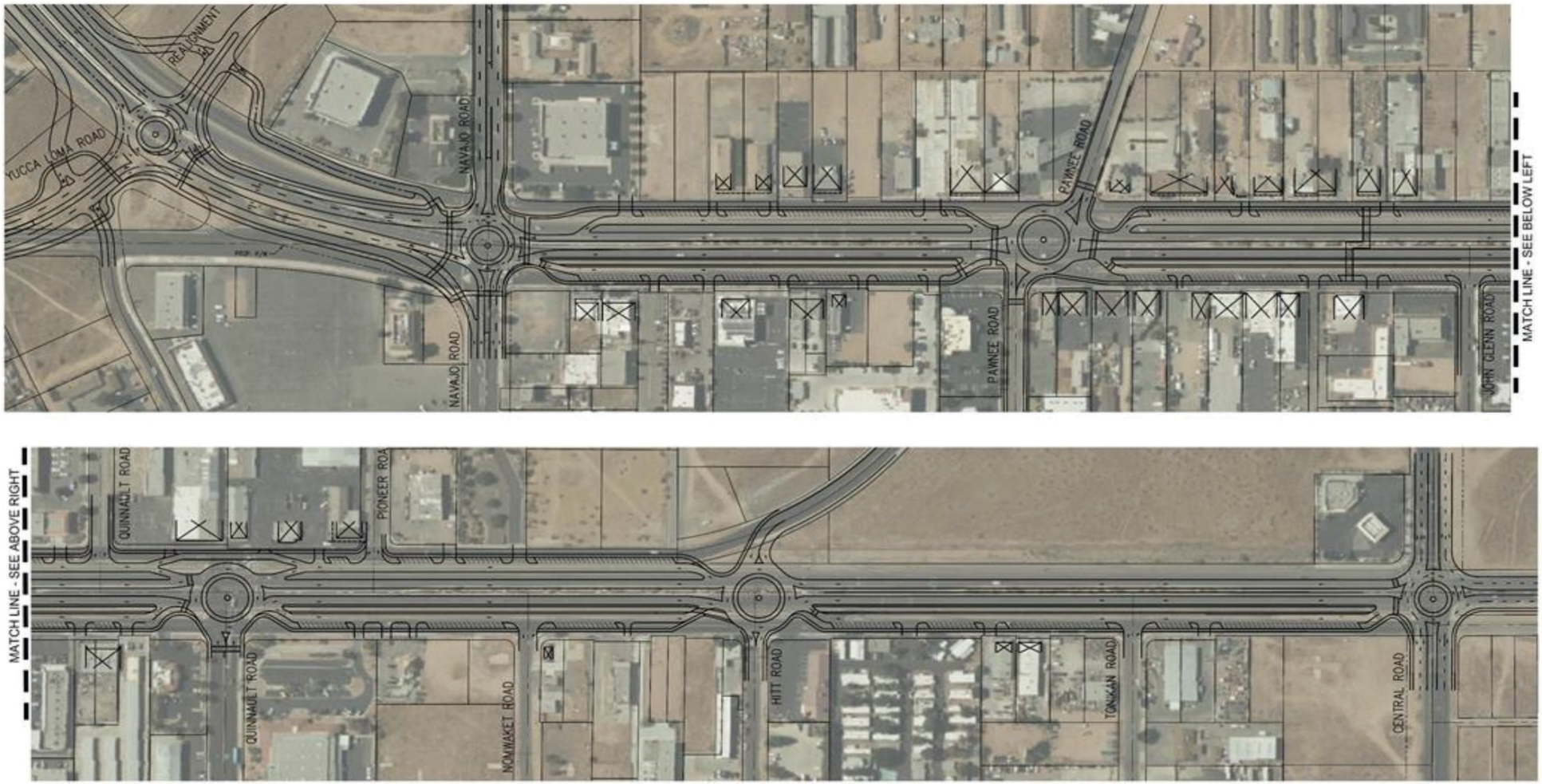
Village Specific Plan
Circulation Plan Alternative 1: Overview

Town of Apple Valley

Exhibit 2.17-6



Source: David Evans and Associates, Inc., 2021

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01.25.22

Exhibit 2.17-7

TERRA NOVA®
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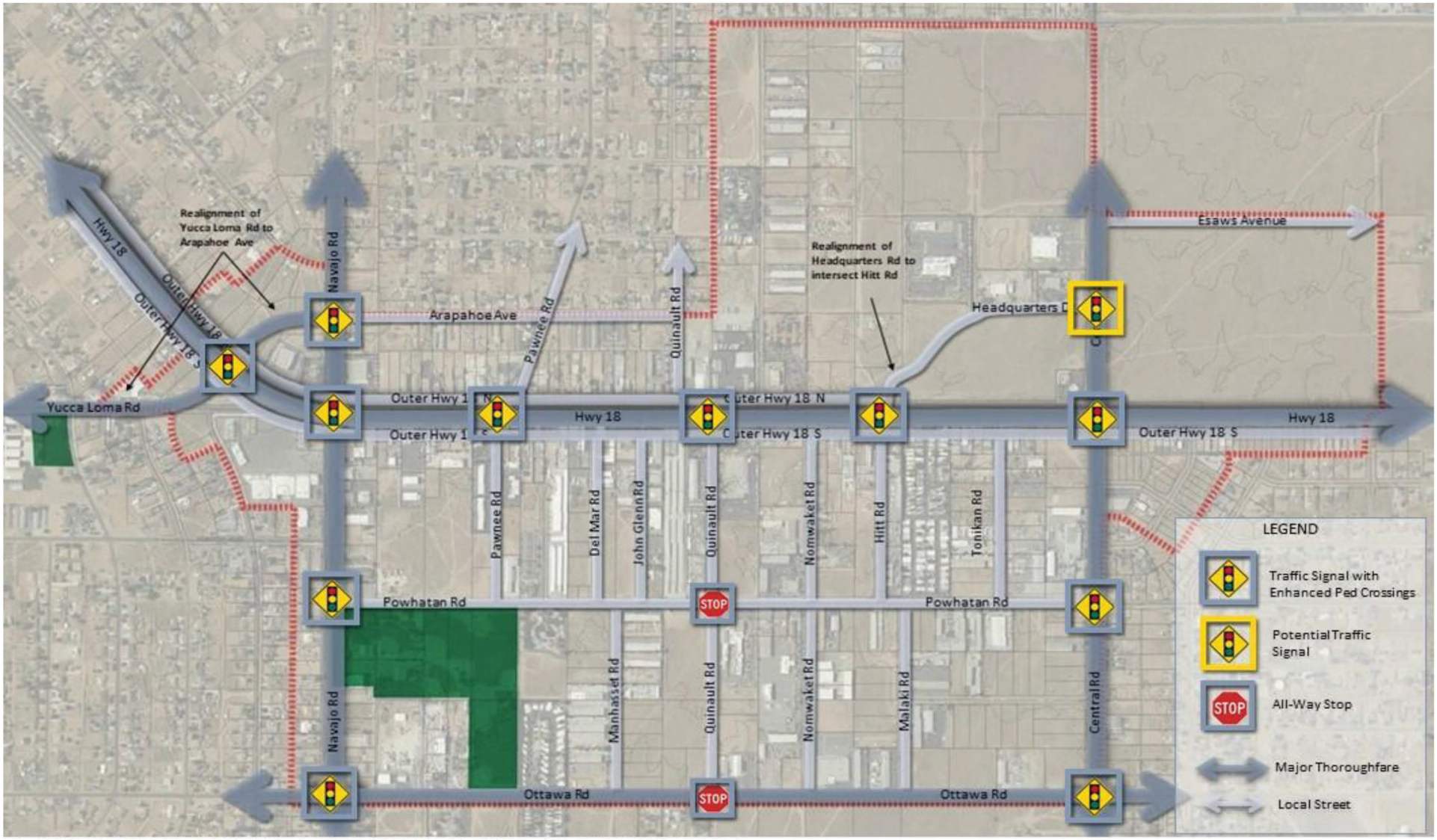
Village Specific Plan
Circulation Plan Alternative 1: Geometric Detail

Town of Apple Valley



Source: David Evans and Associates, Inc., 2021

01.25.22

Exhibit 2.17-8

TERRA NOVA®
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Village Specific Plan
Circulation Plan Alternative 2: Overview

Town of Apple Valley

Source: David Evans and Associates, Inc., 2021

01.25.22

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Village Specific Plan
Circulation Plan Alternative 2: Geometric Detail

Exhibit 2.17-9

Town of Apple Valley

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.

LOS Policy

The Apple Valley General Plan establishes LOS D as the minimum peak hour intersection performance standard for the Town's circulation network. The San Bernardino County Congestion Management Plan (CMP) establishes LOS E as the minimum LOS standard for CMP designated roadways, including Highway 18.

The Project-specific Traffic Analysis projected year 2040 traffic conditions for the Planning Area without and with the proposed Project.

Year 2040 Without Specific Plan

The Year 2040 Without Specific Plan scenario (Table 2.17-5) is based on year 2040 land use projections provided by the San Bernardino County Transportation Authority (SBCTA) which represent buildout of each jurisdiction's General Plan. The scenario assumes no transportation improvements have occurred beyond current conditions; as such, it applies traffic projections to existing intersection lane geometries and traffic controls. However, the analysis does include future transportation improvements identified in SCAG's Regional Transportation Plan, including the High Desert Corridor (HDC), a proposed freeway/expressway that would connect communities of San Bernardino and Los Angeles Counties with the high desert area. The HDC is relevant to the proposed Project because its alignment connects with Highway 18 east of the Project Planning Area.

In year 2040 Without Specific Plan, all but two intersections are projected to operate within the Town's LOS policy of LOS D or better. The two exceptions are: 1) Highway 18 at Navajo Road, operating at LOS E in the PM peak hour, and 2) Navajo Road at Ottawa Road, operating at LOS F in the PM peak hour for traffic turning left from Ottawa Road to northbound Navajo Road. At the other intersections, delays are projected to be somewhat higher than existing conditions, but not significantly, which suggests a relatively low level of growth is anticipated in this area of the Town.

All Highway 18 intersections in the Planning Area are projected to operate within the County's CMP LOS policy of LOS E or better.

Table 2.17-5
Intersection Capacity Analysis – Year 2040 Without Specific Plan

	Intersection	Intersection Control Type	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Hwy 18 at Navajo Rd.	TS	39.1	D	73.9	E
2	Hwy 18 at Pawnee Rd.	SSSC	11.9	B	13.3	B
3	Hwy 18 at Quinnault Rd. South	TS	14.2	B	12.9	B
4	Hwy 18 at Central Rd.	TS	30.5	C	30.9	C
5	Central Rd. at Esaws Ave.	TS	5.4	A	6.2	A
6	Central Rd. at Headquarters Dr.	SSSC	11.6	B	11.6	B
7	Central Rd. at Powhatan Rd.	SSSC	23.7	C	21.6	C
8	Central Rd. at Ottawa Rd.	SSSC	20.8	C	24.0	C
9	Quinnault Rd. at Powhatan Rd.	SSSC	14.6	B	13.3	B
10	Quinnault Rd. at Ottawa Rd.	SSSC	9.6	A	9.7	A
11	Navajo Rd. at Powhatan Rd West	SSSC	19.6	C	27.6	D
12	Navajo Rd. at Powhatan Rd East	TS	8.5	A	10.2	B
13	Navajo Rd. at Ottawa Rd.	SSSC	27.5	D	152.7	F
14	Hwy 18 at Yucca Loma Rd.	Not applicable – intersections only occur with Specific Plan				
15	Navajo Rd. at Yucca Loma Rd.					
16	Hwy 18 at Hitt Rd/Headquarters					

Existing lane geometries and traffic controls assumed at intersections
Shaded cells represent intersections and time periods that exceed the Town standard of LOS D or better
TS – Traffic Signal Controlled Intersection
SSSC – Side Street Stop Controlled Intersection
Delay – seconds per vehicle
LOS – Level of Service
Source: "Village Specific Plan Traffic Analysis", prepared by David Evans and Associates, December 14, 2021, Table 6.

Year 2040 With Specific Plan

Alternative 1 (All Roundabouts on Highway 18)

Table 2.17-6, below, shows intersection operations in Year 2040 With Specific Plan Alternative 1 (All Roundabouts on Highway 18). Delays will increase somewhat over existing conditions. All intersections are projected to operate within the Town's LOS policy of LOS D or better, except the intersection of Navajo Road at Powhatan Road West which is projected to operate at LOS E in the PM peak hour. If the intersection meets warrants justifying installation of a traffic signal, this improvement may be considered but, being only 400 feet from the signalized intersection at Navajo Road and Powhatan Road East, it will require that the two signals be synchronized.

All Highway 18 intersections in the Planning Area are projected to operate within or better than the County's CMP LOS policy of LOS E or better.

Table 2.17-6
Intersection Capacity Analysis – Year 2040 With Specific Plan
Alternative 1 (All Roundabouts on Hwy 18)

	Intersection	Intersection Control Type	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Hwy 18 at Navajo Rd.	RB	13.8	B	26.3	D
2	Hwy 18 at Pawnee Rd.	RB	13.6	B	32.9	D
3	Hwy 18 at Quinnault Rd. South	RB	11.5	B	15.0	B
4	Hwy 18 at Central Rd.	RB	18.6	C	24.9	C
5	Central Rd. at Esaws Ave.	SSSC	23.9	C	6.3	A
6	Central Rd. at Headquarters Dr.	TS	13.5	B	12.9	B
7	Central Rd. at Powhatan Rd.	TS	11.7	B	12.2	B
8	Central Rd. at Ottawa Rd.	TS	12.4	B	13.6	B
9	Quinnault Rd. at Powhatan Rd.	AWSC	9.5	A	9.2	A
10	Quinnault Rd. at Ottawa Rd.	AWSC	7.8	A	7.5	A
11	Navajo Rd. at Powhatan Rd West	SSSC	16.9	C	36.0	E
12	Navajo Rd. at Powhatan Rd East	TS	9.0	A	11.5	B
13	Navajo Rd. at Ottawa Rd.	TS	16.0	B	22.6	C
14	Hwy 18 at Yucca Loma Rd.	RB	8.6	A	10.5	B
15	Navajo Rd. at Yucca Loma Rd.	TS	10.8	B	11.9	B
16	Hwy 18 at Hitt Rd/Headquarters	RB	15.3	C	16.2	C

Shaded cells represent intersections and time periods that exceed the Town standard of LOS D or better
TS – Traffic Signal Controlled Intersection
RB – Roundabout Controlled Intersection
SSSC – Side Street Stop Controlled Intersection
AWSC – All-Way Stop Controlled Intersection
Delay – seconds per vehicle
LOS – Level of Service
Source: "Village Specific Plan Traffic Analysis", prepared by David Evans and Associates, December 14, 2021, Table 7.

Alternative 2 (All Traffic Signals on Highway 18)

Table 2.17-7, below, shows intersection operations in Year 2040 With Specific Plan Alternative 2 (All Traffic Signals on Highway 18). Under Alternative 2, the only intersection in the Planning Area that exceeds the Town's LOS D policy is Navajo Road at Powhatan Road West. The projected delay of 36 seconds per vehicle and projected LOS E are the same as projected under Alternative 1.

Like Alternative 1, all Highway 18 intersections in the Planning Area are projected to operate within the County's CMP LOS policy of LOS E or better.

Table 2.17-7
Intersection Capacity Analysis – Year 2040 With Specific Plan
Alternative 2 (All Traffic Signals on Hwy 18)

	Intersection	Intersection Control Type	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Hwy 18 at Navajo Rd.	TS	35.6	D	31.7	C
2	Hwy 18 at Pawnee Rd.	TS	24.5	C	49.8	D
3	Hwy 18 at Quinnault Rd. South	TS	13.3	B	22.1	C
4	Hwy 18 at Central Rd.	TS	24.3	C	25.4	C
5	Central Rd. at Esaws Ave.	TS	23.9	C	6.3	A
6	Central Rd. at Headquarters Dr.	SSSC	13.5	B	12.9	B
7	Central Rd. at Powhatan Rd.	TS	11.7	B	12.2	B
8	Central Rd. at Ottawa Rd.	TS	12.4	B	13.6	B
9	Quinnault Rd. at Powhatan Rd.	AWSC	9.5	A	9.2	A
10	Quinnault Rd. at Ottawa Rd.	AWSC	7.8	A	7.5	A
11	Navajo Rd. at Powhatan Rd West	SSSC	16.9	C	36.0	E
12	Navajo Rd. at Powhatan Rd East	TS	9.0	A	11.5	B
13	Navajo Rd. at Ottawa Rd.	TS	16.0	B	22.6	C
14	Hwy 18 at Yucca Loma Rd.	TS	35.4	D	40.0	D
15	Navajo Rd. at Yucca Loma Rd.	TS	10.8	B	11.9	B
16	Hwy 18 at Hitt Rd/Headquarters	TS	45.0	D	42.4	D

Shaded cells represent intersections and time periods that exceed the Town standard of LOS D or better
TS – Traffic Signal Controlled Intersection
SSSC – Side Street Stop Controlled Intersection
AWSC – All-Way Stop Controlled Intersection
Delay – seconds per vehicle
LOS – Level of Service
Source: "Village Specific Plan Traffic Analysis", prepared by David Evans and Associates, December 14, 2021, Table 8.

Summary of Project Impacts to LOS Policy

The above analysis demonstrates that both Alternatives 1 and 2 of the proposed Project's circulation plan can accommodate vehicular traffic generated by the Project. In year 2040 under both alternatives, all intersections in the Planning Area, except one, will meet the Town's LOS D policy. The intersection of Navajo Road at Powhatan Road West will operate at LOS E in the PM peak hour from the side street (which is a left turn movement) and, therefore, will fail to meet the Town's LOS D policy. The intersection is currently a side-street-stop controlled intersection. Installation of a traffic signal (when warranted) that is coordinated with the existing traffic signal at Navajo Road and Powhatan Road East, approximately 400 feet to the south, will improve LOS conditions to LOS D or better (Mitigation Measure TRANSP-1). With mitigation, all intersections in the Planning Area will meet the Town's LOS policy and Project impacts will be less than significant.

The analysis also demonstrates that, in year 2040 under both Alternatives 1 and 2 of the proposed Project, all Highway 18 intersections in the Planning Area will operate within the County's CMP LOS E policy. Project-related impacts would be less than significant.

Street Classifications

Although the General Plan (General Plan Exhibit II-6) establishes eight (8) street classifications, the Specific Plan proposes only two (2) classifications for the Planning Area: Major Thoroughfare and Local Street (Table 2.17-8). Proposed right-of-way widths, general number of lanes, and median treatments are the same as set forth in the General Plan, but street sections vary depending on the modal emphasis of the street and priority of on-street parking. This simplifies the classification system and allows flexibility in configuring sidewalks, bike lanes, and on-street parking in the Planning Area. It improves parking and bikeway options and connectivity but maintains right-of-way consistency with streets outside of the Planning Area. Impacts would be positive and less than significant.

Table 2.17-8
Proposed Street Classifications in the Planning Area

Specific Plan Classification	General Plan Classification	Streets in Specific Plan[1]	Standard Right of Way	No. of Lanes	Sidewalk/ Parkway Width	Bike Lane/ Parking Lane Width
Major Thoroughfare	• Major Divided Arterial • Major Road • Secondary Road	• Highway 18* • Navajo Rd • Central Rd • Ottawa Rd • Yucca Loma Rd	128 feet 104 feet 88 feet	6 4 4	15 feet 12 feet 12 feet	8-10 feet 8-10 feet 8 feet
Local Street	• Local Street	• Outer Hwy 18 N* • Outer Hwy 18 S* • Powhatan Rd • Headquarters Dr • Arapahoe Ave • Quinnault Rd • Del Mar Rd • John Glenn Rd • Nomwaket Rd • Hitt Rd • Tonikan Rd • Manhasset Rd • Malaki Rd	60 feet	2	12 feet	**

[1] The identified local streets within the Specific Plan is not a complete list. Local streets listed are primary pedestrian routes.

* Highway 18 and Outer Highway 18 (north and south), although designated a Major Divided Arterial in the General Plan circulation element, is a major arterial street with frontage roads which operate together as if a single street. The combined right-of-way is approximately 212 feet.

** The General Plan does not specify the width of bike or parking lanes on local streets. Local streets have a 36-ft. travel way (18 ft. in each direction) which typically accommodates on-street parking (approx. 7 ft.). Designated (Class II) bike lanes would require parking restrictions. When designated as part of the bikeway system, local streets are usually classified as a Class III bike route/shared roadway.

Powhatan Road is proposed as a Local Street. However, under Alternative 1 (All Roundabouts on Highway 18), Powhatan Road between Navajo Road and Central Road may be widened to 4 lanes and designated a Major Thoroughfare should it be required to relieve traffic demand on Highway 18. This could be needed due to the constriction of Highway 18 to a single lane in each direction between Navajo Road and Central Road. Should this occur, the intersection of Powhatan Road and Central Road would be signalized. Powhatan Road would need to be designated a Through Truck Route to accommodate trucks from Highway 18. New development projects would need to provide adequate right-of-way to accommodate a Major Thoroughfare. These modifications are described in Mitigation Measure TRANSP-2. With implementation of TRANSP-2, impacts would be less than significant.

Multi-Use Paths

The Specific Plan proposes multi-use paths or Class I bicycle facilities on Central Road, Navajo Road, (realigned) Yucca Loma Road, and Esaws Avenue. This is consistent with the General Plan bikeway plan (General Plan Exhibit II-10) that designates Class I bikeways on the same streets. The General Plan designates Highway 18 between Yucca Loma and Central Roads as a Class II facility, but the Specific upgrades it to a Class I facility under Alternative 1. Impacts to the General Plan bikeway plan would be positive and less than significant.

Bicycle Facilities

The Specific Plan is consistent with and expands the bikeway designations of the General Plan (General Plan Exhibit II-10). The General Plan provides Class 1 (off-street paths) and Class II (bike lanes) on several roads in the Planning Area. The Specific Plan Active Transportation Plan proposes Class I, II, and III (bike routes) on more roads than the General Plan (see Specific Plan Circulation Plan Figure 10). Project-related impacts would be positive and less than significant.

b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b).

CEQA Guidelines Section 15064.3 states that "generally, vehicle miles traveled (VMT) 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. Other relevant considerations may include the effects of the project on transit and non-motorized travel."

A lead agency may use models or other methods to analyze a project's VMT quantitatively or qualitatively. According to CEQA Guidelines Section 15064.3(b), for land use projects (such as the proposed Project), "vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit

stop along an existing high-quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be considered to have a less than significant transportation impact."

The Town of Apple Valley adopted thresholds of significance for Vehicle Miles Traveled (VMT) in May 2021 for the purpose of determining a potentially significant impact to transportation pursuant to CEQA. The thresholds are as follows:

> A project would result in a significant project-generated VMT impact if either of the following conditions are satisfied:
>
> 1. The baseline project-generated VMT per service population exceeds the Town of Apple Valley General Plan Buildout VMT per service population, or
> 2. The cumulative project-generated VMT per service population exceeds Town of Apple Valley General Plan Buildout VMT per service population.
>
> The project's effect on VMT would be considered significant if it resulted in either of the following conditions to be satisfied:
>
> 3. The baseline link-level boundary Town-wide VMT per service population increases under the plus project condition compared to the no project population, or
> 4. The cumulative link-level boundary Town-wide VMT per service population increases under the plus project condition compared to the no project condition.

A VMT analysis was performed for the proposed Project in the Project-specific Traffic Analysis.[8] The analysis was two-fold. First, it compared the Town of Apple Valley General Plan Buildout VMT service population with the Project's VMT service population for the baseline (2016) and cumulative (2040) scenarios. The Town of Apple Valley General Plan Buildout VMT per service population threshold is 33.2, which was obtained from the San Bernardino County Transportation Authority (SBCTA) VMT Screening Tool. The Project's baseline VMT per service population is 32.7, which is less than 33.2 and therefore does not indicate an impact. The Project's cumulative VMT per service population is 34.9, which is greater than the regional threshold of 33.2 by about 5%. It should be noted that the 2040 modeling scenario is a conservative estimate because the Project land uses were included in addition to the assumed growth included in the model.

[8] "Village Specific Plan Traffic Analysis", prepared by David Evans and Associates, December 14, 2021.

Also, the Project includes a high percentage of retail land use with very high customer base/trips, and therefore high VMT is expected. Typically, service population estimates only include Project population and employment. When retail customers are considered in the calculation of service population, the Project's cumulative VMT per service population is 16.0, which is below the threshold and results in a less than significant impact.

For the second part of the VMT analysis, the Traffic Study evaluated the Project's effect on VMT by comparing VMT within the Town of Apple Valley under "With Project" and "Without Project" conditions. Baseline (2016) VMT per service population would be 8.5 with the Project, and 8.5 without the Project. Cumulative (2040) VMT per service population would be 10.0 with the Project, and 10.0 without the Project. Therefore, the Project does not result in any change in VMT between the Without Project and With Project conditions, and no significant impact would occur.

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

Proposed land uses (residential, commercial, institutional) are consistent with existing land uses in the Planning Area and those on surrounding lands. The future vehicle mix will be comparable to the existing mix. Therefore, the Project will not increase hazards due to incompatible uses.

Geometric design features proposed by the Project are listed below, and a description of each follows.

Table 2.17-9
Proposed Circulation Design Features

Design Feature	Alternative 1	Alternative 2
Highway 18 between Yucca Loma & Central Rd:		
Single lane in each direction	X	
4 lanes w/left turn bays		X
Roundabout intersections	X	
Signalized intersections		X
Frontage roads widened, reconfigured as one-way streets, diagonal parking on one side of each street	X	X
Protected pedestrian crossings	X	X
Multi-use paths and/or bike lanes	X	X
Headquarters Rd./Hitt Rd. Realignment	X	X
Yucca Loma Rd. Realignment	X	X
Pedestrian Crossing Enhancements at Intersections	X	X
Powhatan Rd. Widening (potential)	X	

Highway 18 Modifications

The Project proposes numerous physical modifications to Highway 18 between (realigned) Yucca Loma Road on the west and Central Road on the east (Exhibits 2.17-6 through 2.17-8). The current configuration has caused inefficient intersection turning movements, access challenges, and safety concerns for a variety of users, including vehicles, pedestrians, and bicyclists. The Highway's current 200+-foot right-of-way and nearly ½-mile distance between protected pedestrian crossings impedes walkability and limits safe crossings. Numerous closely spaced driveways along the frontage roads interrupt traffic flow and increase opportunities for collisions. Parking is generally provided on individual parcels, and some parking lots are physically constrained so that turning and maneuvering space is inadequate and/or unsafe.

Proposed modifications will improve safety for all users throughout the corridor through properly engineered intersections, simplification of frontage roads, removal of excess driveway access points, centralized parking, and a coordinated network of multi-use paths and pedestrian crossings. Impacts resulting from geometric design features will be positive, and no adverse safety impacts are anticipated.

Headquarters Drive/Hitt Road Realignment

The proposed realignment of Headquarters Drive and Hitt Road at Highway 18 will improve access between land north and south of Highway 18, and traffic maneuvers will be controlled with a roundabout or traffic signal. Improvements will be designed, engineered, built, and maintained to meet applicable roadway and intersection safety standards, and no adverse safety impacts are anticipated.

Yucca Loma Road Realignment

The existing intersection of Yucca Loma Road and Navajo Road is immediately south of the intersection of Highway 18 and Navajo Road, which causes confusing and potentially dangerous turning maneuvers. The proposed realignment and traffic controls (either roundabout or traffic signal) will improve safety and efficiency at the newly proposed easterly terminus of Yucca Loma Road. Improvements will be designed, engineered, built, and maintained to meet applicable roadway and intersection standards, and impacts to traffic safety are expected to be positive and less than significant.

Pedestrian Crossing Enhancements at Intersections

The Project proposes enhanced pedestrian crossings at roundabouts and new and existing signalized intersections throughout the Planning Area. Crossings will be designed and built according to applicable standards and will improve safety conditions for pedestrians. Impacts will be positive and less than significant.

Powhatan Road Widening

Under Alternative 1, Powhatan Road between Navajo Road and Central Road may be widened to four lanes and designated as a Major Thoroughfare should it be required to alleviate traffic demand on Highway 18. No hazardous design features, such as dangerous curves or intersections, are proposed. The intersection of Powhatan Road and Central Road would be signalized. Improvements would be designed, engineered, built, and maintained in accordance with applicable standards. No adverse safety impacts are anticipated.

d) Result in inadequate emergency access.

The Project does not propose any physical changes or land use designations that would result in inadequate emergency access. The Project would facilitate development and redevelopment projects and roadway modifications that could cause temporary road closures and/or detours. However, impacts would be temporary, and any activities impacting public streets would be coordinated with Town staff and emergency responders. The Town Police Department, Apple Valley Fire Protection District, and Town staff would continue to review site-specific traffic control plans and inspect new development/redevelopment projects to assure adequate emergency access is provided, including but not limited to adequate vehicular access and turn-around spaces, fire lanes, signage, secondary access points, and access to gated and locked entrances. Proposed modifications to Highway 18 frontage roads, realignment of the Headquarters Drive/Hitt Road intersection at Highway 18, and realignment of Yucca Loma Road will replace confusing and inefficient intersections with safer designs that are expected to have net positive benefits for emergency access. Project-related impacts will be less than significant.

2.17.7 Mitigation Measures

The following mitigation measures shall be implemented to assure potential Project-related impacts are reduced to less than significant levels.

TRANSP-1 Intersection of Navajo Road and Powhatan Road West

When warranted, a traffic signal shall be installed at the intersection of Navajo Road at Powhatan Road West and coordinated with the existing traffic signal at Navajo Road and Powhatan Road East.

TRANSP-2 Powhatan Road Between Navajo and Central Roads

Should circulation plan Alternative 1 (All Roundabouts on Highway 18) be implemented, the Town shall routinely (at least every 5 years) monitor traffic volumes on Powhatan Road between Navajo Road

and Central Road to determine whether this roadway segment should be widened to 4 lanes and designated and improved as a Major Thoroughfare. Should this occur, this roadway segment shall be designated a Through Truck Route, the intersection of Powhatan Road and Central Road shall be signalized, and development projects shall be required to provide adequate right-of-way for a Major Thoroughfare.

2.17.8 Significance After Mitigation

With implementation of Mitigation Measures TRANSP-1 and TRANPS-2, Project-related impacts will be less than significant.

2.17.9 Cumulative Impacts

Analysis of the Project's cumulative impacts on the local transportation system were evaluated through VMT analysis in the project-specific Traffic Impact Analysis.[9] The findings were discussed in Section 2.17.6.a, above, because the Town's thresholds of significance for VMT require analysis of cumulative impacts. The analysis was based on the San Bernardino County Transportation Analysis Model (SBTAM), a socioeconomic data-based model, and proposed Project land uses were converted into model employment categories (number of employees and dwelling units) using general conversion factors.

The analysis included two measures of cumulative impacts. First, it compared the proposed Project's year 2040 VMT service population with the Town of Apple Valley General Plan Buildout year 2040 VMT service population. The Town of Apple Valley General Plan Buildout VMT per service population threshold is 33.2, which was obtained from the San Bernardino County Transportation Authority (SBCTA) VMT Screening Tool. The Project's cumulative VMT per service population is 34.9, which is greater than the regional threshold of 33.2 by about 5%. However, the modeling scenario is considered a conservative estimate because Project land uses are included in addition to assumed growth included in the model. Also, the Project includes a high percentage of retail land use with very high customer base/trips, and therefore high VMT is expected. Typically, service population estimates only include Project population and employment. When retail customers are considered in the calculation, the Project's cumulative VMT per service population is 16.0, which is below the threshold and results in a less than significant cumulative impact.

[9] "Village Specific Plan Traffic Analysis", prepared by David Evans and Associates, December 14, 2021.

The second part of the cumulative analysis compared Town-wide VMT "With Project" and "Without Project" in year 2040 at General Plan buildout. As shown in the following table, the Project would increase roadway VMT by 73,595 and the service population by 7,296, but VMT per service population (10.0) would be the same "With Project" and "Without Project." Therefore, Project-related cumulative impacts would be less than significant.

Table 2.17-10
Comparison of Town-Wide VMT per Service Population
With and Without Project

Year 2040	With Project	Without Project	Project Variance
Roadway VMT	1,334,074	1,260,479	+73,595
Service Population	133,652	126,356	+7,296
VMT per Service Population	10.0	10.0	no change

Source: "Village Specific Plan Traffic Analysis", prepared by David Evans and Associates, December 14, 2021, Table 11.

2.18 Tribal Cultural Resources

2.18.1 Introduction

This section evaluates the potential for the proposed Project to result in adverse impacts to Native American tribal cultural resources. Mitigation measures to reduce impacts are identified, where appropriate. This section is based primarily on the Cultural Resources Survey report prepared for the Project by CRM TECH[1] and the notification and consultation process between the Town and Native American individuals and organizations (both contained in Appendix C).

This section is closely related to Section 2.6, Cultural Resources. Much of the information provided in Section 2.6 is also pertinent to this section. References to Section 2.6 are provided where appropriate.

2.18.2 Thresholds of Significance

According to recent Appendix G of the CEQA Guidelines, the Project would have a significant effect on tribal cultural resources if it would:

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

   i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

   ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

[1] "Historical/Archaeological Resources Sensitivity Assessment, The Village Specific Plan and EIR, Town of Apple Valley," CRM TECH, January 31, 2022.

2.18.3 Regulatory Framework

State

Assembly Bill 52

Assembly Bill (AB) 52 was (2014) established a new category of resources in the California Environmental Quality Act (CEQA) called Tribal Cultural Resources. Public Resources Code (PRC) Section 21074.a defines "tribal cultural resources" as:

(1) sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
   (A) included or determined to be eligible for inclusion in the California Register of Historical Resources.
   (B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.
(2) a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1, for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

AB 52 establishes a formal consultation process for California Native American tribes and lead agencies regarding tribal cultural resources, referred to as government-to-government consultation. Per Public Resources Code Section 21080.3.1.(b), the AB 52 consultation process must begin prior to release of an environmental impact report, mitigated negative declaration, or negative declaration. Native American tribes to be included in the formal consultation process are those that have requested notice of projects proposed within the jurisdiction of the lead agency.

Senate Bill 18

Senate Bill (SB) 18 requires cities and counties to contact and consult with California Native American tribes before adopting or amending a General Plan or Specific Plan or designated land as Open Space, for the purpose of protecting Native American cultural places. Notice must be given to tribes that are on the contact list maintained by the Native American Heritage Commission (NAHC). Once contacted, tribes have 90 days to request consultation. The purpose of SB 18 is to establish meaningful consultation between tribes and local governments early in the planning process to avoid potential conflicts.

Regional/Local

Apple Valley General Plan
The Apple Valley General Plan (2009) was adopted before CEQA required analysis of tribal cultural resources. However, the General Plan Cultural Resources Element includes policies and programs that address the protection and conservation of cultural and historical resources, which can include tribal cultural resources. Relevant policies and programs are listed in Section 2.6.3 of this EIR.

Apple Valley Landmarks and Points of Interest
Section 2.24.050 of the Apple Valley Development Code grants the Town Council the authority to declare landmarks and points of interest, and the Town maintains a list of landmarks and points of interest. More information is provided in Section 2.6.3.

2.18.4 Environmental Setting

The prehistory of the Mojave Desert region dates to around 8,000 B.C. or earlier. Prehistoric artifacts in the region are typically related to subsistence activities and include points, flaked stone crescents, pottery, mortars and pestles, and scrapers. Ancient occupation sites included the banks of the Mojave River, rock shelters, and hills, mountains, and ridges. The region was once occupied by the Serrano and Vanyume peoples. The Vanyume virtually disappeared well before 1900.

Most of the Serrano were removed to Spanish missions between the 1810s and 1834 or were displaced or died in punitive expeditions in 1866-1870. Today's descendants of the Serrano people are affiliated with the San Manuel Band of Mission Indians, Morongo Band of Mission Indians, or Serrano Nation of Indians. The Apple Valley area was sparsely populated until the second half of the 20th century. Early historic settlements were associated with cattle ranching, apple orchards, and other agricultural operations. Much of the settlement occurred after World War II, when developers acquired, marketed, and developed thousands of acres, creating the community of Apple Valley.

Refer to Section 2.6.4 and Appendix C for more details.

2.18.5 Existing Conditions

Cultural Resources Assessment
A historical/archaeological assessment for the Project Planning Area was prepared by CRM TECH in January 2022.[2] It included records searches, historical

[2] Ibid.

background research, and a field survey. The findings are summarized below. Additional details are provided in Section 2.6.5 and Appendix C.

A search of the California Historical Resources Information System (CHRIS) determined that two (2) sites of historical origin were recorded within the Planning Area (Table 2.6-1). Neither was determined eligible for the National Register of Historic Places or California Register of Historical Resources at the time of their recordation. No records of prehistoric cultural resources were identified within the Planning Area or ¼-mile scope.

