Draft Environmental Impact Report

HALE AVENUE EXTENSION AND SANTA TERESA CORRIDOR WIDENING AND REALIGNMENT

SCH# 2016052076

CITY OF MORGAN HILL

December 2016

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SUMMARY

The proposed roadway project would be constructed in two phases, Phase I and Phase II. Phase I is the extension of Hale Avenue from West Main Avenue to the Dewitt/Spring Avenue intersection. Phase II is the realignment and widening of the Santa Teresa Corridor from the Dewitt/Spring Avenue intersection to Watsonville Road.

Summary of Significant Impacts and Mitigation Measures

The following table includes a summary of the potentially significant environmental impacts of the project identified and discussed within the text of the Environmental Impact Report (EIR), and the mitigation measures proposed to avoid or reduce those impacts to a less than significant level where possible. The reader is referred to the main body of text of the EIR for detailed discussions of the existing setting, impacts, and mitigation measures. Alternatives to the proposed project are also summarized at the end of the table.

Significant Impacts	Mitigation Measures
Air Quality	
Impact AQ-1: Construction activities associated with the proposed project, including both Phase I and Phase II, could temporarily generate fugitive dust in the form of PM10 and PM2.5. **(Significant Impact)**	**MM AQ-1:** The project applicant shall ensure the following measures are implemented during construction of the proposed project. • All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. • All haul trucks transporting soil, sand, or other loose material offsite shall be covered. • All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. • All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph) • All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

	• Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points. • All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. • A publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints shall be posted. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations. **(Less Than Significant Impact with Mitigation Incorporated)**
Impact AQ-2: The maximum increased residential cancer risk due to TAC emissions during construction would be 28.0 in one million for a child exposure, which exceeds the single-source threshold of 10.0 per million. The maximum modeled annual residential PM2.5 concentration would be 0.5 µg/m3, which exceeds the single-source threshold of 0.3 µg/m3. **(Significant Impact)**	**MM AQ-2:** The project shall develop a plan to demonstrate at least a 65 percent reduction in DPM emissions. This can be accomplished several ways. Below, are two examples of measures that could be implemented to achieve such reductions: • All diesel-powered construction equipment larger than 50 hp and operating on site for more than two days continuously shall meet U.S. EPA particulate matter emissions standards for Tier 4 engines or equivalent, or

	• All diesel-powered construction equipment larger than 50 hp and operating on site for more than two days continuously shall be retrofitted with CARB Level 3 Verified Diesel Emissions Control Strategy (VDECS). **(Less Than Significant Impact with Mitigation Incorporated)**
Biological Resources	
Impact BIO-1: The proposed extension of Hale Avenue (Phase I) would impact sensitive creek, drainage, and wetland habitats. **(Significant Impact)**	**MM BIO-1:** The proposed project is located within the Habitat Plan coverage area. As part of the Habitat Plan application process, a wetland delineation will be completed and the square footage of project impacts to sensitive creek, drainage, and wetland habitats will be calculated. The Habitat Plan fees paid by the project will be based, in part, upon the calculated square footage of each sensitive habitat. **(Less Than Significant Impact with Mitigation Incorporated**
Impact BIO-2: Construction of the proposed Hale Avenue alignment would result in the removal of 12 ordinance sized trees, and construction activities near the five ordinance sized trees designated to be retained could impact tree health and survival. **(Significant Impact)**	**MM BIO-2.1:** TREE PROTECTION: Unless tree removal has been previously approved, all trees located within the project shall be protected using the following minimum protection measures (these guidelines shall be included with all site development plans): • Mark all trees to be saved with a survey flag or ribbon. Do not nail or staple directly to the tree. • Erect a temporary fence enclosing an area equal to at least the dripline of the tree (or as far from the trunk as possible). This tree protection zone shall not be used for parking, storage of building materials, or other equipment or the placement of temporary or permanent fill. Signs should be posted identifying the restriction of uses in the tree protection zone.

	• Locate structures, grade changes, and other ground or surface disturbances (e.g. concrete pours) as far as feasible from the "dripline" area of the tree. • Avoid root damage through grading, trenching, compaction, etc at least within an area 1.5 times the dripline area of the tree. Where root damage cannot be avoided, roots encountered over 1" in diameter should be exposed approximately 12" beyond the area to be disturbed (towards the tree stem), by hand excavation, or with specialized hydraulic or pneumatic equipment, cut cleanly with hand pruners or power saw and immediately back-filled with soil. Avoid tearing or otherwise disturbing that portion of the roots to remain. • The addition of plant or other landscaping materials shall remain outside of the dripline of all trees. • Any tree subject to Chapter 12.32 Restrictions on Removal of Significant Trees of the Morgan Hill Municipal Code requires approval from the Planning Division. The applicant shall request approval prior to removing any significant trees. **MM BIO-2.2:** TREE ASSESSMENT: Prior to site development, the applicant shall retain the services of a certified arborist to assess all trees that may be impacted by the proposed project. The arborist will conduct a tree assessment and submit a report to the City detailing all trees subject to the Chapter 12.32 Restrictions on Removal of Significant Trees. The report will include: • Tree species and common name.

	• Size (dbh) and approximate height of tree(s). • Current health of the tree including at a minimum: bark, foliage, structure/integrity, and roots. • Evaluation of current health and potential impacts to future health. • Recommendations for protection or removal of tree (if removal of tree is recommended, provide justification). • Proposed mitigation measures and/protection measures. **(Less Than Significant Impact with Mitigation Incorporated)**
Hazardous Materials	
Impact HAZ-1: Grading and excavation activities associated with the Phase I project could expose construction workers and/or the environment to harmful chemicals. **(Significant Impact)**	**MM HAZ – 1.1:** Soil sampling and testing could be completed at the time of future implementation when the project design has been finalized. Prior to the start of demolition, grading, and excavation activities associated with the proposed extension of Hale Avenue, soil within the proposed Phase I alignment will be sampled and tested for pesticides and the soil in the area of the PG&E building will be sampled and tested for PCBs, petroleum hydrocarbons, and heavy metals to determine whether contamination is present at levels that exceed applicable standards. The number and location of the test samples shall be determined by a qualified hazardous materials specialist in consultation with the Santa Clara County Department of Environmental Health (SCCDEH) and the City of Morgan Hill. If contamination is found to be present above applicable screening levels, then a soil management plan will be prepared by the hazardous material specialist under SCCDEH oversight. The soil management plan will identify the specific procedures for the

	excavation, storage, transport, and disposal of contaminated soil, as necessary, consistent with applicable regulations. **(Less Than Significant Impact with Mitigation Incorporated)**
Hydrology and Water Quality	
Impact HYD-1: During large storm events, the runoff generated by the proposed extension of Hale Avenue (Phase I) could exacerbate flooding downstream of the Hale Avenue extension. **(Significant Impact)**	**MM HYD-1.1:** The proposed retention basins shall be sized to meet the Hydromodification Management requirement. In order to meet this requirement, the post-project runoff shall not exceed pre-project flow rates for the two-year, 24-hour storm. **MM HYD-1.2:** The proposed retention basins shall be sized to meet the City of Morgan Hill storm drain design standards. In order to meet these standards, the basins shall be designed to provide storage for a 25-year, 24-hour storm with an additional capacity of 25 percent for freeboard. The storm drain outlet from the detention basins to the public storm drain system would be sized to limit the runoff rate from the proposed roadway improvements to existing conditions. If there is no outlet, the retention basins shall designed to contain the 100-year storm event. **MM HYD-1.3:** The stormwater runoff generated by the proposed roadway improvements shall be treated using bioretention areas that are designed to meet the requirements set forth in the Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast Region. **MM HYD-1.4:** The stormwater runoff generated by the proposed roadway improvements shall be retained onsite through the use of infiltration, evaporation, or rainwater harvesting. If retention is deemed infeasible due to poorly draining soils, 10 percent of the equivalent impervious surface shall be set aside for stormwater management controls as

	described in the Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast Region. This will be incorporated into the two retention basins. **(Less Than Significant Impact with Mitigation Incorporated)**
Impact HYD-2: During large storm events, the runoff generated by the planned future widening and realignment of the Santa Teresa Corridor (Phase II) could exacerbate flooding downstream of the proposed roadway improvements. **(Significant Impact)**	**MM HYD – 2:** A Hydrology and Water Quality Report would be prepared for the proposed roadway improvements, which would evaluate the potential for the proposed improvements to cause or exacerbate downstream flooding. Mitigation measures would be identified to ensure that the existing frequency of capacity exceedance of the storm drain system downstream of the planned future roadway improvements is maintained or decreased. These measures may be similar to mitigation measures MM HYD-1.1 through MM HYD-1.4 identified above to reduce potential flooding impacts from the proposed Phase I roadway improvements to a less than significant level. **(Less Than Significant Impact with Mitigation Incorporated)**
Impact HYD-3: During large storm events, the increased rate and volume of stormwater runoff resulting from the proposed extension of Hale Avenue (Phase I) could result in downstream erosion and siltation. **(Significant Impact)**	As described above under mitigation measures MM HYD-1.1 through MM HYD-1.4, the proposed retention basins will be designed to reduce the rate of stormwater runoff from the proposed Hale Avenue extension to existing conditions. In addition to reducing downstream flooding impacts to a less than significant level, implementation of mitigation measures MM HYD-1.1 through MM HYD-1.4 would also reduce downstream erosion and siltation to a less than significant level. **(Less Than Significant Impact with Mitigation Incorporated)**

Impact HYD-4: During large storm events, the runoff generated by the planned future widening and realignment of the Santa Teresa Corridor (Phase II) could result in downstream erosion and siltation. **(Significant Impact)**	As described above under mitigation measure MM HYD-2, a Hydrology and Water Quality Report would be prepared for the planned future Phase II roadway improvements, which would evaluate the potential for the roadway improvements to cause or exacerbate downstream flooding. Mitigation measures would be identified to ensure that the existing frequency of capacity exceedance of the storm drain system downstream of the planned future roadway improvements is maintained or decreased. These measures may be similar to mitigation measures MM HYD-1.1 through MM HYD-1.4 identified above to reduce potential flooding impacts from the proposed Phase I roadway improvements to a less than significant level. In addition to reducing flooding, implementation of MM HYD-2 would also reduce downstream erosion and siltation to a less than significant level. **(Less Than Significant Impact with Mitigation Incorporated)**
Noise	
Impact NOI-1: Groundborne vibration levels at adjacent structures could be substantial during the construction of planned Phase II roadway improvements. **(Significant Impact)**	**MM NOI – 1:** An environmental noise assessment would be completed at the time of future project-level environmental review prior to commitment to implement a specific Phase II alignment to identify potential noise and vibration impacts during construction and operation of the Phase II roadway improvements. If vibration levels at adjacent residences during construction is projected to exceed 0.3 in/sec PPV, then mitigation measures would be identified to reduce the vibration impact to less than significant. **(Less Than Significant Impact with Mitigation Incorporated)**

Impact NOI-2: Operation of the planned future widening and realignment of the Santa Teresa Corridor (Phase II) could substantially increase noise levels at adjacent receptors. **(Significant Impact)**	**MM NOI – 2:** An environmental noise assessment would be completed at the time of future project-level environmental review prior to commitment to implement a specific Phase II alignment to identify potential noise and vibration impacts during construction and operation of the Phase II roadway improvements. If noise levels at adjacent receptors during operation are projected to substantially increase, then feasible mitigation measures (e.g., sound walls) would be identified to reduce traffic noise to a less than significant level. **(Less Than Significant Impact with Mitigation Incorporated)**
Transportation	
Impact TRAN-1: Under Existing Plus Project conditions, the proposed extension of Hale Avenue (Phase I) would cause the intersection of Hale Avenue and Wright Avenue to operate at an unacceptable LOS E during the PM peak hour. **(Significant Impact)**	**MM TRAN-1:** Peak-hour signal warrants would be met during the PM peak hour under Existing Plus Project conditions. Signalizing the intersection would reduce the impact to a less than significant level. **(Less Than Significant Impact with Mitigation Incorporated)**
Impact TRAN-2: Under Year 2020 Plus Project conditions, the proposed extension of Hale Avenue (Phase I) would cause the intersection of Hale Avenue and Wright Avenue to operate at an unacceptable LOS F during the PM peak hour. **(Significant Cumulative Impact)**	**MM TRAN-2:** Peak-hour signal warrants would be met during both the AM and PM peak hours under Year 2020 Plus Project conditions. Signalizing the intersection would reduce the impact to a less than significant level. **(Less Than Significant Impact with Mitigation Incorporated)**
Impact TRAN-3: Under Year 2035 Plus Project conditions, the proposed project, including both Phase I and Phase II, would exacerbate unacceptable operations at the intersection of Hale Avenue and Wright Avenue. **(Significant Cumulative Impact)**	**MM TRAN-3:** Peak-hour signal warrants would be met during both the AM and PM peak hours under Year 2035 Plus Project conditions. Signalizing the intersection or implementing other measures to reduce delays at the intersection (e.g., traffic circle) would reduce the impact to a less than significant level. **(Less Than Significant Impact with Mitigation Incorporated)**

Alternatives Considered but Rejected

CEQA encourages consideration of an alternative site when the impacts of the project might be avoided or substantially lessened. An alternative alignment for the extension of Hale Avenue would require the demolition of numerous residences and commercial buildings, would result in greater impacts than the proposed alignment, and would not substantially lessen the impacts of the project. For these reasons, an alternative alignment was considered but rejected.