Four (4) sites in the Planning Area are designated as Historical Points of Interest in the Planning Area: 1) El Pueblo Shops, 2) Conrad Publishing House, 3) James A. Woody Community Center, and 4) Apple Valley's Pink House (Table 2.6-2).

The field survey confirmed that the bulk of commercial buildings along and behind Highway 18 date primarily to the post-World War II era. No potential indicators of prehistoric human use were observed in the Planning Area.

Sacred Lands File Search

In October 2020, CRM TECH sent a written request to the California Native American Heritage Commission (NAHC) for a records search in the commission's Sacred Lands File. The NAHC reported the presence of unspecified Native American cultural resource(s) in the general vicinity of the Planning Area but did not provide additional details. Sacred Land File searches are conducted at a broad scale, and the reported resource(s) may be miles from the Planning Area. The NAHC provided a list of Native American contacts who may have knowledge about cultural resources in the area. The NAHC response letter is provided in CRM TECH's report (Appendix C).

Tribal Notification and Participation

AB 52 and SB 18 require that the consultation process between local and tribal governments begin prior to the release of an environmental impact report, negative declaration, or mitigated negative declaration. On October 28, 2021, the Town of Apple Valley sent written requests regarding the Project to all contacts identified in the NAHC response letter described above. Copies of the letters are provided in Appendix C. A total of eight (8) letters were sent to representatives of the following Tribes:

- Morongo Band of Mission Indians
- Quechan Tribe of the Fort Yuma Reservation
- Twenty-nine Palms Band of Mission Indians
- San Manuel Band of Mission Indians
- San Fernando Band of Mission Indians
- Serrano Nation of Mission Indians

No responses were received from the contacts and, therefore, no additional information about tribal cultural resources in or around the Project Planning Area has been received.

2.18.6 Project Impacts

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

i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

As discussed in Section 2.18.5, two (2) historic resources were identified within the Planning Area in a records search of the California Historical Resources Information System (CHRIS) conducted by the South Central Coastal Information Center (SCCIC) in October 2020, neither of which were tribal resources. However, both sites were determined not to be eligible for the National Register of Historic Places or California Register of Historical Resources at the time of their recordation. During the search, no records of prehistoric cultural resources were identified in the Planning Area or the ¼-mile scope. The SCCIC noted that records that had not been digitized were unavailable during its search due to facility closure during the COVID-19 pandemic and, therefore, the records search results may or may not have been complete.

Four (4) sites in the Planning Area are designated by the Town as Historical Points of Interest: 1) El Pueblo Shops, 2) Conrad Publishing House, 3) James A. Woody Community Center, and 4) Apple Valley's Pink House (see Table 2.6-2). However, none of these sites has been identified as a tribal cultural resource with cultural value to a California Native American tribe.

AB 52 and SB 18 require the Town to initiate a formal consultation process with relevant tribes prior to releasing an environmental impact report, negative declaration, or mitigated negative declaration. The consultation process was completed and is described in Section 2.18.5. Written notices about the proposed Project were sent to tribal representatives recommended by the NAHC, but no responses were received. Therefore, no information about tribal cultural resources in the Planning Area was received from a Tribe.

Given that undigitized CHRIS records were not available during the records search, and that the NAHC found the presence of unspecified Native American cultural resources in the Project vicinity, there is a potential for development and redevelopment projects facilitated by the Project to impact tribal cultural resources if they occur on a project site. Demolition, grading, excavation, and other ground disturbing activities could uncover previously unknown resource. Mitigation Measures CUL-1, CUL-2, and CUL-3 described in Section 2.6.7, Cultural Resources, of this EIR would reduce potential impacts to less than significant levels.

ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

The Town of Apple Valley is the lead agency for the proposed Project. Other than designating four (4) local Historical Points of Interest in the Planning Area (described in Sections 2.6.5 and 2.18.5), the Town has not determined that other significant cultural resources are in the Planning Area. Nonetheless, the Town recognizes that the proposed Project will facilitate new development and redevelopment in the Planning Area, and construction-related ground disturbances may unearth previously unknown tribal cultural resources. Implementation of existing General Plan policies and programs and Mitigation Measures CUL-1, CUL-2, and CUL-3 from Section 2.6.7, Cultural Resources, in this EIR will assure that potential impacts of individual development projects within the Planning Area on tribal cultural resources are reduced to less than significant levels.

2.18.7 Mitigation Measures

Implementation of Mitigation Measures CUL-1, CUL-2, and CUL-3, described in Section 2.6.7 of this EIR, will reduce potential Project-related impacts to tribal cultural resources to less than significant levels.

2.18.8 Significance After Mitigation

With implementation of the above referenced mitigation measures, Project-related impacts would be reduced to less than significant levels.

2.18.9 Cumulative Impacts

The Apple Valley General Plan EIR (2009) did not evaluate impacts to tribal cultural resources because the analysis was not required at the time. It did evaluate cumulative impacts to cultural resources and determined that ground disturbing activities associated with General Plan buildout have the potential to discover, damage, and/or destroy historic and archaeological resources of cultural importance. However, it was determined that implementation of General Plan policies and programs would protect such resources and that no significant cumulative impacts would occur.

Similar findings can be made for tribal cultural resources because, like cultural resources, discovery of and impacts to tribal cultural resources are typically associated with grading, excavation, and other ground disturbing activities on vacant land. Compared to the General Plan, the proposed Project would result in a 23% increase in the number of dwelling units and a 9% increase in commercial/service/office/public facility square feet. The increase can be expected to result in similar impacts to vacant land, because the Specific Plan allows increased intensification, but the type of development and the amount of land disturbed will be the same as would have occurred under General Plan conditions.

The proposed Project would contribute considerably to cumulative impacts if it were to have a substantial adverse effect on tribal resources. Development and redevelopment projects would be subject to the same mitigation measures identified in the General Plan, including preparation of site-specific cultural resource surveys, and cessation of ground-disturbing activities and contacting a qualified archaeologist if cultural resources are discovered. In addition, implementation of Mitigation Measures CUL-1, CUL-2, and CUL-3 from Section 2.6.7 of this EIR would further protect potential tribal cultural resources. With implementation of these measures, Project-related impacts to tribal cultural resources would be incremental but not cumulatively considerable.

2.19 Utilities and Service Systems

2.19.1 Introduction

This section of the EIR discusses potential impacts to utilities and service systems, including water supply, wastewater and sewer service, storm drainage, and solid waste disposal resulting from implementation of the proposed Apple Valley Village Specific Plan.

A wide range of available resources, including the Town's General Plan and Sewer System Master Plan and Southern California Edison (SCE), Southwest Gas Corporation, Liberty Utilities, and Burrtec published documents and annual reports, have been used in researching and analyzing the Specific Plan and its potential effects. These include detailed analysis of existing utility lines and future extensions and conditions.

2.19.2 Thresholds of Significance

The following criteria from CEQA Guidelines Appendix G have been used to evaluate the significance of the proposed Project's potential impacts to utilities and service systems. Would the Project:

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.

c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

2.19.3 Regulatory Framework

Federal

No federal regulations relative to utilities and service systems would be applicable to the proposed Project.

State

California Integrated Waste Management Act of 1989

The California Integrated Waste Management Act of 1989 (Public Resources Code, Division 30), enacted through Assembly Bill (AB) 939 and modified by subsequent legislation, required all California cities and counties to implement programs to reduce, recycle, and compost at least 50% of wastes by the year 2000 (Public Resources Code Section 41780). CalRecycle determines compliance with this mandate to divert generated waste, including both disposed and diverted waste.

In 2007, Senate Bill (SB) 1016 amended AB 939 to establish a per capita disposal measurement system. The per capita disposal measurement system is based on a jurisdiction's reported total disposal of solid waste divided by its population. California's Integrated Waste Management Board sets a target per capita disposal rate for each jurisdiction. Each jurisdiction must submit an annual report to California's Integrated Waste Management Board with an update of its progress in implementing diversion programs and its current per capita disposal rate.

California Assembly Bill 341

In October 2011, Assembly Bill 341 was signed into law, setting a 75% recycling goal for California by year 2020. The legislation mandates that all California commercial or public entities that generate 4 or more cubic yards of solid waste per week, and multifamily dwellings of 5 or more units, must arrange recycling services by and following July 1, 2012. Individual jurisdictions determined compliance measures and due dates. Per Public Resources Code Section 41821 (annual reporting), each jurisdiction is required to electronically report the progress achieved which is reviewed by CalRecycle.

CALGreen Code

CALGreen Code Section 4.408.1 (construction waste management) mandates recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with Section 4.408.2. Section 4.408.2 (construction waste management plan) requires a construction waste

management plan submitted for the project, signed by the owner, in conformance with Items 1 through 5 prior to issuance of a building permit. The construction waste management plan shall be updated as necessary upon approval by the enforcing agency and shall be available during construction for examination by the enforcing agency.

Senate Bill 221

SB 221, enacted in 2001 and codified in Government Code Section 66473.7, requires a county, city, or local agency to include a condition to any tentative subdivision map that a sufficient water supply will be available to serve the subdivision. The term "sufficient water supply" is defined as the total water supplies available during a normal year, single dry year, and multiple dry years within a 20-year projection that would meet the proposed subdivision's projected water demand, in addition to existing and planned future water uses, including agricultural and industrial uses, within the specified service area. SB 221 further requires any verification of "projected" water supplies to be based on entitlement contracts, capital outlay programs, and regulatory permits and approvals.

Regional and Local

County of San Bernardino Countywide Integrated Waste Management Plan

The Countywide Integrated Waste Management Plan (CIWMP) was prepared in accordance with the California Integrated Waste Management Act of 1989 (AB 939). To attain the reduction goals, AB 939 established a hierarchy of preferred waste management practices from source reduction, recycling and composting to disposal.[1] The Countywide Summary Plan, the final element of the CIWMP, contains goals and policies as well as a summary of integrated waste management issues faced by the County. It summarizes waste management programs and the steps needed to cooperatively implement programs among the County's jurisdictions and continue to meet the statewide diversion mandates.

Town of Apple Valley General Plan

The Town of Apple Valley General Plan includes goals, policies, and programs to provide adequate utility services, promote water and energy conservation, reduce the generation of solid waste, and improve recycling programs that divert valuable resources from the waste stream to productive use. Policies and programs are found in the Water, Wastewater and Utilities Element. Those that are relevant to the proposed Project include the following:

[1] County of San Bernardino – Countywide Summary Plan - Countywide Integrated Waste Management Plan, revised April 2018. http://cms.sbcounty.gov/Portals/50/solidwaste/SWAT/Engineering/SB-County-Final-Draft-Summary-Plan-SP-for-SWAT-07-2018r.pdf?ver=2018-07-10-135812-593.

Goal The provision of a range of water, wastewater and other utility services and facilities that is comprehensive and adequate to meets the Town's near and long-term needs in a cost-effective manner.

Policy 1.A The Town shall coordinate with the various domestic water service providers to ensure that local and regional domestic water resources and facilities are protected from over-exploitation and contamination.

Program 1.A.2
The Town, along with the Apple Valley Ranchos Water Company, Golden State Water Company, and other water services providers, shall continue and augment their water conservation initiatives by expanded efforts that promote the use of water efficient landscaping in all development, as well as water-efficient technologies in new construction or structures that undergo significant remodeling.

Program 1.A.3
The Town shall, along with the various water services providers, evaluate and implement appropriate actions and regulations to facilitate the retrofitting of residential and commercial landscaping/irrigation and appliances and processes that use water so as to substantially increase water use efficiencies.

Program 1.A.4
The Town shall coordinate with the various water service providers to ensure that water customers are provided with conservation incentives, including free information on water use and conserving technologies, rate structures that encourage conservation, discounts on advanced irrigation controllers, and other incentives.

Policy 1.B The Town shall continue to require sewer connection where feasible at the time that a lot is developed, or when service becomes available.

Program 1.B.3
The Town and its Departments of Public Works and Building and Safety shall continue to require that, to the greatest extent feasible, new development extend and connect to sewer lines. Should on-lot septic systems be required, the Town shall require the installation of "dry sewers" and the payment of connection fees for future sewer main extensions.

Policy 1.D The Town shall confer and coordinate with service and utility providers to ensure the timely expansion of facilities so as to minimize or avoid environmental impacts and disturbance of existing improvements. Planning efforts shall include design and siting of support and distribution facilities.

Program 1.D.1
The Town may require and otherwise shall encourage that subsurface transmission facilities, including underground utility lines, be consolidated to limit disruption to traffic and roadways from those facilities.

Policy 1.E The Town shall encourage and support the integration of energy conservation technologies throughout the community.

Program 1.E.1
The Town shall explore and implement, where appropriate, actions and regulations facilitating conservation strategies by business and residential development, as well as implementing technology during remodeling or retrofitting to increase energy use efficiencies to the greatest extent practicable.

Policy 1.F The Town and its solid waste disposal service provider shall continue to consult and coordinate to maintain and surpass, where possible, the provisions of AB 939 by means of expanded recycling programs to divert resources from the waste stream that can be returned to productive use.

Policy 1.G To the greatest extent feasible, the Town shall encourage commercial and industrial establishments to minimize the amount of packaging and potential waste associated with product manufacturing and sales.

Policy I.H Power and other transmission towers, cellular communication towers and other major utility facilities shall be designed and sited so that they result in minimal impacts to viewsheds and minimally pose environmental hazards.

2.19.4 Environmental Setting

The Project area is well connected to the utilities network and served by the following providers:

Utility	Service Provider(s)
Electricity	Apple Valley Choice Energy (AVCE) Southern California Edison (SCE)
Natural gas	Southwest Gas Corporation (SWG)
Water	Liberty Utilities
Wastewater	Most parcels: Town of Apple Valley sewer and Victor Valley Wastewater Reclamation Authority Some parcels: septic systems
Solid waste	AVCO Disposal, Inc. (a Burrtec company)
Telecommunications	Charter Spectrum, Frontier

2.19.5 Existing Conditions

Water Service

Liberty Utilities provides domestic water service to the majority of Apple Valley, including the Specific Plan Planning Area. Liberty Utilities owns and operates regulated water, wastewater, natural gas, and electric utilities. The Liberty-Apple Valley system has provided water service for 70 years. The Mojave Water Agency (MWA) is Watermaster of the adjudicated Mojave Basin. In 2020, the system-wide water supply/demand totaled 14,979 acre-feet for 20,957 connections. [2] The system serves approximately 50 square miles that encompasses approximately 81% of the Town of Apple Valley and portions of the surrounding area through a network of 475 miles of underground pipe.

In 2020, the Liberty - Apple Valley system obtained 100% of its source water from 18 deep wells located throughout the service area. These wells draw water from the deep Alto sub-unit of the Mojave ground water basin, which is recharged from snowmelt from the San Bernardino Mountains to the south and the Mojave River to the west. MWA also imports water from the California State Water Project to spread in the Mojave River to help recharge the groundwater.

Wastewater Service

The Town owns and operates a relatively new municipal sewer system. The Department of Public Works Wastewater Division operates and maintains approximately 140 miles of collector sewer, trunk lines and interceptors, as well as nine sewer lift (pump) stations. The division also conducts maintenance programs on the wastewater system and facilities. The Town is a member of the joint power agency, Victor Valley Wastewater Reclamation Authority (VVWRA). VVWRA operates a regional interceptor sewer system and wastewater reclamation plants. The Town's sewer system conveys wastewater to the

[2] Liberty Utilities – Apple Valley 2020 Urban Water Management Plan Final Draft, June 2021.

Regional Wastewater Reclamation Facility (RWWRF) operated by VVWRA in Victorville. The plant currently treats approximately 10.7 million gallons per day (mgd) and has a design capacity of 18 mgd, with planned future expansions.[3] The Apple Valley Subregional Water Recycling facility located at Brewster Park was completed in 2018. It can produce one million gallons per day of recycled water, which is used to irrigate Brewster Park and the Civic Center Park. The facility only treats wastewater and returns solid waste to the sewer line where it continues to the RWWRF in Victorville for treatment. Therefore, for analysis purposes, this EIR compares potential wastewater generation to the RWWRF capacity.

The Town's sewer system is relatively new and does not connect to the entire Specific Plan Planning Area. Some parcels rely on septic systems. The Village Specific Plan identifies proposed improvements in its Infrastructure Plan (Specific Plan Exhibit B-2). Sewer connections will be made consistent with General Plan policies as development occurs in the Planning Area.

Electricity

Southern California Edison (SCE) provides electricity service to the Town of Apple Valley and many of the surrounding areas, serving approximately fifteen million people within a service area of approximately 50,000 square miles. SCE generates power from a variety of energy sources, including natural gas, large hydroelectric, nuclear, and renewable sources (which include small hydroelectric, solar, wind, geothermal, biomass, and biowaste sources).

According to the Town of Apple Valley Climate Action Plan 2019 Update, Town-wide electricity demand in Apple Valley in 2019 was 329,848,695 kilowatt-hours (kWh). This includes electricity consumed by municipal buildings, residential, commercial, agricultural, and industrial land uses, as well as streetlights and traffic signals.[4]

Apple Valley Choice Energy (AVCE) is a community choice aggregation program created by the Town of Apple Valley to provide more affordable electricity and cleaner energy choices. Launched in April 2017, AVCE service is available to all municipal, commercial, and residential customers within the Town limits. AVCE rates are set by the Town Council, reviewed annually to provide stability to customers, and typically lower than the SCE per kWh rate. Customers are automatically enrolled into AVCE and have the options to upgrade to More Choice (50% renewable energy content), Your Choice (solar/wind power generators), or opt out of AVCE.

[3] FINAL Interceptor Risk Analysis, prepared for: Victor Valley Water Reclamation Authority, June 2021.

[4] Town of Apple Valley Climate Action Plan 2019 Update, adopted May 2021.

Most power lines in the Specific Plan area are overhead. North of Highway 18, power lines generally run along the back of lots through an electrical easement, adjacent to the back of properties. South of Highway 18, the power lines are generally larger and typically run along the back of lot without a dedicated easement. Some streets (such as Nomwaket Road) have power lines running along the street set back behind drainage ditches.

Natural Gas

Southwest Gas Corporation (SWG) provides natural gas service to the Town and the Planning Area through a series of pipelines of various sizes and pressure capabilities. SWG provides natural gas service to more than 2 million customers in Arizona, Nevada, and portions of California. SWG has a network of high-pressure natural gas corridors, and the nearest two are generally on the border of the Planning Area along Central Road (8 inch and 12 inch) and Ottawa Road (8 inch). Distribution lines ranging from 2 to 8 inches in diameter are located within most public rights-of-way.

According to the Town of Apple Valley Climate Action Plan 2019 Update, Town-wide natural gas demand in Apple Valley in 2019 was 15,526,732 therms. This includes natural gas consumed by municipal buildings, residential, commercial, agricultural, and industrial land uses, as well as power plants.[5]

Telecommunications

Frontier and Charter Spectrum provide telecommunications services such as telephone, high-speed Internet service, and cable television to the high desert region, including the Town of Apple Valley and the Project Planning Area.

Solid Waste Management

The Town contracts with Burrtec for solid waste collection and disposal services. Burrtec's AVCO Disposal collects non-hazardous solid waste and hauls it to the Victorville Landfill, located at 18600 Stoddard Wells Road. The landfill is operated by San Bernardino County. With 341 disposal acres out of 491 total acres, Victorville Landfill is permitted to receive up to 3,000 tons daily.[6] Its remaining capacity is estimated at 79,400,000 cubic yards,[7] and the estimated closing date is October 2047.[8] Solid waste collection and disposal services are provided on a fee basis to residential, commercial, and industrial customers.

5 Ibid.
6 https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1870?siteID=2652, accessed October 15, 2021.
7 Ibid.
8 County of San Bernardino Solid Waste Facility Permit, Facility Number 36-AA-0045, issued June 2, 2010.

AVCO also provides weekly pick up of recyclable materials for residential, commercial, and industrial customers. Recyclables are sorted at the Victor Valley Materials Recovery Facility (MRF) at 17000 Abbey Lane. The facility has a maximum permitted throughput of 985 tons per day.[9]

Residential household hazardous wastes (HHW), such as pesticides, batteries, medications, paint thinners, electronics, and gasoline and fuels, are accepted at the Apple Valley Household Hazardous Waste facility at the Public Works Corporate Yard at 13450 Nomwaket Road in the Project Planning Area.

The Town is a member of the Zero Waste Communities of San Bernardino County and the Mojave Desert and Mountain Recycling Joint Powers Authority (JPA). The JPA addresses solid waste contracts, facilities, issues, and education for its member cities and some unincorporated areas in the County.

2.19.6 Project Impacts

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. *(also see Section 2.11 addressing stormwater)*

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.

c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

Projected development under the proposed Specific Plan would increase demand for water, wastewater treatment, storm water drainage, electric power, natural gas, and telecommunications services. The Specific Plan would have the potential to accommodate an additional 682 residential units and 6,067,523 square feet of commercial uses in the Planning Area at full buildout.

New projects would receive utility services from the existing utility providers. Currently, much of the Planning Area is developed, and the utility infrastructure is already in place. Future development under the proposed Specific Plan would

[9] https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1950?siteID=2731, accessed October 15, 2021.

be required to connect to the existing utility infrastructure. To ensure adequate system capacity to meet the growing needs of the Town, the utility providers have plans in place which would be updated based on future demands in their service area. In addition, the proposed Specific Plan includes policies and programs that would improve the utility supply and reduce utility demands in the Planning Area, as needed.

Domestic Water Supply

Liberty Utilities provides domestic water service to the majority of Apple Valley, including the Planning Area. The Liberty – Apple Valley system has 20,957 service connections and a total supply of 14,979 acre-feet (AF) as of 2020. The system currently sources 100% of its water from the Mojave groundwater basin, which is recharged through natural means and imported water from the State Water Project. Liberty Utilities implements a variety of programs to conserve water resources, including green technology and reclaimed water in its business practices, workshops, rebates and no-cost conservation devices and water audits to customers.

As discussed in Section 2.11, Hydrology and Water Quality, at full buildout under the proposed Specific Plan, the Planning Area would require 865.24 acre-feet (AF) of water annually, which represents an additional 436.02 AF or 101.6% increase from the estimated existing demand (429.22 AF). The net Project water demand of 436.02 AFY represents approximately 2.9% of the total 2020 water supply (14,979 AFY) from Liberty Utilities, and less than 2.4% of the projected 2045 water supply (18,538 AFY).[10]

[10] 14,979 AFY for 2020 and 18,538 AFY for 2045 are provided in the Liberty Utilities – Apple Valley 2020 Urban Water Management Plan Final Draft, June 2021.

Table 2.19-1
Apple Valley Village Specific Plan Estimated Water Demand

Land Use[1]	Annual Water Demand Factor[2]	Existing Development	Existing Water Demand (acre feet per year, or AFY)	Future Development[3]	Additional Water Demand (AFY)	Total Water Demand (AFY) at Specific Plan Buildout
Residential	80,784 gallons per unit	289 units	71.65	682 units	169.08	240.73
Commercial /Service /Office /Public	365,000 gallons per acre	220.2 acres	246.66	238.31 acres[4]	266.94	513.60
Open Space (park)	1,922,302.8 gallons per acre	18.8 acres	110.91	0 acres	0	110.91
Total	-	-	**429.22**	-	**436.02**	**865.24**

[1] Based on Apple Valley Village Specific Plan Existing and Proposed Land Uses Tables.
[2] Residential water demand factor based on Golden State Water Company average residential account monthly usage (6,732 gallons) in Apple Valley. Commercial/Service/ Office/Public water demand factor based on 2021 Water Master Plan Update for the City of Victorville. Open Space water demand is based on a factor for turfgrass in desert climate (44.13 gals per square foot per year) developed by the U.S. Department of Energy.
[3] Future development accounts for new development on currently vacant land and does not include redevelopment.
[4] As shown in Table 1-2 of this EIR, vacant acres designated for commercial uses include 98.58 ac (District 1) + 91.42 ac (District 2) + 48.31 ac (District 3) = 238.31 ac. No acres are designated for commercial uses in Districts 4 or 5.

All of Liberty Utilities water supplies are from groundwater extracted from the Mojave Basin Area – Alto Subarea, and the company has the flexibility to increase groundwater production if needed. According to its 2020 Urban Water Management Plan, based on historical and on-going management practices, Liberty Utilities will be able to rely on the Mojave Basin Area for adequate supply over the next 25 years during a normal year, a single-dry year, and a five consecutive year drought. In addition, there are potential water supply projects and programs that may allow Liberty Utilities to enhance and augment existing water supplies, including water transfer opportunities and recycled water beneficial uses.

In addition, the proposed Specific Plan includes guidelines that reduce water demand and protect water resources in the Planning Area. Chapter 5 Design Guidelines provides guidance and detailed requirements for landscaping using native drought-tolerant plants and efficient irrigation systems. Future development will also be required to install water-efficient appliances in buildings per the latest California Building Code (Title 20 – Appliance Efficiency Regulations).

In summary, buildout of the Planning Area consistent with the proposed Specific Plan would result in increased demand for domestic water as the population increases and development occurs. The Town will work with Liberty Utilities to assure sufficient water would be available in the future during normal, dry, and multiple dry years. Due to sufficient groundwater resources and Specific Plan guidelines and existing regulations to conserve water resources, buildout of the proposed Specific Plan would result in less than significant impacts related to water resources.

Domestic Water Infrastructure

There are existing Liberty Utilities water lines within the Specific Plan Planning Area ranging from 4" to 12" in size. The Specific Plan identifies proposed 12" water lines along the north side of Highway 18 (generally between Navajo and Pioneer Roads), and several locations along Powhatan Road where water lines are currently absent (Specific Plan Exhibit 5.7). The Town requires new development in the Planning Area to provide water service and extend water infrastructure as development occurs. The water improvements will be constructed on an as-needed basis as a condition of approval as development occurs. The extension of water lines is expected to have less than significant environmental impacts because the physical expansion will be limited within the future development site and disturbed right-of-way, and the Specific Plan will facilitate new water-efficient buildings and drought-tolerant desert landscaping.

Wastewater Services and Infrastructure

The Town's local wastewater collection system covers most of the developed portions of the Planning Area, with existing lines ranging from 4" to 21" in size. The Specific Plan identifies proposed 8" sewer lines along Nomwaket Road (between Ottawa and Powhatan Roads), and along parcels located between Navajo Road and Pawnee Road (sewer lines would extend between Powhatan Road and Highway 18) (Specific Plan Exhibit 5.8). The Town adopted a Sewer Connection Policy in 2006 that requires new development to connect with sewer facilities where the parcel is within one-half mile of existing sewer facilities, which would apply to the entire Village Specific Plan area.

The Town's sewer system conveys wastewater to the Regional Wastewater Reclamation Facility (RWWRF) operated by Victor Valley Wastewater Reclamation Authority (VVWRA) in Victorville. The plant currently treats approximately 10.7 million gallons per day (mgd) and has a design capacity of 18 mgd, with planned future expansions.[11] As shown in Table 2.19-2, at full buildout, the proposed Specific Plan would generate 916,930 gallons of wastewater per day (gpd), which represents an additional 524,555 gpd or

[11] FINAL Interceptor Risk Analysis, prepared for: Victor Valley Water Reclamation Authority, June 2021.

133.7% increase from the estimated existing demand (392,375 gpd). The net Project wastewater generation of 524,555 gpd (equivalent to 0.52 million gallons per day, mgd) represents approximately 2.9% of the RWWRF's design capacity.[12] The Specific Plan buildout would increase the amount treated at RWWRF from 10.7 mgd to 11.2 mgd, which is well below its design capacity (18 mgd). VVWRA plans future expansions to the RWWRF based on the regional demand in its service area, including a series of 2030 projects recommended in the Interceptor Risk Analysis prepared in 2021.[13] The Town also plans improvements to the local sewer system in response to demand through its Sewer System Management Plan, which was last updated in 2019.[14]

Table 2.19-2
Apple Valley Village Specific Plan Estimated Wastewater Generation

Land Use[1]	**Daily Wastewater Generation Factor**[2]	**Existing Development**	**Existing Wastewater Generation (gallons per day, gpd)**	**Future Development**[3]	**Additional Wastewater Generation (gpd)**	**Total Wastewater Generation (gpd) at Specific Plan Buildout**
Residential	245 gallons per unit	289 units	70,805	682 units	167,090	237,895
Commercial /Service /Office	1,500 gallons per acre	191.1 acres	286,650	238.31 acres[4]	357,465	644,115
Public Facility	1,200 gallons per acre	29.1 acres	34,920	0 acres	0	34,920
Total	-	-	**392,375**	-	**524,555**	**916,930**

[1] Based on Apple Valley Village Specific Plan Existing and Proposed Land Uses Tables. Open Space (park) use is assumed not to generate wastewater and not included.
[2] Wastewater generation factors based on Sewer System Management Plan (SSMP) Update, Town of Apple Valley, September 10, 2019.
[3] Future development accounts for new development on currently vacant land and does not include redevelopment.
[4] As shown in Table 1-2 of this EIR, vacant acres designated for commercial uses include 98.58 ac (District 1) + 91.42 ac (District 2) + 48.31 ac (District 3) = 238.3 ac. No acres are designated for commercial uses in Districts 4 or 5.

Buildout of the Specific Plan will occur gradually over time and will require new sewer lines at individual development sites or adjacent right-of-way. It is possible that redevelopment and new development under the Specific Plan will occur before sewer mains are extended throughout the Planning Area. Projects that occur where sewer infrastructure is unavailable would install septic systems and use them until sewer extensions are built and operational. They would also be required to install dry sewer connections in anticipation of future sewer use.

12 Ibid.
13 Ibid.
14 Sewer System Management Plan (SSMP) Update, Town of Apple Valley, September 10, 2019.

As discussed above, future development also will be required to install water-efficient appliances in buildings per the latest California Building Code (Title 20 – Appliance Efficiency Regulations), which will help reduce wastewater generation.

Based on the capacity analysis, buildout of the Planning Area consistent with the proposed Specific Plan is projected to generate wastewater quantities that are within the treatment capacity of the RWWRF, and it is not expected to require new or expanded wastewater treatment facilities. As VVWRA carries out future projects on new or expansion of wastewater treatment facilities, each development project would be evaluated on a project-by-project basis. Overall, buildout of the proposed Specific Plan would result in a less than significant impact related to wastewater treatment facilities.

Stormwater Drainage Facilities

The Town of Apple Valley Public Works Department manages local drainage facilities through its Master Drainage Plan. The County of San Bernardino Flood Control District is responsible for regional stormwater management within the Town. In the Specific Plan area, existing drainage flows north to a low point in the Apple Valley Dry Lake region.

The Specific Plan Infrastructure Plan (Chapter 6) illustrates a recommended drainage concept in the Project Planning Area. There are currently two trapezoidal channels (77 cfs in capacity) parallel to the north and south frontage roads of Highway 18, which terminate near a wash on the northwest corner of Central Road and Highway 18. The Specific Plan recommends replacing the existing channels with larger capacity box culverts in a similar layout as the existing channels; or the installation of a 54" pipe to serve the same purpose, if upstream improvements are undertaken (please see Section 2.11). At its outlet, a bio swale and combination basin and/or drywells would filter the stormwater and mitigate some of the volume. The Town has established per unit developer impact fees for storm drainage facilities for residential and commercial/industrial development to offset the cost of improvements due to increased development.

As individual projects are proposed under the Specific Plan, the increased runoff from new impervious surfaces may be addressed through use of on-site stormwater detention or retention improvements, which for compliance with NPDES, typically include bio-remediation areas to break down potential pollutants and capture sand and sediment before and during percolation and before surface discharge. Therefore, the proposed Specific Plan is not expected to have a significant impact on new or expanded additional drainage facilities.

Electricity

The developed areas in the Specific Plan area are well served by existing SCE infrastructure. Most power lines in the Planning Area are overhead. The Town Ordinance No. 14.28.020 requires that all new electric lines of 34.5kV or less in Apple Valley be installed underground, which covers most distribution lines and circuits. Undergrounding future power lines will be completed by developers (for private developments) and the Town for any public works projects.

According to the Specific Plan Air Quality Analysis (see Appendix B), at buildout, the Planning Area is projected to consume 101,028,120 kWh per year (see Table 2.7-2, Section 2.7), which would be equivalent to approximately 30.6% of annual Town-wide usage in 2019.[15] The projections are considered conservative because the air quality analysis did not include specific energy-related mitigation measures for the operational phase, and the demand estimate is based on maximum gross building square footage rather than occupied space.

Buildout of the Planning Area under the proposed Specific Plan is not expected to have a significant adverse impact on SCE's ability to provide power. Development will occur gradually as individual projects are approved. Future development will be subject to the latest requirements of the California Green Building Standards Code (California Building Code Part 11). The proposed Specific Plan also includes measures to promote energy efficiency in design and use of lighting.

Construction of future development and associated utility lines will comply with applicable SCE requirements regarding installation, extensions, and connections to limit impacts to electricity infrastructure and avoid service interruptions. No new SCE electric power facilities will need to be constructed or relocated which could cause significant environmental effects. Project-related impacts will be less than significant.

Natural Gas

The developed areas in the Specific Plan area are well served by existing SWG infrastructure. Two high-pressure natural gas corridors generally run on the border of the Planning Area along Central Road (8 inch and 12 inch) and Ottawa Road (8 inch). Distribution lines ranging from 2 to 8 inches in diameter are located within most public rights-of-way.

According to the Specific Plan Air Quality Analysis (see Appendix B), at buildout, the Planning Area is projected to consume 2,130,448 therms of natural gas per year (see Table 2.7-3, Section 2.7), which would be equivalent to approximately

[15] Town of Apple Valley Climate Action Plan 2019 Update, adopted May 2021.

13.7% of annual Town-wide usage in 2019.[16] The projections are considered conservative because the air quality analysis did not include specific energy-related mitigation measures for the operational phase, and the demand estimate is based on maximum gross building square footage rather than occupied space. As discussed above, future development will be subject to the latest requirements of the California Green Building Standards Code (California Building Code Part 11).

Buildout of the Planning Area under the proposed Specific Plan is not expected to significantly impact natural gas supplies or SWG's ability to provide it. Prior to ground disturbance, project contractors would notify and coordinate with SWG to identify the locations and depths of all existing gas lines and avoid disruption of gas service. No additional natural gas facilities will need to be constructed or relocated. Impacts will be less than significant.

Utility providers plan for adequate capacity to serve new connections/development, which depends on rates of growth in their respective service boundaries. Both SCE and SWG are regulated by the California Public Utilities Commission (CPUC), which mandates that electric and natural gas service must be provided to new customers. The need for, and location of, new or expanded dry utility infrastructure, including communication systems, would be determined on a project-by-project basis. Generally, extension of dry utility services to new development occurs within the service provider's easement or within a project's boundary. The potential environmental impacts of new or expanded dry utility infrastructure would be addressed through each project's environmental review process under CEQA.

Telecommunication

Frontier and Charter Spectrum provide telecommunications services, including telephone, high-speed Internet service, and cable television to the high desert region, including the Project Planning Area.

As with electricity and natural gas, the need for and location of new or expanded infrastructure, including communication systems, would be determined on a project-by-project basis. Generally, extension of dry utility services to new development occurs within the service provider's easement or within a project's boundary, and multiple utility infrastructure improvements can be installed during construction to save costs and reduce potential impacts associated with ground disturbance. The potential environmental impacts related to the need for new or expanded dry utility infrastructure, where applicable, would be addressed through each project's environmental review

[16] Ibid.

process under CEQA. Overall, less than significant impacts are anticipated from the expansion of telecommunication facilities.

d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

Future development facilitated by the proposed Specific Plan would increase development and the population in the Planning Area. At full buildout, there will be a total of 971 residential units and 7,890,903 square feet of commercial/ service/office/public facility uses within the Planning Area. As discussed in Section 2.14, Population and Housing of this EIR, implementation of the Specific Plan would result in a population increase of approximately 2,005 new residents. This increase in growth and development as a result of the proposed Specific Plan would result in an increase in solid waste generation, and increased demand for solid waste services throughout the Planning Area. Using solid waste generation factors provided by CalRecycle, buildout of the proposed Specific Plan could result in the generation of 41,370,134.0± pounds, equivalent to 20,685.1 tons per year, of solid waste (Table 2.19-3). The Specific Plan buildout would result in a 333.9% increase in solid waste generation, or a net increase of 31,834,810.5± pounds, equivalent to 15,917.4 tons per year.

Table 2.19-3
Apple Valley Village Specific Plan Estimated Solid Waste Generation

Land Use[1]	**Daily Generation Rate**[2]	**Existing Development**	**Existing Solid Waste Generation (pounds per year, lb)**	**Future Development**[3]	**Additional Solid Waste Generation (lb per year)**	**Total Solid Waste Generation (lb per year) at Specific Plan Buildout**
Residential	12.23 lb/unit	289 units	1,290,081.6	682 units	3,044,413.9	4,334,495.5
Commercial /Service /Office	0.013 lb/SF	1,637,674 SF	7,770,763.1	6,067,523 SF	28,790,396.6	36,561,159.8
Public Facility	0.007 lb/SF	185,706 SF	474,478.8	0 SF	0	474,478.8
Total	-	-	**9,535,323.5**	-	**31,834,810.5**	**41,370,134.0**

[1] Based on Apple Valley Village Specific Plan Existing and Proposed Land Uses Tables. Open Space (park) use is assumed not to generate solid waste and not included.
[2] SF = square foot. Source: Estimated Solid Waste Generation Rates, CalRecycle, accessed October 19, 2021.
[3] Future development accounts for new development on currently vacant land and redevelopment.

State law (AB 939) requires a 50% diversion of solid waste from landfills; after diversion, solid waste disposal at Specific Plan buildout is projected to be a net increase of 7,958.7 tons per year. As discussed above, the landfill serving the Town and Planning Area has a remaining capacity of at 79,400,000 cubic yards as of 2020. Waste generated annually by future development under the proposed Specific Plan would contribute approximately 0.4% to the remaining capacity as of 2020 and would not exceed the landfill capacity.[17]

The Town of Apple Valley, Burrtec Waste Industries, and the landfill serving the Town are required to comply with applicable solid waste management and reduction statutes and regulations. The proposed Specific Plan would have no impact on their compliance with these requirements. Overall, with continuing adherence to the requirements of AB 939 and existing standards and regulations, the Planning Area would maintain compliance with applicable statutes and regulations related to solid waste, and impacts would be less than significant.

2.19.7 Mitigation Measures

Impacts will be less than significant, and no mitigation measures are required.

2.19.8 Significance After Mitigation

Impacts will be less than significant.

2.19.9 Cumulative Impacts

The General Plan EIR stated that future development facilitated by the General Plan is expected to increase the demand for utility services and facilities incrementally and cumulatively. However, substantial reductions to the cumulative demand for energy can result from an increased reliance on non-polluting energy systems and the construction of energy-efficient buildings, as supported by the policies and programs of the General Plan. In addition to regionally coordinated recycling programs, goals, policies and programs in the General Plan that support recycling programs and aggressive waste minimization could significantly reduce cumulative impacts to landfills. Impacts would be reduced such that the General Plan's contribution to cumulative utility impacts would not be cumulatively considerable. Compared to the General Plan, maximum buildout of the proposed Specific Plan would result in a 23% increase in the number of dwelling units and a 9% increase in commercial

[17] Assumes that 1 CY of commercial and residential recyclable solid waste is equivalent to 100 lbs. (averaged). "Volume to Weight Conversion Factors," US EPA Office of Resource Conversion and Recovery. April 2016.

square footage, but they would occur in the same location and area as the current General Plan designations. As discussed below, the Project would result in only a limited increase in development that would not contribute considerably to cumulative impacts on utilities and service systems in Apple Valley.

Liberty Utilities provides water services, the Town's local sewer system (and septic systems in some locations) provides wastewater collection, and Victor Valley Wastewater Reclamation Authority provides wastewater treatment in the Project vicinity. The proposed Project will result in an increase of less than 2.4% of Liberty Utilities 2045 water supply. Liberty Utilities will have adequate supplies from the Mojave Basin Area to meet demands during normal, single-dry, and multiple-dry years over the next 25 years. Buildout of the proposed Project would require the construction or expansion of stormwater and sewer facilities in the Specific Plan area, which will be primarily limited to individual development parcels and public right-of-way. Potential impacts will be assessed as part of individual project-level CEQA analysis, or through a standalone public project CEQA process. When considered in conjunction with other projects in the City's General Plan boundaries, the proposed Project is not expected to have a significant impact on services. Therefore, the Project's contribution to cumulative impacts related to these services would not be cumulatively considerable.

SCE and SWG have policies, programs, and projects in place to provide continued, adequate energy to their users, including the proposed Project. As discussed above, the Project would increase the Town's overall electricity and natural gas demand, and would not require additional facilities other than local connections to, or undergrounding of, existing facilities in the Project vicinity. Therefore, the proposed Project's incremental demand for electricity and natural gas facilities would not be cumulatively considerable.

Regarding solid waste, implementation of state and municipal requirements to reuse and recycle construction and operation waste would lessen the amount of solid waste generated by the Project. When considered in conjunction with other development projects in the region, the solid waste generated by the proposed Project will represent a marginal increase in waste to landfills. Cumulative impacts would be less than significant.

TOWN OF APPLE VALLEY VILLAGE SPECIFIC PLAN

RECIRCULATED DRAFT ENVIRONMENTAL IMPACT REPORT

3. ALTERNATIVE PROJECTS ANALYSIS

3.1. Introduction

Public Resources Code Section 21002.1 and CEQA Guidelines Section 15126.6 provide specific guidance on the need for alternatives to a proposed project. CEQA does not require that every potential alternative to a project be analyzed. Rather, an EIR must consider potentially feasible alternatives that meet most or all of the project objectives and avoid or substantially reduce the impacts of the proposed Project. CEQA further requires that the analysis of alternatives contain sufficient information to allow for "meaningful evaluation, analysis and comparison of the proposed project." A No Project alternative must be considered to allow decision makers to assess the impacts of approving the proposed Project, versus not approving it.

The analysis below includes a summary of existing conditions, as described in Section 2, if they are different for the alternatives analyzed than they were for the proposed Project. Impacts are assessed on a categorical basis for the same categories provided in Section 2, impacts associated with alternatives are considered, and mitigation measures presented if necessary. The Thresholds of Significance and Regulatory Framework described for each category in Section 2 are not replicated, as they are identical to those in Section 2.

The following impacts are assessed in Section 3:

- Aesthetics, Section 3.3
- Air Quality, Section 3.4
- Biological Resources, Section 3.5
- Cultural Resources, Section 3.6
- Energy, Section 3.7
- Geology and Soils, Section 3.8
- Greenhouse Gas Emissions, Section 3.9
- Hazards and Hazardous Materials, Section 3.10
- Hydrology and Water Quality, Section 3.11
- Land Use and Planning, Section 3.12
- Noise, Section 3.13
- Population, Housing, and Socio-Economic Resources, Section 3.14
- Public Services, Section 3.15
- Recreation, Section 3.16
- Transportation and Traffic, Section 3.17
- Tribal Cultural Resources, Section 3.18
- Utilities and Service Systems, Section 3.19

Where mitigation is required for an alternative, and the same mitigation measure required for the proposed Project in Section 2 applies, a reference to the appropriate Section 2 mitigation measure is made. Where additional mitigation measures are required for an alternative, they are listed in this section.

This section concludes with a comparison of the alternatives to the proposed Project, in the context of the level of impact, and a discussion of which alternative is the most environmentally superior.

3.1.1. Statement of Project Objectives

Pursuant to CEQA Guidelines Section 15142(b), the project description includes a statement of objectives (see Section 1 of this EIR). The purpose of the objectives is to facilitate developing a reasonable range of project alternatives to evaluate in this EIR. These objectives are intended to explain the purpose of the Project and aid decision-makers in preparing findings or a statement of overriding considerations, if necessary.

The Project objectives identify the purpose of the Project. The Town has identified the following list of criteria as the Project objectives. The primary goal of the Village Specific Plan is to provide a comprehensive and cohesive planning tool that facilitates buildout and revitalization of the Village and its surroundings, leverages

and optimizes a wide range of appropriate development, and fosters neighborhood and economic development along the corridor. The Project objectives are listed below. The analysis in this section considers how much each alternative meets, or does not meet, the Project objectives.

1. Create a vibrant neighborhood that will stand the test of time.

2. Expand the identity of the Village from Highway 18 throughout the Village boundary.

3. Have a cohesive and harmonious look and feel, with inviting streetscapes and attractive building façades.

4. Enhance connectivity and access throughout the Village.

5. Create a sense of place with interesting public spaces and paseos to increase walkability.

6. Be a convenient place for locals and visitors to stop, shop, and do business.

7. Be a safe and comfortable place for pedestrians, cyclists, and motorists.

8. Attract an eclectic mix of retail, services, specialty shops, and restaurants.

9. Strengthen partnerships between the Town, the Village Property and Business Improvement District (PBID), and business and property owners to fund and implement improvements.

3.1.2. Summary of Alternatives

Two (2) alternatives were selected for consideration based on the potential for each to reduce the impacts of the proposed Project. They provide a comparative basis for evaluation of the proposed Project. They include the following:

Alternative 1 – No Project/Existing Zoning Alternative

Based on the existing zoning designations in the Planning Area, Alternative 1 considers buildout of the Planning Area as currently designated. Land uses would develop as currently zoned, and the street system would build out consistent with General Plan roadway classifications. Existing zoning designations are shown on Exhibit 2.12-2.

Table 3-1 summarizes potential changes to the Planning Area associated with Alternative 1. Alternative 1 would facilitate new development projects that could add approximately 500 additional dwelling units and 5,413,585 additional square feet of commercial/retail/office/public facility development to the Planning Area. Based on the Town's average household size of 2.94 persons per household[1], the new dwelling units would house 1,470 new residents. Combined with existing development, buildout of Alternative 1 would result in a total of 789 dwelling units, 7,236,965 square feet of commercial/retail/office/public facility development, and 2,320 residents in the Planning Area.

Table 3-1
Alternative 1 Buildout Summary

	Residential (dwelling units)	Commercial/ Service/Office/ Public Facility (square feet)	Population[1]
Existing	289	1,823,380	850
Potential new facilitated by Alternative 1	500	5,413,585	1,470
Total at Alternative 1 Buildout	789	7,236,965	2,320

[1] Based on 2.94 persons per household, California Dept. of Finance, Table E-5, January 1, 2021.

A detailed breakdown of Alternative 1 land uses, by existing zoning designation, is shown in Table 3-2.

[1] California Department of Finance, Table E-5, January 1, 2021.

Table 3-2
Alternative 1 Land Use Buildout

Zoning Designation	Developed Acres	Vacant Acres	Total Acres	Existing Dwelling Units[1]	Potential Dwelling Units[3]	Total Dwelling Units
Residential						
Mobile Home Park (MHP, 5-15 du/ac)	17.5	0.0	17.5	173	0	173
Multi-Family Residential (R-M, 2-20 du/ac)	25.2	25.0	50.2	115	500	615
Estate Residential (R-E, 1 du/1 to 2.5 gross ac)	1.0	0.0	1.0	1	0	1
Residential Subtotal:	43.7	25.0	68.7	289	500	789
Commercial				**Existing Sq. Ft.[2]**	**Potential Sq. Ft.[4]**	**Total Sq. Ft.**
General Commercial (C-G) (max. FAR 0.5)	29.1	115.3	144.4	240,981.0	2,511,446.7	2,752,427.7
Service Commercial (C-S) (max. FAR 0.5)	107.0	118.4	225.3	975,576.0	2,577,775.8	3,553,351.8
Village Commercial (C-V) (max. FAR 0.5)	55.1	14.9	70.0	421,117.0	324,362.9	745,479.9
Commercial Subtotal:	191.2	248.6	439.7	1,637,674.0	5,413,585.3	7,051,259.3
Public Facility						
Public Facilities (P-F) (max FAR 0.5)	29.1	0.0	29.1	185,706.0	0.0	185,706.0
Public Facility Subtotal:	29.1	0.0	29.1	185,706.0	0.0	185,706.0
Open Space						
Open Space - Recreation (OS-R)	18.8	0.0	18.8	---	---	---
Open Space Subtotal:	18.8	0.0	18.8	---	---	---
Land Use Total Acreage:	282.8	273.6	556.3			
Street Right-of-Way Total Acreage:	94.8	0.0	94.8			
TOTAL:	**377.6**	**273.6**	**651.2**			

[1] estimate based on Google Earth
[2] estimate based on Microsoft Maps US Building Footprints dataset
[3] future residential development potential assumes maximum density of 20 DU/AC (vacant acres x 20 du).
[4] future commercial development potential assumes maximum allowed Floor Area Ratio (FAR) of 0.5 (vacant acres x 43,560 sf x 50%).
Source: Apple Valley Zoning Code GIS database

Alternative 2 – Reduced Intensity Alternative

Alternative 2 represents the Reduced Intensity Alternative. Under this Alternative, the Districts would build out with land uses and improvements consistent with the Specific Plan's standards and guidelines, but at a lower density of units and intensity of square footage. For purposes of this Alternative, it has been assumed that residential development would occur at a density of 10 units per acre (a 50% reduction in density), and the commercial square footage Floor Area Ratio (FAR) would be reduced from 0.5 to 0.2. The residential density is consistent with past higher density projects built in Town and would likely result in a mix of single-family homes and apartments. The commercial FAR in this Alternative is consistent with the average FAR of existing development within the Planning Area. This Alternative assumes that redevelopment of underutilized parcels could occur, consistent with the proposed Project.

Table 3-3 summarizes potential changes to the Planning Area associated with Alternative 2. Alternative 2 would facilitate new development and redevelopment projects that could add approximately 237 additional dwelling units and 2,311,980 additional square feet of commercial/retail/office/public facility development in the Planning Area. Based on the Town's average household size of 2.94 persons per household[2], the new dwelling units would house 697 new residents. Combined with existing development, buildout of Alternative 2 would result in a total of 526 dwelling units, 4,135,360 square feet of commercial/retail/office/public facility development, and 1,547 residents in the Planning Area.

Table 3-3
Alternative 2 Buildout Summary

	Residential (dwelling units)	Commercial/ Service/Office/ Public Facility (square feet)	Population[1]
Existing	289	1,823,380	850
Potential new facilitated by Alternative 2	237	2,311,980	697
Total at Alternative 2 Buildout	526	4,135,360	1,547

[1] Based on 2.94 persons per household, California Dept. of Finance, Table E-5, January 1, 2021.

A detailed breakdown of Alternative 2 land uses, by District, is provided in Table 3-4.

[2] Ibid.

Table 3-4
Alternative 2 Land Use Buildout

District	Acres					Residential (dwelling units)				Commercial/Service/Office/Public Facility (square feet)			
	Developed Acres			Vacant Acres	Total Acres	Existing Units	Under-utilized Potential[1]	Vacant Potential[2]	Total Units at Buildout[4]	Existing sq. ft.	Under-utilized Potential[1]	Vacant Potential[3]	Total sq. ft. at Buildout[4]
	Developed	Under-Utilized[4]	Total Developed										
District 1: Village Core	59.64	16.33	75.97	107.58	183.55	63	21	90	148	543,437	124,015	858,829	1,433,126
District 2: Village Services North	95.78	23.78	119.56	91.42	210.98	89	0	0	1	1,029,533	207,184	796,458	1,950,206
District 3: Village Services South	28.87	11.06	39.93	48.31	88.24	41	0	0	0	181,088	96,329	420,880	682,706
District 4: Residential & Recreation	40.10	7.20	47.30	2.98	50.28	96	72	30	144	69,322	0	0	69,322
District 5: Residential	0	0	0	23.28	23.28	0	0	233	233	0	0	0	0
Land Use Total Acre:	224.40	58.36	282.76	273.57	556.33	---	---	---	---	---	---	---	---
Street ROW Total Acres:	94.82	0	94.82	0	94.82	---	---	---	---	---	---	---	---
Total:	**319.22**	**58.36**	**377.58**	**273.57**	**651.16**	**289**	**93**	**353**	**526**	**1,823,380**	**427,528**	**2,076,167**	**4,135,360**

Estimates based on a number of sources, including Google Earth, ESRI, San Bernardino County Assessor, and Town housing data.
Potential uses for vacant and/or underutilized acres assumes District 1 is mixed use residential and commercial/service uses (see footnote 1), Districts 2 and 3 are all commercial/service uses, and Districts 4 and 5 are residential uses.

[1] For District 1, assumes the west end signature project (Franklin, 5 parcels, approx. 8.38 acres categorized as "underutilized") will develop 25% residential (2.095 acres) and 75% commercial (6.285 acres), the east end signature project (30 acres, all vacant land) will develop 30% residential (9 acres) and 70% commercial (21 acres), and remaining underutilized acreage will develop as commercial. Combined, the west and east end signature projects are 11.09 acres residential and 27.29 acres commercial.

[2] Future residential development potential assumes maximum density of 20 DU/AC.

[3] Commercial development potential assumes existing development has occurred at maximum allowed Floor Area Ratio (FAR) of 0.5 (acres x 43,560 sf x 50%).

[4] Underutilized acres currently have either commercial/retail/service square feet or residential units on site. Redevelopment of underutilized sites assumes all existing square feet or units would be removed from that site. For scenarios where underutilized acres are redeveloped, the total square feet or residential units is the sum of existing + underutilized + vacant – existing underutilized square feet or units. Existing mobile home parks are planned to be redeveloped as either commercial space or multi-family units. No new MHP are proposed.

3.1.3. Alternatives Considered But Not Further Analyzed

In addition to the two alternatives studied in the EIR, the Town also considered changes in land use designations within the 5 districts established in the Specific Plan, including an increase in residential development potential. This alternative was considered but not further analyzed because the Town's goals and vision for the Village is the strengthening of the Village as an economic development opportunity for the Town's long term growth, and for the preservation of a central downtown main street.

3.2. Alternative Projects Analysis Summary

As noted, this section analyzes the environmental categories and thresholds set forth in Appendix G of the CEQA Guidelines. First, existing conditions are summarized and reference made to the corresponding Section 2 discussion where more detail is provided. Then, each impact threshold is cited and the effects of each alternative analyzed. The need for mitigation is discussed, and an assessment of the environmentally superior alternative is provided.

3.3 Aesthetics

3.3.1 Introduction

This section evaluates potential impacts of the two project alternatives on aesthetic, visual, and scenic resources in the Planning Area and compares these potential impacts to those of the proposed Project. Specific Plan objectives, development standards and guidelines, and standard Town requirements are evaluated as to their effect of mitigating or avoiding any potentially significant effects.

3.3.2 Existing Conditions

The Town of Apple Valley is in the high desert region north of the San Bernardino Mountains. The Town's topography is characterized by gently sloping alluvial fans ranging in elevation from approximately 3,400 feet near the base of the Fairview Mountains to the northeast to 2,700 feet along the Mojave River to the west.

Located in the urban core of Apple Valley, scenic vistas are somewhat distant from the Planning Area, as it is more than two miles from the nearest mountains to the east and four miles from the Mojave River to the west. Scenic vistas include the Granite Mountains to the east, Juniper Flat foothills to the south, Bell Mountain and Catholic Hill to the northwest, and Fairview Mountain to the northeast.

Visual resources in the Village Planning Area also include four Historic Points of Interest identified by the Town—the Pink House, the Conrad Publishing House, El Pueblo Shops, and James A. Woody Community Center. Currently, about 58% of the Planning Area is developed with residential, commercial retail, service commercial (light industrial), and institutional land uses. Buildings along Highway 18 generally are free-standing, Western-themed on the north, and more eclectic on the south. There are also some Mission or industrial style buildings.

Some buildings appear dilapidated or abandoned. The signage along Highway 18 is not coordinated and varies by block or even by building. There is also a lack of well-designed and maintained landscaping, street furniture, and public spaces for gathering and pedestrian activity. Please see Section 2.3.5 for a full discussion of existing aesthetic conditions in the Planning Area.

3.3.3 Alternatives Impact Analysis

a) Have a substantial adverse effect on a scenic vista?

Alternative 1 (No Project/Existing Zoning)
Alternative 1 would result in development of the same land (Planning Area) as the proposed Project, but development would occur according to current zoning designations and Development Code standards and guidelines. In addition to existing development, Alternative 1 would have the potential to accommodate an additional 500 residential units and 5,413,585 square feet of commercial/service/office/public uses in the Planning Area at full buildout. Compared to the proposed Specific Plan, Alternative 1 would allow largely the same land uses but result in fewer residential units and less commercial/public facilities square footage.

As discussed in Section 2.3.6, scenic vistas seen from the Planning Area are generally limited to mid- and top-range views of the Granite Mountains, and more distant mid- and top-range views of Juniper Flat foothills to the south, Bell Mountain and Catholic Hill to the northwest, and Fairview Mountain to the northeast. Only mountain ridges are visible from some locations. Due to distance, views of the mountains from within the Planning Area are not a defining characteristic of the Planning Area or adjacent lands. No other notable or unique landforms or scenic features are within or visible from the Planning Area.

Future development facilitated by Alternative 1 will be subject to development standards and guidelines set forth in the Development Code (Municipal Code Title 9) under the current zoning designations. The height limit, setback, and lot coverage provisions serve to control building mass/scale and potential impacts on scenic vistas. As with the proposed Project, future development will require Town staff and/or Planning Commission/Council review. Development would be similar in land use and design to current conditions, but with reduced land coverage and design guidelines. Under this alternative, the enhanced parkways proposed in the Specific Plan on local streets, and the landscaping and public spaces provided for on Highway 18 would not occur, reducing the visual appeal possible under the proposed Project. Public views from the Highway would remain in the same character as they currently are, without the enhancements provided on the north and south sides by the landscaped parkways in the Specific Plan.

It is important to note that Alternative 1 represents continued implementation of current zoning and Development Code regulations without implementation of a Specific Plan. Under Alternative 1, future development would not benefit from the Village Specific Plan, which provides a vision, objectives, standards, and guidelines to enhance the aesthetic value of the Planning Area and promote

placemaking and a creative, cohesive, and harmonious look and atmosphere. In this regard, Alternative 1 may not realize as much positive impact on scenic vistas in the Planning Area as the proposed Project. However, no significant adverse impacts are expected under Alternative 1.

Alternative 2 (Reduced Intensity)
Alternative 2 would cover the same land (Planning Area) as the proposed Specific Plan but result in fewer residential units and less commercial/public facilities square footage. In addition to existing development, Alternative 2 would have the potential to accommodate an additional 237 residential units and 2,311,980 square feet of commercial/service/office/public uses in the Planning Area at full buildout. Like the proposed Project, future development facilitated by Alternative 2 will be subject to the Specific Plan vision, objectives, standards, and guidelines to protect existing views and maintain existing scenic vistas. The design guidelines, landscaped parkways, and aesthetic improvements provided in the Specific Plan would also apply to this alternative, which would improve visual character and views from Highway 18 and other Planning Area streets. Therefore, impacts to aesthetic resources from Alternative 2 would be essentially the same as for the proposed Project and would be less than significant.

c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Alternative 1 (No Project/Existing Zoning)
Much of the Planning Area is already developed with various land uses, except some larger vacant parcels along the perimeter of the Planning Area. In addition, smaller parcels along the Highway 18 and scattered in the Planning Area are available for infill development, and 'underutilized' areas where land use efficiencies have not been fully achieved in each of the five districts have redevelopment potential.

Future development facilitated by Alternative 1 will be subject to development standards and guidelines set forth in the Development Code (Municipal Code Title 9) under the current zoning designations and the General Plan. No changes to or conflicts with current zoning or General Plan regulations governing scenic quality will occur. As with the proposed Project, future development will require Town staff and/or Planning Commission/Council approval.

It is important to note, however, that Alternative 1 represents continued implementation of current zoning and Development Code regulations without implementation of a Specific Plan. Under Alternative 1, future development would not benefit from the Village Specific Plan, which provides a vision, objectives, design standards and guidelines specifically tailored to the Planning Area based on thoughtful planning and public outreach. In this regard, Alternative 1 may not realize as much positive impact on visual character and scenic quality in the Planning Area as the proposed Project. However, no significant adverse impacts are expected under Alternative 1.

Alternative 2 (Reduced Intensity)
Alternative 2 would cover the same Planning Area as the proposed Project but result in fewer residential units and less commercial/public facilities square footage. Like the proposed Project, Alternative 2 would implement the Village Specific Plan which provides its own development standards that will supersede those in the Development Code. Future development facilitated by Alternative 2 will be subject to the Specific Plan design standards and guidelines that are consistent with and will enhance the existing visual character of the Planning Area, including parkway improvements on Highway 18 and other Planning Area streets. The Village Public Art Program included in Chapter 6, Administration & Implementation, will also be implemented under Alternative 2, which requires future development to install a public art project in or near the development site or pay in-lieu fees toward art projects on public lands. This requirement would improve the visual character of the Planning Area in a manner consistent with the proposed Project.

As with the proposed Project, under Alternative 2, streets will continue to be improved with curb, gutter, and landscaping that enhance visual character along public rights-of-way (see Chapter 5, Infrastructure, of the Specific Plan). Future development facilitated by Alternative 2 will be subject to rigorous regulatory review by the Town staff, Planning Commission and/or Town Council. Architectural and landscape design for all new projects and major remodels and administrative design review applications will also be regulated by the Specific Plan and reviewed by Town staff. As discussed in Section 2.3.6, the Specific Plan vision, objectives, and guidelines are consistent with and support General Plan goals and policies governing scenic quality. As with the proposed Project, Alternative 2 will not conflict with applicable zoning or General Plan regulations governing scenic quality. Impacts on visual character and scenic quality in and surrounding the Planning Area as a result of Alternative 2 implementation are expected to be less than significant.

d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?

Alternative 1 (No Project/Existing Zoning)
Light and glare impacts are associated with increased urbanization and, without proper regulation, will continue to increase with the buildout of the Planning Area under all alternatives. Within the Planning Area, most lands are developed, and daytime and nighttime skies are already affected by moderate light and glare (see Section 2.3.6 d). Alternative 1 would facilitate development in the Planning Area according to current zoning designations, and future lighting sources (mostly buildings and vehicles) will be similar to those that exist today.

Potential light and glare impacts associated with Alternative 1 implementation will be marginally reduced when compared to the proposed Project, based on a lesser amount of development. The Town Municipal Code prohibits light spillage onto neighboring properties or the street (Section 9.70.020). As with the proposed Project, future development will require Town staff and/or Planning Commission/Council approval. Impacts under Alternative 1 are expected to be less than significant, and comparable to or less than those under the proposed Project.

Alternative 2 (Reduced Intensity)
Alternative 2 would cover the same Planning Area as the proposed Project but result in fewer residential units and less commercial/public facilities square footage. Alternative 2 will facilitate land uses in the Planning Area similar to those that exist today. Like the proposed Project, future development facilitated by Alternative 2 will be subject to the Specific Plan design standards and guidelines that reduce light and glare caused by new and remodeled development (see Specific Plan Section 3.2 and 4.2 through 4.4). The Specific Plan promotes low lighting levels in all types of outdoor applications and maintains the performance standards set forth in the Town Development Code.

Potential light and glare impacts associated with Alternative 2 implementation will be essentially the same as the proposed Project, if not less due to lower development densities. The Specific Plan prohibits light spillage onto neighboring properties or the street, prohibits reflective building materials, and limits lighting to that necessary for functional safety, security, and identification. As with the proposed Project, future development will require Town staff and/or Planning Commission/Council approval. Impacts under Alternative 2 are expected to be less than significant, and comparable to or less than those under the proposed Project.

3.3.4 Mitigation Measures

As is the case with the proposed Project, mitigation measures are not required, and impacts are less than significant.

3.3.5 Environmental Superior Alternative

Alternative 2 will result in the fewest residential units and lowest commercial square footage compared to the proposed Project and Alternative 1. Therefore, Alternative 2 can be expected to have the least impacts on scenic vistas in and around the Planning Area. Alternative 2 would also implement the Village Specific Plan which provides a vision, objectives, standards, and guidelines to enhance the aesthetic value of the Planning Area and promote placemaking and a creative, cohesive, and harmonious look and atmosphere. For these reasons, Alternative 2 is arguably the environmentally superior alternative. However, all alternatives, including the proposed Project, would be subject to the Town's development review and would have less than significant impacts.

3.4 Air Quality

3.4.1 Introduction

The following section analyzes the potential air quality impacts associated with the proposed Project alternatives. A variety of local and regional data and information, ranging from research and analysis conducted for the Planning Area, to regional-scale planning and environmental documents, have been used in researching and analyzing the Project alternatives and their potential effects on air quality.

3.4.2 Existing Conditions

The Specific Plan area and the Town of Apple Valley are located within the Mojave Desert Air Basin (MDAB) and under the jurisdiction of the Mojave Desert Air Quality Management District (MDAQMD). Air quality in the Mojave Desert Air Basin has been impacted by emissions associated with increased development, population growth, and vehicle emissions. Although air pollution is emitted locally from various sources, the most evident degradation of regional air quality, with the exception of fugitive dust, is due to sources outside the area, including the San Bernardino and Los Angeles County air basins. In the Specific Plan area, MDAQMD regulates air quality and implements applicable state and federal policies and regulations.

Please see Section 2.4 for a detailed description of the regulatory framework and existing air quality conditions relating to the Planning Area.

3.4.3 Alternatives Impact Analysis

a) Conflict with or obstruct implementation of the applicable air quality plan?

Alternative 1 (No Project/Existing Zoning)
Alternative 1 represents the continued implementation of the existing Development Code and Zoning Map. Alternative 1 would result in 789 dwelling units, 7,236,965 square feet of general commercial/services, and 2,320 residents. The proposed Project would result in 971 dwelling units (182-unit increase), 7,890,903 square feet of general commercial/services (653,938 SF increase), and 2,855 residents (565 population increase).

As discussed in Section 2.4, The MDAQMD works directly with the Southern California Association of Governments (SCAG), county transportation commissions, and local governments, and cooperates actively with all state and

federal government agencies. SCAG adopted the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (2020 RTP/SCS) to comply with metropolitan planning organization (MPO) requirements under the Sustainable Communities and Climate Protection Act. The Growth Management chapter of the RTP/SCS forms the basis of land use and transportation controls of air quality plans. A project is considered to be "in conformity" if it complies with all applicable District rules and regulations, complies with all proposed control measures that are not yet adopted from the applicable plan(s), and is consistent with the growth forecasts in the applicable plan(s).

The MDAQMD has several air quality management plans that establish control strategies and guidance on regional emission reductions for air pollutants (see page 2.4-13). These plans are based, in part, on the land use plans of the jurisdictions in the region. Alternative 1 would maintain the existing General Plan land use designations and is therefore consistent with the land use assumptions of the air quality management plans and the growth forecasts in the 2020 RTP/SCS.

Any future project as a result of Alternative 1 would adhere to the General Plan policies designed to reduce air quality impacts, regardless of changes in population projections, including Policy AQ 1.D, which states that the Town shall review all development proposals for potential adverse effects on air quality and requires mitigation of significant impacts. As with the proposed Project, the Town's compliance with General Plan policies and standard MDAQMD rules and regulations will ensure that buildout of the Planning Area under Alternative 1 is done so in accordance with applicable air quality management plans. Alternative 1 would not result in any new or increased severity impacts compared to the existing General Plan and therefore impacts will be less than significant.

Alternative 2 (Reduced Intensity)
Alternative 2 represents the Reduced Intensity Alternative. Under this Alternative, the Districts would build out with land uses and improvements consistent with the Specific Plan's standards and guidelines, but at a lower density of units and intensity of square footage. Alternative 2 would result in 526 dwelling units, 4,123,360 square feet of general commercial/services, and 1,547 residents. Compared to existing conditions, this represents a 263-unit decrease, 3,113,605 SF decrease, and 773 population decrease.

As described above, a project is considered to be "in conformity" if it complies with all applicable MDAQMD rules and regulations, complies with all proposed control measures that are not yet adopted from the applicable plan(s), and is consistent with the growth forecasts in the applicable plan(s). Compared to existing conditions (Alternative 1), Alternative 2 would marginally decrease the population assumed in the growth forecasts and therefore would not result in any

new or increased severity impacts compared to the existing General Plan. Any future project as a result of Alternative 2 would adhere to the General Plan policies designed to reduce air quality impacts, regardless of changes in population projections, including Policy AQ 1.D, which states that the Town shall review all development proposals for potential adverse effects on air quality and requires mitigation of significant impacts. As with the proposed Project and Alternative 1, the Town's compliance with General Plan policies and standard MDAQMD rules and regulations will ensure that buildout of the Planning Area under Alternative 2 is done in accordance with applicable air quality management plans. Therefore, impacts will be less than significant.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Alternative 1 (No Project/Existing Zoning)
A significant impact could occur if Alternative 1 would make a considerable cumulative contribution to federal or state non-attainment pollutants. The Planning Area is classified as a "non-attainment" area for PM_{10} and ozone. Cumulative air quality analysis is evaluated on a regional scale given the dispersing nature of pollutant emissions and aggregate impacts from surrounding jurisdictions and air management districts. Any development project or activity resulting in emissions of PM_{10}, ozone, or ozone precursors will contribute, to some degree, to regional non-attainment designations of ozone and PM_{10}.

As with the proposed Project, operational emissions were calculated by using California Emissions Estimator Model (CalEEMod) version 2020.4.0. The following assumptions were entered into the CalEEMod software for Alternative 1:

- Buildout year: 2040
- Land uses and square footages were not specified in the same way they were for the proposed Project in the Traffic Study. Alternative 1 land uses were lump summed together into two categories: "Apartments low Rise" and "Strip Mall." Strip mall represents a general mix of commercial uses.
- Due to the unknown certainty of future land uses and their distribution within the Planning Area, it is unrealistic to assume trip lengths or to apply trip reductions from hypothetical land use synergies. Therefore, mobile emissions were analyzed qualitatively as opposed to quantitatively using land use trip rates cited in the Traffic Study and controlled with default trip mileage and distribution rates in CalEEMod.
- Mobile emissions have been manually adjusted to account for the land use synergies and associated trip reduction assumptions that the Traffic Study made for the proposed Project. Alternative 1's mobile emissions were

calculated using the percentage of the Alternative's non-residential square footage compared to that of the proposed Project. Alternative 1's non-residential square footage is 92% of the proposed Projects non-residential square footage. This method is used to provide a qualitative analysis and does not represent actual mobile emissions.

As shown in the table below, the cumulative net increases of NO_x, ROG, and PM_{10} emissions would be less under Alternative 1 than those emitted under the proposed Project.

Table 3.4-1
Operational Emissions Summary (lbs./day)
Alternative 1 vs. Proposed Project

	CO	NO_x	ROG	SO_x	PM_{10}	$PM_{2.5}$
Proposed Project						
Area	84.32	9.78	251.56	0.06	1.16	1.16
Energy	46.32	56.97	6.29	0.34	4.34	4.34
Mobile[1]	2,708.43	392.79	332.62	5.89	768.80	207.35
TOTAL:	**2,839.07**	**459.54**	**590.47**	**6.29**	**774.30**	**212.85**
Alternative 1						
Area	68.60	7.95	227.31	0.04	0.94	0.94
Energy	4.87	7.28	0.82	0.04	0.56	0.56
Mobile[2]	2,491.75	361.36	306.01	5.41	707.29	190.71
TOTAL:	**2,565.22**	**367.59**	**534.14**	**5.49**	**708.79**	**192.21**
MDAQMD Threshold	**548**	**137**	**137**	**137**	**82**	**65**

Source: CalEEMod Version 2020.4.0. See Appendix B for detailed output tables. Value shown represents the average emissions of summer and winter outputs.
1. Mobile emissions are overstated because they do not account for future land use synergies that would reduce trip lengths and frequencies. Emissions are shown for qualitative analysis.
2. Consistent with assumptions made in Section 2.17 Transportation and Traffic, Alternative 1 is assumed to be 92% of the proposed Projects non-residential square footage and overall daily trips. For analysis purposes, Alternative 1 mobile emissions are assumed to be 92% of the proposed Project's mobile emissions. These numbers are not in the CalEEMod outputs. The above analysis is qualitative.

The MDAQMD does not currently recommend quantified analyses of construction and/or operational emissions from multiple development projects nor provides methodologies or thresholds of significance to be used to assess the significance of cumulative emissions generated by multiple cumulative projects, including buildout of Alternative 1. However, it is recommended that a project's potential contribution to cumulative impacts should be assessed utilizing the same significance criteria as those for project-specific impacts.

As shown above, Alternative 1 projections of these pollutants exceed established daily thresholds, with the exception of SO_x, and therefore have the potential to result in a cumulative impact to ozone (as ozone precursors) and PM_{10}. However, subsequent CEQA documentation prepared for future individual projects would have project-specific data and would be required to address, and to the extent feasible, mitigate any significant air quality impacts to a less than significant level. Therefore, with implementation of the existing General Plan policies including Policy AQ 1.D, Alternative 1 impacts to non-attainment criteria pollutants are expected to be reduced to less than significant levels on a case-by-case basis.

Alternative 2 (Reduced Intensity)
A significant impact could occur if Alternative 2 would make a considerable cumulative contribution to federal or state non-attainment pollutants. The Planning Area is classified as a "non-attainment" area for PM_{10} and ozone. Any development project or activity resulting in emissions of PM_{10}, ozone, or ozone precursors will contribute, to some degree, to regional non-attainment designations of ozone and PM_{10}.