Other alternatives that were considered but rejected include a below-grade roadway, narrower cross-section, reduced roadway capacity, and an alternative that did not include the Phase II roadway improvements. A below-grade roadway could reduce noise levels, but the extended construction duration and use of heavy duty diesel grading and excavation equipment would result in significant unavoidable noise and air quality impacts. Narrowing the cross-section of the proposed Hale Avenue extension at West Main Avenue would avoid impacts to West Little Llagas Creek, but at the expense of eliminating the sidewalk and, therefore, would not achieve the project objective of a multi-modal roadway. The vehicular capacity of the proposed roadway improvements cannot be reduced further than the currently proposed two-lane alignment. Lastly, omitting the Phase II roadway improvements from the proposed project would not substantially reduce roadway volumes and would not fully achieve the project objectives. For these reasons, these alternatives were all considered but rejected.

No Project Alternative

The purpose of the No Project Alternative is to allow decision-makers to compare the impacts of approving the project with the impacts of not approving the project. Under the No Project Alternative, the alignments would remain unchanged. The No Project Alternative would avoid all of the environmental impacts that are anticipated to occur under the proposed project. All of the project impacts, however, would be reduced to a less than significant level with the mitigation measures included in the proposed project. None of the project objectives would be met under the No Project Alternative.

Open Graded Pavement Alternative

There are many causes of roadway noise, one of which is the air in the tire treads being trapped and compressed against the roadway surface. The trapped air is pushed out of the tire treads, which creates noise. The sound walls included in the proposed project would reduce roadway noise to a less than significant level. An alternative to the sound walls could be the use of open graded pavement. Open graded pavement allows the air in the tire treads to escape through the pavement, reducing noise. There are many factors to be considered to ensure open graded pavement is a viable alternative to sound walls (e.g., cost, availability, reduced noise reduction benefit over time, and maintenance). The use of open graded pavement for the Hale Avenue extension could avoid the need to construct the proposed sound walls and would incrementally reduce construction-related impacts, while achieving all of the project objectives.

Four-lane Monterey Road Alternative

The traffic analysis completed for the proposed project conservatively assumes Monterey Road through Downtown Morgan Hill is two lanes, one lane in each direction, which results in higher traffic volumes on Hale Avenue. The purpose of the Four-lane Monterey Road Alternative is to determine if the noise and/or traffic impacts on Hale Avenue would be reduced by having Monterey Road remain four-lanes through Downtown. Traffic modeling completed for the Four-lane Monterey Road Alternative shows there would be very little change in traffic volumes on Hale Avenue. Peak-hour and average daily traffic (ADT) volumes on Hale Avenue would decrease up to six percent and one percent, respectively. Therefore, whether Monterey Road is two-lanes or four-lanes through Downtown, the impacts that would occur on Hale Avenue upon implementation of the proposed project, both Phase I and Phase II, would be the same, and all the project objectives would be met. The Four-lane Alternative does not have substantial environmental benefits for future impacts on Hale Avenue, compared to the scenario that assumes Monterey Road is reduced to two lanes, one in each direction.

Know Public Controversy and Views of Local Groups

There is no known public controversy regarding the proposed project and local groups have not expressed concerns. One comment letter from the Santa Clara Valley Transportation Authority (VTA) was received during the circulation of the EIR Notice of Preparation (NOP), which expressed support for the proposed project. The NOP and the response letter from VTA is included as Appendix A to this EIR. No comments were received during the public scoping meeting that was held for the project.

INTRODUCTION

PURPOSE OF THE ENVIRONMENTAL IMPACT REPORT

The purpose and role of an EIR are detailed in CEQA and the CEQA Guidelines. The following CEQA guidelines clarify the role of an EIR:

Section 15121(a). Informational Document. An EIR is an informational document, which will inform public agency decision makers and the public 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.

Section 15146. Degree of Specificity. The degree of specificity required in an EIR will correspond to the degree of specificity involved in the underlying activity which is described in the EIR.

> (a) An EIR on a construction project will necessarily be more detailed in the specific effects of a project than will an EIR on the adoption of a local general plan or comprehensive zoning ordinance because the effects of the construction can be predicted with greater accuracy.
>
> (b) An EIR on a project such as the adoption or amendment of a comprehensive zoning ordinance or local general plan should focus on the secondary effects that can be expected to follow from the adoption or amendment, but the EIR need not be as detailed as an EIR on the specific construction project that might follow.

Section 15151. Standards for Adequacy of an EIR. An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently considers environmental consequences. An evaluation of the environmental effects of the proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection, but for adequacy, completeness, and a good-faith effort at full disclosure.

The City of Morgan Hill (City), as the Lead Agency, has prepared this EIR for the Hale Avenue and Santa Teresa Corridor Widening and Realignment Project in compliance with CEQA Guidelines. This EIR incorporates by reference the City of Morgan Hill 2035 General Plan, including all appendices thereto (General Plan EIR), certified by the Morgan Hill City Council on July 27, 2016.

ORGANIZATION OF THE DRAFT EIR

The Draft EIR includes the following sections:

Summary

> The Summary of the Draft EIR, which precedes this introduction, includes a brief description of the proposed project and summarizes the project's impacts, mitigation measures, and

alternatives to the project. The summary also briefly describes any known areas of public controversy and the views of local groups.

Introduction

This section provides a general overview of the CEQA process, describes the public participation process and opportunities for input, and outlines the contents of the Draft EIR.

Section 1.0 Description of the Proposed Project

This section describes the physical and operational characteristics of the proposed project. Information on the location of the project and assumptions about implementation of the proposed project are addressed in this section. This section also describes the intended uses of the EIR, and lists the objectives for the project.

Section 2.0 Environmental Setting, Impacts, and Mitigation

The Environmental Setting, Impacts, and Mitigation section includes descriptions of the physical setting of the project area, identifies environmental impacts resulting from the project, and identifies mitigation measures for the environmental impacts examined in the EIR. The Draft EIR identifies proposed mitigation measures for significant impacts in this section and briefly evaluates the expected effectiveness/feasibility of these measures.

Section 3.0 Growth Inducing Impacts

The discussion of growth inducing impacts addresses the ways in which the proposed project could foster economic or population growth or the construction of additional housing in the surrounding area.

Section 4.0 Significant Unavoidable Impacts

This section lists any significant unavoidable impacts that could result if the proposed project is implemented.

Section 5.0 Consistency with Relevant Plans

The project's consistency with policies in the City's General Plan and applicable regional plans is described in this section.

Section 6.0 Alternatives to the Proposed Project

This section identifies a reasonable range of alternatives to the proposed project which would feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen the significant impacts of the project. The environmental impacts associated with each alternative are discussed and a comparison of the impacts to those of the project presented. Each of the alternatives is assessed to determine its ability to meet the project objectives.

Section 7.0 Significant Irreversible Environmental Changes

This section discusses the irreversible commitment of natural resources that could occur as a result of implementation of the proposed office project.

Section 8.0 References

This section lists the references, persons, and organizations consulted during preparation of the Draft EIR.

Section 9.0 List of Preparers

This section lists the lead agency staff and consultants who participated in preparation of the Draft EIR.

Appendices

These attachments to the Draft EIR include the Notice of Preparation, responses to the Notice of Preparation, and technical appendices to the Draft EIR.

EIR PROCESS AND PUBLIC PARTICIPATION

Notice of Preparation and Scoping

In accordance with Section 15063 and 15082 of the CEQA Guidelines, the City prepared a Notice of Preparation (NOP) for this EIR. The NOP provided a general description of the proposed project and identified possible environmental impacts that could result from implementation of the project. The NOP was circulated to local, state, and federal agencies on May 27, 2016. The standard 30-day comment period concluded on June 26, 2016.

As advertised in the NOP, a public scoping meeting was held at the Morgan Hill City Council Chambers on June 8, 2016, when the public was invited to make comments on the project. No comments were received during the public scoping meeting.

Draft EIR Public Review and Comment Period

Publication of this Draft EIR will mark the beginning of a 45-day public review and comment period. During this period, the Draft EIR will be available to local, state, and federal agencies and to interested organizations and individuals for review. Written comments concerning the environmental review contained in this Draft EIR during the 45-day public review period should be sent to:

John W. Baty
Principal Planner (Interim)
17575 Peak Avenue
Morgan Hill, CA 95037
John.Baty@MorganHill.ca.gov

Copies of documents referred to in this EIR are available for review at the following locations during regular business hours:

City of Morgan Hill
Community Development
17575 Peak Avenue
Morgan Hill, CA 95037

Morgan Hill Library
660 West Main Avenue
Morgan Hill, CA 95037

Final EIR/Responses to Comments

Following the conclusion of the public review period, the City will prepare a Final EIR. The Final EIR will consist of comments received on the Draft EIR during the public review period, responses to those comments, and revisions to the text of the Draft EIR resulting from comments received. The City will consider the EIR for certification at a City Council meeting and may proceed with project approval actions after EIR certification.

Section 15091(a) of the CEQA Guidelines stipulates that no public agency shall approve or carry out a project for which an EIR has been certified which identifies one or more significant environmental effects of the project unless the public agency makes one or more written findings. If the lead agency approves a project despite it resulting in significant adverse environmental impacts that cannot be mitigated to a less than significant level, the agency must state the reasons for its action in writing. This Statement of Overriding Considerations must be included in the record of project approval.

Notice of Determination

If the project is approved, the City will file a Notice of Determination (NOD), which will be available for public inspection and posted within 24 hours of receipt at the County Clerk's Office for 30 days. The filing of the NOD starts a 30-day statute of limitations on court challenges to the approval under CEQA (CEQA Guidelines Section 15094(g)).

SECTION 1.0 DESCRIPTION OF THE PROPOSED PROJECT

1.1 BACKGROUND

In 1964, the County adopted an Official Plan Line for Santa Teresa Boulevard between South San Jose and Gilroy.[1] That plan and subsequent County plans for Santa Teresa envisioned a four-lane expressway with speed limits up to 50 mph. In 1994 the City completed, but never adopted, a plan line for a four-lane arterial roadway, 110 feet in width through the City.

In 2010, the Circulation Element of the City's General Plan was updated. Based on the traffic modeling completed for the Circulation Element update, the Santa Teresa/Hale Avenue corridor was downsized to a two-lane multi-modal arterial in keeping with the "complete streets' approach to roadway planning. The proposed project is the culmination of this planning effort.