As with the proposed Project, operational emissions were calculated by using California Emissions Estimator Model (CalEEMod) version 2020.4.0. The following assumptions were entered into the CalEEMod software for Alternative 2:

- Buildout year: 2040
- Alternative 2 used the same land uses and percentage of units/square footage breakdown as were used for the proposed Project in the Traffic Study.
- Due to the unknown certainty of future land uses and their distribution within the Planning Area, it is unrealistic to assume trip lengths or to apply trip reductions from hypothetical land use synergies. Therefore, mobile emissions were analyzed qualitatively as opposed to quantitatively using land use trip rates cited in the Traffic Study and controlled with default trip mileage and distribution rates in CalEEMod.

As shown in the table below, the cumulative net increases of NO_x, ROG, and PM_{10} emissions would be less under Alternative 2 than those emitted under the proposed Project, but would exceed MDAQMD thresholds, except for Sox.

Table 3.4-2
Operational Emissions Summary (lbs./day)
Alternative 2 vs. Proposed Project

	CO	NO_x	ROG	SO_x	PM_{10}	$PM_{2.5}$
Proposed Project						
Area	84.32	9.78	251.56	0.06	1.16	1.16
Energy	46.32	56.97	6.29	0.34	4.34	4.34
Mobile[1]	2,708.43	392.79	332.62	5.89	768.80	207.35
TOTAL:	**2,839.07**	**459.54**	**590.47**	**6.29**	**774.30**	**212.85**
MDAQMD Threshold	**548**	**137**	**137**	**137**	**82**	**65**
Alternative 1						
Area	45.66	5.30	132.07	0.03	0.63	0.63
Energy	2.90	4.44	0.50	0.05	0.34	0.34
Mobile[2]	1,421.12	312.71	251.10	2.96	403.46	108.81
TOTAL:	**1469.68**	**322.45**	**383.67**	**3.04**	**404.43**	**109.78**
MDAQMD Threshold	**548**	**137**	**137**	**137**	**82**	**65**

Source: CalEEMod Version 2020.4.0. See Appendix B for detailed output tables. Value shown represents the average emissions of summer and winter outputs.
1. Mobile emissions are overstated because they do not account for future land use synergies that would reduce trip lengths and frequencies. Emissions are shown for qualitative analysis.
2. Consistent with assumptions made in Section 2.17 Transportation and Traffic, Alternative 2 assumes the same land use categories and percentage breakdown as analyzed for the proposed Project

As shown above, Alternative 2 projections of these pollutants exceed established daily thresholds, with the exception of SO_x, and therefore have the potential to result in a cumulative impact to ozone (as ozone precursors) and PM_{10}. However, subsequent CEQA documentation prepared for future individual projects would have project-specific data and would be required to address, and to the extent feasible, mitigate any significant air quality impacts to a less than significant level. Therefore, with implementation of the existing General Plan policies including Policy AQ 1.D, Alternative 2 impacts to non-attainment criteria pollutants are expected to be reduced to less than significant levels on a case-by-case basis.

c) Expose sensitive receptors to substantial pollutant concentrations?

Alternative 1 (No Project/Existing Zoning)
Under Alternative 1, the potential impact of air pollutant emissions at sensitive receptors will be assessed at an individual project level as directed by the General Plan policy AQ 1.D discussed in Section 2.4. Sensitive receptors can include, but are not limited to, uses such as long-term health care facilities, rehabilitation centers, and retirement homes, residences, schools, playgrounds, childcare centers, and athletic facilities.

Specific air pollutant emissions data from individual projects will be used in Localized Significance Threshold (LST) analysis to determine if a project would exceed the MDAQMD localized significance thresholds during construction and/or operation. As discussed above, mitigation will be required for future projects under Alternative 1 if they would expose sensitive receptors to substantial pollutant concentrations.

MDAQMD recommends an evaluation of potential localized CO impacts when a project causes the level of service (LOS) at a study intersection to worsen from C to D, or if a project increases the traffic volume (or demand) to capacity (V/C) ratio at any intersection rated D or worse by 2% or more. Traffic-related impacts on the creation of CO hot spots will be analyzed on a case-by-case basis and mitigated as needed. Specifically, mitigation was set forth in the Traffic Analysis requiring the installation of a traffic signal (when warranted) to ensure all intersections are operating at acceptable levels. After mitigation, all intersections would be operating at LOS D or better and therefore, Alternative 1 would not result in the creation of an unmitigated CO hotspot.

Like the proposed Project, Alternative 1 is not expected to expose sensitive receptors to substantial pollutant concentrations and air quality impacts to sensitive receptors are expected to be less than significant.

Alternative 2 (Reduced Intensity)
Under Alternative 2, the potential impact of air pollutant emissions at sensitive receptors will be assessed at an individual project level as directed by the General Plan policy AQ 1.D discussed in Section 2.4.

Specific air pollutant emissions data from individual projects will be used in Localized Significance Threshold (LST) analysis to determine if a project would exceed the MDAQMD localized significance thresholds during construction and/or operation. As discussed above, mitigation will be required for future projects under Alternative 2 if they would expose sensitive receptors to substantial pollutant concentrations.

Although development intensities would be reduced under Alternative 2, it is expected that the traffic impacts would be similar to the proposed Project. Mitigation was set forth in the Traffic Analysis requiring the installation of a traffic signal (when warranted) to ensure all intersections are operating at acceptable levels. After mitigation, all intersections would be operating at LOS D or better and therefore, Alternative 2 would not result in the creation of an unmitigated CO hotspot.

Like the proposed Project, Alternative 2 is not expected to expose sensitive receptors to substantial pollutant concentrations and air quality impacts to sensitive receptors are expected to be less than significant.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Alternative 1 (No Project/Existing Zoning)
The impact related to potential exposure of people to odors or other emissions would be the same as for the proposed Project. The Town's current project review process ensures that within the Planning Area, project applications will be reviewed individually based on their potential to generate odors under CEQA. Furthermore, existing regulations such as MDAQMD Rule 402 (Nuisance) would continue to minimize odor impacts. Therefore, it is considered unlikely that implementation of Alternative 1 would result in objectionable odors affecting a substantial number of people. Similar to the proposed Project, Alternative 1 is expected to have less than significant impacts in regard to odors or other emissions.

Alternative 2 (Reduced Intensity)
The impact related to potential exposure of people to odors or other emissions would be the same as for the proposed Project. The Town's current project review process ensures that within the Planning Area, project applications will be reviewed individually based on their potential to generate odors under CEQA. Furthermore, existing regulations such as MDAQMD Rule 402 (Nuisance) would continue to minimize odor impacts. Therefore, it is considered unlikely that implementation of Alternative 2 would result in objectionable odors affecting a substantial number of people. Similar to the proposed Project, Alternative 2 is expected to have less than significant impacts in regard to odors or other emissions.

3.4.4 Mitigation Measures

Similar to the proposed Specific Plan, Alternatives 1 & 2 will be held to the same General Plan policies (Policy AQ 1.D) and standard MDAQMD rules and regulations to ensure future impacts remain less than significant. No additional mitigation measures are required.

3.4.5 Environmental Superior Alternative

At buildout, the proposed Project would result in overall higher criteria pollutant emissions than the other project alternatives, thus resulting in more intense impacts to air quality thresholds. Alternative 2 has the lowest criteria pollutant emissions compared to the proposed Project and Alternative 1 and therefore is the overall superior alternative.

3.5 Biological Resources

3.5.1 Introduction

This section of the EIR analyzes the potential impacts to biological resources of the proposed alternatives. Each alternative's potential impacts to these resources are discussed and compared to the proposed Project.

3.5.2 Existing Conditions

The Town of Apple Valley, including the Specific Plan Planning Area, lies in southern portion of the Mojave Desert, a high desert with elevations ranging from 2,000 to 5,000 feet above mean sea level (MSL). The Apple Valley area hosts abundant common plant and animal species and approximately 30 sensitive species including state and/or federally listed species.

The proposed Apple Valley Village Specific Plan encompasses 651± acres with 377± acres of developed land and 274± acres of vacant undeveloped land. Vacant lands are comprised of larger sites generally north of Highway 18 and east of Valley Drive and smaller infill lots across the Planning Area. The Specific Plan Planning Area is not located within or near valuable habitats that support special status species (General Plan Exhibit III-6), which are generally associated with the Mojave River and hillsides/mountains on the west and north sides of the Town.

Biological resources in most of the Planning Area have been affected by urban development and habitat fragmentation, area roadways and traffic, and introduction of non-native plant and domestic animal species. The majority of the Specific Plan Planning Area is classified as Urban/Rural in the Town's General Plan (Exhibit III-5 Natural Communities by Vegetation Type), and only the northeast portion (north of Highway 18 and east of Central Road) contains Saltbush Scrub vegetation.

The Project Planning Area does not contain federal land, and thus is not subject to the West Mojave Habitat Conservation Plan. The entire Planning Area will be covered under the Apple Valley MSHCP/NCCP upon its adoption. Future development will be subject to provisions of the Apple Valley MSHCP/NCCP, which will protect larger habitats of the Saltbush Scrub vegetation and associated special-status species that are of higher quality (not subject to fragmentation nor close to urban development) in the northeast Planning Area.

Please see Section 2.5, Biological Resources, for the full discussion of regional and local biological conditions.

3.5.3 Alternatives Impact Analysis

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

Alternatives 1 (No Project/Existing Zoning) and 2 (Reduced Intensity)
Alternative 1 would result in development of the same lands as the proposed Project, but development would be subject to current zoning designations and Development Code standards and guidelines. Compared to the proposed Specific Plan, Alternative 1 would result in fewer residential units and less commercial/public facilities square footage.

Alternative 2 would also cover the same lands as the proposed Project. Under Alternative 2, land use and development would be guided by the Village Specific Plan but would result in fewer dwelling units and less commercial/public facility square footage than the proposed Project. Like the proposed Project, buildout of both alternatives would modify ground surfaces and potential habitat.

As described in Section 2.5, native habitat has been eliminated or deeply fragmented in almost all but the northeast portion of the Planning Area (at the northeast corner of Central Road and Highway 18 in District 1). This area largely retains native soils and vegetation of the Saltbush Scrub community but is also bounded by major roadways and existing urban development on the west and south and transected by dirt trails/roads. Sensitive species are not known to occur on this parcel. Saltbush Scrub is a common vegetation type in the region and is expected to be protected by the Apple Valley MSHCP/NCCP upon its adoption, in locations offering higher quality habitats not subject to fragmentation nor close to urban development. Should any Joshua Trees occur on the site or any other site within the Planning Area, their removal or transplanting will be conducted pursuant to Municipal Code provisions in Chapter 9.76, as would be the case for the proposed Project.

Similar to the proposed Project, Alternatives 1 and 2 would facilitate future urban development that has the potential to disturb or permanently remove sensitive species and/or their habitats. Impacts would be reduced or mitigated to less than significant levels through a variety of mechanisms, including compliance with the MBTA, compliance with General Plan policies and programs, habitat-enhancing landscaping, and adherence to the Apple Valley MSHCP/NCCP guidelines upon its adoption. The Town will implement and abide by the Apple Valley MSHCP/NCCP, once adopted, for future development within the Planning Area.

On the vacant development sites in the Planning Area, the Town will require migratory bird surveys in compliance with applicable state and federal laws and regulations (Mitigation Measure BIO-2), regardless of whether the proposed Project or either of the alternatives are implemented. Future development facilitated under Alternatives 1 and 2 would be evaluated on a project-by-project basis for potential adverse impacts to sensitive species and required to implement mitigation measures, as needed (Mitigation Measure BIO-1).

Like the proposed Project, with the implementation of mitigation measures set forth in Section 2.5.7 (BIO-1 through BIO-2), potential impacts to sensitive species associated with Alternatives 1 and 2 would be less than significant, and consistent with the level of impact of the proposed Project.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

Alternatives 1 (No Project/Existing Zoning) and 2 (Reduced Intensity)
Alternative 1 and 2 would result in development of the same lands as the proposed Project, but development would occur at lower densities or intensities than the proposed Project. Like the proposed Project, buildout of both alternatives would modify ground surfaces and potential habitat in a similar manner.

As described in Section 2.5, according to the General Plan (Exhibit III-4, Streams, Washes, and Waterways), there is one non-jurisdictional water mapped within the Planning Area, in the southeastern corner near Central Road. Given the nature of ephemeral desert washes and drainages, the drainage may have moved, been modified due to surrounding development, or gone extinct. No riparian habitats or sensitive natural communities are known to occur in the Planning Area. However, future development projects facilitated by Alternatives 1 and 2 could potentially disturb these resources and will be required to conduct site-specific biological studies, as needed, to identify potential impacts to biological resources, including natural communities and riparian habitats (Mitigation Measure BIO-1). Project-specific mitigation measures would be required, where necessary, to reduce potential impacts to less than significant levels. Development projects would also be subject to the provisions of Municipal Code Chapter 9.76.030 which addresses riparian plant conservation. With implementation of Mitigation Measure BIO-1 and the riparian plant ordinance, impacts on riparian habitat or other sensitive natural communities would be less than significant for either Alternative 1 or Alternative 2. Overall, impacts on

riparian habitat or other sensitive natural communities under Alternatives 1 and 2 are expected to be less than significant and consistent with the impacts of the proposed Project.

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

Alternatives 1 (No Project/Existing Zoning) and 2 (Reduced Intensity)
Alternative 1 and 2 will result in the disturbance of the same lands as the proposed Project, but with lowered intensity and density. As a result, both alternatives would modify ground surfaces and potential habitat.

As described in Section 2.5, no U.S. Army Corps of Engineers (USACE) or California Department of Fish and Wildlife (CDFW) jurisdictional waters or wetlands were mapped within the Specific Plan Planning Area (General Plan Exhibit III-4). As discussed in Section 2.5.6.c, the USFWS National Wetlands Inventory mapping database identifies one Riverine habitat, which overlaps with the non-jurisdictional water mapped by the General Plan (Exhibit III-4). The mapped habitat is part of a 42.81-acre habitat classified as Riverine (R) Intermittent (4) Streambed (SB) Seasonally Flooded (C), and mostly overlaps with existing developments east of Malaki Road south of Powhatan Road. Based upon on-site visits and review of aerial photos during development of the proposed Specific Plan, the mapped habitat is either non-existent or has been heavily modified to lose its original form and function. Development of this area would occur under Alternatives 1 or 2, or the proposed Project. The area is not a state or federally protected resource, and therefore, impacts under Alternatives 1 and 2 will be less than significant.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

Alternatives 1 (No Project/Existing Zoning) and 2 (Reduced Intensity)
Alternative 1 and 2 will result in development of the same lands as the proposed Project, but at reduced intensities of development. Therefore, buildout of both alternatives would modify ground surfaces and potential habitat.

Much of the Planning Area is developed; the remaining vacant parcels are partially surrounded by development and/or transected with dirt trails/roads. Therefore, given the general urban context and site conditions, the Planning Area is not suitable as a wildlife corridor. Larger vacant parcels, such as the parcel at the northeast corner of Central Road and Highway 18 in District 1, may have some

potential to serve as migratory corridors for the movement of migratory bird species protected under the MBTA, as discussed above in a). However, wildlife (other than birds) movement between these areas is largely prevented by existing intervening development, including buildings, roads, and walls and fences.

The habitat value of scattered undeveloped parcels is considered diminished by the edge effects of surrounding development, such as trash dumping, off-road vehicle use, and the presence of domestic pets. The undeveloped lands within the Planning Area are not known to serve as wildlife nursery sites but may serve as nesting sites for birds. As with the proposed Project, future development facilitated by Alternatives 1 and 2 could impact nesting birds if construction occurs during nesting seasons; however, implementation of MBTA surveys (Mitigation Measure BIO-2) would reduce potential impacts to less than significant levels.

The Planning Area is not located in or near important linkage areas such as the Mojave River corridor, washes between Turtle and Black Mountains, Fairview Mountain, the Granite Mountains, and the Juniper Flat foothills located within the San Bernardino Mountains. Alternatives 1 and 2 would not expand development beyond lands designated for urban uses under the current General Plan and will not interfere with current or future policies and programs aimed at preservation of wildlife corridors. The Apple Valley MSHCP/NCCP will establish guidelines for the preservation and maintenance of wildlife movement corridors within the Town and vicinity. Implementation of the existing regulations and mitigation measures will ensure that impacts on wildlife movement, corridors and nursery sites remain less than significant under Alternatives 1 and 2, as they would for the proposed Project.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Alternatives 1 (No Project/Existing Zoning) and 2 (Reduced Intensity)
As with the proposed Specific Plan, Alternatives 1 and 2 will not interfere with any Town policies regarding the preservation of plants or animals. Future development resulting from Alternatives 1 and 2 will be required to adhere to Apple Valley MSHCP/NCCP provisions and guidelines. Projects proposed under Alternatives 1 and 2 would adhere to General Plan policies and programs on native species landscaping and avoiding the use of invasive plants (Chapter III, Open Space and Conservation and Biological Resources Elements). Future projects under Alternatives 1 and 2 will also be subject to provisions in Municipal Code Chapter 9.76 regarding protection of native trees. Impacts associated with Alternatives 1 and 2 will be less than significant and consistent with the proposed Specific Plan.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Alternatives 1 (No Project/Existing Zoning) and 2 (Reduced Intensity)
The CEQA review process for the Apple Valley MSHCP/NCCP is currently under way, and future development facilitated by Alternatives 1 and 2 will be required to adhere to the requirements of the MSHCP/NCCP, as would any project in Town. No conflict with any habitat conservation plan is expected as a result of Alternatives 1 and 2. Potential impacts would be less than significant.

3.5.4 Mitigation Measures

As with the proposed Specific Plan, the mitigation measures set forth in Section 2.5.7 of this EIR will be effective at reducing potential impacts of Alternatives 1 and 2 to less than significant levels. Because the same land area would be impacted with similar development types at lower intensities, no additional mitigation measures would be required for either Alternative 1 or Alternative 2.

3.5.5 Environmental Superior Alternative

All Alternatives, including the proposed Project, encompass the same Planning Area and propose to develop the same parcels. The difference in buildout intensities and whether a parcel would develop with the same land use is not expected to change the potential level of impacts to biological resources. Because development under all Alternatives, including the proposed Project, will be required to comply with the same regulations and implement the same mitigation measures accordingly, all alternatives, including the proposed Project, will have essentially the same level of impact after mitigation. There is no environmentally superior alternative.

3.6 Cultural Resources

3.6.1 Introduction

This section analyzes the potential impacts of the proposed Alternatives on cultural resources, including archaeological and historic resources and human remains. It is based on a variety of cultural and historic resources surveys and reports within and in proximity to the Planning Area, as well as the Apple Valley General Plan and other Town resource documents.

3.6.2 Existing Conditions

As discussed in Section 2.6 of this EIR, the Planning Area remained undeveloped until the 1940s and 1950s when commercial buildings, mobile home parks, and rural residences were built along Highway 18. Two (2) sites of historical origin were recorded in the Planning Area. However, both sites were determined not to be eligible for listing under the National Register of Historic Places or California Register of Historical Resources. Potential historic resources in the Planning Area include four (4) properties that are locally recognized as Historical Points of Interest, and any other buildings or notable built-environment features that are at least 50 years of age and retain at least a recognizable level of historical characteristics.

No archaeological sites or other cultural resources from the prehistoric period have been recorded in the Planning Area, and no potential indicators of prehistoric use were observed during the archaeological/historic field survey. Given the distance of the Planning Area from the Mojave River, Apple Valley Dry Lake, and elevated hills and terraces, where evidence of prehistoric habitation sites have been typically found, it is not likely to have served as a habitation site by prehistoric populations. The Planning Area is not known to contain formal cemeteries or burial sites.

Alternatives 1 and 2 occur on the same land area as the proposed Project. Therefore, the existing conditions analysis provided in Section 2.6 also applies to the Alternatives analyzed below.

3.6.3 Alternatives Impact Analysis

a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5.

Alternative 1 (No Project/Existing Zoning)
Similar to the proposed Project, Alternative 1 would result in development in the Planning Area that could potentially impact historical resources, either directly or indirectly. However, Alternative 1 reduces potential new development that could occur in the Planning Area. Compared to the proposed Project, new dwelling units would be reduced by 27%, and new commercial/service/office/public facility square feet would be reduced by 11%. Despite the reduced development intensity of Alternative 1, areas subject to site disturbance and development are likely to be equivalent, and could harbor currently unknown historical resources. Under Alternative 1, new development projects would be subject to the same programs and permitting processes to protect historical resources as the proposed Project. Mitigation Measures CUL-1 and CUL-2, which were provided for the proposed Project in Section 2.6.7, would also be required for Alternative 1. Impacts would be less than significant with mitigation and consistent with the proposed Project.

Alternative 2 (Reduced Intensity)
Alternative 2 would also result in development that could potentially impact historical resources in the Planning Area. Compared to the proposed Project, Alternative 2 reduces new dwelling units by 65% and new commercial/service/office/public facility square feet by 62%. However, as stated above, impacts to historic resources would depend on site-specific and project-specific parameters, such as the location and extent of soil disturbance, but would be similar in scope to the proposed Project. New development projects would be subject to Mitigation Measures CUL-1 and CUL-2, provided for the proposed Project in Section 2.6.7. With implementation of CUL-1 and CUL-2, impacts to historic resources would be less than significant and consistent with the proposed Project.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5.

Alternative 1 (No Project/Existing Zoning)
As explained above, Alternative 1 would result in less development than the proposed Project in the same land area. However, there still would be a potential for archaeological resources to be uncovered during ground-disturbing activities. Potential impacts to archaeological resources would vary based on project- and site-specific parameters and would need to be evaluated on a project-by-project basis. Implementation of Mitigation Measures CUL-1 and CUL-2, which were identified for the proposed Project in Section 2.6.7, would be required to minimize potential impacts to less than significant levels. With implementation of mitigation measures, Alternative 1 impacts would be less than significant and consistent with the proposed Project.

Alternative 2 (Reduced Intensity)
Alternative 2 would also result in less development in the Planning Area than the proposed Project. However, similar to the proposed Project, there is a potential for archaeological resources to be uncovered during ground-disturbing activities under this Alternative. Impacts would need to be evaluated on a project-level basis. Implementation of Mitigation Measures CUL-1 and CUL-2, identified for the proposed Project in Section 2.6.7, would reduce impacts to less than significant levels. With mitigation, Alternative 2 impacts would be less than significant and consistent with the proposed Project.

c) Disturb any human remains, including those interred outside of formal cemeteries.

Alternative 1 (No Project/Existing Zoning)
Alternative 1 would facilitate new development in the Planning Area. Although development levels would be less than the proposed Project, future development facilitated by Alternative 1 could result in ground surface disturbances that uncover previously unknown human remains. Implementation of Mitigation Measure CUL-3, which is described for the proposed Project in Section 2.6.7, would reduce potential impacts to human remains to less than significant levels, consistent with the proposed Project.

Alternative 2 (Reduced Intensity)
Alternative 2 would facilitate new development and redevelopment in the Planning Area. Development would occur at a lower intensity than the proposed Project, but nonetheless, the potential would exist for human remains to be unearthed during ground disturbance activities, such as grading and excavation. To reduce potential impacts to less than significant levels, Mitigation Measure CUL-3, as provided in Section 2.6.7, would be applicable to this Alternative and would reduce impacts to less than significant levels, as with the proposed Project.

3.6.4 Mitigation Measures

Development and redevelopment facilitated by Alternatives 1 and 2 would be subject to Mitigation Measures CUL-1, CUL-2, and CUL-3, provided in Section 2.6.7 for the proposed Project. No additional or modified mitigation measures would be required.

3.6.5 Environmental Superior Alternative

All Alternatives, including the proposed Project, are located on the same land area and would facilitate future development of the same parcels. Any

differences in buildout intensities or land uses are irrelevant to cultural resources, as cultural resources could be unearthed during any ground-disturbing activity. Development under all Alternatives would be required to comply with the same regulations and mitigation measures, and all Alternatives would result in essentially the same level of impact. Therefore, there is no environmentally superior alternative.

3.7 Energy Resources

3.7.1 Introduction

This section of the EIR analyzes the potential impacts associated with the alternatives to the proposed Apple Valley Village Specific Plan based on regional and local energy resources. In the Apple Valley area, energy resources range from wind turbine development and solar photovoltaic systems on various scales, to traditional energy sources that produce natural gas and electricity. Fossil energy resources (coal, oils, natural gas) are not known to occur in Apple Valley or the region.

3.7.2 Existing Conditions

There are no wind turbines in the Planning Area and vicinity. Solar photovoltaic systems are gaining popularity in Apple Valley given the abundant solar radiation. Southern California Edison (SCE) provides electricity service to the Town of Apple Valley and the surrounding area. Southwest Gas Corporation (SWG) provides natural gas service to the Town and the Planning Area through a series of pipelines of various sizes and pressure capabilities.

Apple Valley Choice Energy (AVCE) is a community choice aggregation program created by the Town of Apple Valley to provide more affordable electricity and cleaner energy choices. Launched in April 2017, AVCE service is available to all municipal, commercial, and residential customers within the Town limits. The AVCE power mix is cleaner than SCE power, though still delivered through SCE facilities. SCE remains the utility provider and bills customers using AVCE's lower electricity rates. Customers are automatically enrolled into AVCE and have the options to upgrade to More Choice (50% renewable energy content), Your Choice (solar/wind power generators), or opt out of AVCE.

Please see Section 2.7.5 for a detailed discussion of the existing conditions on energy resources.

3.7.3 Alternatives Impact Analysis

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

Alternative 1 (No Project/Existing Zoning)
Alternative 1 covers the same land (Planning Area) as the proposed Project, but development would occur in accordance with current zoning designations and Development Code standards and guidelines. Alternative 1 would have the potential to accommodate an additional 500 residential units and 5,413,585 square feet of commercial/service/office/public uses in the Planning Area at full buildout. Compared to the proposed Specific Plan, Alternative 1 would result in fewer residential units and less commercial/public facilities square footage.

Similar to the proposed Project, development of land uses as designated in Alternative 1 would require energy for construction, operation, and transportation thereby increasing energy demand in the Planning Area. The annual demand for electricity (in kWh) and natural gas (in therms) was estimated for Alternative 1 buildout and is presented below in Tables 3.7-1 and 3.7-2.

Table 3.7-1
Annual Electricity Demand at Alternative 1 Buildout

Land Use	Proposed Project (kWh/year)	Alternative 1 (kWh/year)
Apartments Low Rise	4,049,020	3,290,090
General Office Building	21,755,200	-
Research & Development	23,483,300	-
Strip Mall	33,528,400	87,856,800
High Turnover (Sit Down Restaurant)	18,212,200	-
TOTAL	**101,028,120**	**91,146,890**

Source: CalEEMod Version 2020.4.0 Outputs, see Appendix B of this DEIR.

Table 3.7-2
Annual Natural Gas Demand at Alternative 1 Buildout

Land Use	Proposed Project (therms/year)[1]	Alternative 1 (therms/year)
Apartments Low Rise	146,908	119,372
General Office Building	81,217	-
Research & Development	765,522	-
Strip Mall	60,775	159,251
High Turnover (Sit Down Restaurant)	1,076,027	-
TOTAL	**2,130,448**	**278,623**

Source: CalEEMod Version 2020.4.0 Outputs, see Appendix B of this DEIR.
1. Difference is due to rounding.

As with the proposed Specific Plan, future development under Alternative 1 will be subject to the latest requirements of the California Energy Code and Green Building Standards Code (California Building Code Parts 6 & 11). Tables 3.7-1 and 3.7-2 show that Alternative 1 would result in an annual demand for approximately 91,146,890 kWh of electricity and 278,623 therms of natural gas. Alternative 1 would have a lower demand for electricity and natural gas by 9,881,230 kWh and 1,851,825 therms, respectively, when compared to the proposed Project. These projections do not take into account the energy savings mandated through regulations such as the Green Building Standards Code (Title 24), which is incorporated in the Apple Valley Municipal Code and requires zero-net-energy construction for new residential buildings starting 2020 and for new commercial buildings starting 2030.

According to the alternatives air quality analysis in Section 3.4 of this DEIR, Alternative 1 is estimated to result in 8% fewer vehicle miles traveled (VMT) related emissions at buildout compared to the proposed Project. Therefore, Alternative 1 will likely result in a lower transportation energy demand than the proposed Project. However, Alternative 1 represents continuation of existing conditions without a Specific Plan, and thus would not benefit from the land use efficiencies (particularly mixed use development), circulation improvements, or multi-modal transportation network proposed in the Village Specific Plan.

Land uses proposed under this alternative would be similar to those of the proposed Project, but in lesser intensities. Implementation of the California Building Code and other relevant regulations will ensure impacts related to energy efficiency are less than significant, and less than the proposed Project for electricity and natural gas use, but greater than the proposed Project for transportation energy use.

Alternative 2 (Reduced Intensity)

Alternative 2 would cover the same land (Planning Area) as the proposed Specific Plan but result in fewer residential units and less commercial/public facilities square footage. Alternative 2 would have the potential to accommodate an additional 237 residential units and 2,311,980 square feet of commercial/service/office/public uses in the Specific Plan area at full buildout.

Similar to the proposed Project, development of land uses as designated in Alternative 2 would require energy for construction, operation, and transportation thereby increasing energy demand in the Planning Area. The annual demand for electricity (in kWh) and natural gas (in therms) was estimated for Alternative 2 buildout and is presented below in Tables 3.7-3 and 3.7-4.

Table 3.7-3
Annual Electricity Demand at Alternative 2 Buildout

Land Use	Proposed Project (kWh/year)	Alternative 2 (kWh/year)[1]
Apartments Low Rise	4,049,020	2,193,390
General Office Building	21,755,200	11,401,200
Research & Development	23,483,300	12,306,800
Strip Mall	33,528,400	17,571,100
High Turnover (Sit Down Restaurant)	18,212,200	9,544,410
TOTAL	**101,028,120**	**53,016,900**

Source: CalEEMod Version 2020.4.0 Outputs, see Appendix B of this DEIR.
1. Difference is due to rounding.

Table 3.7-4
Annual Natural Gas Demand at Alternative 2 Buildout

Land Use	Proposed Project (therms/year)[1]	Alternative 2 (therms/year)
Apartments Low Rise	146,908	79,581
General Office Building	81,217	42,563
Research & Development	765,522	401,185
Strip Mall	60,775	31,850
High Turnover (Sit Down Restaurant)	1,076,027	563,909
TOTAL	**2,130,448**	**1,119,088**

Source: CalEEMod Version 2020.4.0 Outputs, see Appendix B of this DEIR.
1. Difference is due to rounding.

As with the proposed Specific Plan, future development under Alternative 2 will be subject to the latest requirements of the California Energy Code and Green Building Standards Code (California Building Code Parts 6 & 11). Tables 3.7-3 and 3.7-4 show that Alternative 2 would result in an annual demand for approximately 53,016,900 kWh of electricity and 1,119,088 therms of natural gas. Alternative 2 would have a lower demand for electricity and natural gas by 48,011,220 kWh and 1,011,360 therms, respectively, when compared to the proposed Project. These projections do not take into account the energy savings mandated through regulations such as the Green Building Standards Code (Title 24), which is incorporated in the Apple Valley Municipal Code and requires zero-net-energy construction for new residential buildings starting 2020 and for new commercial buildings starting 2030.

According to the alternatives air quality analysis in Section 3.4 of this DEIR, Alternative 2 is estimated to result in 47.5% lower vehicle miles traveled (VMT) at buildout compared to the proposed Project. Therefore, Alternative 2 will likely result in lower transportation energy demand than the proposed Project. Therefore, Alternative 2 would result in lower transportation energy demand than the proposed Project. Alternative 2 would also benefit from the land use efficiencies, circulation improvements, and multi-modal transportation network proposed in the Village Specific Plan.

Implementation of the California Building Code and other relevant regulations will ensure impacts related to energy efficiency are less than significant for this alternative. Alternative 2 would result in lower electricity, natural gas and transportation energy use than the proposed Project.

3.7.4 Mitigation Measures

The proposed Specific Plan standards, guidelines, and circulation plan will also apply to the alternatives to reduce impacts on energy resources. Implementation of relevant state laws and regulations and compliance with other standard energy savings measures will ensure the use of energy resources in the Planning Area is as efficient as possible for both alternatives and the proposed Project. As a result, impacts to energy resources from implementation of both alternatives are expected to be less than significant. No additional mitigation measures are required.

3.7.5 Environmental Superior Alternative

At buildout, Alternative 2 would result in a lower demand for electricity and transportation fuels when compared to the proposed Project and Alternative 1, though Alternative 2 would result in a higher demand for natural gas than Alternative 1. Alternative 2 would also benefit from the land use efficiencies, circulation improvements and multi-modal transportation network proposed in the Village Specific Plan. Therefore, Alternative 2 is arguably the environmentally superior alternative compared to the other alternatives.

3.8 Geology and Soils

3.8.1 Introduction

This section of the EIR analyzes the potential impacts associated with the alternatives to the proposed Apple Valley Village Specific Plan based on regional and local geology and soils. The impacts associated with each of the alternatives is assessed and compared to the proposed Project where appropriate.

3.8.2 Existing Conditions

The majority of Apple Valley is situated on gently sloping alluvial fans ranging in elevation from approximately 3,400 feet near the base of the Fairview Mountains to the northeast to 2,700 feet along the Mojave River to the west. The geological formation of Apple Valley and the surrounding region is affected by its proximity to large active fault systems, including the Helendale Fault, San Andreas Fault, and the North Frontal Fault. Fault activity in this region continues to cause ground rupture, major groundshaking, subsidence, uplift and mountain building, and landform compression and extension. As a result, the mountains are composed of rocks that have been sheared and intensely fractured under the strain of tectonic movement.

The entire Specific Plan Planning Area is underlain by young alluvial fan deposits (Qyf), which range from a few years old up to about 15,000 years in age and blanket most of the valley with unconsolidated to moderately consolidated silt and sand with scattered gravel. The composition of Qyf makes it potentially susceptible to collapse and compression. This potential is exacerbated when additional weight loads and/or pressure is applied. In the Apple Valley area, expansive soils are limited to finer-grained sediments that have a clay component.

The region is in an area of extreme topographic relief between the valley and the surrounding mountains and some areas are, therefore, subject to erosion, runoff, and sedimentation. The Planning Area, however, has very little slope, and is generally flat.

The water table is below 50 feet of the ground surface in the Planning Area, which indicates a low potential for liquefaction and related hazards. No subsidence has been detected to date within Apple Valley. The Mojave Water Agency (MWA) continues to implement groundwater conservation and recharge activities in the Apple Valley area, which contribute to the management of ground subsidence.

Please see Section 2.8.4 and Section 2.8.5 for a detailed description of existing geotechnical conditions.

3.8.3 Alternatives Impact Analysis

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

ii) Strong seismic ground shaking.

Alternatives 1 (No Project/Existing Zoning) and 2 (Reduced Intensity)
Alternative 1 covers the same land area (Planning Area) as the proposed Project, but development would occur in accordance with current zoning designations and Development Code standards and guidelines. Alternative 2 also covers the same Planning Area as the proposed Project. It implements the same Village Specific Plan as the proposed Project, but development would occur at lower development intensities. Compared to the proposed Project, Alternatives 1 and 2 would result in fewer residential units, less commercial/public facilities square footage, and fewer residents. However, the types of land uses, construction methods, buildings, and improvements would be the same as the proposed Project.

In the event of an earthquake along active faults near the Planning Area, development facilitated by both Alternatives could be subjected to the same ground motion as development facilitated by the proposed Project. Strong ground shaking could occur during an earthquake event on the North Frontal, Helendale, San Andreas, Cleghorn, Cucamonga Faults, or other nearby faults. Seismic ground-shaking could pose hazards to existing and future development in the Planning Area, including damage to building foundations, frames, walls and columns, windows, chimneys, and ceilings, as well as roads and utility infrastructure.

As is the case for the proposed Specific Plan, the risk of damage to Alternative 1 and Alternative 2 structures due to ground shaking cannot be fully eliminated, but project-specific geotechnical investigation and building practices that meet current building codes, including more stringent seismic design standards, would minimize potential impacts from a seismic event (Mitigation Measure GEO-1).

Redevelopment facilitated by Alternatives 1 and 2 would achieve overall beneficial impacts as vulnerable structures are demolished and new structures are built to be more resistant to ground-shaking hazards. Like the proposed Project, implementation of existing regulations and policies and project-specific mitigation measures would reduce potential hazards from ground shaking to less than significant levels. Impacts would be comparable to the proposed Project.

iii) Seismic-related ground failure, including liquefaction.

The types of ground failure associated with liquefaction may include lateral spreading, flow failure, ground oscillation, loss of bearing strength, and ground lurching. Lateral spreading is the finite, lateral movement of gently to steeply sloping, saturated soil deposits caused by earthquake-induced liquefaction. Other forms of ground failure are discussed in c) below.

Alternative 1 (No Project/Existing Zoning)
Alternative 1 covers the same land (Planning Area) as the proposed Project, but development would occur according to current zoning designations and Development Code standards and guidelines. Compared to the proposed Project, Alternative 1 would result in fewer residential units and less commercial/public facilities square footage.

As discussed in Section 2.8.6, the Planning Area is not located in or near areas where local geological and groundwater conditions suggest a potential for liquefaction, principally because the approximate depth to groundwater is greater than 50 feet. It should be noted that local variations are likely to be present despite the general conditions described herein. As is the case for the proposed Specific Plan, site-specific geotechnical studies for individual projects under Alternative 1 will need to consider the possibility of localized conditions conducive to liquefaction, along with the historical highs in groundwater levels and future impacts of irrigation (Mitigation Measure GEO-1). If a project site has a potential for liquefaction, the studies should also identify appropriate recommendations for earthwork, grading, slopes, foundations, pavements, and other necessary geologic and seismic design considerations. Compliance with existing policies and requirements, and the implementation of Mitigation Measure GEO-1 would ensure identification of potential ground failure hazards on individual development sites and incorporation of site-specific mitigation measures, where necessary, to reduce potential impacts to less than significant levels, and be consistent with those of the proposed Project.

Alternative 2 (Reduced Intensity)
Alternative 2 would cover the same land (Planning Area) as the proposed Project, but result in fewer residential units and less commercial/public facilities square footage.

As discussed in Section 2.8.6 and above, the Planning Area in general has low liquefaction potential, though local variations are likely to be present. As with the proposed Project, site-specific geotechnical studies for individual projects under Alternative 2 will need to consider the possibility of localized conditions conducive to liquefaction, along with historical highs in groundwater levels and future

impacts of irrigation (Mitigation Measure GEO-1). If a project site has a potential for liquefaction, the studies should also identify appropriate recommendations for earthwork, grading, slopes, foundations, pavements, and other necessary geologic and seismic design considerations. Compliance with existing policies and requirements, and with Mitigation Measure GEO-1 would ensure identification of potential ground failure hazards on individual development sites and incorporation of site-specific mitigation measures, where necessary, to reduce potential impacts to less than significant levels.

b) Result in substantial soil erosion or the loss of topsoil.

Alternatives 1 (No Project/Existing Zoning) and 2 (Reduced Intensity)
Both project alternatives would cover the same Planning Area as the proposed Project. Given the geographic and climatic setting, wind erosion is a common hazard in the Planning Area. Wind erosion hazard can contribute to soil erosion and the generation of fugitive dust, impairing air quality and damaging properties.

Both project alternatives would facilitate new development and redevelopment in the Planning Area. Grading and excavation activities for construction may lead to localized erosion, as wind and water carry loose soils off site. Individual projects will be required to implement dust control to avoid measurable amount of dust or dirt emission beyond the parcel boundary (Municipal Code Section 9.70.020 Performance Standards). Appropriate grading procedures would be applied to individual projects, and include minimal disturbance of native vegetation, scheduling grading activities to avoid repeated grading, watering graded areas, construction of walls and fences to contain dust and dirt, and revegetation of graded areas. In addition, future development and redevelopment projects would be required to implement erosion control Best Management Practices (BMPs) outlined in the Storm Water Pollution Prevention Plan (SWPPP) that would be developed and implemented as part of construction activities on sites greater than one acre, in compliance with the National Pollutant Discharge Elimination System (NPDES). This is further discussed in Section 2.11and Section 3.11.

As the Planning Area builds out, new pavement, buildings, and landscaping can be expected to help stabilize soils and reduce soil erosion from both wind and water under both alternatives. Implementation of project-specific and standard erosion control measures will ensure the impacts related to soil erosion or loss of topsoil are less than significant for both project alternatives. Impacts would be comparable to those of the proposed Project.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.

Alternatives 1 (No Project/Existing Zoning) and 2 (Reduced Intensity)
Both project alternatives would cover the same Planning Area as the proposed Project. Each would result in a different mix of uses at buildout but would be exposed to the same geological and soil conditions. As discussed in a) iii) above, the Planning Area has low potential for liquefaction and related lateral spreading hazards. Project-specific geotechnical studies will be able to identify potential hazards and provide mitigation measures to reduce potential impacts. The Planning Area is not subject to landslide hazards.

Subsidence studies conducted by the U.S. Geological Survey and the Mojave Water Agency (MWA) show that the closest subsidence area to Apple Valley is approximately seven miles northwest, but no subsidence has been detected within Apple Valley. Therefore, subsidence should not pose a hazard for either alternative, just as it will not pose a hazard for the proposed Project. Nonetheless, the potential for seismically induced ground subsidence should be determined by site-specific geotechnical studies (Mitigation Measure GEO-1). Building and seismic code requirements will ensure that any potential impact associated with ground subsidence is reduced to less than significant levels through conventional site preparation techniques such as over-excavation, moisture conditioning, and recompaction. These requirements would apply to both alternatives and the proposed Project.

Collapse can be triggered by excessive irrigation or change of water tables and accelerated by heavy loads on the ground surface (e.g. vehicle/equipment) and can cause rapid ground settlement. The young alluvial sediments in the Planning Area are prone to collapse, and this propensity should be evaluated by site-specific geotechnical studies for future development (Mitigation Measure GEO-1). Mitigation can be accomplished through a variety of design and construction methods such as pre-watering of susceptible soils to induce collapse prior to construction, designing drainage to flow away from structures, avoiding open-bottomed planters adjacent to structures, using roof gutters to direct drainage away from foundations, and limiting the use of irrigation water. These design solutions would be applied to the alternatives and to the proposed Project.

As is the case for the proposed Project, development facilitated by project alternatives will be constructed in conformance with recommendations of project-specific analyses and would not result in unmitigated unstable soils. Implementation of existing policies and Mitigation Measure GEO-1 will ensure

impacts regarding unstable soils and associated potential hazards are reduced to less than significant levels. Impacts would be less than significant and comparable to the proposed Project.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.

Alternatives 1 (No Project/Existing Zoning) and 2 (Reduced Intensity)
Both project alternatives would cover the same Planning Area as the proposed Specific Plan. Each would result in a different mix of uses at buildout but would be exposed to the same soil conditions. Soils with significant amounts of clay can give up water (shrink) or absorb water (swell). These soils are considered expansive and have potential to substantially change in volume in response to changes in moisture content.

Alluvial sediments underlying the Planning Area are primarily comprised of granular materials, such as silty sand and sand. These soils typically have a low expansion potential, although pockets of fine-grained expansive soils may be present within these units. Therefore, the potential for impacts associated with expansive soils are low.

Both alternatives would facilitate new development in the Planning Area. Site-specific geotechnical investigations would be required to identify potential expansive soils, if any, and provide mitigation measures to reduce the expansion potential (Mitigation Measure GEO-1). The geotechnical investigations would entail structural design criteria and construction recommendations to ensure the stability and integrity of structures and infrastructure, including the potential for soil expansion and the soil expansion index that needs to be used in the engineering design. Compliance with the requirement for geotechnical investigations and appropriate construction standards for individual projects would ensure that impacts related to expansive soils remain less than significant. Impacts would be comparable to those of the proposed Project.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.

Alternatives 1 (No Project/Existing Zoning) and 2 (Reduced Intensity)
Both project alternatives would result in a different mix of uses at buildout on the same land area but would be exposed to the same soil conditions.

The Town owns and operates the local wastewater collection system, which is relatively new and does not cover the entire Town or Planning Area. The Town's Sewer Connection Policy requires new development to connect with municipal sewer facilities where the development site is within one-half mile of existing sewer facilities, which would apply within all of the Planning Area. The proposed Specific Plan analyzed sewer infrastructure in the Planning Area and proposed additional sewer facilities (see Village Specific Plan Chapter 6.0 Infrastructure).

As is the case for the proposed Specific Plan, both alternatives would facilitate new development in the Planning Area and be subject to Town policies on sewer system connections. The Town requires new development in the Village to provide sewer facilities and extend sewer infrastructure as development occurs. Sewer improvements will be constructed as a condition of approval as development occurs. There will be no impact on soil suitability for septic tanks and alternative wastewater disposal systems under either alternative. Impacts will be less than significant and comparable to those of the proposed Project.

3.8.4 Mitigation Measures

As with the proposed Project, the mitigation measures set forth in Section 2.8.7 of this EIR and standard development conditions will be effective at reducing potential impacts associated with both project alternatives to less than significant levels.

3.8.5 Environmental Superior Alternative

The same geological and soils threats and conditions are applicable to both project alternatives. Most geotechnical hazards are site-specific. In this regard, Alternative 2 (Reduced Intensity Alternative) appears to be environmentally superior to the others. It results in the fewest housing units and commercial/public facility square feet, and the smallest population at buildout, and thus will subject the fewest people to potential hazards. With this exception, potential environmental effects after mitigation are comparable to one another. Therefore, Alternative 2 is arguably the environmentally superior alternative to the others evaluated in this EIR.

3.9 Greenhouse Gas Emissions

3.9.1 Introduction

The following section analyzes the potential greenhouse gas impacts associated with the proposed Project alternatives. A variety of local and regional data and information, ranging from research and analysis conducted for the Planning Area, to regional-scale planning and environmental documents, have been used in researching and analyzing the Project alternatives and their potential effects on greenhouse gas.

3.9.2 Existing Conditions

Certain gases in the earth's atmosphere, classified as greenhouse gases (GHGs), play a critical role in determining the earth's surface temperature. These gases allow solar radiation into the earth's atmosphere, but prevent radioactive heat from escaping, thus warming the earth's atmosphere. The principal GHGs contributing to the greenhouse effect are CO_2, methane (CH_4), nitrous oxide (N_2O), and fluorinated compounds (hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride). GHG sources include both natural and anthropogenic processes, and some are associated with air pollution.

Please see Section 2.9 for a detailed description of the regulatory framework and existing greenhouse gas conditions relating to the Planning Area.

3.9.3 Alternatives Impact Analysis

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

Alternative 1 (No Project/Existing Zoning)
Alternative 1 represents the continued implementation of the existing Development Code and Zoning Map. The following GHG estimates are provided to compare 2040 conditions under the proposed Specific Plan land use plan and Alternative. Because of the decreased land use intensities, and thus decreased trip generation, Alternative 1 would generate fewer GHG emissions than the proposed Project. Nonetheless, Alternative 1 would exceed the MDAQMD GHG threshold of 100,000 $MTCO_2e$ per year. Similar to the proposed Project, the same General Plan policies and Climate Action Plan reduction measures would help promote GHG emission reductions. However, based on the GHG projections below, it is possible that Alternative 1 would generate GHG emissions that could have a significant and unavoidable impact on the environment.

Table 3.9-1
2040 Operational GHGs: Alternative 1 vs. Proposed Project
(Metric Tons/Year)

	Proposed SP LU	Alternative 1 LU
Area Emissions	435.35	353.76
Energy Emissions	29,443.02	17,743.19
Mobile Emissions[1]	91,203.81	83,907.50
Waste Emissions	5,241.83	4,003.98
Water Emissions	8,115.80	2,878.09
Total Operational	**134,439.70**	**108,886.52**
Plus 2% Construction Amortized	**137,128.49**	**112,516.07**
MDAQMD Threshold	**100,000**	**100,000**

Source: CalEEMod Version 2020.4.0. See Appendix B for detailed output tables.

1. Using the same methodology as Air Quality and Transportation, mobile emissions for Alternative 1 were manually calculated as 92% of the proposed Project's mobile emissions, consistent with the percentage difference in non-residential land uses.

Alternative 2 (Reduced Intensity)

Alternative 2 represents the Reduced Intensity Alternative. Under this Alternative, the Planning Area would build out with land uses and improvements consistent with the Specific Plan's standards and guidelines, but at a lower density of units and intensity of square footage. Alternative 2 would result in 526 dwelling units, 4,123,360 square feet of general commercial/services, and 1,547 residents. Compared to existing conditions, this represents a 263-unit decrease, 3,113,605 SF decrease, and 773 population decrease.

Because of the decreased land use intensities, and thus decreased trip generation, Alternative 2 would generate fewer GHG emissions than the proposed Project. Similar to the proposed Project, the same General Plan policies and Climate Action Plan reduction measures would help promote GHG emission reductions. Unlike the proposed Project, Alternative 2 GHG emissions would fall below the MDAQMD GHG threshold of 100,000 $MTCO_2e$ per year, and thus would have a less than significant impact on the environment, and substantially lower impacts than the proposed Project.

Table 3.9-2
2040 Operational GHGs: Alternative 1 vs. Proposed Project
(Metric Tons/Year)

	Proposed SP LU	Alternative 2 LU
Area Emissions	435.35	235.83
Energy Emissions	29,443.02	15,456.76
Mobile Emissions[1]	91,203.81	47,869.95
Waste Emissions	5,241.83	2,751.03
Water Emissions	8,115.80	4,258.73
Total Operational	**134,439.70**	**70,572.30**
Plus 2% Construction Amortized	**137,128.49**	**71,983.74**
MDAQMD Threshold	**100,000**	**100,000**

Source: CalEEMod Version 2020.4.0. See Appendix B for detailed output tables.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Alternative 1 (No Project/Existing Zoning)
Similar to the proposed Project, Alternative 1 buildout emissions would exceed the MDAQMDs annual thresholds for GHG emissions and therefore would result in a significant and unavoidable impact. However, Alternative 1 would result in fewer GHG emissions when compared to the proposed Project land use plan. The existing General Plan policies would be applied under Alternative 1 to help promote further GHG emission reductions. Individual development projects developed under Alternative 1 will be assessed on a case-by-case basis for potential impacts related to GHG emissions. Projects will be required to demonstrate adherence to applicable plans, policies, and regulations adopted for the purposed of reducing GHG emissions; therefore, impacts from Alternative 1 will be less than significant.

Alternative 2 (Reduced Intensity)
Unlike the proposed Project, Alternative 2 buildout emissions would not exceed the MDAQMDs annual thresholds for GHG emissions and therefore would not result in a significant and unavoidable impact. Alternative 2 would also result in fewer GHG emissions when compared to the proposed Project land use plan. Alternative 2 would implement the Specific Plan policies and guidelines that promote GHG reductions through transportation and land use planning, efficient use of energy resources, and adherence to current trends in policies, regulations, and action plans.

Individual development projects proposed under Alternative 2 will be assessed on a case-by-case basis for potential impacts related to GHG emissions. Projects will be required to demonstrate adherence to applicable plans, policies, and regulations adopted for the purposed of reducing GHG emissions; therefore, impacts from Alternative 2 will be less than significant.

3.9.4 Mitigation Measures

Similar to the proposed Specific Plan, Alternatives 1 & 2 will be held to the same General Plan policies, standard MDAQMD rules and regulations, and mitigation measures provided in Section 2.9.7. These measures, provided in Section 2.9, were provided to assure impacts of greenhouse emissions will be reduced to the greatest extent possible. In the case of Alternative 2, because impacts would be less than significant, Mitigation Measures GHG-1 through GHG-3 would not apply. Unlike the proposed Project, and based on the GHG projections above, Alternative 2 would not generate significant GHG emissions because operational emissions are projected to remain below MDAQMD's established thresholds of 100,000 $MTCO_2e$ per year. Therefore, no mitigation measures would be required.

3.9.5 Environmental Superior Alternative

At buildout, Alternative 2 would result in the fewest criteria pollutant and GHG emissions, thus resulting in less intense impacts to air quality and GHG thresholds. In this regard, Alternative 2 is the environmentally superior alternative compared to the proposed Project and Alternative 1.

3.10 Hazards and Hazardous Materials

3.10.1 Introduction

This section of the EIR analyzes the potential impacts associated with the use of hazardous materials by the proposed alternatives. The Project site is located in a region where hazardous materials transport, storage, and use is strictly regulated for large quantity users, such as industrial processing plants and commercial dry cleaners. The alternatives' potential impacts are discussed below.

3.10.2 Existing Conditions

Potential hazardous/toxic material generators located in the Town include commercial, quasi-industrial, and medical operations. In the Project Planning Area, existing development includes large and small commercial enterprises, such as auto storage and maintenance facilities, metal and wood workshops, gasoline service stations, restaurants, and other potential generators of hazardous materials. The proposed alternatives would facilitate comparable development.

The three main hazardous materials transportation corridors in Apple Valley include the Atchison Topeka & Santa Fe Railroad, Interstate 15, and Highway 18, which have the potential to be involved in the transport of hazardous wastes and materials. The potential hazardous material transport route crossing the Project Planning Area is Highway 18. The Hazardous Materials Transportation Act (HMTA) regulates the safe transport of hazardous materials on water, rail, highways, through air, or in pipelines.

One school is within the Project Planning Area, and several schools are outside the boundaries of the Planning Area but in close proximity.

Major emergency evacuation routes in the Town include Central Road, Highway 18, and Bear Valley Road. Highway 18 bisects the entire length of Planning Area and provides primary access in an emergency for most of the Town.

According to CALFire's Fire and Resource Assessment Program (FRAP) maps, the majority of Apple Valley is in a Local Responsibility Area (LRA), and several small areas in the western and northern Town are in a Federal Responsibility Area (FRA).[1] There is no VHFHSZ or any other fire hazard severity zones designated by CALFire in Apple Valley, including the Planning Area.

[1] Fire and Resources Assessment Program (FRAP) FHSZ Viewer, California Department of Forestry and Fire Protection. https://egis.fire.ca.gov/FHSZ/, accessed October 14, 2021.

3.10.3 Alternatives Impact Analysis

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Alternatives 1 (No Project/Existing Zoning) and 2 (Reduced Intensity)
Hazardous materials are transported through Apple Valley along Highway 18 and other designated truck routes and local roads, including Navajo Road and Yucca Loma Road, which pass through the Planning Area. The California Highway Patrol (CHP) and California Department of Transportation (Caltrans) have primary responsibility for enforcing federal and state hazardous materials transport regulations. Future and existing development pursuant to the project alternatives, may use, store, or generate hazardous materials or wastes in quantities that would pose a significant hazard to the public or the environment during both construction and operational activities.

Demolition and construction activities associated with new development can be expected to involve the temporary use of heavy equipment and machinery, which would contain fuels and oils, and various other potentially hazardous products such as concrete, paints, and adhesives. The materials used are not expected to be in quantities or stored in a manner that pose a significant hazard to the public. Nonetheless, as with the proposed Project, all potentially hazardous materials would be contained, stored, and used in accordance with manufacturers' instructions and handled in compliance with applicable federal, state, and local regulations. All new projects would be responsible for implementation of these standard requirements, and would be subject to local, regional and State regulations during construction, regardless of the alternative.

Like the proposed Project, neither alternative allows heavy industrial or other land uses that would generate or use large quantities of hazardous materials. Existing and future small business operations, individual households, and maintenance activities will utilize hazardous materials in limited quantities, including paints, thinners, cleaning solvents, fertilizers, pesticides, motor oil, and automotive fluids. For residential uses, these hazardous materials would be stored and used at individual homes, and will not require a hazardous material handling/storage permit. The quantities stored at commercial sites would be comparable to typical commercial uses, and would be regulated by state and local law, including Fire Department regulations on proper storage and inspection. The same regulating agencies and their standards and requirements, including the County of San Bernardino and the County Fire Department, would apply to all alternatives, and are designed to lower impacts to less than significant levels.

Existing federal, state, regional, and local regulations, such as the Hazardous Material Transportation Act, the Resource Conservation and Recovery Act, the California Hazardous Waste Control Act, assure the safe transport of hazardous materials. These requirements ensure that industrial and commercial users, generators, and transporters provide operational safety and emergency response measures so that no major threats to public health and safety are created. These agencies and regulations would apply equally to all alternatives, and would assure that impacts would be less than significant and consistent with the proposed Project.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

Alternatives 1 (No Project/Existing Zoning) and 2 (Reduced Intensity)
Implementation of either project alternative would enable development and redevelopment of various land uses in the Planning Area which are not expected to utilize or generate large quantities of hazardous materials. As discussed under a) above, hazardous materials stored at commercial sites would be comparable to typical commercial uses and regulated by state and local law, including Fire Department regulations requiring proper storage and inspection.

Compliance with and enforcement of existing laws and regulations concerning the upset and/or accidental release of hazardous materials into the environment, supported by the General Plans goals, policies, and programs, would ensure that the public would not be exposed to any unusual or excessive risks related to upset/accidental conditions involving the release of hazardous materials into the environment. Potential impacts are expected to be less than significant under both project alternatives, and levels of impact would be comparable to those of the proposed Project.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

Alternatives 1 (No Project/Existing Zoning) and 2 (Reduced Intensity)
Four schools are within one-quarter mile of the Planning Area, including Yucca Loma Elementary School, Rancho Verde Elementary School, Smart Starts Academy, and Granite Hills High School. Like the proposed Project, any potential quantities of hazardous substances used or stored in the Planning Area and in proximity to schools would be limited to those used during construction/demolition; or during the operational life of households, commercial, or light industrial facilities. Neither project alternative proposes heavy industry in the Planning Area.

Currently, there are no plans for a new school to be located within the Planning Area; however, Alternative 1 allows for such uses in Districts 2-4 (under Public Facilities zoning), and Alternative 2 allows for such uses in Districts 2-5 (a Special Use Permit may be required). For new development, any future placement of schools would be required to comply with state statutory and regulatory requirements addressing safety from hazards, including hazardous materials; therefore, impacts from the placement of schools in the vicinity of such hazards are anticipated to be less than significant under both alternatives.

California Education Code (section 17210 et seq.) outlines the requirements of siting school facilities near or on known or suspected hazardous materials sites, or near facilities that emit or handle hazardous materials, substances, or waste. Any school project proposed within the Planning Area under either Alternative would be subject to these siting requirements, which would reduce impacts to less than significant levels.

Impacts of the project alternatives regarding hazardous materials emissions in proximity to a school would be less than significant. Impacts would be comparable to those of the proposed Project.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Alternative 1 (No Project/Existing Zoning) and 2 (Reduced Intensity)
Both Alternative 1 and Alternative 2 would result in the development of the same Planning Area as the proposed Project, but both would result in reduced intensities of development. Both alternatives would be expected to develop within the existing street grid, and would not permanently block or remove any existing evacuation route, including both Highway 18 and Central Road. Alternative 1 would not include the realignments of Yucca Loma Road, Hitt Road/Headquarters Drive, or the improvements on Highway 18 designed to improve traffic, and therefore emergency access along, onto and off of the Highway. As development in the area increases, Alternative 1 could result in greater, but still less than significant conflicts in emergency response. Alternative 2, however, would implement these improvements and improve access along the Highway 18 corridor in a manner consistent with the proposed Project.

The Town's Emergency Operations Plan (EOP) (2014) identified that the Apple Valley Police Department is the lead agency in evacuations, and identified several critical facilities which occur in the Planning Area, including James A. Woody Community Center, the animal shelter, and Public Works facility. Neither alternative would result in changes to these facilities. Both alternatives would result

in construction projects, at somewhat lower intensities than the proposed Project, which will require Construction Traffic Control Plans and establish and preserve emergency/secondary access during all construction activities.

Although both alternatives would have less than significant impacts on emergency access and evacuation routes, Alternative 1, which would not include road system improvements, would have a somewhat greater impact regarding this issue.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

Alternatives 1 (No Project/Existing Zoning) and 2 (Reduced Intensity)
Both alternatives would cover the same land as the proposed Specific Plan, but result in different mixes of land uses and different development densities. According to the Town's Local Hazard Mitigation Plan (2017),[2] local wildfire hazard areas include the southern foothill area known as Marianas (5± miles from the Specific Plan Planning Area) and the Mojave Riverbed (4± miles away). The California Department of Forestry and Fire Protection's Fire and Resource Assessment Program (FRAP) does not identify any fire hazard severity zone within the Town, and the Planning Area is not near any fire hazard zone.

Both alternatives will facilitate development and redevelopment in the Planning Area; however, neither alternative is expected to exacerbate wildfire risks because all structures and improvements will be constructed per the latest edition of California Building Code and California Fire Code and will also be subject to review by the Apple Valley Fire Protection District. Adherence to these state and local requirements will ensure that the risk of loss, injury, or death involving wildland fires will be reduced to less than significant levels. The level of impact would be comparable to that of the proposed Project.

3.10.4 Mitigation Measures

As is the case with the proposed Project, mitigation measures are not required, and impacts of both alternatives would be less than significant.

[2] Town of Apple Valley Local Hazard Mitigation Plan – 2017 Plan Update.

3.10.5 Environmental Superior Alternative

Both alternatives will result in a similar level of use, transport and storage of hazardous materials, and the impacts associated with them would be expected to be less than significant. The proposed Project and Alternative 2 will facilitate roadway realignments along Highway 18 that are designed to improve existing roadway capacity and access to properties, improve traffic safety, and enhance access for emergency vehicles in and around the Planning Area. Alternative 1 would not implement these improvements, and could see a greater conflict in emergency access. Overall, Alternative 2 would be the environmentally superior alternative because it would result in the fewest dwelling units and smallest buildout population, thereby potentially generating and storing the least amount of potential hazardous materials and exposing the fewest people to potential hazards, while improving the transportation system through the Planning Area.

3.11 Hydrology and Water Quality

3.11.1 Introduction

This section of the EIR analyzes the potential impacts associated with the alternatives to the proposed Project based on the local hydrological setting and affecting runoff and water quality. The Project area is located within the South Lahontan Hydrologic Region and Upper Mojave River Valley Groundwater Basin

In this section, each project alternative's potential impacts are discussed, and mitigation measures are set forth where needed.

3.11.2 Existing Conditions

Over the past century, Apple Valley has seen extensive urban development which has affected water quality due to the introduction of pollutants and erosion due to agriculture in the Town's early years, and urban development. Development and expanses of pavement result in increased runoff and higher velocities in creeks, streams, and channels and in turn cause erosion. Urban pollutants may include toxic metals, hydrocarbons, nutrients, suspended solids, and a variety of other chemicals.

The Planning Area is designated Zone D on Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM). Zone D identifies areas of potential but undetermined flood hazards, as no analysis of flood hazards has been conducted. Therefore, the extent to which the Specific Plan Planning Area is at risk of flooding is unknown.

The Mojave Basin Area encompasses a total of 1,400 square miles and has an estimated total water storage capacity of nearly 5 million acre-feet. The elevation of the area within the Village Specific Plan is generally 2,940 feet above sea level, and slopes in a northern direction with at an average slope of 0.3% to a low point in the Apple Valley Dry Lake region. Recharge from the Mojave River accounts for approximately 80 percent of the total basin natural recharge. Other sources of recharge include infiltration of storm runoff from the mountains and recharge from human activities such as irrigation return flows, wastewater discharge, and enhanced recharge with imported water.

Liberty Utilities provides domestic water service to the majority of Apple Valley including the Planning Area. The Liberty – Apple Valley system has 20,957 service connections and a total supply of 14,979 acre-feet (AF) as of 2020.[1] The system currently sources 100% of its water from the Mojave groundwater basin from 18 deep wells located throughout the community.

Water quality is generally good to excellent in the Town of Apple Valley. Exceptions are generally limited to zones of high mineral concentrations, particularly areas with older alluvium where the groundwater receives very little recharge and limited groundwater movement. Currently, water quality does not affect water supply reliability in the Liberty Utilities service area.

3.11.3 Alternatives Impact Analysis

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.

Alternative 1 (No Project/Existing Zoning) and 2 (Reduced Intensity)
Potentially significant impacts on surface water quality are typically associated with discharges from development that create pollution, contamination, or nuisance as defined in Section 13050 of the California Water Code (CWC) or would cause regulatory standards to be violated, as defined in the applicable National Pollution Discharge Elimination System (NPDES) stormwater permit or Water Quality Control Plan for the receiving water body. For all project alternatives, the area is located in the Mojave River watershed. All water providers in the watershed, including Liberty Utilities, are required to comply with the State Regional Water Quality Control Board (SWRCB) standards for the protection of water quality.

All of the project alternatives would facilitate future development, building demolition and reconstruction, grading, paving, and other development and improvement projects. Future development will utilize existing Town drainage facilities and may require additional on-site detention and conveyance facilities. Town and Regional Water Quality Control Board review and implementation of their regulations would ensure that construction and operational best management practices (BMPs) satisfy local, state, and federal standards.

In addition, the Town would require preparation of a Storm Water Pollution Prevention Plan (SWPPP) in conformance with the National Pollutant Discharge Elimination System (NPDES) prior to the issuance of grading permits. The preparation of Water Quality Management Plans will also be required of any development proposal in excess of 5,000 square feet.

[1] Liberty Utilities – Apple Valley Final 2020 Urban Water Management Plan, June 2021.

New construction would be required to connect to the existing Town sewer system in compliance with applicable standards that minimize impacts to regional groundwater quality.

The implementation of existing regulations and guidelines will ensure that existing and future development in the Planning Area, regardless of the alternative, will not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. Impacts from the subject project alternatives are expected to be less than significant and consistent with the proposed Project.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

Alternative 1 (No Project/Existing Zoning) and 2 (Reduced Intensity)
As discussed above, Liberty Utilities provides domestic water to the Planning Area. As can be seen from the following tables, under Alternatives 1, 2, the decreased intensity in growth and development would result in a lower domestic water demand than that projected for the proposed Project.

As shown in table 3.11-1, Alternative 1 would require 831.65 AF of water annually, which represents an additional 402.43 AF or 112.6% increase from the estimated existing demand (429.22 AF). The net Project water demand of 402.43 AFY represents less than 2.7% of the 2020 water supply (14,979 AFY) from Liberty Utilities, and less than 2.2% of the 2045 water supply (18,538 AFY) for 2040.[2]

As shown in table 3.11-2, Alternative 2 would require 754.91 AF of water annually, which represents an additional 325.69 AF or 75.9% increase from the estimated existing demand (429.22 AF). The net Alternative 2 water demand of 337.50 AFY represents less than 2.2% of the 2020 water supply (14,979 AFY) from Liberty Utilities, and less than 1.8% of the 2045 water supply (18,538 AFY) for 2040.[3]

Alternative 1 and Alternative 2 result in a reduction in water use of 33.59 AFY and 110.33 AFY, respectively, when compared to the proposed Project. Therefore, Alternative 2 would represent the most water-conserving alternative.

[2] 14,979 AFY for 2020 and 18,538 AFY for 2045 are provided in the Liberty Utilities – Apple Valley 2020 Urban Water Management Plan Final Draft, June 2021.

[3] 14,979 AFY for 2020 and 18,538 AFY for 2045 are provided in the Liberty Utilities – Apple Valley 2020 Urban Water Management Plan Final Draft, June 2021.

Table 3.11-1
Alternative 1 Estimated Water Demand

Land Use[1]	Annual Water Demand Factor[2]	Existing Development	Existing Water Demand (acre feet per year, or AFY)	Future Development[3]	Additional Water Demand (AFY)	Total Water Demand (AFY) at Specific Plan Buildout
Residential	80,784 gallons per unit	289 units	71.65	500 units	123.96	195.61
Commercial /Service /Office /Public	365,000 gallons per acre	220.2 acres	246.66	248.6 acres	278.47	525.13
Open Space (park)	1,922,302.8 gallons per acre	18.8 acres	110.91	0 acres	0	110.91
Total	-	-	**429.22**	-	**402.43**	**831.65**

[1] Based on Apple Valley Village Specific Plan Existing and proposed Land Uses Tables.
[2] Residential water demand factor based on Golden State Water Company average residential account monthly usage (6,732 gallons) in Apple Valley. Commercial/Service/ Office/Public water demand factor based on 2021 Water Master Plan Update for the City of Victorville. Open Space water demand is based on a factor for turfgrass in desert climate (44.13 gals per square foot per year) developed by the U.S. Department of Energy.
[3] Future development accounts for new development on currently vacant land and does not include redevelopment.

Table 3.11-2
Alternative 2 Estimated Water Demand

Land Use[1]	Annual Water Demand Factor[2]	Existing Development	Existing Water Demand (acre feet per year, or AFY)	Future Development[3]	Additional Water Demand (AFY)	Total Water Demand (AFY) at Specific Plan Buildout
Residential	80,784 gallons per unit	289 units	71.65	237 units	58.76	130.41
Commercial /Service /Office /Public	365,000 gallons per acre	220.2 acres	246.66	238.3 acres	266.93	513.59
Open Space (park)	1,922,302.8 gallons per acre	18.8 acres	110.91	0 acres	0	110.91
Total	-	-	**429.22**	-	**325.69**	**754.91**

[1] Based on Apple Valley Village Specific Plan Existing and proposed Land Uses Tables.
[2] Residential water demand factor based on Golden State Water Company average residential account monthly usage (6,732 gallons) in Apple Valley. Commercial/Service/ Office/Public water demand factor based on 2021 Water Master Plan Update for the City of Victorville. Open Space water demand is based on a factor for turfgrass in desert climate (44.13 gals per square foot per year) developed by the U.S. Department of Energy.
[3] Future development accounts for new development on currently vacant land and does not include redevelopment.

According to Liberty's 2020 UWMP, available water supplies are sufficient to meet the anticipated demand for 2020 through 2040 during normal, single dry, and multiple dry water years.

In addition, the proposed Specific Plan includes guidelines that seek to reduce water demand and protect water resources in the Planning Area, would apply to Alternative 2. Alternative 1 would result in buildout of existing conditions and would be subject to existing General Plan policies and regulations regarding water conservation and protection.

The Town will work with Liberty Utilities to assure sufficient water would be available in the future during normal, dry and multiple dry years. Due to sufficient groundwater resources and Specific Plan guidelines and existing regulations to conserve water resources, buildout of the proposed alternatives would result in less than significant impacts related to water resources. Alternative 2 would have the least significant impact on groundwater, although both alternatives would have less than significant impacts.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i) result in substantial erosion or siltation on- or off-site;

Alternative 1 (No Project/Existing Zoning) and 2 (Reduced Intensity)
Like the proposed Specific Plan, Alternatives 1 and 2 will facilitate development projects that will result in grading, excavation, and other modifications to the ground surface, and have the potential to result in erosion and/or siltation on- and off-site. The Town requires projects to implement effective erosion control measures. Alternative 1 would maintain existing conditions and will not alter existing drainage patterns. Flood flows would continue to occur as they currently do, and improvements would be limited to on-site retention facilities, which would be required to include BMPs for erosion and siltation control.

The Specific Plan, and thus Alternative 2, proposes changes to the existing drainage system to facilitate major improvements along Highway 111, however development in accordance with Alternative 2, as is the case with the proposed Project, is not expected to alter the existing drainage pattern in a manner that would cause substantial erosion or siltation on- or off-site.

Compliance with federal, state, regional and local regulations and policies would minimize the potential for erosion and siltation in the Planning Area. Therefore, regardless of the project alternative, future development will not result in substantial erosion or siltation on- or off-site.

ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;

Alternative 1 (No Project/Existing Zoning) and 2 (Reduced Intensity)
As described in Section 2.11, as with the proposed Specific Plan all project alternatives, development standards and guidelines are designed to minimize the amount of additional stormwater runoff from future development. These include requirements for desert/drought-tolerant landscaping and associated opportunities for on-site stormwater retention and other runoff, and the construction of on-site retention/detention facilities sufficient to contain the increase in generated runoff on site. Applicable standards and guidelines set forth in the General Plan (Alternative 1) and proposed Specific Plan (Alternative 2) will apply to the project alternatives. Neither alternative will substantially increase the rate or amount of surface runoff such that would result in flooding on- or off-site, because of the implementation of local requirements. Impacts from both alternatives would be less than significant and consistent with those of the proposed Project.

iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

Alternative 1 (No Project/Existing Zoning) and 2 (Reduced Intensity)
Future retention basins built in the Planning Area will be required to store the 100-yearr 24-hour design storm volume in accordance with Town standards and regulations. None of the project alternatives will substantially increase the rate of off-site surface runoff, and existing drainage facilities and stormwater management requirements will preclude flooding either within or beyond the Planning Area, and neither surface nor groundwater quality will be compromised. With the provision of on-site stormwater retention and implementation of required BMPs, none of the project alternatives would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Impacts are less than significant for both alternatives, as they are for the proposed Project.

iv) impede or redirect flood flows.

Alternative 1 (No Project/Existing Zoning) and 2 (Reduced Intensity)
Implementation of either of the alternatives will result in grading, excavation, construction, and other modifications to the ground surface that could redirect flood flows. However, the Town requires thoughtful and effective stormwater management plans that retain runoff onsite, effectively direct flood flows, and

include other improvements, as necessary, to ensure that the Town's system of surface and subsurface runoff conveyance is properly constructed and maintained. Alternative 1 would be constructed using existing improvements, and would not benefit from the improvements included in the Specific Plan, which could provide limitations on storm flow conveyance, because of the lack of capacity in existing systems. Alternative 2 would be built under governance of the Specific Plan, which does include regional improvements, including box culverts on either side of Highway 18. However, neither of the alternatives are expected to significantly impede or redirect flood flows.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.