1.2 PROJECT LOCATION

In its entirety, the proposed roadway project extends south along the Santa Teresa Corridor from the intersection of West Main Avenue and Hale Avenue in the north to the intersection of Watsonville Road and Sunnyside Avenue in the south. Except for the section between the DeWitt/Spring Avenue intersection and approximately Edmundson Road, which is located within the County of Santa Clara, the proposed roadway project is located in the City of Morgan Hill (refer to Figures 1.2-1, 1.2-2, and 1.2-3).

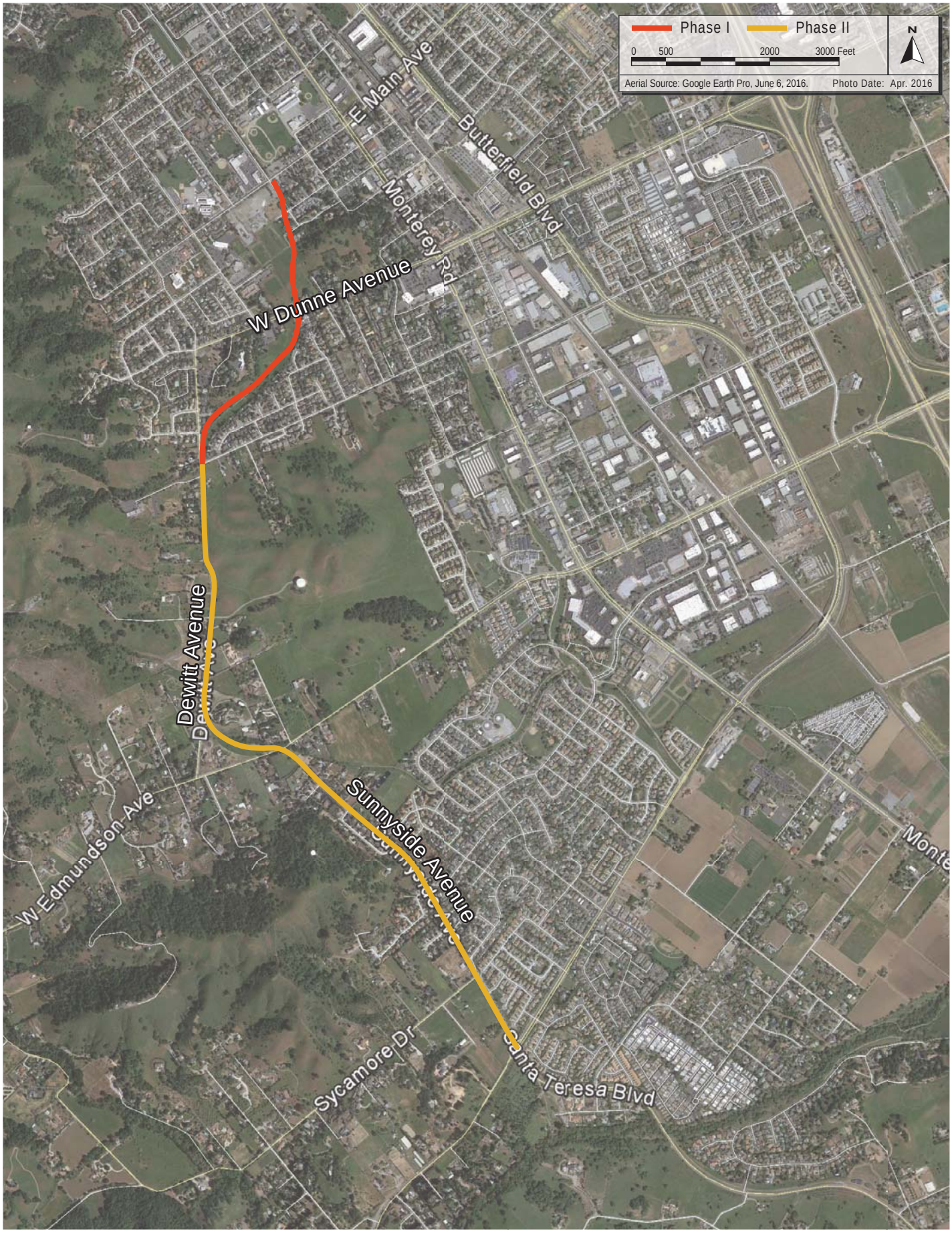
1.3 PROJECT DESCRIPTION

The proposed project is the adoption of an Official Plan Line for the Santa Teresa Corridor from West Main Avenue to Watsonville Road and construction of the proposed roadway improvements, as described below. The proposed roadway project would be constructed in two phases, Phase I and Phase II. Phase I is the extension of Hale Avenue from West Main Avenue to the Dewitt/Spring Avenue intersection. Phase I is anticipated to be constructed within the next two to three years, depending on funding availability. Phase II is the realignment and widening of the Santa Teresa Corridor from the Dewitt/Spring Avenue intersection to Watsonville Road. Phase II is anticipated to be constructed in the next 10 to 15 years. The design speed for the proposed roadway improvements would be 35 miles per hour (MPH). Phase I and Phase II of the project are described in further detail below. The conceptual site plans for Phase I and Phase II are shown on Figures 1.3-1 and 1.3-2, respectively.

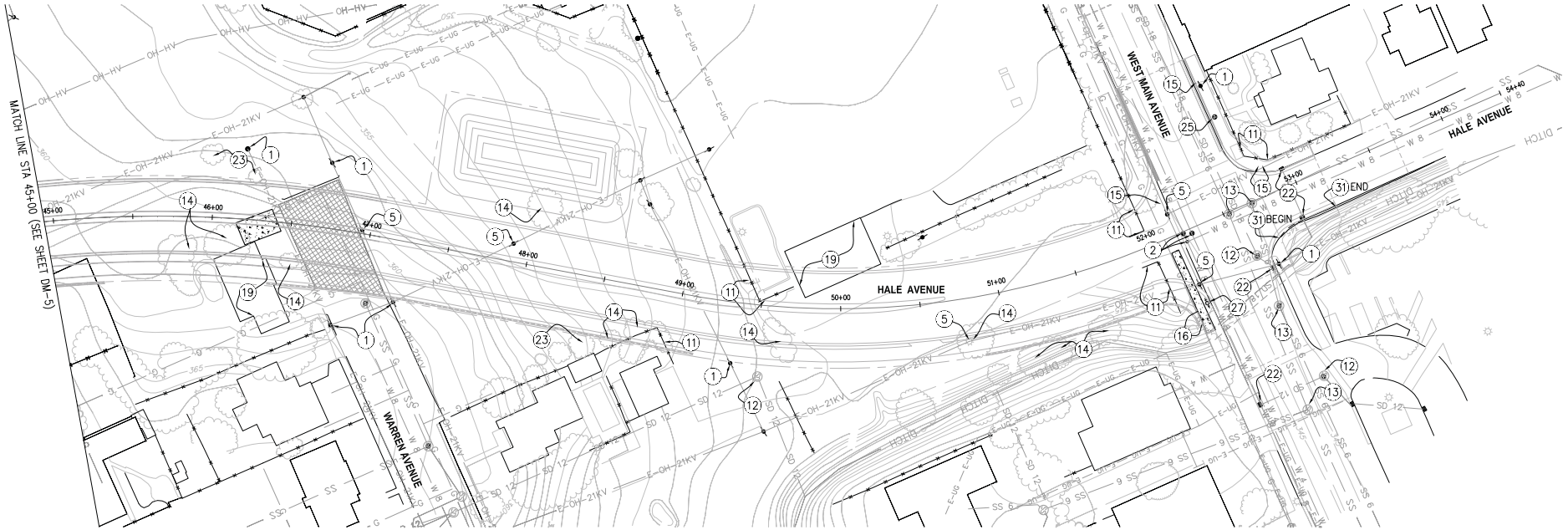
[1] Official Plan Lines are lines designated upon a map that is officially adopted by the public agency (e.g., County or City) with jurisdiction over the affected area. Official Plan Lines indicate areas that are reserved for future development of public streets and thoroughfares consistent with the General Plan.

REGIONAL MAP FIGURE 1.2-1

VICINITY MAP FIGURE 1.2-2



AERIAL PHOTOGRAPH FIGURE 1.2-3



DEMOLITION NOTES

1. PROTECT (E) PG&E POWER POLE IN PLACE
2. ADJUST (E) WATER VALVE TO GRADE
3. REMOVE (E) SD PIPE
4. REMOVE (E) COBBLESTONE DITCH
5. RELOCATE (E) PG&E POWER POLE
6. REMOVE (E) SIGN & POST
7. ADJUST (E) PG&E VAULT TO GRADE
8. RELOCATE (E) PG&E ELECTRICAL CABINET
9. RELOCATE (E) STREET LIGHT POLE & PULLBOX
10. RELOCATE (E) IRRIGATION BOX
11. REMOVE (E) FENCE
12. ADJUST (E) SD MANHOLE TO GRADE
13. ADJUST (E) SS MANHOLE TO GRADE
14. REMOVE (E) TREE
15. ADJUST (E) WATER METER TO GRADE
16. PROTECT (E) HEAD WALL IN PLACE
17. REMOVE (E) WALL
18. REMOVE (E) CONCRETE V-DITCH
19. DEMOLISH & REMOVE (E) BUILDING
20. ADJUST (E) AT&T MANHOLE TO GRADE
21. REMOVE (E) SD INLET & CAP THE PIPES
22. ADJUST (E) SD INLET TO GRADE
23. PROTECT (E) TREE IN PLACE
24. RELOCATE (E) FIRE HYDRANT
25. ADJUST (E) COMMUNICATION MANHOLE TO GRADE
26. PROTECT (E) STREET LIGHT POLE IN PLACE
27. ADJUST (E) FIRE HYDRANT TO GRADE
28. PROTECT (E) SD INLET IN PLACE
29. RELOCATE (E) PG&E BOX (ELECTRICAL SERVICE POINT)
30. ADJUST (E) CABLE TV BOX TO GRADE
31. REMOVE & REPLACE (E) METAL BEAM GUARD RAIL

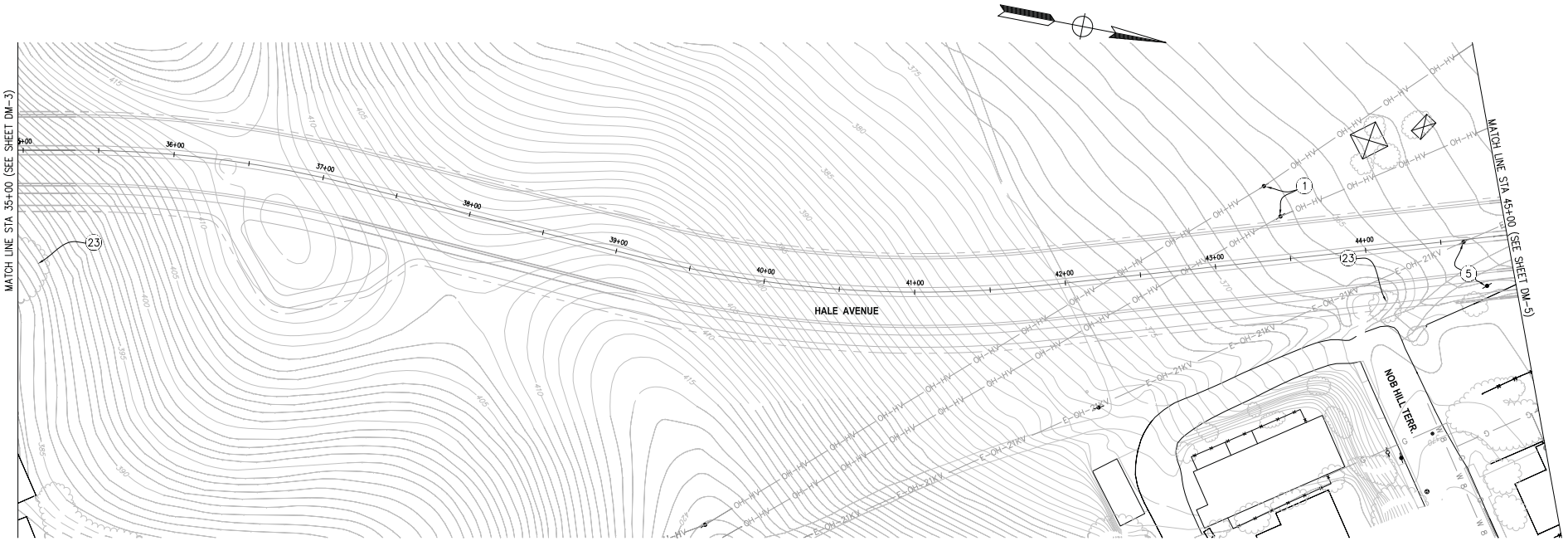
LEGEND

- REMOVE (E) AC PVMT & BASE
- REMOVE (E) CONCRETE PVMT & BASE
- REMOVE (E) CONCRETE CURB & GUTTER

Source: Mark Thomas & Company, Inc., 7/20/12.

PHASE I SITE PLAN (1 OF 5)

FIGURE 1.3-1



LEGEND

- REMOVE (E) AC PVMT & BASE
- REMOVE (E) CONCRETE PVMT & BASE
- REMOVE (E) CONCRETE CURB & GUTTER

DEMOLITION NOTES

1. PROTECT (E) PG&E POWER POLE IN PLACE
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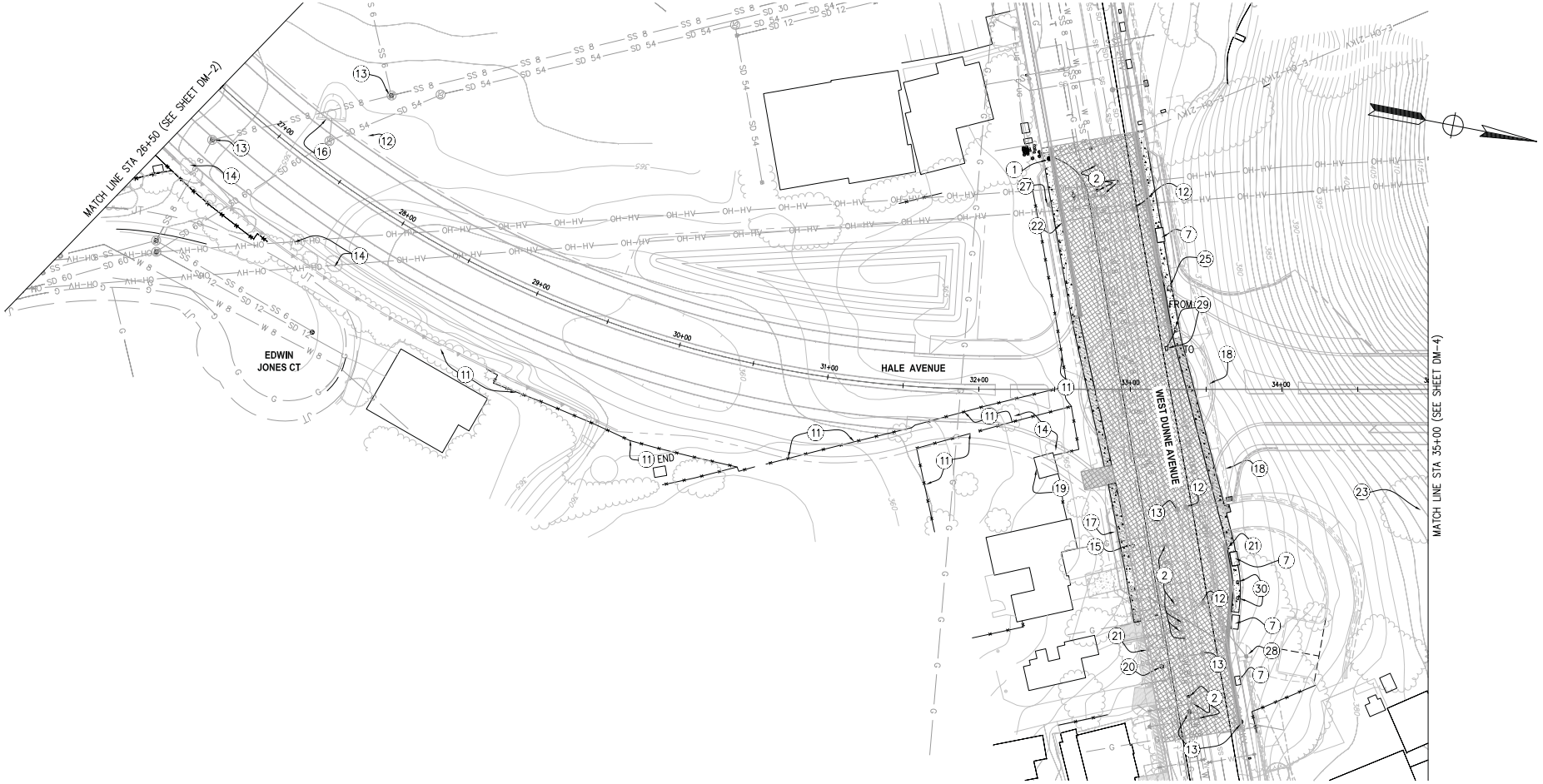
5. RELOCATE (E) PG&E POWER POLE
6. REMOVE (E) SIGN & POST
7. ADJUST (E) PG&E VAULT TO GRADE
8. RELOCATE (E) PG&E ELECTRICAL CABINET
9. RELOCATE (E) STREET LIGHT POLE & PULLBOX
10. RELOCATE (E) IRRIGATION BOX
11. REMOVE (E) FENCE
12. ADJUST (E) SD MANHOLE TO GRADE
13. ADJUST (E) SS MANHOLE TO GRADE
14. REMOVE (E) TREE
15. ADJUST (E) WATER METER TO GRADE
16. PROTECT (E) HEAD WALL IN PLACE
17. REMOVE (E) WALL
18. REMOVE (E) CONCRETE V-DITCH
19. DEMOLISH & REMOVE (E) BUILDING
20. ADJUST (E) AT&T MANHOLE TO GRADE
21. REMOVE (E) SD INLET & CAP THE PIPES
22. ADJUST (E) SD INLET TO GRADE
23. PROTECT (E) TREE IN PLACE
24. RELOCATE (E) FIRE HYDRANT
25. ADJUST (E) COMMUNICATION MANHOLE TO GRADE
26. PROTECT (E) STREET LIGHT POLE IN PLACE
27. ADJUST (E) FIRE HYDRANT TO GRADE
28. PROTECT (E) SD INLET IN PLACE
29. RELOCATE (E) PG&E BOX (ELECTRICAL SERVICE POINT)
30. ADJUST (E) CABLE TV BOX TO GRADE

Source: Mark Thomas & Company, Inc., 7/20/12.

PHASE I SITE PLAN (2 OF 5)

FIGURE 1.3-1



LEGEND

- REMOVE (E) AC PVMT & BASE
- REMOVE (E) CONCRETE PVMT & BASE
- REMOVE (E) CONCRETE CURB & GUTTER

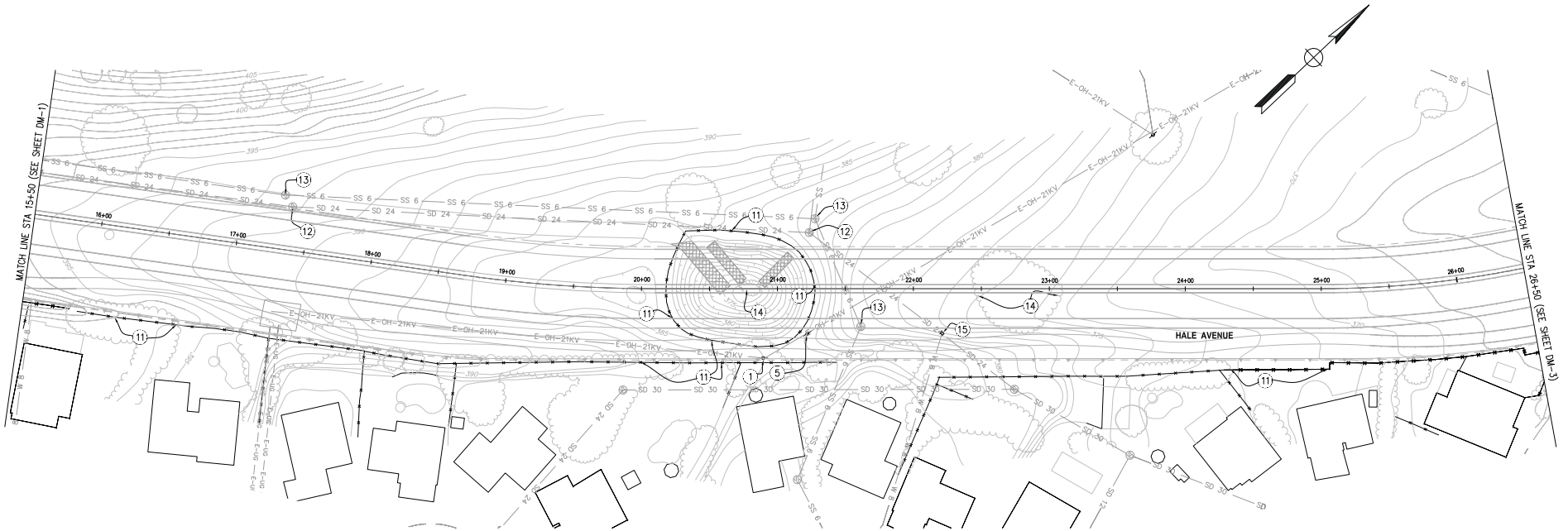
DEMOLITION NOTES

1. PROTECT (E) PG&E POWER POLE IN PLACE
2. ADJUST (E) WATER VALVE TO GRADE
3. REMOVE (E) SD PIPE
4. REMOVE (E) COBBLESTONE DITCH
5. RELOCATE (E) PG&E POWER POLE
6. REMOVE (E) SIGN & POST
7. ADJUST (E) PG&E VAULT TO GRADE
8. RELOCATE (E) PG&E ELECTRICAL CABINET
9. RELOCATE (E) STREET LIGHT POLE & PULLBOX
10. RELOCATE (E) IRRIGATION BOX
11. REMOVE (E) FENCE
12. ADJUST (E) SD MANHOLE TO GRADE
13. ADJUST (E) SS MANHOLE TO GRADE
14. REMOVE (E) TREE
15. ADJUST (E) WATER METER TO GRADE
16. PROTECT (E) HEAD WALL IN PLACE
17. REMOVE (E) WALL
18. REMOVE (E) CONCRETE V-DITCH
19. DEMOLISH & REMOVE (E) BUILDING
20. ADJUST (E) AT&T MANHOLE TO GRADE
21. REMOVE (E) SD INLET & CAP THE PIPES
22. ADJUST (E) SD INLET TO GRADE
23. PROTECT (E) TREE IN PLACE
24. RELOCATE (E) COMMUNICATION BOX
25. ADJUST (E) COMMUNICATION MANHOLE TO GRADE
26. PROTECT (E) STREET LIGHT POLE IN PLACE
27. ADJUST (E) FIRE HYDRANT TO GRADE
28. PROTECT (E) SD INLET IN PLACE
29. RELOCATE (E) PG&E BOX (ELECTRICAL SERVICE POINT)
30. ADJUST (E) CABLE TV BOX TO GRADE

Source: Mark Thomas & Company, Inc., 7/20/12.