Alternative 1 (No Project/Existing Zoning) and 2 (Reduced Intensity)
The Specific Plan Planning Area is designated Zone D on Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM). Development of both alternatives would occur in this zone, as would the proposed Project.

Both alternatives would be constructed in the same land area as the proposed Project. There is no risk of inundation resulting from dam failure as the Planning Area is outside of dam inundation areas. There is no risk of inundation resulting from seiche because no above-ground water reservoirs or other large bodies of water are in or near the Planning Area. There is no risk of inundation from tsunami because the Planning Area is inland and well outside of any tsunami zones.

Both alternatives will facilitate the development of new buildings and improvements that could use, store, or otherwise be involved with potentially hazardous materials. These facilities would be required to comply with applicable safety regulations and best practices to minimize the release of pollutants during potential flood events. Adherence to zoning (Alternative 1), development standards in the proposed Specific Plan (Alternative 2), and other regulatory requirements will ensure that no significant impacts will occur associated with release of pollutants due to inundation.

3.11.4 Mitigation Measures

As with the proposed Project, no mitigation measures would be required to implement either of the project alternatives. As noted above, compliance with Town and state regulatory requirements will serve to effectively avoid, minimize and otherwise mitigate potentially significant impacts to water resources or water quality, or from existing and future flood hazards that could result from implementation of any project alternative. The standard requirements imposed by the Town and local Regional Water Quality Control Board ensure that the

community remains safe from local and regional flooding hazards and that the community's water resources will be used wisely and will be protected for the long-term.

3.11.5 Environmental Superior Alternative

All alternatives including the proposed Project will be required to comply with well-established federal, state and local requirements to manage stormwater runoff and tributary flows, and to protect surface and ground water quality. Alternative 2 would result in improvements on Highway 18 to convey regional flows, while these improvements would not occur under Alternative 1. Alternative 1 would result in the least intense land development and would therefore have a smaller percentage of impermeable surfaces that contribute to runoff. Because of this, Alternative 1 is the superior alternative.

3.12 Land Use and Planning

3.12.1 Introduction

This section of the EIR evaluates the potential impacts of the Project Alternatives on land use and planning. As with the proposed Project, the Alternatives' land use compatibility has been assessed using planning documents and land use regulations.

3.12.2 Existing Conditions

As discussed in Section 2.12 of this EIR, the Planning Area contains a mix of retail and service-oriented businesses, mobile home parks and multi-family dwelling units, and public and quasi-public facilities. There are currently approximately 289 dwelling units and 1,823,380 square feet of commercial and public facility development in the Planning Area. Vacant parcels (273± acres) are concentrated in the north, northeast, and south. Surrounding lands include low-density residential development to the north, west, and southeast, and vacant and sparsely developed land to the east and south.

The General Plan assigns seven (7) land use designations to the Planning Area, including residential, commercial, public facility, and open space uses. Residential densities range from very low (1 du/1 to 2.5 gross acres) to moderately high (20 du/ac). The Development Code and Zoning Map assign eight (8) zoning designations to the Planning Area. They are the same as General Plan designations except General Commercial (C-G) lands are separated into two categories, General Commercial (C-G) and Village Commercial (C-V), based on location. In addition to existing development, buildout of the Planning Area according to existing zoning designations would result in an additional 500 dwelling units and 5,413,585 future square feet of commercial development.

3.12.3 Alternatives Impact Analysis

a) Physically divide an established community.

Alternative 1 (No Project/Existing Zoning)
Alternative 1 represents the continued implementation of the existing Development Code and Zoning Map. The Code is a policy document that does not physically divide an established community, and no impact to an established community would occur. However, development and design features in the Planning Area would continue to be evaluated and implemented on a project-by-project basis, and the area would not benefit from a unified, cohesive program of development standards and design guidelines.

Alternative 2 (Reduced Intensity)
Like the proposed Project, Alternative 2 would result in implementation of a Specific Plan. The Specific Plan is a policy document that would not physically divide an established community, regardless of land use intensity. The Planning Area boundaries of Alternative 2 are the same as the proposed Project and do not divide established communities or neighborhoods. Like the proposed Project, Alternative 2 would provide a unified, cohesive set of development standards and guidelines for the Planning Area, and promote compatible land uses that minimize impacts to established communities. Alternative 2 would be expected to have a beneficial effect on the Planning Area, and impacts would be less than significant.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

Alternative 1 (No Project/Existing Zoning)
Alternative 1 represents the continued implementation of the General Plan and Development Code currently in effect. No changes to land use designations, development standards, or design guidelines would occur. There would be no conflict with existing plans or policies, and no impact would occur.

Alternative 2 (Reduced Intensity)
Like the proposed Project, Alternative 2 would require a General Plan Amendment (GPA) and Zone Change (ZC) to replace existing General Plan land use designations with "Village Specific Plan" and existing zoning designations with Specific Plan Districts 1 through 5. Within the Planning Area, development standards and design guidelines of the Development Code would be replaced with those of the Specific Plan. These actions are consistent with General Plan Land Use Element Program 6.C.3 and Policy 3.B, which state that future development and redevelopment of the Village shall be governed by a Specific Plan, and Specific Plans shall be required for development proposals that include variations from development standards in the applicable zone. Therefore, impacts would be less than significant, consistent with the proposed Project.

Buildout Intensity
As shown in the following table, there are currently approximately 289 dwelling units and 1,823,380 square feet of commercial/service/office/public facility uses in the Planning Area. Under existing zoning designations, the Planning Area could accommodate an additional 500 dwelling units and 5,413,585 square feet of commercial/service/office/public facility uses. Under Alternative 2, the Planning Area could accommodate an additional 237 dwelling units and 2,311,980 square

feet of commercial/service/office/public facility uses. Therefore, compared to current zoning designations, Alternative 2 would result in a reduction of 263 dwelling units (53% decrease) and 3,101,605 square feet (57% decrease).

Table 3.12-1
Land Use Buildout, Existing Zoning vs. Alternative 2

		Current Zoning		Alternative 2	
	Existing	Potential New	Maximum Buildout	Potential New	Maximum Buildout
Dwelling Units	289	500	789	237	526
Square Feet of Commercial/Service/ Office/Public Facility	1,823,380	5,413,585	7,236,965	2,311,980	4,135,360
Source: from Tables 1-3 and 3-3 of this DEIR					

Compared to existing zoning designations, Alternative 2 would decrease development in the Planning Area by more than half. Alternative 2 impacts associated with development intensity would be less than significant, consistent with the findings for the proposed Project.

3.12.4 Mitigation Measures

Neither Alternative 1 nor Alternative 2 result in significant impacts to land use and planning. No mitigation measures would be required.

3.12.5 Environmentally Superior Alternative

Neither the proposed Project, Alternative 1, or Alternative 2 would physically divide an established community. Alternative 1 (No Project/Existing Zoning) would not create a cohesive and harmonious identity throughout the Planning Area and, therefore, would not meet Project Objectives 2 or 3. The proposed Project and Alternative 2 (Reduced Intensity) would provide a cohesive development and design program that is expected to unify and have a beneficial impact on the Planning Area. In this regard, the proposed Project and Alternative 2 are environmentally superior.

Alternative 2 (Reduced Intensity) would result in the fewest dwelling units and square feet of commercial/service/office/public facility development at buildout. As such, it would be expected to result in the fewest environmental impacts associated with land use and development, such as ground surface disturbances and use of construction materials and energy. Therefore, Alternative 2 is considered the environmentally superior alternative.

3.13 Noise

3.13.1 Introduction

This section of the EIR analyzes the potential impacts of the two project alternatives regarding the local noise environment in the Planning Area and compares potential impacts to surrounding sensitive receptors to those of the proposed Project. Continued buildout of the Planning Area will take place adjacent to noise-sensitive land uses and, therefore, will introduce both temporary and long-term noise increases to the existing ambient noise environment.

3.13.2 Existing Conditions

Noise Sources

The primary noise source in the Planning Area is traffic on Highway 18, which includes trucks and buses. Commercial land uses, particularly warehouse and light industrial sites, can also generate high noise levels from mechanical equipment, truck deliveries, loading and unloading operations, and trash compactors.

The noise impact analysis prepared for the General Plan conducted both short term and long term (24-hour) monitoring at various sites in the Town. Two of the short-term monitoring sites were near the western end of the Specific Plan area, which indicated that residential neighborhoods adjacent to Highway 18 experience exterior noise levels approaching 65 dBA CNEL.

The General Plan noise impact analysis also studied existing noise levels along major roadways. In the Planning Area, residential development along major roadways such as Highway 18 and Navajo Road may experience noise levels above the 65 dBA CNEL noise level limits as the 70 dBA CNEL noise contours extend beyond the road right-of-way. These contours represent unmitigated exterior noise levels.

Please see Section 2.13.5 for a detailed discussion of the existing noise environment.

Vibration Sources

In the Planning Area, vibration sources include temporary construction equipment and machinery associated with light industrial uses such as metal workshops and auto maintenance. The roadways are generally smooth, and thus vibration associated with motor vehicles is not expected to be perceptible.

Without heavy industrial uses, the Planning Area only has the potential to generate minor and occasional vibrations.

3.13.3 Alternatives Impact Analysis

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;

Alternative 1 (No Project/Existing Zoning)
Alternative 1 would result in development of the same land (Planning Area) as the proposed Project, but development would occur according to current zoning designations. In addition to existing development, Alternative 1 would have the potential to accommodate an additional 500 residential units and 5,413,585 square feet of commercial/service/office/public uses in the Planning Area at full buildout. Compared to the proposed Specific Plan, Alternative 1 would result in fewer residential units and less commercial/public facilities square footage, but the types of land uses, construction techniques, and vehicle mix would be largely the same. As with the proposed Project, future development will require Town staff and/or Planning Commission/Council review which will ensure land use compatibility.

Buildout of the Planning Area in accordance with the current zoning designations will result in site preparation, demolition, grading, excavation, construction, paving, and related activities that will result in localized and temporary increases in ambient noise levels and may impact sensitive receptors. Alternative 1 would be subject to Development Code Section 9.73.060.F which restricts allowable construction hours and establishes noise restriction guidance where construction and demolition occur near residential areas. These measures will reduce, to some extent, construction noise impacts on surrounding land uses. Impacts will be temporary and end once construction is complete.

Alternative 1 buildout will occur according to current zoning designations, which are consistent with current General Plan designations. The General Plan noise impact analysis projected future CNEL noise contour boundaries for the 55, 60, 65 and 70 dBA noise levels and the estimated CNEL exterior noise level at 100 feet at build out. Section 2.13.6.a includes a detailed discussion on noise contours for roadway segments that fall in the Planning Area. As shown in Table 2.13.4 in Section 2.13.6.a, the buildout noise levels along several Planning Area roadways are expected to increase by up to 9.6 dBA CNEL over existing conditions. Increases in noise levels are expected to be perceptible to land uses adjacent to six roadway segments in the Planning Area. As provided in Mitigation Measure

NOI-1, future residential projects occurring in the southwest and northeast corners of the Planning Area under Alternative 1 would be required to prepared site- and project-specific noise studies to assure that development of residential uses would not be adversely impacted by roadway noise.

Alternative 1 buildout will result in overall increases to community noise levels from increased urbanization and associated activities including short-term construction noise and increases in motor vehicle traffic and other modes of transportation. These impacts would be less than the proposed Project, because of the reduced units and square footage proposed in this alternative, but could still impact sensitive receptors. Common mitigation measures include building setbacks, wall and window insulation, sound walls, earthen berms and landscape barriers as detailed in the General Plan Noise Element Program 1.A.2. The General Plan Noise Element includes policies and programs that require implementation of noise attenuation (Program 1.A.2) and siting commercial/industrial mechanical equipment away from nearby sensitive receptors (Program 1.A.3) to ensure acceptable noise levels. Policy 1.B and associated programs require a noise analysis during the entitlement process for residential projects near roadway noise contours and commercial/industrial projects proposed near sensitive receptors to ensure noise and vibration impacts are mitigated to acceptable levels.

With implementation of the Town's standard requirements and Mitigation Measure NOI-1, potential noise impacts associated with future development under Alternative 1 will remain less than significant through project-level focused noise studies and mitigation, where necessary. As such, the potential noise impacts of Alternative 1 would be somewhat less than those of the proposed Project, but would require mitigation consistent with the proposed Project.

Alternative 2 (Reduced Intensity)

Alternative 2 would occur on the same land as the proposed Specific Plan but result in fewer residential units and less commercial/public facilities square footage. In addition to existing development, Alternative 2 would have the potential to accommodate an additional 237 residential units and 2,311,980 square feet of commercial/service/office/public uses in the Planning Area at full buildout. Like the proposed Project, Alternative 2 would guide future development through a Specific Plan that considers land use compatibility and seeks to minimize potential conflicts, including noise incompatibilities, between adjacent and surrounding uses.

Buildout of the Planning Area under Alternative 2 will result in site preparation, demolition, grading, excavation, construction, paving, and related activities that will result in localized and temporary increases in ambient noise levels and may impact sensitive receptors. The same construction hour restrictions, muffling of

construction equipment, and other measures applicable to Alternative 1 and the proposed Project would reduce, to some extent, construction noise impacts on surrounding land uses. Impacts will be temporary and end once construction is complete.

Alternative 2 land uses do not differ from those allowed by the General Plan, but may result in locational shift of some land uses. Therefore, future noise levels generated by the Alternative 2 buildout will be comparable to those predicted in the General Plan noise impact analysis, which is the main data source for the following discussion on noise impacts.

The General Plan projected future estimated CNEL exterior noise levels along several Planning Area roadways are expected to increase by up to 9.6 dBA CNEL over existing conditions. Increases in noise levels are expected to be perceptible to land uses adjacent to six roadway segments in the Planning Area. As provided in Mitigation Measure NOI-1, future residential projects occurring in the southwest and northeast corners of the Planning Area under Alternative 2 would be required to prepared site- and project-specific noise studies to assure that development of residential uses would not be adversely impacted by roadway noise.

Like the proposed Project, Alternative 2 would implement the Specific Plan. The Specific Plan's land use plan is designed to minimize land use incompatibilities, including noise intrusion, between adjacent and surrounding lands. As such, it would reduce noise impacts to some extent, as would the reduced intensities and densities proposed under Alternative 2. Nonetheless, noise impacts may be significant if not mitigated, especially to sensitive receptors along the major roadways in the Planning Area. Mitigation Measure NOI-1 would reduce these impacts to less than significant levels, and be applied to Alternative 2. With implementation of the Town's standard requirements and General Plan policies as described above and Mitigation Measure NOI-1, potential noise impacts associated with future development under Alternative 2 will remain less than significant. Therefore, potential noise impacts would be marginally reduced but comparable to the proposed Project.

b) Generation of excessive groundborne vibration or groundborne noise levels;

Alternatives 1 (No Project/Existing Zoning) and 2 (Reduced Intensity)
Both alternatives encompass the same Planning Area with varying residential densities and commercial square footage. As discussed in Section 2.13.6.b, the Town's Noise Ordinance prohibits operating or permitting the operation of any device that creates a vibration which is above the vibration perception threshold of an individual at or beyond the property boundary of the source if on private

property, or at one hundred fifty (150) feet from the source if on a public space or public right-of-way (Municipal Code Section 9.73.060G). Additionally, the FTA Transit Noise and Vibration Impact Assessment Manual (2018) sets forth criteria that construction vibration impacts would be significant if vibration levels exceed 100 VdB, which is the general threshold where damage can occur to typical buildings, or 72 VdB at residences during nighttime hours.

Similar to the proposed Project, construction details and equipment for future project-level developments under the project alternatives are not known at this time. Site-specific construction-related vibration impacts would be assessed on a case-by-case basis prior to the issuance of building permits by the Town. Construction activities would be required to comply with all Noise Ordinance requirements for the control of construction-related vibration. The implementation of relevant General Plan policies and programs and compliance with standard Town requirements would reduce or otherwise mitigate potential vibration-related impacts to less than significant levels under both project alternatives.

Similar to the proposed Specific Plan, the two alternatives do not propose land uses that would generate significant stationary sources of vibration, such as from heavy equipment operations. Operational-related vibration sources would be limited to electrical and mechanical equipment consistent with existing land uses in the Planning Area. Future commercial/industrial projects proposed near sensitive receptors would be required to prepare focused noise studies and implement mitigation where necessary to reduce vibration impacts to less than significant levels (General Plan Program 1.B.6). Therefore, operational vibration impacts are expected to be less than significant under both project alternatives, and comparable to the impacts of the proposed Project.

3.13.4 Mitigation Measures

As is the case with the proposed Project, the implementation of Mitigation Measure NOI-1 will assure that noise impacts associated with both alternatives will be less than significant.

3.13.5 Environmental Superior Alternative

Alternative 2 will result in the fewest residential units and lowest commercial square footage compared to the proposed Project and Alternative 1. Therefore, Alternative 2 can be expected to generate the least noise and vibration and subject the smallest population to potential noise and vibration impacts. It would also implement the Village Specific Plan that guides land use planning in the Planning Area and addresses land use compatibility on a broad scale, thereby reducing, to some extent, potential noise conflicts on adjacent and surrounding

parcels. For these reasons, Alternative 2 is arguably the environmentally superior alternative. However, all alternatives, including the proposed Project, would comply with the same Town requirements which would reduce or mitigate noise and vibration impacts to less than significant levels.

3.14 Population and Housing

3.14.1 Introduction

This section of the EIR analyzes the potential impacts of the Project Alternatives related to population and housing. It also addresses impacts associated with environmental justice in a broad context the considers whether the physical changes associated with the Alternatives would result in indirect adverse social or economic impacts.

3.14.2 Existing Conditions

Population
As discussed in Section 2.14, the Town of Apple Valley population was estimated at 74,350 in January 2021.[1] The Southern California Association of Governments (SCAG) projects the population will grow to 101,400 by 2045. The Project Planning Area has an estimated population of 850 residents.

Housing
The California Department of Finance estimates that there are 27,173 dwelling units in Apple Valley, the majority of which (77%) are single-family detached units. The average household size is 2.94 persons, and the vacancy rate is 7.5%.[2] The Project Planning Area includes approximately 289 dwelling units consisting of 173 mobile homes, 115 multi-family units, and 1 single-family unit.

Employment
The Apple Valley workforce consists of 26,261 residents ages 16 and over, and the largest employment industry sectors are: 1) educational services, health care, social service (25.2%), 2) retail trade (14.9%), and 3) transportation, warehousing, utilities (10.2%).

Jobs in the Planning Area represent a broad range of industries, including retail, food service, professional/administrative, transportation/warehousing/utilities, public administration, recreation, and health care.

1 Table 2: E-5 City/County Population and Housing Estimates, California Department of Finance, January 1, 2021.
2 Ibid.

Disadvantaged Communities
There are no disadvantaged communities in Apple Valley or the Project Planning Area, as identified by CalEPA on CalEnviroScreen 4.0.

3.14.3 Alternatives Impact Analysis

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Alternatives 1 and 2 would result in new homes, businesses, and infrastructure extensions that would have direct and indirect impacts to population growth. Impacts and comparisons to the proposed Project are summarized in Table 3.14-1 and discussed below.

Table 3.14-1
Buildout Comparison: Alternative 1, Alternative 2, and Proposed Project

	Alternative 1 (No Project)	Alternative 2 (Reduced Intensity)	Proposed Project
Residential (dwelling units)			
Existing	289	289	289
Potential New	500	237	682
Buildout Total	789	526	971
Population[1]			
Existing	850	850	850
Potential New	1,470	697	2,005
Buildout Total	2,320	1,547	2,855
Commercial/Public Facility (sq. ft.)			
Existing	1,823,380	1,823,380	1,823,380
Potential New	5,413,585	2,311,980	6,067,523
Buildout Total	7,236,965	4,135,360	7,890,903

[1] Based on 2.94 persons per household, California Dept. of Finance, Table E-5, January 1, 2021.

Alternative 1 (No Project/Existing Zoning)

New Homes
Maximum buildout of Alternative 1 could result in up to 500 new dwelling units and 1,470 residents in the Planning Area. According to the 2009 General Plan, the Town has the potential to accommodate 31,716 additional dwelling units and 96,829 additional residents within the Town boundaries through General Plan buildout.[3] The housing and population increases facilitated by Alternative 1

[3] Apple Valley General Plan, Table II-3 and page II-12.

represent only 1.6% of the General Plan's projected remaining housing and population capacity. Similarly, SCAG projects the Town will have 37,400 households and 101,400 residents by 2045.[4] The additional housing and population increases associated with Alternative 1 represent only 1.4% of the SCAG's growth projections. Therefore, Alternative 1 housing and population growth is within, and only a marginal percentage of, growth forecasts for Apple Valley. Impacts would be less than significant.

Impacts of Alternative 1 housing growth would be similar to that of the proposed Project. Both Alternatives would result in additional housing in the Planning Area and directly increase the population. Maximum buildout of Alternative 1 would result in 182 fewer dwelling units (26% decrease) and 535 fewer residents (26% decrease) than the proposed Project. However, growth in the Town is planned and anticipated. Alternative 1 would be well within Town and SCAG anticipated growth projections, and the impacts would be less than significant.

New Businesses

Maximum buildout of Alternative 1 could result in up to 5,413,585 additional square feet of commercial/service/office/public facility uses in the Planning Area. The General Plan determined that the Town could accommodate 37,205,344 additional square feet of commercial uses through General Plan buildout.[5] The square footage increase associated with Alternative 1 accounts for approximately 15% of the remaining square footage capacity cited in the General Plan. Therefore, Alternative 1 business growth is within the projections of the General Plan and represents a limited percentage of anticipated commercial growth.

Alternative 1 business growth would be slightly less than that of the proposed Project. Maximum buildout of Alternative 1 would result in 653,938 fewer square feet (11% less) than the proposed Project. Both Alternatives would result in new commercial/service/office/public facility square footage in the Planning Area, which could indirectly attract new residents to the Town. However, it is anticipated that most new jobs would be filled by residents of Apple Valley or neighboring communities who are either current residents or move to the area as part of the growth projected for the future. Business growth in the Planning Area is planned and anticipated. Both Alternative 1 would be within, and only a limited percentage of, the projections cited in the General Plan. Impacts of new businesses on population growth would be less than significant.

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4 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy, Demographics and Growth Forecast Technical Report, Southern California Association of Governments, Table 14.

5 Apple Valley General Plan Table II-4 (total potential commercial sq. ft. in Town boundaries at buildout = 44,550,054), and Apple Valley General Plan EIR Table III-39 (existing commercial sq. ft. in Town boundaries = 7,344,710).

Extension of Roads/Infrastructure

Alternative 1 would result in development of the same Planning Area as the proposed Project. Like the proposed Project, Alternative 1 would require parcel-level water and utility extensions to serve new development. However, fewer extensions would be installed because Alternative 1 would facilitate less development than the proposed Project. Eventual sewer extensions would be built in the same areas as the proposed Project and, therefore, would have the same potential to induce population growth on undeveloped parcels east, northeast, and south of the Planning Area; however, such growth would be expected to occur incrementally over time. Impacts of infrastructure extensions under Alternative 1 would have roughly the same (less than significant) impact on growth inducement as the proposed Project.

Alternative 2 (Reduced Intensity)

New Homes

Alternative 2 is the least development intensive scenario of all the Project Alternatives. Maximum buildout of Alternative 2 could result in up to 237 new dwelling units and 697 new residents in the Planning Area. These increases represent only 0.7% of the 31,716 additional dwelling units and 96,829 additional residents cited in the General Plan that could be accommodated through General Plan buildout. They represent only 0.7% of SCAG's 2045 household and population growth projections for Apple Valley. Therefore, Alternative 2 housing and population growth is within, and only a marginal percentage of, growth forecasts for the Town.

Both Alternative 2 and the proposed Project would result in additional housing in the Planning Area that would directly increase the population. However, maximum buildout of Alternative 2 would result in 445 fewer dwelling units (65% decrease) and 1,308 fewer residents (65% decrease) than the proposed Project. Nonetheless, growth in the Town is planned and anticipated. Alternative 2 would be well within Town and SCAG anticipated growth projections, and the impacts on population growth would be less than significant.

New Businesses

Maximum buildout of Alternative 2 could result in up to 2,311,980 additional square feet of commercial/service/office/public facility uses in the Planning Area. This represents 6% of the 37,205,344 additional square feet of commercial uses cited in the General Plan that could be accommodated through General Plan buildout. Therefore, Alternative 2 business growth is within the projections of the General Plan and represents a limited percentage of anticipated commercial growth.

Alternative 2 business growth would be less than that of the proposed Project. Maximum buildout of Alternative 2 represents 3,755,543 fewer square feet (62% decrease) than the proposed Project. Alternative 2 could indirectly attract new residents to the Town; however, it is anticipated that most new jobs would be filled by residents or neighboring communities, much like Alternative 1. Business growth in the Planning Area is planned and anticipated. Both Alternative 2 and the proposed Project would be within, and only a limited percentage of, General Plan growth projections. Impacts of new businesses on population growth would be less than significant.

Extension of Roads/Infrastructure

Alternative 2 covers the same geographic area as the proposed Project. It would result in fewer parcel-level infrastructure extensions and temporary septic systems than the proposed Project because it would accommodate less new development. However, eventual extension of the municipal sewer system would occur in the same areas as the proposed Project and, therefore, would have the same potential to induce population growth on undeveloped parcels east, northeast, and south of the Planning Area. Such growth would be expected to occur incrementally over time. Under Alternative 2, impacts of infrastructure extensions on growth inducement would be less than significant and marginally less than those of the proposed Project.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Alternative 1 (No Project/Existing Zoning)

It is unknown whether or to what extent existing housing or people could be displaced under Alternative 1. The potential for future development and redevelopment proposals to displace housing or people would be evaluated on a project-by-project basis as they are submitted to the Town. However, given the limited scale of redevelopment that could occur in the Planning Area, and the regional housing supply in Apple Valley and the Victor Valley region, impacts of Alternative 1 on housing displacement are expected to be less than significant.

Environmental Justice

The Planning Area does not contain any disadvantaged communities, as designated by CalEPA, and therefore, the adoption and implementation of Alternative 1 would have no impact on a disadvantaged community.

The Housing Element Update analyzes affordable housing needs and constraints and includes policies and programs to address them, and the Circulation Element includes policies to promote multi-modal access throughout the community. These efforts offer general guidance for the Planning Area but do not provide

focused design and planning, a benefit that would be provided by the proposed Project. Therefore, impacts of Alternative 1 on environmental justice would be generally neutral.

Alternative 2 (Reduced Intensity)

Like the proposed Project, Alternative 2 represents a policy document that would not propose the demolition of existing housing units, but could facilitate the redevelopment of underutilized parcels, resulting in demolition of existing housing and displacement of residents. Alternative 2 has the same geographic boundaries as the proposed Project Planning Area, which has 58.36± acres of underutilized land. Table 3.14-2 estimates the number of dwelling units that potentially could be lost or gained to redevelopment of underutilized land under Alternative 2. A similar table (Table 2.14-5) for the proposed Project is provided in Section 2.14 of this EIR, and the same methods and assumptions apply to both tables (see Section 2.14.6.b).

Assuming a conservative scenario in which all underutilized acres in the Planning Area are redeveloped and all existing units on underutilized land are lost, Alternative 2 is projected to result in a net loss of 116 dwelling units. Based on the Town's average household size of 2.94 persons, 342 residents would be displaced. However, Alternative 2 designates 25± currently vacant acres in the Planning Area for future residential development, and maximum buildout of those lands would result in 353 new dwelling units. The number of replacement housing units would exceed the number of units lost by 237 units, and the new units could accommodate displaced residents. Therefore, Alternative 2 impacts associated with the displacement of people or housing would be less than significant.

A comparison of Alternative 2 and the proposed Project shows that, under Alternative 2, redevelopment could potentially result in the loss of 116 dwelling units, and development of vacant lands could result in 353 new units, for a net increase of 237 units. Under the proposed Project, redevelopment could potentially result in the loss of 23 dwelling units, and development of vacant lands could result in 705 new units, for a net increase of 682 units. The differences are because Alternative 2 allows a maximum density of 10 du/ac, whereas the proposed Project allows a maximum density of 20 du/ac. Therefore, the proposed Project can accommodate a greater number of replacement dwelling units. Regardless, both Alternative 2 and the proposed Project are expected to result in net increases in dwelling units even with redevelopment of underutilized acreage. Impacts of both Alternatives on displacement of housing and people would be less than significant.

Table 3.14-2
Alternative 2: Potential Housing Losses/Gains Due to Redevelopment of Underutilized Land

Existing Land Use Designation by District	Acres		Dwelling Units Potentially Lost/Gained due to Redevelopment of Underutilized Land[1]
	Under-utilized	Total	
District 1			
Commercial/Industrial/Office/Retail	12.23	170.64	21 units gained[2]
Medium Density Residential and Estate Residential	2.63	11.43	9 units lost to commercial development
Mobile Home Park	1.47	1.48	17 units lost to commercial development
Subtotal:	16.33	183.55	26 units lost; 21 units gained (net loss of 5 units)
District 2			
Commercial/Industrial/Office/Retail	11.76	185.08	No residential impact
Public	0	13.05	No underutilized land
Medium Density Residential	4.65	5.48	12 units lost to commercial development
Mobile Home Park	7.37	7.37	76 units lost to commercial development
Subtotal:	23.78	210.98	88 units lost
District 3			
Commercial/Industrial/Office/Retail	7.06	76.13	No residential impact
Public	0	8.11	No underutilized land
Mobile Home Park	4.00	4.00	41 units lost to commercial development
Subtotal:	11.06	88.24	41 units lost
District 4			
Commercial/Industrial/Office/Retail	0	5.58	No underutilized land
Public	0	26.76	No underutilized land
Medium Density Residential	2.51	13.25	15 units lost; 25 units gained (net gain of 10 units)
Mobile Home Park	4.69	4.69	39 units lost; 47 units gained (net gain of 8 units)
Subtotal:	7.20	50.28	54 units lost; 72 units gained (net gain of 18 units)
District 5			
Commercial/Industrial/Office/Retail	0	2.26	No underutilized land
Medium Density Residential	0	21.02	No underutilized land
Subtotal:	0	23.28	No underutilized land
Land Use Total Acres:	58.36	556.33	---
Street ROW Total Acres:	0	94.82	---
Total:	**58.36**	**651.16**	**209 units lost; 93 units gained (net loss of 116 units)**

[1] conservative estimate that assumes all existing dwelling units on underutilized parcels will be lost to redevelopment and new units may be built
[2] on 2.095 acres at the West End signature project

Environmental Justice

The Planning Area does not contain any disadvantaged communities, as designated by CalEPA, and therefore, the adoption and implementation of Alternative 2 would have no impact on a disadvantaged community.

As with the proposed Project, Alternative 2 would result in positive impacts associated with environmental justice. The same concepts of equitable access to resources and protection from environmental hazards would apply to Alternative 2, including a complete streets network that removes mobility barriers, mixed uses that can improve the jobs/housing balance, and a lack of industrial uses in the land use plan, would benefit all segments of the population. Impacts would be net positive, the same as the proposed Project.

3.14.4 Mitigation Measures

Impacts would be less than significant. No mitigation measures are required.

3.14.5 Environmental Superior Alternative

Alternative 2 would result in the fewest housing units and smallest population. In this regard, it would be environmentally superior to the other Project Alternatives. It would reduce residential densities and commercial Floor Area Ratios (FAR) to maximum 10 du/ac and maximum FAR 0.2. However, in doing so, it does not fully maximize the development potential of the Planning Area, and lower residential densities do not provide meaningful support to the variety of existing and potential future commercial goods and services that the Planning Area could accommodate. Alternative 1 would result in the next lowest development intensities, but would not provide a focused, cohesive program for residential and other development and redevelopment in the Planning Area. On the basis of land use allocation models and the numbers and densities of housing that could be facilitated by each Alternative, the proposed Project would be superior to the other Alternatives because it maximizes the development potential in the Planning Area and creates more opportunities for a range of housing products that could benefit all segments of the community.

3.15 Public Services

3.15.1 Introduction

This section of the EIR evaluates the potential for the project alternatives to directly affect public services at buildout. Public services include fire protection, police protection, school services, and other public services. The analysis considers whether implementation of the project alternatives would affect the ability of service providers to maintain acceptable service or other performance objectives, resulting in the need for new or expanded facilities, staffing or other capabilities.

3.15.2 Existing Conditions

Fire Protection
Apple Valley Fire Protection District (AVFPD) covers 206 square miles in the High Desert area of San Bernardino County. The District currently employs 51 full-time and 3 part-time and reserve personnel. The District provides paramedic level Advanced Life Support services from all front line fire apparatus. Transportation to the hospital is provided by American Medical Response (AMR), a private company. AMR leases Station 333 from the AVFPD, which is located on Highway 18 northwest of the Planning Area.

Fire Station 331 (also known as Fire Station 1) is located at 22400 Headquarters Drive in the northeastern Planning Area. Station 331 is fully staffed and serves as the AVFPD headquarters.

Police Protection
The Town of Apple Valley contracts with the San Bernardino County Sheriff's Department for public safety services. It serves as the Town of Apple Valley Police Department, which consists of 51 officers and 13 general employees. In addition to general patrol, the department also includes special teams, such as traffic division, retail theft division, and a gang unit. The Apple Valley police station is at 14931 Dale Evans Parkway, approximately two miles northwest of the Planning Area.

Schools
Apple Valley Unified School District (AVUSD) serves over 13,000 students ranging from preschool through twelfth grade and offers an adult education program in coordination with Victor Valley College. AVUSD has five elementary schools, five middle schools, two high schools, and three schools for independent study,

opportunity, and online learning. The Planning Area includes one private preschool and is in proximity to six other schools. The nearest higher education opportunity to Apple Valley is Victor Valley College (VVC), a 253-acre community college located south of Apple Valley within the City of Victorville (See Section 2.15.5 for details).

Parks
Discussion of Town parks is provided in Section 2.16, Recreational Resources, of this DEIR.

Other Public Facilities
Additional public facilities in the Planning Area include: James A. Woody Community Center on Navajo Road; Michael H. Martin Gymnasium on Navajo Road; U.S. Post Office on Highway 18; Apple Valley Municipal Animal Shelter on Powhatan Road; Apple Valley Corporate Yard on Nomwaket Road; Household Hazardous Waste Facility on Nomwaket Road; and San Bernardino County Transitional Assistance Department on Central Road.

Please see Section 2.15 for a full description of Public Services within the Planning Area.

3.15.3 Alternatives Impact Analysis

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

- ***Fire Protection***
- ***Police Protection***
- ***Schools***
- ***Parks (see Section 3.16)***
- ***Other Public Facilities***

Alternative 1 (No Project/Existing Zoning)
Alternative 1 would result in development of the same Planning Area as the proposed Project, but development would occur according to current zoning

designations and Development Code standards and guidelines. In addition to existing development, Alternative 1 would have the potential to accommodate an additional 500 residential units and 5,413,585 square feet of commercial/service/office/public uses in the Planning Area at full buildout. Compared to the proposed Specific Plan, Alternative 1 would result in 182 fewer residential units and 653,938 less commercial/public facilities square footage.

As with the proposed Project, Alternative 1 will have less than significant impacts on fire protection, police protection, schools, and other public facilities. While the Alternative 1 will facilitate population growth and increase demand for these public services and facilities, implementation of General Plan policies and standard requirements including plan review by the Fire Marshall and Police Department and payment of developer impact fees will ensure that potential impacts are less than significant. Population growth at Project buildout will not impact fire and police protection services such that they could not meet set performance targets or service levels, nor will it require additional schools other than those already planned by the AVUSD. Fees would be paid under Alternative 1, and property tax generated, although to a lesser degree. Since development would also be less intense, the reductions should be proportional, and not significantly different from the proposed Project.

Compared to the proposed Project, new development under Alternative 1 would result in lower new demand for fire protection services, police services, school services, and other public services. Therefore, impacts would be decreased compared to the proposed Project. As with the proposed Project, impacts related to public services and facilities under Alternative 1 would be less than significant with implementation of General Plan policies and standard requirements.

Alternative 2 (Reduced Intensity)

Alternative 2 would have the potential to accommodate an additional 237 residential units and 2,311,980 square feet of commercial/service/office/public uses in the Planning Area at full buildout. Alternative 2 would cover the same land (Planning Area) as the proposed Project, but result in 445 fewer residential units and 3,755,543 less commercial/public facilities square footage.

Alternative 2 will have less than significant impacts on fire protection, police protection, schools, and other public facilities with implementation of General Plan policies and standard requirements. Population growth at Project buildout will not impact fire and police protection services such that they could not meet set performance targets or service levels, nor will it require additional schools other than those already planned by the AVUSD. Fees and property taxes would be collected in lesser amounts under this alternative, but the demand for services would also be reduced.