PHASE I SITE PLAN (3 OF 5)

FIGURE 1.3-1



LEGEND

- REMOVE (E) AC PVMT & BASE
- REMOVE (E) CONCRETE PVMT & BASE
- REMOVE (E) CONCRETE CURB & GUTTER

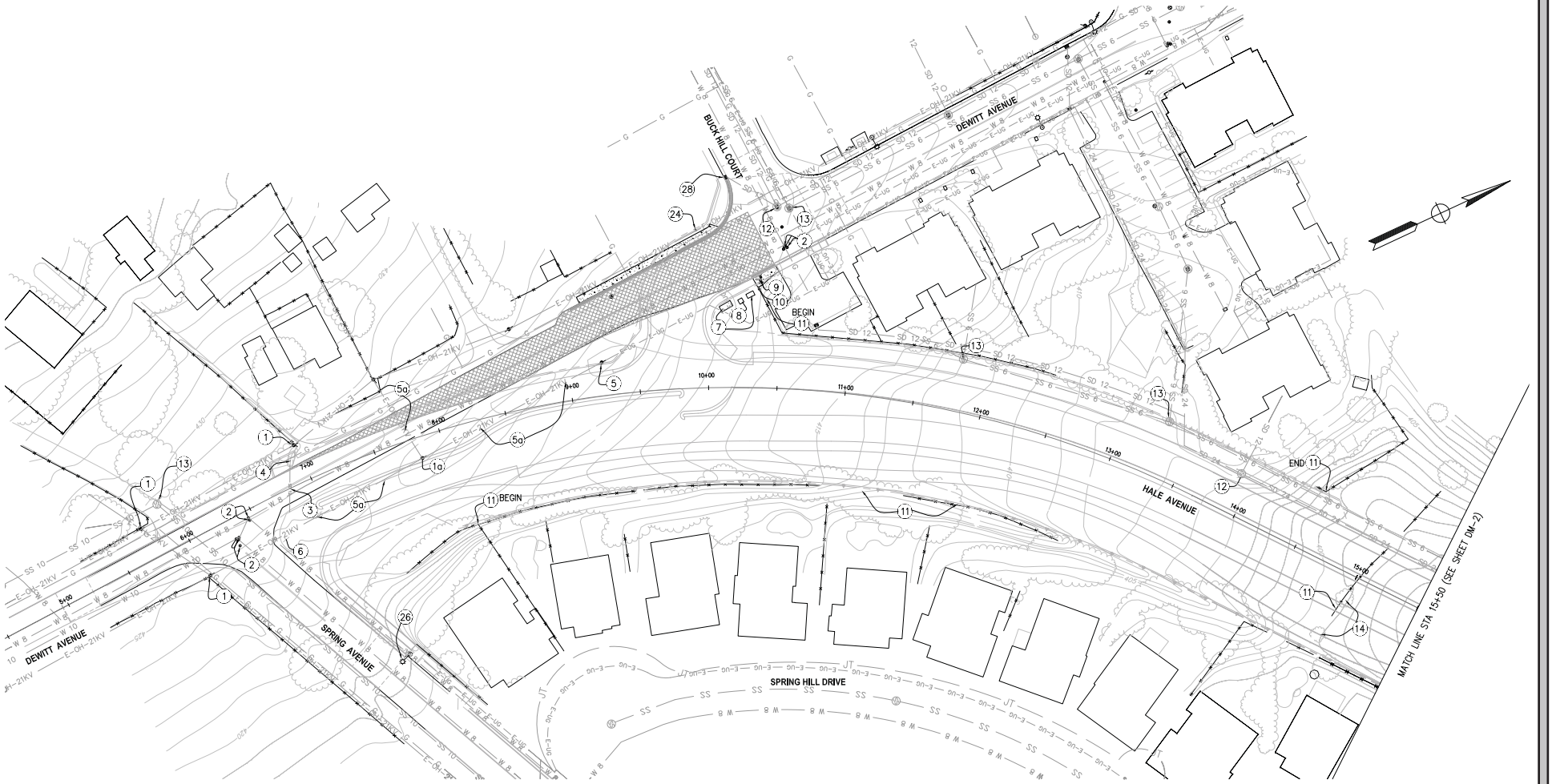
DEMOLITION NOTES

1. PROTECT (E) POWER POLE IN PLACE
1a. REMOVE (E) POWER POLE
2. ADJUST (E) WATER VALVE TO GRADE
3. REMOVE (E) SD PIPE
4. REMOVE (E) COBBLESTONE DITCH
5. RELOCATE (E) POWER POLE
5a. UNDERGROUND (E) 21 KV OVERHEAD LINE
6. REMOVE (E) SIGN & POST
7. PROTECT (E) PG&E VAULT IN PLACE AND ADJUST TO GRADE
8. PROTECT (E) PG&E CABINET IN PLACE AND ADJUST TO GRADE
9. RELOCATE (E) STREET LIGHT POLE & PULLBOX
10. PROTECT (E) IRRIGATION BOX IN PLACE
11. REMOVE (E) FENCE
12. ADJUST (E) SD MANHOLE TO GRADE
13. ADJUST (E) SS MANHOLE TO GRADE
14. REMOVE (E) TREE
15. ADJUST (E) WATER METER TO GRADE

Source: Mark Thomas & Company, Inc., 7/20/12.

PHASE I SITE PLAN (4 OF 5)

FIGURE 1.3-1



LEGEND

- REMOVE (E) AC PVMT & BASE
- REMOVE (E) CONCRETE PVMT & BASE
- REMOVE (E) CONCRETE CURB & GUTTER

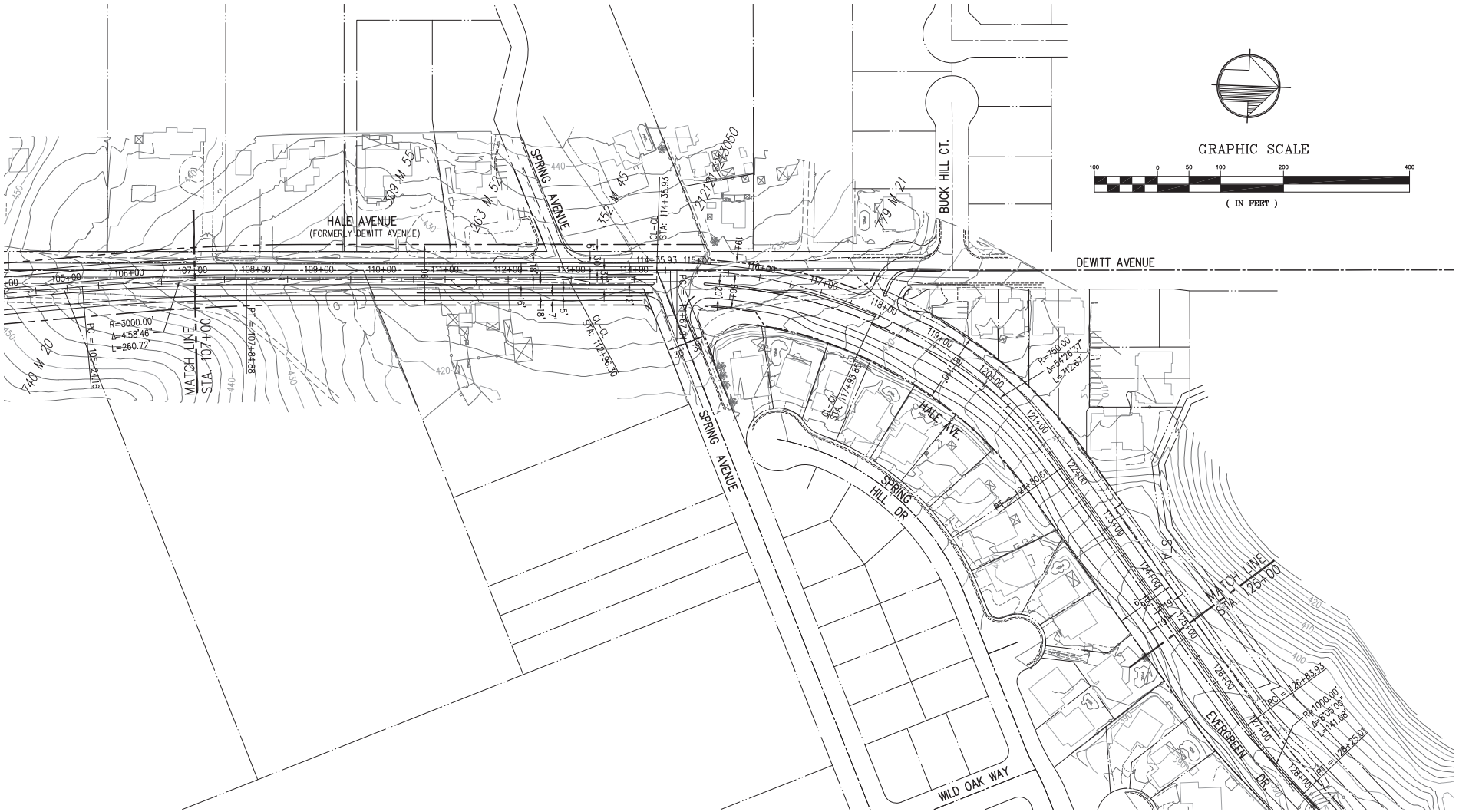
DEMOLITION NOTES

1. PROTECT (E) POWER POLE IN PLACE
1a. REMOVE (E) POWER POLE
2. ADJUST (E) WATER VALVE TO GRADE
3. REMOVE (E) SD PIPE
4. REMOVE (E) COBBLESTONE DITCH
5. RELOCATE (E) POWER POLE
5a. UNDERGROUND (E) 21 KV OVERHEAD LINE
6. REMOVE (E) SIGN & POST
7. PROTECT (E) PG&E VAULT IN PLACE AND ADJUST TO GRADE
8. PROTECT (E) PG&E CABINET IN PLACE AND ADJUST TO GRADE
9. RELOCATE (E) STREET LIGHT POLE & PULLBOX
10. PROTECT (E) IRRIGATION BOX IN PLACE
11. REMOVE (E) FENCE
12. ADJUST (E) SD MANHOLE TO GRADE
13. ADJUST (E) SS MANHOLE TO GRADE
14. REMOVE (E) TREE
26. PROTECT (E) STREET LIGHT POLE IN PLACE
24. RELOCATE (E) COMMUNICATION CABINET
28. PROTECT (E) SD INLET IN PLACE

Source: Mark Thomas & Company, Inc., 7/20/12.

PHASE I SITE PLAN (5 OF 5)

FIGURE 1.3-1



Source: MH Engineering Co., 5/19/2015.