Compared to the proposed Project, new development under Alternative 2 would result in lower new demand for fire protection services, police services, school services, and other public services. Therefore, impacts would be decreased as compared to the proposed Project. As with the proposed Project, impacts related to public services and facilities under Alternative 2 would be less than significant with implementation of General Plan policies and standard requirements.

3.15.4 Mitigation Measures

As is the case with the proposed Project, mitigation measures are not required, and impacts are less than significant.

3.15.5 Environmental Superior Alternative

At buildout, Alternative 2 would result in the fewest dwelling units and smallest population within the same Planning Area when compared to the proposed Project and Alternative 1. As a result, it is expected to require the least amount of public services and planned expansion of related facilities, including school facilities. In this regard, Alternative 2 is environmentally superior to the other project alternatives.

3.16 Recreational Resources

3.16.1 Introduction

This section of the EIR analyzes the potential impacts on parks and recreational resources associated with the Project alternatives. The Planning Area is in the high desert which provides a wide range of recreational opportunities to residents and visitors. The analysis considers whether and to what extent buildout of the alternatives and their associated populations would impact local parks and recreational facilities.

3.16.2 Existing Conditions

The Town's Park and Recreation Department is responsible for designing, operating, and maintaining public facilities that include 11 parks and playgrounds, Town Hall Recreation Center, James Woody Community Center, a gymnasium, an equestrian center, trails, and numerous ball fields. As of October 2021, the Town has a total of 340.87 acres of developed park lands, two proposed parks as part of approved Specific Plans, and approximately 27 acres of undeveloped lands planned for use as parklands. Buildout of planned and future parklands will result in a total of 432.87 acres of parkland.

Parks and recreational facilities in the Project Planning Area include the James A. Woody Park and Community Center and Michael H. Martin Gymnasium. None of the planned/future park sites are located within the Project Planning Area. See Section 2.16 for a detailed discussion of park standards and existing conditions.

In the Planning Area, bikeways are only in two locations: 1) Class II bike lane on both sides of Navajo Road north of Highway 18, and 2) substandard Class I bike path on the south side of Yucca Loma Road west of Algonquin Road. Although this pathway exists, it is in poor condition, has no curbs or rest facilities, and is unmarked. Lifeline Trails are in the westerly portion of the Planning Area on: 1) Navajo Road north of Highway 18, 2) rear property line of parcels fronting on the north side of Highway 18 and Pine Ridge Avenue, terminating at the rear property line of Del Taco, and 3) rear property line of parcels fronting the south side of Highway 18 and Rancherias Road, terminating at Yucca Loma Road.

In addition, the Planning Area has Bridle Easements/Trails, which are recorded easements that are mapped and known to be used for equestrian use; however, they are not improved or marked. Bridle Trails are located along: 1) the rear property line of parcels fronting the north side of Highway 18 and Arapahoe

Avenue, 2) rear property line of parcels on east side of Navajo Road, south of Michael Martin Gymnasium, and 3) rear property line of parcels on west side of Navajo Road, south of Powhatan Road.

The Town aims to provide Class-I bike paths or multi-use paths along most major roads, including segments of Highway 18, Navajo Road, Yucca Loma Road, Esaws Avenue, and Central Road in the Project Planning Area.

3.16.3 Alternatives Impact Analysis

a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.

Alternative 1 (No Project/Existing Zoning)
Alternative 1 would result in development of the same Planning Area as the proposed Project, but development would occur in accordance with current zoning designations and Development Code standards and guidelines. In addition to existing development in the Planning Area, Alternative 1 would have the potential to accommodate 500 residential units, 5,413,585 square feet of commercial/service/office/public uses, and 1,470 residents in the Project area at full buildout. Compared to the proposed Project, Alternative 1 would result in 182 fewer residential units, 653,938 less commercial/public facilities square footage, and 535 fewer residents.

As discussed in Section 2.16.6,a, the Town currently provides around 4.6 acres of parkland per 1,000 residents, which is slightly below the five acres for every 1,000 residents standard set in the Development Code Section 9.71.055(C). Buildout of Alternative 1 would occur gradually with a comparable timeframe to General Plan buildout. Total parkland areas including planned and future parklands (432.87 acres) would exceed the Town's goal of 5 acres per 1,000 residents. Because Alternative 1 would result in a smaller buildout population than the proposed Project, Alternative 1 would result in a higher parkland to population ratio, which will also exceed the Town's established standard. Therefore, Alternative 1 is not expected to result in a significant demand for new or expanded parks or other recreational facilities.

Alternative 1 will facilitate population growth in the Planning Area, which would incrementally increase the demand on existing neighborhood and community parks in Apple Valley. As with the proposed Project, the increased demand placed on park and recreational facilities would be met through a combination of site-specific improvements, private recreational facilities, and payment of in-lieu fees or dedication of land to the Town. Developers will be required to pay the

in-lieu parkland fee or dedicate land per Development Code Section 9.71.055, depending on development type. Exemptions for certain redevelopment projects and partial credit for private park and recreational facilities may apply in the calculation of park in-lieu fees. Implementation of existing requirements in the Development Code and General Plan would reduce potential impacts under Alternative 1 on Town parks and recreation facilities to less than significant levels.

It is important to note that Alternative 1 would not result in implementation of the proposed Village Specific Plan or its planned multi-modal improvements that include an expanded and coordinated system of pedestrian, bicycle, and multi-modal pathways in the Planning Area. Existing sidewalks and bicycle facilities would continue to be in their current condition, which is absent in some areas and fragmented and/or unsafe in others. The buildout of Alternative 1 would result in new sidewalks and some on-street bike paths, consistent with the General Plan, but would not provide the improvements of parkways and enhanced facilities provided in the Specific Plan. As a result, Alternative 1 would have fewer multi-modal facilities and associated improvements.

Alternative 2 (Reduced Intensity)
Alternative 2 would have the potential to accommodate an additional 237 residential units, 2,311,980 square feet of commercial/service/office/public uses, and 697 residents in the Project Planning Area at full buildout. Alternative 2 would cover the same land (Planning Area) as the proposed Specific Plan, but result in 445 fewer residential units, 3,755,543 less commercial/public facilities square footage, and 1,308 fewer residents.

Total parkland areas including planned and future parklands (432.87 acres) would exceed the Town's goal of 5 acres per 1,000 residents set forth in the Development Code Section 9.71.055(C). Because Alternative 2 would result in a smaller buildout population than the proposed Project, Alternative 2 would result in a higher parkland to population ratio, which will also exceed the Town's established standard. Therefore, Alternative 2 is not expected to result in a significant demand for new or expanded parks or other recreational facilities.

Alternative 2 will facilitate population growth in the Planning Area, which would incrementally increase the demand on existing neighborhood and community parks in Apple Valley. As with the proposed Project, the increased demand placed on park and recreational facilities would be met through a combination of on-site public improvements (including new and/or expanded bicycle and multi-modal facilities), private recreational facilities, and payment of in-lieu fees or dedication of land to the Town. Developers will be required to pay the in-lieu parkland fee or dedicate land per Development Code Section 9.71.055, depending on development type. Implementation of existing requirements in the

Development Code and General Plan would reduce potential impacts under Alternative 2 on Town parks and recreation facilities to less than significant levels.

The multi-modal improvements proposed in the Specific Plan will also be implemented under Alternative 2, which consists of an integrated pedestrian and bicycle network with multi-use paths. Multi-use paths are proposed on Highway 18, Navajo Road, Central Road, Esaws Avenue, and Yucca Loma Road in the Planning Area. The multi-use paths, pedestrian and bicycle routes will provide both alternative transportation and recreational opportunities for future residents.

Under Alternative 2, the nature of future residential and mixed-use development within the Planning Area would consist of planned communities through new development or redevelopment projects. Future development would dedicate parkland or pay in-lieu fees to the Town, and/or provide private open space and recreational amenities to residents. Commercial development facilitated by Alternative 2 would utilize and enhance open space and landscaping to provide people with places to sit, relax, and gather. The incorporation of recreational amenities within future development would help offset the demand of future residents for the Town's existing parks and recreational facilities and further reduce potential impacts.

b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

Alternative 1 (No Project/Existing Zoning)
Alternative 1 represents the continuation of existing conditions in the Project Planning Area. Any future construction or improvement projects affecting recreational amenities in the Planning Area would be subject to Development Code and General Plan requirements and guidelines, and review by Town staff and the police and fire departments. Potential impacts and the need for mitigation measures would be evaluated on a project-by-project basis. With adherence to these standard requirements, impacts of new or expanded recreational facilities under Alternative 1 would be less than significant.

Alternative 2 (Reduced Intensity)
Like the proposed Project, Alternative 2 would implement a Specific Plan that facilitates construction of private recreational amenities throughout the Planning Area. Such recreational amenities would be constructed concurrently with individual developments within the Planning Area, and potential impacts and mitigation measures would be evaluated on a project-by-project basis to assure any adverse physical effects would be less than significant.

Like the proposed Project, Alternative 2 would also result in an integrated network of public pedestrian, bicycle, and multi-use paths that enhance recreational opportunities and access in the Planning Area. The short-term impacts and mitigation measures associated with the construction of these facilities are addressed in this Draft EIR (as part of the whole Project), particularly Sections 3.4 (Air Quality); 3.7 (Energy Resources); 3.9 (Greenhouse Gas Emissions); and 3.17 (Traffic and Transportation). Construction of the recreational amenities would not result in significant impacts but would contribute to overall Project construction impacts. As described in the Draft EIR sections listed above, impacts of the proposed new pathway improvements under Alternative 2 would be less than significant.

3.16.4 Mitigation Measures

As is the case with the proposed Project, impacts would be less than significant for Alternatives 1 and 2, and mitigation measures are not required.

3.16.5 Environmental Superior Alternative

At buildout, Alternative 2 would result in the fewest dwelling units and smallest population within the same Planning Area when compared to the proposed Project and Alternative 1. As a result, it is expected to require the least amount of new or expanded park services and recreational resources. Alternative 2 would also implement a Specific Plan that proposes an integrated network of public pedestrian, bicycle, and multi-use paths that enhance recreational opportunities and access in the Planning Area. This benefit would not be provided by Alternative 1. In this regard, Alternative 2 and the proposed Project are environmentally superior and equivalent in their benefits to recreation and parks.

3.17 Transportation and Traffic

3.17.1 Introduction

This section of the EIR analyzes the potential impacts associated with alternatives to the proposed Project based on local and regional transportation conditions. It briefly describes existing conditions in the Planning Area and analyzes the potential impacts of the Project alternatives.

3.17.2 Existing Conditions

Highway 18 is the principal regional connector and commercial corridor of Apple Valley and the eastern part of Victor Valley. Within the Project Planning Area, it extends 1.5± miles and consists of a 4-lane highway with two (2) two-way frontage roads that separate high-speed traffic from local traffic accessing commercial sites. Pedestrian crossings on Highway 18 are limited due to the highway's 200+-foot right-of-way and nearly ½-mile distance between crossings. Other key connectors in the Planning Area include Central Road, Navajo Road, Powhatan Road, Ottawa Road, and Yucca Loma Road. Highway 18, Central Road, and Navajo Road are designated truck routes. As described in Section 2.17, Transportation and Traffic, intersections in the Planning Area are currently operating within the Town's Level of Service D standard. The only intersection of concern is Highway 18 and Navajo Road which is operating at LOS D and approaching its regulatory capacity due to an average delay of 43 seconds per vehicle. However, the intersection is not yet approaching its physical capacity.

Sidewalks and bike lanes in the Planning Area are limited, incomplete, or absent, depending on location. The Victor Valley Transit Authority (VVTA) provides public transit services to the Planning Area and broader region. The Planning Area is well served by public transit and includes five (5) bus routes and ten (10) bus stops.

Additional information about the existing circulation system in and around the Planning Area is provided in Section 2.17.

3.17.3 Alternatives Impact Analysis

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.

Alternative 1 (No Project/Existing Zoning)

LOS Policy

The Apple Valley General Plan establishes LOS D as the minimum peak hour intersection performance standard for the Town's circulation network. The San Bernardino County Congestion Management Plan (CMP) establishes LOS E as the minimum LOS standard for CMP designated roadways, including Highway 18.

Alternative 1 represents the continuation of existing conditions in which future development in the Planning Area is governed by current zoning designations and Development Code standards and guidelines. As discussed in Section 2.17.6.a (Table 2.17-5), in year 2040 without the Project, all but two intersections are projected to operate within the Town's standard of LOS D or better. The two exceptions are: 1) Highway 18 at Navajo Road, operating at LOS E in the PM peak hour, and 2) Navajo Road at Ottawa Road, operating at LOS F in the PM peak hour for traffic turning left from Ottawa Road to northbound Navajo Road. Mitigation measures would be required in the future to bring those intersections into compliance with the Town's LOS policy. These LOS exceedances are not projected to occur under the proposed Project. Compared to the proposed Project, Alternative 1 would result in worse LOS at these two intersections, because none of the improvements proposed as part of the Specific Plan would occur, and Highway 18 would continue to function as currently constructed. It would result in better LOS at the intersection of Navajo Road and Powhatan Road West, which requires mitigation under the proposed Project.

Under Alternative 1, all Highway 18 intersections in the Planning Area are projected to operate within the County's CMP LOS policy of LOS E or better. The level of impact would be comparable to the proposed Project.

Street Classifications

Under Alternative 1, street classifications in the Planning Area would continue as assigned in the General Plan (General Plan Exhibit II-6); no impact would occur. However, none of the cross section variations proposed by the Project would be implemented, which would improve traffic flow on Highway 18 and expand sidewalk and bike lane connectivity and increase on-street parking in the Planning Area.

Multi-Use Paths

Under Alternative 1, multi-use paths/Class I bike facilities would remain as designated in the General Plan (General Plan Exhibit II-10). No impact would occur. However, no Class I facility would be planned on Highway 18, and none of the multi-modal improvements of the Specific Plan would occur, which are upgrades proposed by the Project.

Bicycle Facilities

Alternative 1 represents the continued implementation of the General Plan bikeway plan (General Plan Exhibit II-10). No change to the plan would occur. However, the Planning Area would not benefit from the expanded and more comprehensive bicycle plan proposed by the Project.

Alternative 2 (Reduced Intensity)

LOS Policy

As shown in Table 2.17-7 of this EIR, at buildout of the proposed Project, all intersections in the Planning Area are projected to operate at acceptable LOS D or better, except for the intersection of Navajo Road at Powhatan Road West which is projected to operate at LOS E in the PM peak hour. Mitigation Measure TRANSP-1 (installation of a traffic signal when warranted) would reduce impacts to less than significant levels.

Compared to the proposed Project, Alternative 2 would result in the same types of land uses but 35% fewer dwelling units and 38% fewer square feet of commercial/retail/office/public facility development. Therefore, Alternative 2 would generate proportionately fewer vehicle trips, shorter intersection delays, and better LOS operations than the proposed Project. It is unclear how much the LOS would improve at the intersection of Navajo Road at Powhatan Road West. At worst, the intersection would operate at LOS E and Mitigation Measure TRANSP-1 would be needed to reduce impacts to less than significant levels, like the proposed Project. At best, the intersection would operate at LOS D or better, and no mitigation would be required. Like the proposed Project, all other intersections in the Planning Area would operate at acceptable LOS D or better under Alternative 2. Impacts would be comparable to, or better than, the proposed Project.

Street Classifications

Alternative 2 would result in implementation of the same Specific Plan as the proposed Project, which includes street classification changes and cross section variations described in Section 2.17.6.a. Changes would expand sidewalk, bikeway, parkway and on-street parking facilities in the Planning Area. Should Powhatan Road need to relieve traffic demand on Highway 18, the improvements described in Mitigation Measure TRANSP-2 would reduce impacts to less than significant levels. Impacts would be positive, less than significant with implementation of TRANSP-2, and the same as the proposed Project.

Multi-Use Paths

Like the proposed Project, Alternative 2 would implement the Specific Plan and the proposed multi-use pathway network described in Section 2.17.6.a. Impacts would be positive, less than significant, and the same as the proposed Project.

Bicycle Facilities

Alternative 2 would result in implementation of the Specific Plan and the bikeway plan described in Section 2.16.6.a. The proposed plan expands upon the current General Plan bikeway plan. Impacts would be positive, less than significant, and the same as the proposed Project.

b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b).

As explained in Section 2.17.6.b, CEQA Guidelines Section 15064.3 states that "generally, vehicle miles traveled (VMT) 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. Other relevant considerations may include the effects of the project on transit and non-motorized travel."

Section 2.17.6.b of this EIR explained that the proposed Project's baseline VMT per service population (32.7) would be just below the Town of Apple Valley General Plan Buildout VMT threshold of 33.2, and there would be no impact. It also explained that the Project's cumulative VMT per service population (34.9) would exceed the regional threshold (33.2) by about 5%; however, when retail customers are considered in the calculation of service population, the Project's cumulative VMT per service population (16.0) would be below the threshold, and impacts would be less than significant.

Alternative 1 (No Project/Existing Zoning)

According to the alternatives air quality analysis in Section 3.4 of this DEIR, Alternative 1 is estimated to result in 8% fewer vehicle miles traveled (VMT) related emissions at buildout compared to the proposed Project. Therefore, based on the proposed Project's VMT projections described above, it is expected that Alternative 1's VMT per service population would be marginally lower than the regional threshold of 33.2, and its cumulative VMT per service population would also be marginally lower than the regional threshold. VMT impacts of Alternative 1 would be less than significant.

Alternative 2 (Reduced Intensity)

According to the alternatives air quality analysis in Section 3.4 of this DEIR, Alternative 2 is estimated to result in 47.5% lower vehicle miles traveled (VMT) at buildout compared to the proposed Project. Therefore, based on the proposed

Project's VMT projections described above, it is expected that Alternative 2's VMT per service population would be less than the regional threshold of 33.2, and its cumulative VMT per service population also would be less than the regional threshold. Therefore, VMT impacts of Alternative 2 would be less than significant and better than those of the proposed Project.

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

Alternative 1 (No Project/Existing Zoning)
Under Alternative 1, the existing circulation network would remain unchanged, and no new geometric design features would be built. Development would consist of residential, commercial, and institutional land uses that are comparable to existing development in the area, and the future vehicle mix would be compatible with existing vehicles.

However, under Alternative 1, none of the proposed circulation design features described in Section 2.17.6.c of this EIR would be built, and none of their anticipated safety benefits would be realized. Improvements would occur insofar as General Plan roadway classifications would still apply, and the widening of local streets would continue as development occurred, based on the General Plan's requirements. Highway 18 would continue to operate as it currently does, with inefficiencies and safety concerns that have been documented and studied, particularly those associated with frontage roads and a lack of protected pedestrian crossings. The intersection of Yucca Loma Road at Highway 18 would continue to have access and potential safety challenges associated with its proximity to the intersection of Highway 18 and Navajo Road. Bicycle and sidewalk connectors would continue to be incomplete and/or absent in much of the Planning Area. Impacts would remain less than significant, but would be greater than either the proposed Project or Alternative 2.

Alternative 2 (Reduced Intensity)
Alternative 2 would result in implementation of the same Village Specific Plan circulation plan as the proposed Project. The geometric design features described in Section 2.17.6.c would be built to improve efficiency, safety, and connectivity in the Planning Area. Like the proposed Project, improvements would be designed, engineered, built, and maintained to meet applicable roadway and intersection safety standards, and projects would be subject to review, approval, and inspection by the Town and other agencies, as appropriate. Impacts would be positive, less than significant, and the same as compared to the proposed Project.

d) Result in inadequate emergency access.

Alternative 1 (No Project/Existing Zoning) and Alternative 2 (Reduced Intensity)
Neither of the Project alternatives propose physical changes or land use designations that would result in inadequate emergency access. Both would result in future development of buildings, signage, landscape treatments, sidewalks, and other improvements, the construction of which could temporarily impact emergency access. However, impacts would be temporary, and any lane closures or detours impacting public streets would be coordinated with the Town and emergency responders. Alternative 1 would not change the design of Highway 18, and therefore would continue to pose conflicts at frontage roads for emergency vehicles. Alternative 2 would implement the design upgrades on Highway 18, and access along this corridor would be improved.

As required, police and fire departments and other appropriate agencies would continue to review site-specific traffic control plans and inspect sites of new development projects to assure adequate emergency access is provided. Impacts would be less than significant. Alternative 1 would result in marginally greater impacts, while Alternative 2 would result in beneficial impacts.

3.17.4 Mitigation Measures

Alternative 1 (No Project/Existing Zoning)
As explained in 3.17.3.a, buildout of Alternative 1 in year 2040 is projected to result in LOS exceedances at two intersections in the Planning Area: 1) Highway 18 at Navajo Road, operating at LOS E in the PM peak hour, and 2) Navajo Road at Ottawa Road, operating at LOS F in the PM peak hour for traffic turning left from Ottawa Road to northbound Navajo Road. Future mitigation measures would be required to bring the intersections into compliance with the Town's LOS policy.

As explained in 3.17.3.b, Alternative 1's VMT per service population could potentially exceed regional thresholds, and future mitigation measures could be required to reduce impacts to less than significant levels.

Alternative 2 (Reduced Intensity)

As explained in 3.17.3.a, buildout of Alternative 2 could potentially result in LOS exceedances at the intersection of Navajo Road and Powhatan Road West, like the proposed Project. As such, Mitigation Measure TRANSP-1 would reduce impacts to less than significant levels. Should Powhatan Road require widening as it absorbs Highway 18 traffic under the roundabout scenario, Mitigation Measure TRANSP-2 would be required. These mitigation measures are the same as required for the proposed Project, and therefore, impacts would be comparable to the proposed Project.

Based on the proposed Project's VMT projections described above, it is expected that Alternative 2's VMT per service population would be less than the regional threshold of 33.2, and its cumulative VMT per service population also would be less than the regional threshold. Therefore, VMT impacts of Alternative 2 would be less than significant and would not require mitigation.

3.17.5 Environmental Superior Alternative

Alternative 1 would not improve any of the identified circulation inefficiencies or safety concerns in the Planning Area. It would not meet the Project objectives that call for enhanced connectivity and access throughout the Village, or a safe and comfortable place for pedestrians, cyclists, and motorists. Therefore, it is not the superior alternative.

Both the proposed Project and Alternative 2 propose a comprehensive circulation plan designed to improve traffic efficiencies, safety, and connectivity in the Planning Area, and both would result in construction of the same physical circulation improvements. Both would result in mixed use development and a network of multi-modal features in the Planning Area that are expected to reduce VMTs. Because Alternative 2 would result in less intense land uses (i.e., fewer dwelling units, less square footage, and fewer residents), it would generate fewer VMTs and other roadway impacts than the proposed Project. As such, it is considered the environmentally superior alternative.

3.18 Tribal Cultural Resources

3.18.1 Introduction

This section analyzes the potential impacts associated with the Project alternatives based on tribal cultural resources within or near the Planning Area. It is based on a variety of cultural resources surveys, correspondence with tribal representatives, the Apple Valley General Plan, and other resource documents.

3.18.2 Existing Conditions

As discussed in Section 2.18 of this EIR, two (2) sites of historical origin were recorded in the Planning Area. However, neither was determined eligible for the National Register of Historic Places or California Register of Historical Resources. Four (4) sites in the Planning Area are designated as local Historical Points of Interest by the Town of Apple Valley. None of these sites are related to tribal cultural resources, but rather to the Town's modern history.

No records of prehistoric cultural resources were identified within the Planning Area or ¼-mile scope, and no indicators of prehistoric human use were observed in the Planning Area. The California Native American Heritage Commission (NAHC) determined the presence of unspecified Native American cultural resource(s) in the general vicinity of the Planning Area and recommended contacting the Chemehuevi Indian Tribe and other tribes or tribal representatives for further information. In compliance with AB 52 and SB 18, the Town sent written requests regarding the Project to all tribal contacts recommended by the NAHC.

3.18.3 Alternatives Impact Analysis

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

i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

Alternative 1 (No Project/Existing Zoning)
The Planning Area contains four (4) locally designated Historical Points of Interest. None of these sites has been determined to have cultural value to a California

Native American tribe. However, previously unknown tribal cultural resources could be uncovered during construction-related activities facilitated by Alternative 1. Activities would be similar to those under the proposed Project, including grading, excavation, infrastructure improvements, and building construction. Depths of ground disturbance and requirements for cultural resources investigations and monitoring would be similar to the proposed Project and, therefore, would require avoidance, minimization, and mitigation of impacts comparable to the Project.

Tribal cultural resources are generally addressed on a site-by-site basis, and the probability of uncovering new resources or disturbing unknown resources is considered during project-level environmental review, including subsurface investigations (as warranted). Projects facilitated by Alternative 1 would be subject to the same Mitigation Measures CUL-1, CUL-2, and CUL-3 provided for the proposed Project in Sections 2.6.7 and 2.18.7 of this EIR. With mitigation, potential impacts to tribal cultural resources under Alternative 1 would be less than significant and the same as the proposed Project.

Alternative 2 (Reduced Intensity)
Like the proposed Project, Alternative 2 will facilitate new development and redevelopment in the Planning Area. Although Alternative 2 represents a less intense development scenario, the location and type of ground surface disturbances would be similar to those facilitated by the Project and, therefore, the potential to uncover previously unknown tribal cultural resources would be similar. Development occurring under Alternative 2 would be subject to the same Mitigation Measures CUL-1, CUL-2, and CUL-3 set forth for the proposed Project in Sections 2.6.7 and 2.18.7. With mitigation, impacts of Alternative 2 would be less than significant and comparable to the proposed Project.

ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Alternative 1 (No Project/Existing Zoning)
Other than designating the four (4) Historical Points of Interest, the Town has not identified other significant cultural resources in the Planning Area. Nonetheless, Alternative 1 would result in new development projects that would result in ground disturbing activities comparable to the proposed Project. Such activities would occur in the same Planning Area as the proposed Project and would involve similar types of soil disturbances. Therefore, they have the potential to unearth

previously unknown cultural resources and would be subject to the same Mitigation Measures CUL-1, CUL-2, and CUL-3 identified for the proposed Project in Sections 2.6.7 and 2.18.7. With mitigation, impacts of Alternative 1 on cultural resources would be less than significant and the same as the proposed Project.

Alternative 2 (Reduced Intensity)
Although Alternative 2 would result in a less intense development scenario than the proposed Project, it would facilitate development and redevelopment projects that would cause ground disturbances in the same Planning Area using the same grading and excavating techniques as the proposed Project, potentially impacting previously unknown cultural resources. Development projects would be subject to the same Mitigation Measures CUL-1, CUL-2, and CUL-3 provided for the proposed Project in Sections 2.6.7 and 2.18.7. Alternative 2 impacts would be less than significant with mitigation and the same as the proposed Project.

3.18.4 Mitigation Measures

Development and redevelopment projects facilitated by Alternatives 1 and 2 would be subject to the Mitigation Measures CUL-1, CUL-2, and CUL-3 identified for the proposed Project in Sections 2.6.7 and 2.18.7 of this EIR. No additional or modified mitigation measures would be required.

3.18.5 Environmental Superior Alternative

The proposed Project, Alternative 1, and Alternative 2 encompass the same Planning Area and would facilitate future development and/or redevelopment of the same parcels. Differences in land use designations or development intensities are irrelevant to tribal cultural resources because such resources could be uncovered during any ground-disturbing activity. Regardless of which Alternative is in place, future development projects would be required to comply with the same regulations and mitigation measures. All Alternatives would result in essentially the same level of impact and, therefore, there is no environmentally superior alternative.

3.19 Utilities and Service Systems

3.19.1 Introduction

This section of the EIR evaluates the potential for the project alternatives to directly affect utility services. Utility systems include water, wastewater, stormwater drainage, and solid waste facilities, as well as electricity, natural gas, and telecommunications services within the Project Planning Area and the surrounding region. The analysis considers whether implementation of the project alternatives would affect the ability of service providers to maintain acceptable service or other performance standards, resulting in the need for new or expanded facilities or other capabilities.

3.19.2 Existing Conditions

Water Service

Liberty Utilities provides domestic water service to the majority of Apple Valley, including the Project Planning Area. The Liberty-Apple Valley system has provided water service for 70 years. In 2020, the system-wide water supply/demand totaled 14,979 acre-feet for 20,957 connections.[1] The Liberty - Apple Valley system obtains 100% of its source water from 18 deep wells located throughout the service area. These wells draw water from the Alto sub-unit of the Mojave ground water basin, which is recharged from snowmelt from the San Bernardino Mountains to the south and the Mojave River to the west. The Mojave Water Agency (MWA) also imports water from the California State Water Project to spread in the Mojave River to help recharge the groundwater.

Wastewater Service

The Town owns and operates a relatively new municipal sewer system. The Department of Public Works Wastewater Division operates and maintains approximately 140 miles of collector sewer, trunk lines and interceptors as well as nine sewer lift (pump) stations. The Town's sewer system conveys wastewater to the Regional Wastewater Reclamation Facility (RWWRF) operated by Victor Valley Wastewater Reclamation Authority (VVWRA) in Victorville. The plant currently treats approximately 10.7 million gallons per day (mgd) and has a design capacity of 18 mgd, with planned future expansions.[2] The Apple Valley Subregional Water Recycling facility located at Brewster Park was completed in 2018. It can produce one million gallons per day of recycled water, which is used to irrigate Brewster Park and the Civic Center Park. The facility only treats

[1] Liberty Utilities – Apple Valley 2020 Urban Water Management Plan Final Draft, June 2021.
[2] FINAL Interceptor Risk Analysis, prepared for: Victor Valley Water Reclamation Authority, June 2021.

wastewater and returns solid waste to the sewer line where it continues to the RWWRF in Victorville for treatment. Therefore, for analysis purposes, this EIR compares potential wastewater generation to the RWWRF capacity. The Village Specific Plan identified proposed improvements in the Infrastructure Plan (Specific Plan Exhibit 5.8).

Electricity

Southern California Edison (SCE) provides electricity service to the Town of Apple Valley and many of the surrounding areas, serving approximately fifteen million people within a service area of approximately 50,000 square miles. According to the Town of Apple Valley Climate Action Plan 2019 Update, Town-wide electricity demand in Apple Valley in 2019 was 329,848,695 kWh.

Apple Valley Choice Energy (AVCE) is a community choice aggregation program created by the Town of Apple Valley to provide more affordable electricity and cleaner energy choices.

Natural Gas

Southwest Gas Corporation (SWG) provides natural gas service to the Town and the Planning Area through a series of pipelines of various sizes and pressure capabilities. SWG has a network of high-pressure natural gas corridors, and the nearest to the Project Planning Area are generally on the border of the Planning Area along Central Road (8 inch and 12 inch) and Ottawa Road (8 inch). Distribution lines ranging from 2 to 8 inches in diameter are located within most public rights-of-way. According to the Town of Apple Valley Climate Action Plan 2019 Update, Town-wide natural gas demand in Apple Valley in 2019 was 15,526,732 therms.

Telecommunications

Frontier and Charter Spectrum provide telecommunications services such as telephone, high-speed Internet service, and cable television to the high desert region, including the Town of Apple Valley and the Project Planning Area.

Solid Waste Management

The Town contracts with Burrtec for solid waste collection and disposal services. Burrtec's AVCO Disposal collects non-hazardous solid waste and hauls it to the Victorville Landfill operated by San Bernardino County. With 341 disposal acres out of 491 total acres, Victorville Landfill is permitted to receive up to 3,000 tons daily.[3] Its remaining capacity is estimated at 79,400,000 cubic yards,[4] and the estimated closing date is October 2047.[5]

[3] https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1870?siteID=2652, accessed October 15, 2021.

[4] Ibid.

[5] County of San Bernardino Solid Waste Facility Permit, Facility Number 36-AA-0045, issued June 2, 2010.

Please see Section 2.19.5 for a detailed discussion on existing conditions of utility services in the Planning Area.

3.19.3 Alternatives Impact Analysis

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. *(see Section 2.11 addressing stormwater)*

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.

c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

Projected development would increase demand for water, wastewater treatment, storm water drainage, electric power, natural gas, and telecommunications services. Depending on location, new connections would receive utility services from the existing utility providers. As discussed in Section 2.19.6, the utility providers actively plan for and are expected to have adequate capacity to serve new connections/development or expanded service depending on the actual rate of growth in their respective service boundaries.

Alternative 1 (No Project/Existing Zoning)
Alternative 1 covers the same Planning Area as the proposed Project, but development would be in accordance with current zoning designations and Development Code standards and guidelines. Alternative 1 would have the potential to accommodate an additional 500 residential units and 5,413,585 square feet of commercial/service/office/public uses in the Planning Area at full buildout. Compared to the proposed Specific Plan, Alternative 1 would result in 182 fewer residential units and 653,938 fewer square feet of commercial/service/office/public facilities.

<u>Domestic Water Supply</u>
As discussed above, Liberty Utilities provides domestic water service to the Planning Area. The Liberty – Apple Valley system has a total supply of 14,979 acre-feet (AF) as of 2020. As discussed in Section 3.11, at full buildout, Alternative 1 would require 831.65 AF of water annually, which represents an additional 402.43

AF or 112.6% increase from the estimated existing demand (429.22 AF). The net Project water demand of 402.43 AFY represents less than 2.7% of the 2020 water supply (14,979 AFY) from Liberty Utilities, and less than 2.2% of the 2045 water supply (18,538 AFY) for 2040.[6]

Table 3.19-1
Alternative 1 Estimated Water Demand

Land Use[1]	Annual Water Demand Factor[2]	Existing Development	Existing Water Demand (acre feet per year, or AFY)	Future Development[3]	Additional Water Demand (AFY)	Total Water Demand (AFY) at Specific Plan Buildout
Residential	80,784 gallons per unit	289 units	71.65	500 units	123.96	195.61
Commercial /Service /Office /Public	365,000 gallons per acre	220.2 acres	246.66	248.6 acres	278.47	525.13
Open Space (park)	1,922,302.8 gallons per acre	18.8 acres	110.91	0 acres	0	110.91
Total	-	-	**429.22**	-	**402.43**	**831.65**

[1] Based on Apple Valley Village Specific Plan Existing and Proposed Land Uses Tables.
[2] Residential water demand factor based on Golden State Water Company average residential account monthly usage (6,732 gallons) in Apple Valley. Commercial/Service/ Office/Public water demand factor based on 2021 Water Master Plan Update for the City of Victorville. Open Space water demand is based on a factor for turfgrass in desert climate (44.13 gals per square foot per year) developed by the U.S. Department of Energy.
[3] Future development accounts for new development on currently vacant land and does not include redevelopment.

According to Liberty Utilities' 2020 Urban Water Management Plan, based on historical and on-going management practices, Liberty Utilities will be able to rely on the Mojave Basin Area for adequate supply over the next 25 years during a normal year, a single-dry year and a five consecutive year drought. In addition, there are potential water supply projects and programs that may allow Liberty Utilities to enhance and augment existing water supplies, including water transfer opportunities and recycled water beneficial uses. Future development under Alternative 1 will also be required to install water-efficient appliances in buildings per the latest California Building Code (Title 20 – Appliance Efficiency Regulations).

Similar to the proposed Project, buildout of the Alternative 1 would result in increased demand for domestic water as the population increases and development occurs in the Planning Area. However, projected water demand would be less than that of the proposed Project.

[6] 14,979 AFY for 2020 and 18,538 AFY for 2045 are provided in the Liberty Utilities – Apple Valley 2020 Urban Water Management Plan Final Draft, June 2021.

The Town will work with Liberty Utilities to assure sufficient water would be available in the future during normal, dry and multiple dry years. Due to sufficient groundwater resources and existing regulations to conserve water resources, Alternative 1 buildout would result in less than significant impacts related to water resources.

Domestic Water Infrastructure

There are existing Liberty Utilities water lines within the Planning Area ranging from 4" to 12" in size. The Town requires new development in the Planning Area to provide water service and extend water infrastructure as development occurs. Water improvements will be constructed on an as needed basis as a condition of approval for future projects developed under Alternative 1. Extension of water lines is expected to have less than significant impacts because the physical expansion will be limited to the Planning Area and nearby rights-of-way, and any redevelopment that occurs under Alternative 1 will facilitate more water-efficient new buildings and fixtures. Impacts would be similar to those of the proposed Project.

Wastewater Services and Infrastructure

The Town's local wastewater collection system covers most of the developed portions of the Planning Area, with existing lines ranging from 4" to 21" in size. The Town adopted a Sewer Connection Policy in 2006 that requires new development to connect with sewer facilities where the parcel is within one-half mile of existing sewer facilities, which would include the entire Planning Area. The Victor Valley Wastewater Reclamation Authority (VVWRA) in Victorville currently treats approximately 10.7 million gallons per day (mgd) and has a design capacity of 18 mgd, with planned future expansions.[7]

As shown in Table 3.19-2, at full buildout, Alternative 1 would generate 887,775 gallons of wastewater per day (gpd), which represents an additional 495,400 gpd or 126.3% increase from the estimated existing demand (392,375 gpd). The net Alternative 1 wastewater generation of 495,400 gpd (equivalent to 0.495 million gallons per day, mgd) represents less than 2.8% of the RWWRF's design capacity.[8]

Alternative 1 buildout would increase the amount treated at RWWRF from 10.7 mgd to 11.2 mgd, which is well below its capacity (18 mgd). VVWRA plans future expansions to the RWWRF based on the regional demand in its service area, including a series of 2030 projects recommended in the Interceptor Risk Analysis

7 FINAL Interceptor Risk Analysis, prepared for: Victor Valley Water Reclamation Authority, June 2021.
8 Ibid.

prepared in 2021.[9] The Town also plans improvements to the local sewer system in response to demand through its Sewer System Management Plan, which was last updated in 2019.[10]

Table 3.19-2
Alternative 1 Estimated Wastewater Generation

Land Use[1]	Daily Wastewater Generation Factor[2]	Existing Development	Existing Wastewater Generation (gallons per day, gpd)	Future Development[3]	Additional Wastewater Generation (gpd)	Total Wastewater Generation (gpd) at Specific Plan Buildout
Residential	245 gallons per unit	289 units	70,805	500 units	122,500	193,305
Commercial /Service /Office	1,500 gallons per acre	191.1 acres	286,650	248.6 acres	372,900	659,550
Public Facility	1,200 gallons per acre	29.1 acres	34,920	0 acres	0	34,920
Total	-	-	**392,375**	-	**495,400**	**887,775**

[1] Based on Apple Valley Village Specific Plan Existing and Proposed Land Uses Tables. Open Space (park) use is assumed not to generate wastewater and not included.
[2] Wastewater generation factors based on Sewer System Management Plan (SSMP) Update, Town of Apple Valley, September 10, 2019.
[3] Future development accounts for new development on currently vacant land and does not include redevelopment.

Redevelopment and new development under Alternative 1 would be required to connect to the sewer system and help phase out existing septic tanks. As discussed above, future development will be required to install water-efficient appliances in buildings per the latest California Building Code (Title 20 – Appliance Efficiency Regulations), which will help reduce wastewater generation.

Like the proposed Project, Alternative 1 would increase the demand for wastewater collection and treatment services. However, wastewater generation would be less than that of the proposed Project. Buildout of Alternative 1 will occur gradually over time and require new sewer lines at individual development sites or adjacent right-of-way. Based on the capacity analysis, Alternative 1 is not expected to require new or expanded wastewater treatment facilities. As VVWRA carries out future projects on new or expansion of wastewater treatment facilities, each facility would be evaluated on a project-by-project basis to assure that environmental impacts are minimized or mitigated, as needed. Overall, Alternative 1 buildout would result in a less than significant impact related to wastewater treatment facilities.

9 Ibid.
10 Sewer System Management Plan (SSMP) Update, Town of Apple Valley, September 10, 2019.

Stormwater Drainage Facilities

As with the proposed Project, new and existing development under Alternative 1 is subject to the Town's Ordinance 407 (incorporated in the Development Code), which establishes storm water runoff provisions for all new and existing development within the Town. As individual projects are proposed under Alternative 1, the increased runoff from new impervious surfaces may be addressed through use of on-site stormwater detention or retention, which for compliance with NPDES typically include bio-remediation areas to break down potential pollutants and capture of sand and sediment before and during percolation and before surface discharge.

Alternative 1 represents a continuation of existing conditions. There are currently two trapezoidal channels (77 cfs in capacity) parallel to the north and south of Highway 18, which terminate near a wash on the northwest corner of Central Road and Highway 18. No Specific Plan would be implemented, and improvements would not be planned or implemented as a coordinated, area-wide project as proposed in the Village Specific Plan.

The Town has established per unit developer impact fees for storm drainage facilities for residential and commercial/industrial development to offset the cost of improvements due to increased development. Therefore, Alternative 1 is not expected to have any significant impact on new or expanded additional drainage facilities, but also would not provide the regional improvements provided under the proposed Project or Alternative 2.

Electricity

According to the Project Air Quality Analysis (see Appendix B), at Alternative 1 buildout, the Planning Area is projected to consume 91,146,890 kWh per year (see Table 3.7-1, Section 3.7 of this DEIR), which would be equivalent to approximately 27.6% of annual Town-wide usage in 2019 and less than that of the proposed Project buildout. The projections are considered conservative, because the air quality analysis did not include specific energy-related mitigation measures for the operational phase, and the demand estimate is based on maximum gross building square footage rather than occupied space.

Alternative 1 buildout is not expected to have a significant adverse impact on SCE's ability to provide power. Development will occur in phases as individual projects are built. Future development will be subject to the latest requirements of the California Green Building Standards Code (California Building Code Part 11). Construction of future development and associated utility lines will comply with applicable Town and SCE requirements regarding installation, extensions, and connections to limit impacts to electricity infrastructure and avoid service

interruptions. In summary, no new SCE electric power facilities will need to be constructed or relocated which could cause significant environmental effects. Impacts will be less than significant.

Natural Gas

As discussed in Section 3.7 of this DEIR, at Alternative 1 buildout, the Planning Area is projected to consume 278,623 therms of natural gas per year, which would be equivalent to approximately 1.8% of annual Town-wide usage in 2019 and less than that of the proposed Project. These projections are considered conservative, because the air quality analysis did not include specific energy-related mitigation measures for the operational phase, and the demand estimate is based on maximum gross building square footage rather than occupied space.

As discussed above, future development will be subject to the latest requirements of the California Green Building Standards Code (California Building Code Part 11), which will help reduce natural gas demand. Alternative 1 is not expected to significantly impact natural gas supplies or SWG's ability to provide it. No additional natural gas facilities will need to be constructed or relocated. Impacts will be less than significant.

Telecommunication

New or physically altered cable television and internet services would be required for new development in the Planning Area under Alternative 1. When compared to the proposed Project, Alternative 1 would accommodate fewer residential units and population growth and, therefore, would result in a decreased need for cable television, internet services and related facilities to be constructed or expanded. Therefore, impacts would be decreased as compared to the proposed Project.

As with electricity and natural gas, the need for and location of new or expanded infrastructure, including communication systems, would be determined on a project-by-project basis. Overall, impacts to telecommunication facilities are expected to be less than significant.

Alternative 2 (Reduced Intensity)

Alternative 2 would have the potential to accommodate an additional 237 residential units and 2,311,980 square feet of commercial/service/office/public uses in the Project Planning Area at full buildout. Alternative 2 would cover the same land (Planning Area) as the proposed Project, but result in 445 fewer residential units and 3,755,543 fewer square feet of commercial/ service/office/public facilities.

Domestic Water Supply

As discussed in Section 3.11, at full buildout, Alternative 2 would require 754.91 AF of water annually, which represents an additional 325.69 AF or 75.9% increase from the estimated existing demand (429.22 AF). The net Alternative 2 water demand of 337.50 AFY represents less than 2.2% of the 2020 water supply (14,979 AFY) from Liberty Utilities, and less than 1.8% of the 2045 water supply (18,538 AFY) for 2040.[11]

Table 3.19-3
Alternative 2 Estimated Water Demand

Land Use[1]	Annual Water Demand Factor[2]	Existing Development	Existing Water Demand (acre feet per year, or AFY)	Future Development[3]	Additional Water Demand (AFY)	Total Water Demand (AFY) at Specific Plan Buildout
Residential	80,784 gallons per unit	289 units	71.65	237 units	58.76	130.41
Commercial /Service /Office /Public	365,000 gallons per acre	220.2 acres	246.66	238.3 acres	266.93	513.59
Open Space (park)	1,922,302.8 gallons per acre	18.8 acres	110.91	0 acres	0	110.91
Total	-	-	**429.22**	-	**325.69**	**754.91**

[1] Based on Apple Valley Village Specific Plan Existing and Proposed Land Uses Tables.
[2] Residential water demand factor based on Golden State Water Company average residential account monthly usage (6,732 gallons) in Apple Valley. Commercial/Service/ Office/Public water demand factor based on 2021 Water Master Plan Update for the City of Victorville. Open Space water demand is based on a factor for turfgrass in desert climate (44.13 gals per square foot per year) developed by the U.S. Department of Energy.
[3] Future development accounts for new development on currently vacant land and does not include redevelopment.

According to Liberty Utilities' 2020 Urban Water Management Plan, based on historical and on-going management practices, Liberty Utilities will be able to rely on the Mojave Basin Area for adequate supply over the next 25 years during a normal year, a single-dry year and a five consecutive year drought. In addition, there are potential water supply projects and programs that may allow Liberty Utilities to enhance and augment existing water supplies, including water transfer opportunities and recycled water beneficial uses. Future development under Alternative 2 will also be required to install water-efficient appliances in buildings per the latest California Building Code (Title 20 – Appliance Efficiency Regulations).

[11] 14,979 AFY for 2020 and 18,538 AFY for 2045 are provided in the Liberty Utilities – Apple Valley 2020 Urban Water Management Plan Final Draft, June 2021.

Similar to the proposed Project, buildout of Alternative 2 would result in increased demand for domestic water as the population increases and development occurs in the Planning Area. However, water demand would be less than projected at buildout of the proposed Project.

The Town will work with Liberty Utilities to assure sufficient water would be available in the future during normal, dry and multiple dry years. Due to sufficient groundwater resources and existing regulations to conserve water resources, Alternative 2 buildout would result in less than significant impacts related to water resources; no mitigation is required.

Domestic Water Infrastructure

There are existing Liberty Utilities water lines within the Planning Area ranging from 4" to 12" in size. The Specific Plan Infrastructure Plan identified proposed 12" water lines, mainly along the north side of Highway 18 and Powhatan Road (Specific Plan Exhibit 5.7), which will also be implemented under Alternative 2. The Town requires new development in the Planning Area to provide water service and extend water infrastructure as development occurs. Water improvements will be constructed on an as needed basis as a condition of approval as development occurs. Extension of water lines are expected to have less than significant impacts because the physical expansion will be limited within the future development site and nearby right-of-way, and redevelopment under Alternative 2 will facilitate more water-efficient new buildings and drought-tolerant desert landscaping. Impacts would be comparable to the proposed Project.

Wastewater Services and Infrastructure

The Town adopted a Sewer Connection Policy in 2006 that requires new development to connect with sewer facilities where the parcel is within one-half mile of existing sewer facilities, which would include the entire Planning Area.

The VVWRA plant currently treats approximately 10.7 million gallons per day (mgd) and has a design capacity of 18 mgd, with planned future expansions.[12] As shown in Table 3.19-4, at full buildout, Alternative 2 would generate 807,905 gallons of wastewater per day (gpd), which represents an additional 415,530 gpd or 105.9% increase from the estimated existing demand (392,375 gpd). The net Alternative 2 wastewater generation of 415,530 gpd (equivalent to 0.416 million gallons per day, mgd) represents approximately 2.3% of the RWWRF's design capacity.[13] Alternative 2 buildout would increase the amount treated at RWWRF from 10.7 mgd to 11.1 mgd, which is well below its capacity (18 mgd). VVWRA plans future expansions to the RWWRF based on the regional demand in its service

[12] FINAL Interceptor Risk Analysis, prepared for: Victor Valley Water Reclamation Authority, June 2021.
[13] Ibid.

area, including a series of 2030 projects recommended in the Interceptor Risk Analysis prepared in 2021.[14] The Town also plans improvements to the local sewer system in response to demand through its Sewer System Management Plan, which was last updated in 2019.[15]

Table 3.19-4
Alternative 2 Estimated Wastewater Generation

Land Use[1]	Daily Wastewater Generation Factor[2]	Existing Development	Existing Wastewater Generation (gallons per day, gpd)	Future Development[3]	Additional Wastewater Generation (gpd)	Total Wastewater Generation (gpd) at Specific Plan Buildout
Residential	245 gallons per unit	289 units	70,805	237 units	58,065	128,870
Commercial /Service /Office	1,500 gallons per acre	191.1 acres	286,650	238.31 acres	357,465	644,115
Public Facility	1,200 gallons per acre	29.1 acres	34,920	0 acres	0	34,920
Total	-	-	**392,375**	-	**415,530**	**807,905**

[1] Based on Apple Valley Village Specific Plan Existing and Proposed Land Uses Tables. Open Space (park) use is assumed not to generate wastewater and not included.
[2] Wastewater generation factors based on Sewer System Management Plan (SSMP) Update, Town of Apple Valley, September 10, 2019.
[3] Future development accounts for new development on currently vacant land and does not include redevelopment.

Redevelopment and new development under Alternative 2 would be required to connect to the sewer system and help phase out existing septic tanks. The Specific Plan Infrastructure Plan proposes 8" sewer lines along Nomwaket Road and between Navajo Road and Pawnee Road (Specific Plan Exhibit 5.8), which will also be implemented under Alternative 2. As discussed above, future development will be required to install water-efficient appliances in buildings per the latest California Building Code (Title 20 – Appliance Efficiency Regulations), which will help reduce wastewater generation.

Like the proposed Project, buildout of Alternative 2 would increase the demand for wastewater collection and treatment services. However, wastewater generation would be less than that of the proposed Project. Buildout of Alternative 2 will occur gradually over time and will require new sewer lines at individual development sites or adjacent right-of-way. Based on the capacity analysis, Alternative 2 is not expected to require new or expanded wastewater treatment facilities in the near future. Overall, Alternative 2 buildout would result in a less than significant impact related to wastewater treatment facilities.

[14] Ibid.
[15] Sewer System Management Plan (SSMP) Update, Town of Apple Valley, September 10, 2019.

Stormwater Drainage Facilities

As with the proposed Project, new and existing development under Alternative 2 would be subject to the Town's Ordinance 407 (incorporated in the Development Code), which establishes storm water runoff provisions for all new and existing development within the Town. As individual projects are proposed under Alternative 2, the increased runoff from new impervious surfaces may be addressed through use of on-site stormwater detention or retention, which for compliance with NPDES typically include bio-remediation areas to break down potential pollutants and capture sand and sediment before and during percolation and before surface discharge.

The Specific Plan Infrastructure Plan (Specific Plan Chapter 6) recommends a drainage concept for the Planning Area, which would be implemented under Alternative 2. The recommended drainage improvements would replace the existing channels with larger capacity box culverts in a similar layout to the existing channels. Additional catch basins at intersections of local flooding could enhance the existing system. At its outlet, a bio swale and combination basin and/or drywells would help clean up the stormwater and mitigate some of the volume.

The Town has established per unit developer impact fees for storm drainage facilities for residential and commercial/industrial development to offset the cost of improvements due to increased development. Therefore, Alternative 2 is not expected to have any significant impact on new or expanded additional drainage facilities. Impacts would be comparable to the proposed Project.

Electricity

According to the Specific Plan Air Quality Analysis (see Appendix B), at Alternative 2 buildout, the Planning Area is projected to consume 53,016,900 kWh per year (see Table 3.7-3, Section 3.7 of this DEIR), which would be equivalent to less than 16.1% of annual Town-wide usage in 2019 and less than that of the proposed Project. The projections are considered conservative, because the air quality analysis did not include specific energy-related mitigation measures for the operational phase, and the demand estimate is based on maximum gross building square footage rather than occupied space.

Alternative 2 buildout is not expected to have a significant adverse impact on SCE's ability to provide power. Development will occur in phases as individual projects are approved. Future development will be subject to the latest requirements of the California Green Building Standards Code (California Building Code Part 11). The proposed Specific Plan includes measures to promote energy efficiency through building siting and design, which will also apply to Alternative 2.

Construction of future development and associated utility lines will comply with applicable Town and SCE requirements regarding installation, extensions, and connections to limit impacts to electricity infrastructure and avoid service interruptions. In summary, no new SCE electric power facilities will need to be constructed or relocated which could cause significant environmental effects. Impacts will be less than significant.

Natural Gas

As discussed in Section 3.7 of this DEIR, at Alternative 2 buildout, the Planning Area is projected to consume 1,119,088 therms of natural gas per year, which would be equivalent to approximately 7.2% of annual Town-wide usage in 2019 and less than that of the proposed Project. These projections are considered conservative, because the air quality analysis did not include specific energy-related mitigation measures for the operational phase, and the demand estimate is based on maximum gross building square footage rather than occupied space.

As discussed above, future development will be subject to the latest requirements of the California Green Building Standards Code (California Building Code Part 11), which will help reduce natural gas demand. The proposed Specific Plan includes measures to promote energy efficiency through building siting and design, which will also apply to Alternative 2. Alternative 2 is not expected to significantly impact natural gas supplies or SWG's ability to provide it. No additional natural gas facilities will need to be constructed or relocated. Impacts will be less than significant.

Telecommunication

New or physically altered cable television and internet services would be required for new development in the Planning Area under Alternative 2. When compared to the proposed Project, Alternative 2 would accommodate fewer residential units and population growth and, therefore, would result in a decreased need for cable television, internet services and related facilities to be constructed or expanded. Therefore, impacts would be decreased as compared to the proposed Project, and would be less than significant.

d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

Alternative 1 (No Project/Existing Zoning)

Buildout of Alternative 1 would result in increased development and population in the Planning Area. As discussed in Section 3.14 (Population and Housing) of this EIR, Alternative 1 buildout would result in a population increase of approximately 1,470 new residents in the Planning Area. This increase in growth and development would result in an increase in solid waste generation and increased demand for solid waste services throughout the Planning Area. Alternative 1 buildout could result in the generation of 37,454,759.4± pounds of solid waste per year, equivalent to 18,727.4 tons per year (Table 3.19-5). Alternative 1 buildout would result in a 292.8% increase in solid waste generation, or a net increase of 27,919,435.8± pounds, equivalent to 13,959.7 tons per year. Solid waste generation under Alternative 1 would be less than that of the proposed Project.

Table 3.19-5
Alternative 1 Estimated Solid Waste Generation

Land Use[1]	Daily Generation Rate[2]	Existing Development	Existing Solid Waste Generation (pounds/lb per year)	Future Development[3]	Additional Solid Waste Generation (lb per year)	Total Solid Waste Generation (lb per year) at Buildout
Residential	12.23 lb/unit	289 units	1,290,081.6	500 units	2,231,975.0	3,522,056.6
Commercial /Service /Office	0.013 lb/SF	1,637,674 SF	7,770,763.1	5,413,585 SF	25,687,460.8	33,458,224.0
Public Facility	0.007 lb/SF	185,706 SF	474,478.8	0 SF	0	474,478.8
Total	-	-	**9,535,323.5**	-	**27,919,435.8**	**37,454,759.4**

[1] Based on Apple Valley Village Specific Plan Existing and Proposed Land Uses Tables. Open Space (park) use is assumed not to generate solid waste and not included.
[2] SF = square foot. Source: Estimated Solid Waste Generation Rates, CalRecycle, accessed October 19, 2021.
[3] Future development accounts for new development on currently vacant land and redevelopment.

State law (AB 939) requires a 50% diversion of solid waste from landfills; after diversion, solid waste disposal at Alternative 1 buildout is projected to be a net increase of 6,979.9 tons per year. The landfill serving the Town and Planning Area has a remaining capacity of at 79,400,000 cubic yards as of 2020. Waste generated annually by future development under Alternative 1 would contribute less than 0.2% to the remaining capacity as of 2020 and would not exceed the landfill capacity.[16]

The Town of Apple Valley, Burrtec Waste Industries, and the landfill serving the Town are required to comply with applicable solid waste management and reduction statutes and regulations. Alternative 1 would have no impact on their compliance with these requirements. Overall, with continuing adherence to

[16] Assumes that 1 CY of commercial and residential recyclable solid waste is equivalent to 100 lbs. (averaged). "Volume to Weight Conversion Factors," US EPA Office of Resource Conversion and Recovery. April 2016.

existing standards and regulations, Alternative 2 would maintain compliance with applicable statutes and regulations related to solid waste, and impacts would be less than significant.

Alternative 2 (Reduced Intensity)

At full buildout of Alternative 2, there will be a total of 526 residential units and 4,135,360 square feet of commercial/ service/office/public facility uses within the Planning Area. As discussed in Section 3.14 (Population and Housing) of this EIR, Alternative 2 buildout would result in a population increase of approximately 697 new residents. This would result in an increase in solid waste generation, and increased demand for solid waste services throughout the Planning Area. Alternative 2 buildout could result in the generation of 21,563,624.7± pounds of solid waste per year, equivalent to 10,781.8 tons per year (Table 3.19-6). Alternative 2 buildout would result in a 126.1% increase in solid waste generation, or a net increase of 12,028,301.3± pounds, equivalent to 6,014.2 tons per year. Solid waste generation would be less than that of the proposed Project or Alternative 1.

Table 3.19-6
Alternative 1 Estimated Solid Waste Generation

Land Use[1]	Daily Generation Rate[2]	Existing Development	Existing Solid Waste Generation (pounds/lb per year)	Future Development[3]	Additional Solid Waste Generation (lb per year)	Total Solid Waste Generation (lb per year) at Buildout
Residential	12.23 lb/unit	289 units	1,290,081.6	237 units	1,057,956.2	2,348,037.7
Commercial /Service /Office	0.013 lb/SF	1,637,674 SF	7,770,763.1	2,311,980 SF	10,970,345.1	18,741,108.2
Public Facility	0.007 lb/SF	185,706 SF	474,478.8	0 SF	0	474,478.8
Total	-	-	**9,535,323.5**	-	**12,028,301.3**	**21,563,624.7**

[1] Based on Apple Valley Village Specific Plan Existing and Proposed Land Uses Tables. Open Space (park) use is assumed not to generate solid waste and not included.
[2] SF = square foot. Source: Estimated Solid Waste Generation Rates, CalRecycle, accessed October 19, 2021.
[3] Future development accounts for new development on currently vacant land and redevelopment.

Alternative 2 buildout is projected to be a net increase of 3,007.1 tons per year, which will be subject to the same diversion requirements as Alternative 1 and the proposed Project. As discussed above, the landfill serving the Town and Planning Area has a remaining capacity of at 79,400,000 cubic yards as of 2020. Waste generated annually by future development under Alternative 2 would contribute less than 0.1% to the remaining capacity as of 2020 and would not exceed the landfill capacity.[17]

[17] Assumes that 1 CY of commercial and residential recyclable solid waste is equivalent to 100 lbs. (averaged). "Volume to Weight Conversion Factors," US EPA Office of Resource Conversion and Recovery. April 2016.

The Town of Apple Valley, Burrtec Waste Industries, and the landfill serving the Town are required to comply with applicable solid waste management and reduction statutes and regulations. Alternative 2 would have no impact on their compliance with these requirements. Overall, with continuing adherence to the requirements of AB 939 and existing standards and regulations, the Planning Area would maintain compliance with applicable statutes and regulations related to solid waste, and impacts would be less than significant.

3.19.4 Mitigation Measures

No significant adverse impacts on utilities and services are anticipated for all project alternatives and, therefore, no mitigation measures are required.

3.19.5 Environmental Superior Alternative

At buildout, Alternative 2 would result in the fewest dwelling units, smallest population, and lowest commercial square footage within the same Planning Area when compared to the proposed Project and Alternative 1. As a result, it is projected to have the least demand for water, wastewater treatment, stormwater drainage, energy, and telecommunication services. Alternative 2 is also projected to have the lowest solid waste generation. In this regard, Alternative 2 is environmentally superior to the other project alternatives.

3.20. Conclusion and Overall Environmentally Superior Alternative

Each sub-section of this alternatives analysis has considered the potential impacts of each alternative and compared them to the proposed Project on a categorical basis. Based on the analysis, and as shown in Table 3.20-1 below, the "environmentally superior" project alternative is determined to be Alternative 2, the *Reduced Intensity* buildout scenario (per CEQA 15126.6). Alternative 2, however, would not satisfy the Project's objectives to the degree that the proposed Project would, as described below.

Table 3.20-1
Environmentally Superior Alternative Comparison

Environmental Issue	Environmentally Superior		
	Proposed Project	**Alternative 1**	**Alternative 2**
Aesthetics			X
Air Quality			X
Biological Resources	Equivalent for all scenarios – full site disturbance		
Cultural Resources	Equivalent for all scenarios – full site disturbance		
Energy			X
Geology and Soils			X
Greenhouse Gas Emissions			X
Hazards and Hazardous Materials			X
Hydrology and Water Quality			X
Noise			X
Population and Housing			X
Public Services			X
Recreational Resources			X
Transportation and Traffic			X
Tribal Cultural Resources	Equivalent for all scenarios – full site disturbance		
Utilities and Service Systems			X

Discussion of Project Objectives and Alternatives

As discussed in Section 1, Project objectives were established to assist the Town in developing a reasonable range of project alternatives to evaluate in this EIR. These objectives are intended to explain the purpose of the project, and to aid the decision-makers in preparing findings. The Specific Plan identifies the following objectives:

1. Create a vibrant neighborhood that will stand the test of time.

2. Expand the identity of the Village from Highway 18 throughout the Village boundary.

3. Have a cohesive and harmonious look and feel, with inviting streetscapes and attractive building façades.

4. Enhance connectivity and access throughout the Village.

5. Create a sense of place with interesting public spaces and paseos to increase walkability.

6. Be a convenient place for locals and visitors to stop, shop, and do business.

7. Be a safe and comfortable place for pedestrians, cyclists, and motorists.

8. Attract an eclectic mix of retail, services, specialty shops, and restaurants.

9. Strengthen partnerships between the Town, the Village Property and Business Improvement District (PBID), and business and property owners to fund and implement improvements.

In addition to the above objectives, the Specific Plan's primary focus is to encourage economic growth by expanding and enhancing shopping, dining, and other consumer activity in the downtown Village area. The Planning Area must offer sufficient square footage for a wide range of commercial facilities that attract consumers from the broader region, as well as smaller-scale shops and services that serve local residents. Additional commercial square footage expands business opportunities and creates more jobs. To effectively expand its consumer and employment base, the commercial component of the Planning Area must be balanced with a sufficient residential component. Higher density residential development is needed to attract and accommodate enough residents to fill jobs and support the commercial component of the Planning Area. A larger local population that lives, works, and shops in the Planning Area also can be expected to increase use of the planned multimodal circulation improvements (i.e., sidewalks, bicycle facilities, transit) and their associated benefits, including reduced local vehicle trips and energy consumption, and improved air quality.

The proposed Project is designed to maximize the development potential of parcels in the Planning Area while also assuring densities are sensitive to and compatible with the Town's small-town character. The assumed commercial Floor

Area Ratio of 0.5 (maximum) and residential density of 20 du/ac (maximum) were selected for the proposed Project based on existing and anticipated development trends in the Town, and they are believed to reflect realistic future growth in the Planning Area.

Conclusion

In summary, Alternative 2 would meet many of the project objectives, including those regarding the Village identity and design, circulation improvements, as well as strengthening partnerships between the Town, PBID, and business and property owners. However, Alternative 2's lower floor area ratio and residential densities do not maximize buildout potential of the Planning Area. The proposed Project allows higher residential densities that would increase the number of local residents to better support local businesses, fill jobs, and would increase the use of proposed multimodal improvements that would reduce local vehicle trips and energy consumption, as well as improve air quality. For these reasons, the proposed Project is considered the superior alternative.

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4. UNAVOIDABLE SIGNIFICANT IMPACTS

Introduction

Unavoidable significant impacts are those that cannot be reduced to acceptable or insignificant levels by the implementation mitigation measures. Impacts associated with buildout of the proposed Village Specific Plan are addressed in detail in Section 2 of this EIR. Comprehensive mitigation measures, as well as monitoring and reporting programs, have been developed to address potential impacts. In most cases, the mitigation measures set forth in this Draft EIR will demonstrably and effectively reduce all potentially significant impacts to levels of insignificance. However, greenhouse gas emission levels could not be mitigated to less than significant levels and are considered unavoidable significant impacts.

Greenhouse Gas

Operational activities would result in the generation and emission of greenhouse gases, which could have significant impacts to air quality locally and regionally. There are five emission source categories that contribute either directly or indirectly to operational GHG emissions, including energy/electricity usage, water usage, solid waste disposal, area emissions (pavement and architectural coating off-gassing), and mobile sources.

According to the Mojave Desert Air Quality Management District, a project impact is considered to be significant if it generates total emissions (direct and indirect) in excess of the thresholds listed in Table 6 – Significant Emissions

Thresholds of the MDAQMD Guidelines.[1] For greenhouse gases, the annual threshold is 100,00 tons of CO_2e. As shown in Section 2.9, Table 2.9-2, Project-generated operational emissions have the potential to exceed the MDAQMD's annual greenhouse gas significance threshold by 37,128 tons of CO_2e. It is possible and expected that GHG emissions will decrease over the next 20 years due to future technology improvements, increased use of alternative modes of transportation, improved building efficiency, and increased use of renewable energy sources. However, the elective use of alternative modes of transportation and future efficiency potentials cannot be confidently quantified and applied as a mitigation measure. Therefore, operational impacts as they currently stand are not in compliance with the MDAQMD Conformity Guidelines, and impacts will be significant and unavoidable.

Implementation of the Climate Action Plan (CAP) is intended to reduce impacts associated with the emission of greenhouse gases within Town limits to the greatest extent practicable. The CAP and GHG Inventory are updated every three years to include current trends in technology, climate regulations, and to track the Town's efforts to reduce overall greenhouse gas emissions. In addition, the General Plan's Environmental Resources Element, Air Quality Policy 1.A ensures that the Town will comply with local and regional air quality standards, including future greenhouse gas and global warming rules, regulations, and requirements to monitor and reduce emissions (Program 1.A.1).

The potential GHG emissions associated with the buildout and operation of individual development projects permissible under the Village Specific Plan will be evaluated by the Town on a case-by-case basis per CEQA requirements and using project specific information to estimate GHG emissions and determine the level of impact. Project-specific construction GHG emissions will be amortized over a 30-year period and added to the project's annual operational emissions.

Cumulative Impacts

Based on the analysis above, the Village Specific Plan has the potential to make a cumulatively considerable contribution to GHG levels due to the increased emission levels. Although the proposed Specific Plan objectives, standards and guidelines include the best practicable strategies to reduce emissions associated with buildout, and are consistent with State regulations and guidelines, no additional mitigation is currently available to reduce this impact to a less than significant level. Cumulative impacts could be significant and unavoidable.

[1] "California Environmental Quality Act (CEQA) and Federal Conformity Guidelines," MDAQMD. February 2020.

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5. IRREVERSIBLE COMMITMENT OF RESOURCES

As required by CEQA Section 15126.2(c), this section of the EIR addresses the potentially significant irreversible environmental changes to or loss of non-renewable resources that could occur from implementation of the proposed Project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified. (also see Public Resources Code section 21100.1 and Title 14, California Code of Regulations, Section 15127). In general, non-renewable resources imply fossil-based energy resources, but may also pertain to the permanent loss of agricultural, biological, mineral and other natural resources. The use of non-renewable resources during construction and operation of future projects allowed by the proposed Project, and long-term impacts associated with the build out of the Village Specific Plan area may be irreversible and irretrievable.

Buildout of the proposed Project will result in the irretrievable and irreversible commitment of non-renewable natural resources, including energy resources such as petroleum and natural gas, water resources, and mineral resources used for construction materials, such as concrete and steel (See Section 2.7 Energy Resources.) Future development and redevelopment facilitated by the proposed Specific Plan would increase the demand for sand and gravel resources for roadways, infrastructure, and building construction. These resources could be derived from the regional market, but the demand for sand and gravel resources would not be considered significant when compared to available regional resources. In addition, the Town's General Plan has policies

and programs specifically designed to conserve and monitor the use of significant local mineral resources to ensure a reliable and affordable supply of materials for construction (Energy and Minerals Element, Policy 1.E).

The proposed Project would result in an overall increase in housing units, and commercial, office and institutional square footage. The development of these land uses at planned densities and intensities would also contribute to the need for additional energy supplies (i.e., natural gas, electricity). However, due to efficiencies in land use planning, the proposed Project will reduce overall vehicle miles traveled (VMT) and maintain the same overall VMT per service population at buildout (See Section 2.17 Transportation and Traffic). The reduction in VMTs is primarily due to a reduction in trip generation, combined with a shift in the relationship between residential and non-residential uses.

The annual demand for electricity (in kWh), natural gas (in therms) and transportation energy was estimated for the 2040 buildout of the proposed Specific Plan and is presented in Section 2.7. Future development facilitated by the proposed Specific Plan would be evaluated on a project-by-project basis to assure each project is designed, built, and operated in accordance with all applicable energy-related regulations, including energy efficiency and conservation standards. Energy related impacts are considered less than significant because the proposed Specific Plan would implement a number of standards and guidelines designed to minimize wasteful, inefficient, or unnecessary consumption of energy.

The proposed Specific Plan would facilitate continued urban development that could disturb or permanently affect sensitive species and/or their habitats. As discussed in Section 2.5, future development projects facilitated under the proposed Specific Plan would be evaluated on a project-by-project basis for potential adverse impacts to sensitive species and would be required to implement mitigation measures, as needed. Future development facilitated by the Specific Plan will be required to adhere to the requirements of the MSHCP/NCCP when adopted.

In summary, although the proposed Project will result in the irreversible loss of finite resources, the loss will not be significant, and is consistent with planned development goals of the Town and the objectives of the proposed Specific Plan.

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6. GROWTH INDUCING IMPACTS

Section 15126.2 of the CEQA Guidelines requires that an EIR consider and analyze a project's potential to induce growth. Growth inducement can be directly generated by a project, such as the extension of a roadway into a previously undeveloped area, or may indirectly impact growth and cause changes in the environment that could lead to growth. The degree to which the proposed Project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment is evaluated below. This section is based on the project description provided in Section 1 of this EIR, and the analysis of the various impact areas conducted in Section 2. As noted in CEQA (15126.2(e), it should not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

The proposed Project land use development scenario will not overtly, incidentally or significantly induce growth or change the physical conditions in the proposed Specific Plan area. The Planning Area is urbanized and well served by existing roads and utility infrastructure. The proposed Project includes changes in land use assignments on currently vacant lands, which if realized will improve the balance between jobs and housing and infrastructure, when compared to existing conditions. The proposed Project also improves land use adjacencies or compatibilities that improve access to employment centers, commercial services, retail, entertainment, and parks and recreation

opportunities. Nonetheless, the proposed Project will contribute to an incremental increase in growth over the long-term throughout the Planning Area. The proposed Project intends to maintain and enhance the Town's overall character, while it continues to provide expanded opportunities for housing, business and employment, and growth in other sectors of the local economy.

It should be noted that growth resulting from buildout of the proposed Project, as with all the project alternatives, is planned both on a local and regional level, through the Town's General Plan and as estimated by the Southern California Association of Governments in their Regional Transportation Plan and Regional Housing Allocation. Therefore, growth that is facilitated by the proposed Project is not of a type or extent that is inadvertently induced in the sense meant by CEQA. Growth in the Town will be highly coordinated both locally and regionally, and will continue to coordinate land use and transportation, as well as public services and utilities.

Growth associated with the implementation of the proposed Project will be regulated and limited by Specific Plan objectives, standards and guidelines, as well as Town General Plan policies and programs and the Apple Valley Municipal Code.

Cumulative Impacts

Impacts associated with the implementation of the Village Specific Plan must be considered along with the effects of other development, which may also occur outside the proposed Project Planning Area and jurisdiction. CEQA identifies these as cumulative impacts (Section 21083 (b), CEQA Statutes and Section 15355 of the CEQA Guidelines). In this EIR, cumulative impacts have been addressed categorically for the proposed Project in Section 2.0 and for project alternatives in Section 3.0.

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7. ORGANIZATIONS, PERSONS AND DOCUMENTS CONSULTED

A. Project Proponent

Town of Apple Valley
14955 Dale Evans Pkwy
Apple Valley, CA 92307

B. Environmental/Planning Consultant

Terra Nova Planning & Research, Inc.
Attn: Nicole Sauviat Criste
42635 Melanie Place, Suite 101
Palm Desert, CA 92211

C. Air Quality Consultant

Terra Nova Planning & Research, Inc.
42635 Melanie Place, Suite 101
Palm Desert, CA 92211

D. Cultural Consultant

CRM TECH
1016 East Cooley Drive, Suite A/B
Colton, CA 92324

E. Traffic Consultant

David Evans and Associates Inc.
4141 E. Inland Empire Blvd., Suite 250
Ontario, CA 91764

F. Utilities, Other Agencies & Service Providers

Apple Valley Sewer
Apple Valley Choice Energy
ADVO Disposal, Inc. (a Burrtec company)
Liberty Utilities
Charter Spectrum
Frontier
Southern California Edison
Southwest Gas Corporation (SWG)
Victor Valley Wastewater Reclamation Authority

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