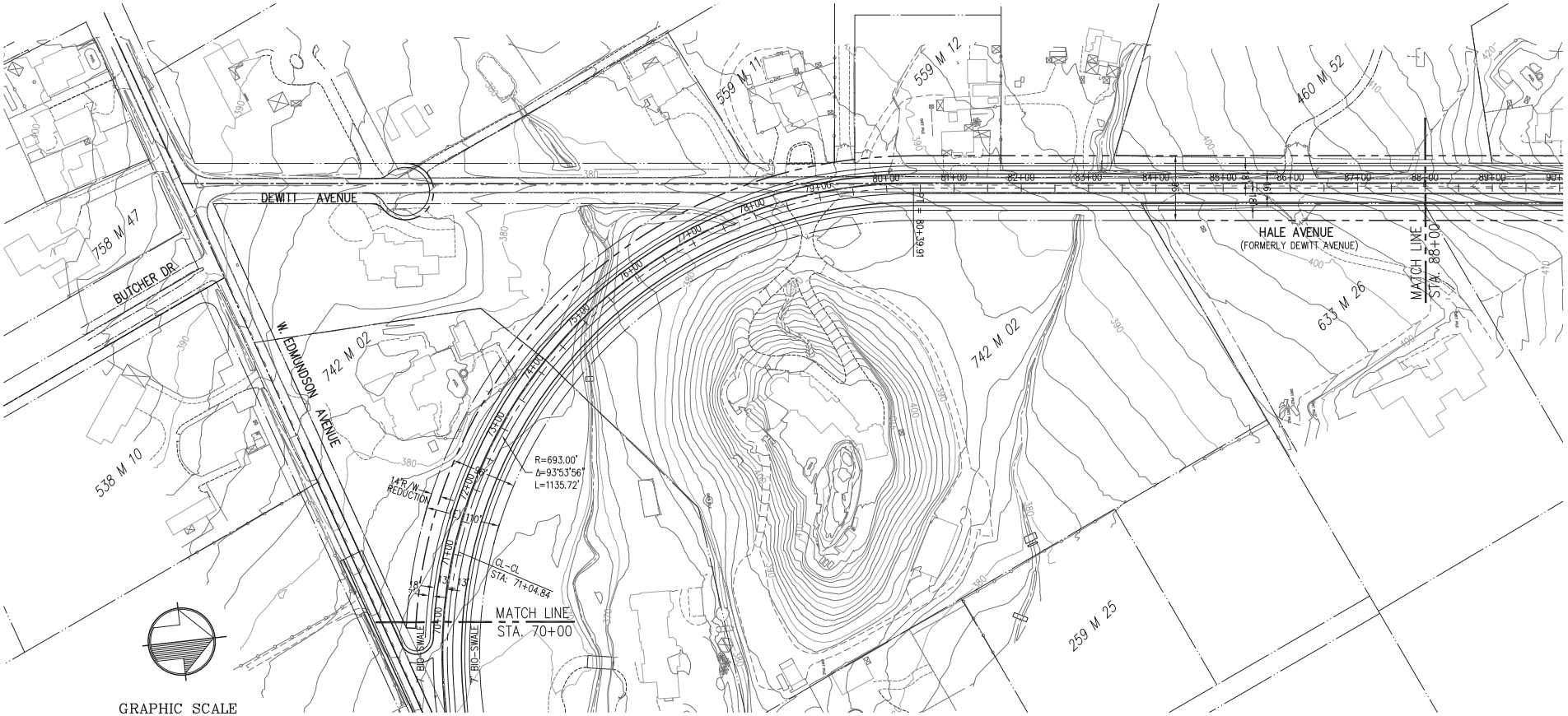
SITE PLAN PHASE II (1 OF 6)

FIGURE 1.3-2

Source: MH Engineering Co., 5/19/2015.

SITE PLAN PHASE II (2 OF 6)

FIGURE 1.3-2



Source: MH Engineering Co., 5/19/2015.

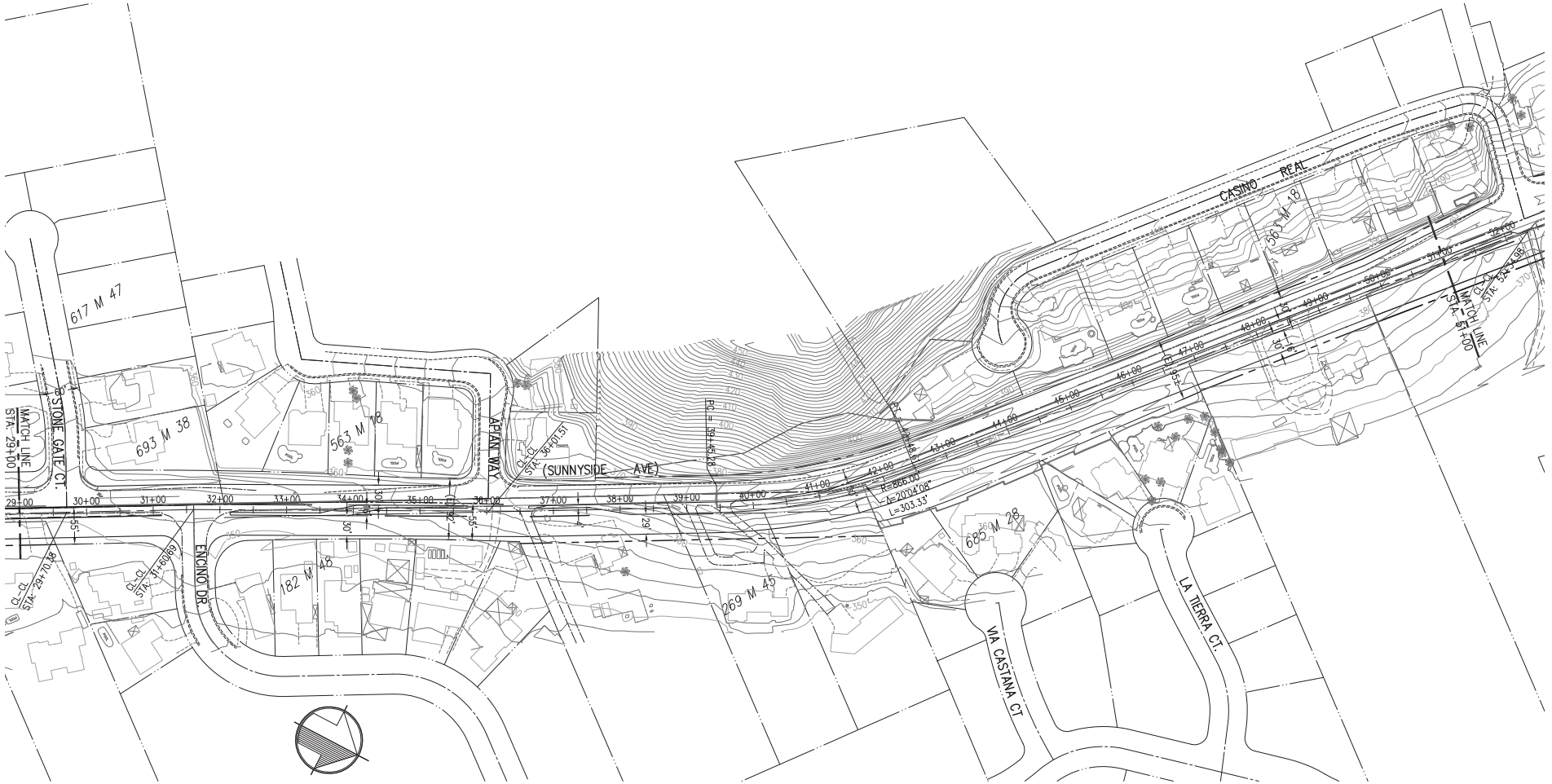
SITE PLAN PHASE II (3 OF 6)

FIGURE 1.3-2

Source: MH Engineering Co., 8/2015.

SITE PLAN PHASE II (4 OF 6)

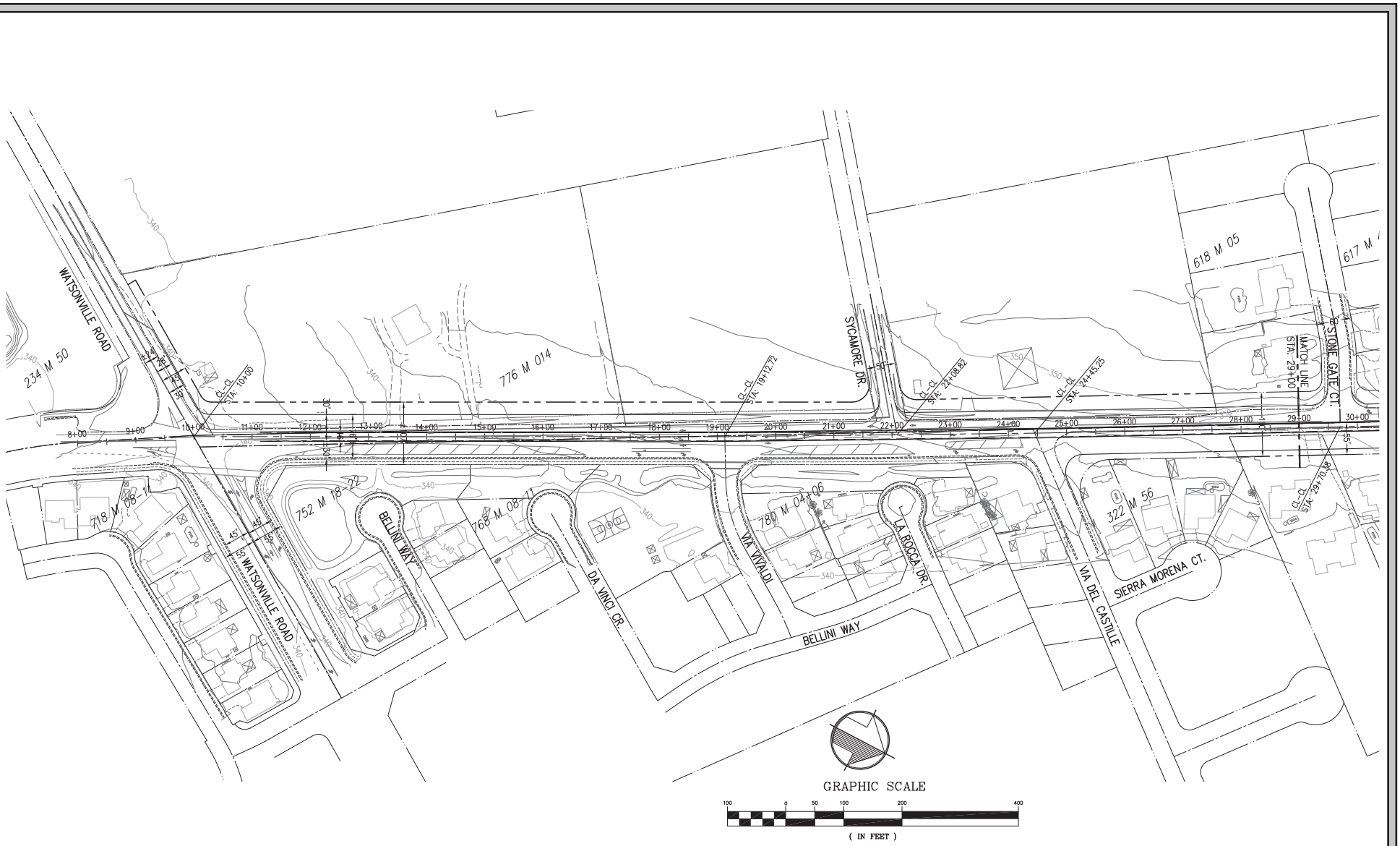
FIGURE 1.3-2



Source: MH Engineering Co., 5/19/2015.

SITE PLAN PHASE II (5 OF 6)

FIGURE 1.3-2



Source: MH Engineering Co., 5/19/2015.

SITE PLAN PHASE II (6 OF 6)

FIGURE 1.3-2

1.3.1 Phase I: Main Avenue to DeWitt/Spring Intersection

Hale Avenue currently terminates at West Main Avenue in the City of Morgan Hill. Phase I of the project proposes to extend Hale Avenue from West Main Avenue to the DeWitt/Spring Avenue intersection, as shown on Figure 1.1-2. This new segment of roadway would be approximately 4,500 feet (0.85 miles) in length.

The extension would consist of a multi-modal, two-lane road (one lane in each direction), which would include bike lanes with a landscaped center median and a pedestrian/bike path within a right-of-way ranging from 62 to 130 feet wide. Vegetative swales for stormwater collection and treatment and landscaping consisting of trees and shrubs would be located on both sides of the proposed extension. Streetlights would be located within the center median, and sound walls would be constructed along the sections near existing and planned residences.

1.3.1.1 *New and Modified Intersections*

The proposed extension of Hale Avenue would modify two existing intersections (DeWitt/Spring Avenue and West Main/Hale Avenue) and construct a new intersection at Dunne Avenue. The extension of Hale Avenue would add a south leg to the intersection of West Main/Hale Avenue. At the DeWitt/Spring Avenue intersection, the Hale Avenue extension would merge with Dewitt Avenue at the north leg of the intersection. At this time, the new intersection at Dunne Avenue is envisioned to operate as a roundabout.

1.3.1.2 *Sound Walls*

Three sound walls would be constructed along the proposed extension of Hale Avenue to reduce roadway noise levels at nearby residences. Sound Wall #1 would begin at the southeast side of the proposed alignment near Spring Avenue. The sound wall would extend for approximately 2,500 feet along the easterly side of the alignment and terminate at West Dunne Avenue. Sound Wall #2 would begin at the southwest side of the proposed alignment near Dewitt Avenue. The sound wall would extend for approximately 400 feet along the westerly side of the alignment. Sound Wall #3 would begin at the northeast end of the alignment near West Main Street. The sound wall would extend for approximately 1,000 feet along the easterly side of the alignment. The approximate locations of the proposed sound walls are shown on Figure 2.11-1. The sound walls would be eight feet in height, except for three segments located south of West Dunne Avenue that would be nine feet in height.

1.3.1.3 *Structures to be Removed or Relocated*

Two permanent structures are located within the right-of-way of the proposed Hale Avenue extension and, as a result, would be removed or relocated during construction of the proposed project. Both structures are located at the northern end of the proposed alignment near West Main Avenue. These structures include a small concrete block structure on the adjacent PG&E property and the residence located at 230 Warren Avenue. In addition to the permanent structures, a small shed located at 310 West Dunne Avenue would also need to be removed or relocated during construction of the proposed project. The structures to be removed or relocated are shown on Figure 1.1-4.

Utility Relocation

Existing utilities in the project area (e.g., water, storm drain, sanitary sewer, and gas lines, electric overhead lines and poles, and telephone/communication lines) would be relocated and/or placed below grade within the proposed Hale Avenue right-of-way.

1.3.1.4 *Stormwater Detention*

Two stormwater detention basins would be constructed in conjunction with the extension of Hale Avenue, one detention basin would be located on the north end of the alignment near West Main Avenue, and the other detention basin would be located south of West Dunne Avenue.

1.3.2 Phase II: Sunnyside Avenue to DeWitt Avenue

Phase II is the widening and realignment of the Santa Teresa Corridor from the Dewitt/Spring Avenue intersection to Watsonville Road, which is approximately two miles in length. Consistent with the proposed roadway improvements under Phase I, the planned roadway within this approximately two-mile segment of the Santa Teresa Corridor would be widened, and a multi-modal, two-lane road with a landscaped center median and a pedestrian/bike path would be constructed within a 96-foot right-of-way. In addition, the section between the southern end of Dewitt Avenue and the northern end of Sunnyside Avenue would be realigned to create one continuous roadway (refer to Figure 1.1-3). Because construction of Phase II is not anticipated to begin for another 10 to 15 years, many project specific details (e.g., utility, drainage, landscaping, and construction) are not yet available.

1.4 PROJECT OBJECTIVES

- Establish an Official Plan Line for the Hale Avenue/Santa Teresa corridor, a two-lane continuous multi-modal arterial in keeping with the "complete streets' approach to roadway planning identified in the Morgan Hill General Plan.
- Provide a continuous direct north/south route for the west side of the City, reducing through traffic on neighborhood streets.
- Provide an alternate north-south road option on the west side of US 101 to relieve congestion on parallel routes such as Monterey Road and Butterfield Boulevard.
- Reduce energy (i.e., gasoline and diesel) consumption by providing an efficient multi-modal roadway within the City of Morgan Hill.

SECTION 2.0 ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION

In accordance with Section 15143 of the CEQA Guidelines, the discussion in this EIR is focused on the significant effects on the environment resulting from the proposed extension of Hale Avenue and the planned future widening and realignment of the Santa Teresa Corridor.

Mitigation measures are identified for all significant project impacts. "Mitigation Measures" are measures that will minimize, avoid, or eliminate a significant impact (CEQA Guidelines 15370). Each impact is numbered using an alpha-numeric system that identifies the environmental issue. For example, Impact HAZ-1, denotes the first significant impact discussed in the hazards and hazardous materials section. Mitigation measures (MM) are also numbered to correspond to the impact they address. For example, MM NOI-2.3 denotes the third mitigation measure for the second impact in the noise section.

The letter codes used to identify the environment issues are listed below.

Letter Code	Environmental Issue
AES	Aesthetics
AQ	Air Quality
BIO	Biological Resources
CUL	Cultural Resources
EN	Energy
GEO	Geology and Soils
GHG	Greenhouse Gas Emissions
HAZ	Hazards and Hazardous Materials
HYD	Hydrology and Water Quality
LU	Land Use
NOI	Noise
PS	Public Services
REC	Recreation
TRAN	Transportation
UTIL	Utilities and Service Systems

Cumulative impacts, as defined by CEQA, refer to two or more individual effects, which when combined, compound or increase other environmental impacts. Cumulative impacts may result from individually minor, but collectively significant effects taking place over a period of time. CEQA Guideline Section 15130 States that an EIR should discuss cumulative impacts "when the project's incremental effect is cumulatively considerable." The discussion does not need to be in as great detail as is necessary for project impacts, but is to be "guided by the standards of practicality and reasonableness." The purpose of the cumulative analysis is to allow decision makers to better understand the impacts that might result from approval of past, present, and reasonably foreseeable future projects, in conjunction with the proposed project addressed in this EIR.

The potential for the proposed project to result in or contribute to a cumulative impact is discussed for each environmental issue at the end of each section. The discussion of cumulative impacts addresses two aspects of cumulative impacts: 1) will the effects of all of the pending development listed result in a cumulatively significant impact on the resource in question? And, if that cumulative impact is likely to be significant, 2) will the contribution to that impact from the proposed project make a cumulatively considerable contribution to the cumulative impact?

The pending development considered in the cumulative analysis is listed below.

Cumulative Project List

Project Application Number(s)	Project Name	Project Description
SR-16-08	Monterey-Pace	facade improvements and new patio
USA-16-01/EA-16-03	Diana-Murray	USA expansion
ZA-08-05/USA-08-07	Dewitt-West Hills Church	USA expansion/Annexation
UP-16-14/SR-16-13	Monterey-McCrainie	art gallery and wine bar
SR-16-05	Lightpost-Riverpark Hospitality	149-room, three-story hotel
SR-16-10	Mast-C&R Development	new 22,530-sf tilt-up building
SR-15-21	Monterey-Dincer	new 3,012-sf laundromat
ME VAR-16-02	Torery-Guilder	setback exception
SD-16-02/DA-16-01/ EA-16-02	Walnut Grove-Newland Homes	9 residential detached units
SD-16-08/DA-16-08	Peak-Finamore	duet
SD-14-03	E. Dunne-Presidio	8-lot subdivision
SR-16-03	Monterey-Dynasty	2 new retail buildings
SD-16-05	Digital-Petwun	parcel map
SD-16-04/DA-16-03/ EA-16-04	Butterfield-Murray	6-lot residential subdivision
ZA-13-07/SD-13-08	E. Dunne-Henken	up to 19 single family units
UP-16-07	Murphy-Voices	Temporary Use Permit for public charter elementary school on a portion of an existing church site
DA-16-02/SD-16-03	E. Dunne-Kruse	4-lot subdivision
RDCS-16-02	East Dunne-Leung (Dunne Hill Meadow)	An extension request for a six residence, single-family detached subdivision located at the northeast corner of Hill Road and Dunne Avenue.
SR-15-17	Monterey-Central/ECA	12 single-family units (attached and detached) on the south side of Central Avenue between Monterey Road and McLaughlin Avenue.

SR-16-07	Cochrane/Butterfield-Southbay	subdivision for 20-acre commercial development
UP-16-02	Cochrane-Browman	gas station and restaurant
SR-16-15	Butterfeild-The Lodge III	senior independent living/congregate care 67 units and 10,000-sf club/leasing facility

Important Note to the Reader: In a December 2015 opinion, [*California Building Industry Association v. Bay Area Air Quality Management District*, 62 Cal. 4th 369 (No. S 213478)] the California Supreme Court confirmed that CEQA, with several specific exceptions, is concerned with the impacts of a project on the environment, not the effects the existing environment may have on a project. Therefore, the evaluation of the significance of project impacts under CEQA in the following sections focuses on impacts of the project on the environment, including whether a project may exacerbate existing environmental hazards.

2.1 AESTHETICS

2.1.1 Existing Setting

2.1.1.1 *Applicable Plans, Policies, and Guidelines*

State Scenic Highways Program

The California Department of Transportation designates state scenic highways, based upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent that development modifies a traveler's enjoyment of the view. California State Route 9 (SR 9) is the only officially designated state scenic highway in Santa Clara County.[2] SR 9 is approximately 19.2 miles northwest of the proposed roadway project; as a result, the locations of the proposed roadway improvements are not visible from SR 9.

City of Morgan Hill 2035 General Plan

Various policies in the City's General Plan have been adopted for the purpose of avoiding or mitigating visual and aesthetics impacts resulting from development within the City, including the following:

Open Space, Hillsides, and Scenic Features Policy NRE-1.1 – Preserve scenic hillsides around the City in an undeveloped state, wherever feasible.
Open Space, Hillsides, and Scenic Features Policy NRE-2.1 – Protect views of hillsides, ridgelines, and prominent natural features surrounding the City. These features help define the City's historic rural character, sense of place, image and identity.
Open Space, Hillsides, and Scenic Features Policy NRE-2.3 – Preserve scenic hillsides around the City in an undeveloped state, wherever feasible. Provide for retention of hillside areas as open space through the dedication and/or purchase of scenic easements and/or open space easements, transfer of development rights and other appropriate measures.
Biological Resource Policy NRE-5.7 – Require creek areas in new developments to be visible from the public right-of-way to ensure safety, maintenance, access, and integration into the neighborhood.
Biological Resources Policy NRE-6.4 – Preserve and protect mature, healthy trees whenever feasible, particularly native trees, historically significant trees, and other trees which are of significant size or of significant aesthetic value to the immediate vicinity or to the community as a whole.
Urban Form Policy CNF-8.1 – Require all development to feature high quality design that enhances the visual character of Morgan Hill.
Urban Form Policy CNF-8.14 – Minimize the use of sound walls to situations where they are required to meet noise standards and other forms of mitigation are not available. Use techniques less visually disturbing than sound walls, including but not limited to earth berms and intervening

[2] Caltrans. "California Scenic Highway Mapping System." Accessed April 14, 2016. Available at: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm

placement of non-sensitive buildings when requiring noise impact mitigation of new and/or expanded development
Urban Form Policy CNF-8.18 – Ensure that development along West Little Llagas Creek incorporates the creek as an amenity.
Urban Form Policy CNF-8.20 – Require nighttime lighting to be designed to minimize light spillage to adjacent properties.

2.1.1.2 *Existing Conditions*

Visual Character of the Alignment

Phase I (Main Avenue to DeWitt/Spring Avenue)

The S-curved extension of Hale Avenue begins at the intersection of West Main Avenue and Hale Avenue in the north and ends at the DeWitt/Spring Avenue intersection in the south. The alignment would mostly occur within existing ROW that primarily consists of previously disturbed, undeveloped grassland areas on rolling hills with trees interspersed throughout. Starting from the north end at West Main Avenue, the alignment goes over Nob Hill down to Dunne Avenue and back up to the Dewitt Avenue/Spring Avenue intersection. The grassland within the alignment varies in height and color depending on the season, from short and bright green in the winter to tall and golden yellow in the summer.

Permanent structures within the ROW includes a small, nondescript, one-story cement utility building that is located on the adjacent PG&E substation property and a single-family residence on the southern end of Warren Avenue (230 Warren Avenue). The cement building was constructed in the 1930s. The building is rectangular with a flat façade and flat roof. The facade is painted a light beige with a white stripe painted along the base of the building. The residence at 230 Warren Avenue was constructed in the 1950s. The small, one-story residence with an attached garage is in relatively poor condition and is representative of typical 1950s residential development.

The proposed alignment also clips the residential property located at 205 Warren Avenue and goes through the western side of the residential property located at 310 West Dunne Avenue. No permanent structures would be affected on these two residential properties.

Phase II (DeWitt Avenue to Watsonville Road)

Phase II is the widening and realignment of the Santa Teresa Corridor from the Dewitt/Spring Avenue intersection to Watsonville Road, which is approximately two miles in length, would mostly occur within existing ROW. Except for the realigned segment crossing Edmundson Avenue between Dewitt Avenue and Sunnyside Avenue, the planned alignment follows along Dewitt Avenue and Sunnyside Avenue. North of Edmundson Avenue, the realigned segment between Dewitt Avenue and Sunnyside Avenue would traverse an undeveloped grassland area and would cross Edmundson Creek. South of Edmundson Avenue, the realigned segment would pass through an undeveloped field.

Within the proposed alignment, Dewitt Avenue and Sunnyside Avenue are rural residential streets with no sidewalks, except for the south end of the alignment near Watsonville Road. New residential development along the east side of Sunnyside Avenue near Watsonville Road paved the existing ROW and constructed sidewalks in anticipation of the proposed improvements. The planned improvements along Dewitt Avenue and Sunnyside Avenue would mostly occur within existing undeveloped ROW that contains mowed grass and/or gravel shoulders. There are segments along both Dewitt Avenue and Sunnyside Avenue where ROW does not exist. These segments mostly contain older residential lots that take access from and front the roadways. The alignment along these segments is mostly comprised of landscaping (e.g., trees and shrubs); however, the alignment also passes through or immediately adjacent to three residences.

Visual Character of the Area Surrounding the Alignment

Phase I (Main Avenue to DeWitt/Spring Avenue)

Located west of Downtown Morgan Hill, the area adjacent to the proposed extension of Hale Avenue includes newer and older residential and commercial development. Examples include one-and two-story, single- and multi-family residences, an elementary school, medical buildings, and small one- and two-story office buildings.

West Little Llagas Creek

North of West Main Avenue, West Little Llagas Creek flows in a roadside ditch along the eastern side of Hale Avenue. The creek then flows through a culvert and under West Main Avenue, daylighting on the southern side of West Main Avenue in a manmade earthen channel that is located adjacent to the proposed alignment. The manmade earthen channel contains reeds and other aquatic vegetation and a row of landscape trees are planted within the channel and parallel to the proposed alignment. West Little Llagas Creek flows within the manmade channel and adjacent to the proposed extension of Hale Avenue for approximately 260 feet until veering east toward Downtown Morgan Hill and away from the proposed roadway alignment.

Phase II (DeWitt Avenue to Watsonville Road)

The area surrounding the planned roadway improvements under Phase II is a mix of residential and agricultural uses. The areas along Dewitt Avenue mostly consist of rural residential development with newer and older residences constructed on large lots and surrounded by undeveloped grassland and/or agricultural fields and structures (e.g., barns, sheds, corrals, etc.). Further south along Sunnyside Road, the surrounding areas also include newer and older residential planned developments with paved roads and sidewalks.

2.1.2 Visual and Aesthetic Impacts

For the purposes of this EIR, a visual and aesthetic impact is considered significant if the project will:

- Have a substantial adverse effect on a scenic vista;

- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway;
- Substantially degrade the existing visual character or quality of the site and its surroundings; or
- Create a new source of substantial light or glare which will adversely affect day or nighttime views in the area.

California State Route 9 (SR 9) is the only officially designated state scenic highway in Santa Clara County. There are no designated state scenic highways in San Benito County or Santa Cruz County.[3] The proposed roadway improvements are not visible from SR 9. For these reasons, the proposed roadway improvements would not damage scenic resources within a state scenic highway, and this threshold is no longer discussed in this document.

2.1.2.1 *Scenic Vistas*

Phase I (Main Avenue to DeWitt/Spring Avenue)

There are no designated scenic vistas in the project area that would be substantially affected by the proposed extension of Hale Avenue from West Main Avenue to the intersection of Dewitt and Spring Avenues. The General Plan, however, emphasizes preserving the scenic hillsides around the City, such as El Toro Mountain and the foothills to the east and west that flank the City. The extension of Hale Avenue would cross over the westerly portion of Nob Hill. Nob Hill is centrally located in the City of Morgan Hill. Existing residential development on Nob Hill in the vicinity of the proposed roadway extension is located at an elevation of approximately 425 feet, and a water tank and antennas are located near the top of Nob Hill at an elevation of approximately 470 feet. The extension of Hale Avenue would climb up and over the westerly portion of Nob Hill, reaching an elevation of approximately 415 feet. Because existing development on Nob Hill is located at a higher elevation than the proposed roadway improvements, the extension of Hale Avenue from West Main Avenue to the intersection of Dewitt Avenue and Spring Avenue would not have a substantial adverse effect on a scenic hillside.

The proposed extension of Hale Avenue would require the removal of 17 ordinance sized trees; however, as discussed in *Section 2.3 Biological Resources*, these trees would be replaced in conformance with the City of Morgan Hill's Tree Protection Ordinance. Additionally, there are no designated scenic rock outcroppings or historic buildings located within the proposed right-of-way. Therefore, development of the proposed extension would not result in a significant impact to scenic resources. **(Less Than Significant Impact)**

Phase II (DeWitt Avenue to Watsonville Road)

According to the City's General Plan, there are no designated scenic vistas, hillsides, or rock outcroppings in the area of the planned future Phase II roadway improvements. The City's Archaeologic Sensitivity Map shows no recorded structures within the planned future widening and

[3] Caltrans. "California Scenic Highway Mapping System." Accessed April 14, 2016. Available at: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm

realignment of the Santa Teresa Corridor. For these reasons, the planned widening and realignment of the Santa Teresa Corridor from Spring Street south to Watsonville Road would not have a substantial adverse effect on a scenic vista or a scenic hillside

At the time of future development, all trees removed as part of the proposed Santa Teresa Corridor widening and realignment would be replaced in conformance with the City of Morgan Hill Tree Protection Ordinance. For this reason and those stated above, the planned future widening and realignment of the Santa Teresa corridor would not result in a significant impact to scenic resources. **(Less Than Significant Impact)**

2.1.2.2 *Visual Character*

Phase I (Main Avenue to DeWitt/Spring Avenue)

The extension of Hale Avenue from West Main Avenue to the intersection of DeWitt Avenue and Spring Avenue would replace undeveloped grassland areas with a multi-modal, two-lane road (one lane in each direction) that would include bike lanes, a pedestrian path, and a landscaped center median with streetlights. Sound walls would be constructed along the sections near existing and planned residences, and retaining walls would be necessary where the roadway traverses the hillside. Consistent with General Plan Policy CNF-8.14, sound walls would only be constructed in those areas necessary to meet the City's noise standards. Sound walls would include design features to discourage graffiti. In these ways, the extension of Hale Avenue under Phase I of the proposed project would change the visual character of the currently undeveloped roadway alignment. The proposed alignment, however, is located in central Morgan Hill and is surrounded by development, and the planned extension of Hale Avenue is an integral component of the City's roadway network. For these reasons, the proposed extension of Hale Avenue from West Main Avenue to the intersection of DeWitt Avenue and Spring Avenue would not substantially degrade the visual character of the site and its surroundings. **(Less Than Significant Impact)**

Phase II (DeWitt Avenue to Watsonville Road)

The planned roadway within this approximately two-mile segment of the Santa Teresa Corridor would be widened, and a multi-modal, two-lane road with a landscaped center median and a pedestrian/bike path would be constructed. The planned improvements would mostly occur within existing right-of-way, some of which is currently paved in anticipation of the widened road. Except for the realigned segment crossing Edmundson Avenue between Dewitt Avenue and Sunnyside Avenue, the planned alignment follows along Dewitt Avenue and Sunnyside Avenue. North of Edmundson Avenue, the realigned segment between Dewitt Avenue and Sunnyside Avenue would traverse an undeveloped grassland area and would cross Edmundson Creek. South of Edmundson Avenue, the realigned segment would pass through an undeveloped field. The realigned segment would change the visual character of the immediate area, as would widening DeWitt Avenue and Sunnyside Avenue, especially those segments not within existing right-of-way. Overall, the change would be localized and the new multi-modal roadway is expected to improve the visual character of the area. It is possible that sound walls may be necessary along those portions of the planned future roadway improvements to meet the City's noise standards. Sound walls can be unsightly. Consistent with General Plan Policy CNF-8.14, sound walls would only be constructed if no other feasible

measures are available to reduce noise levels. For these reasons, planned roadway improvements under Phase II would not substantially change the visual character of the roadway or the surrounding area. **(Less Than Significant Impact)**

2.1.2.3 *Substantial Light or Glare*

Phase I (Main Avenue to DeWitt/Spring Avenue)

Under existing conditions, there is little to no lighting within the right-of-way of the proposed Hale Avenue alignment. Therefore, the proposed extension of Hale Avenue, which includes a landscaped center median with streetlights, would increase light levels in the immediate project area. Vehicle headlights would also contribute to increased light levels. The proposed project would not, however, introduce a new light source to the surrounding area, which is an urbanized area located in central Morgan Hill that contains numerous sources of lighting (e.g., streetlights, vehicle headlights, security lighting, lit parking lots, etc.). Additionally, under normal operation, the project would not result in headlights from vehicles travelling on the alignment to shine directly into adjacent residences. The roadway, in accordance with current roadway safety standards, has been designed to ensure the headlights of vehicles travelling on roadway are directed onto the roadway surface to allow for adequate sight distance. Existing and proposed walls and fences along the road would also block vehicle headlights. For these reasons, compared to existing conditions in the project area, the proposed project would not introduce a new source of substantial light or glare that would affect views in the project area. **(Less Than Significant Impact)**

Phase II (DeWitt Avenue to Watsonville Road)

Unlike the proposed extension of Hale Avenue, the planned future roadway improvements under Phase II of the proposed project would mostly occur within existing right-of-way that is currently lit at night with streetlights and vehicle headlights. Therefore, the Phase II roadway improvements are not likely to result in headlight glare that does not currently exist along the existing roadways within the alignment. Future lighting within the planned alignment under Phase II would be similar to existing conditions and, therefore, would not introduce a new source of substantial light or glare that would affect views in the project area. **(Less Than Significant Impact)**

2.1.3 Cumulative Aesthetics Impacts

Reasonably foreseeable future development may demolish existing buildings, construct tall buildings, remove trees, create light and glare, and possibly affect views of the scenic hillsides around the City, such as El Toro Mountain and the foothills to the east and west, and other scenic resources. As discussed previously, the project would not affect scenic views or scenic resources. Additionally, all reasonable foreseeable future development would be subject to City review, which would ensure a reasonable measures are taken to avoid and/or reduce significant aesthetic impacts. For these reasons, the combination of the proposed extension of Hale Avenue and the planned widening and realignment of the Santa Teresa Corridor together with existing and reasonably foreseeable development in the project area would not affect scenic vistas, substantially degrade the visual character or quality of the site and surroundings, or create a new substantial source of light or

glare that would adversely affect daytime or nighttime views in the project area. **(Less Than Significant Impact)**

2.1.4 Conclusion

The proposed extension of Hale Avenue and the planned widening and realignment of the Santa Teresa Corridor would not have a substantial adverse effect on a scenic vista, substantially degrade the visual character or quality of the site and surroundings, or create a new substantial source of light or glare that would adversely affect daytime or nighttime views in the project area. **(Less Than Significant Impact)**

2.2 AIR QUALITY

The following discussion is based on an Air Quality and Greenhouse Gas Assessment prepared for Phase I of the proposed project by *Illingworth & Rodkin, Inc.* in June 2016. The report is attached as Appendix B to this EIR.

2.2.1 Existing Setting

2.2.1.1 *Applicable Plans, Policies, and Regulations*

The Federal Clean Air Act governs air quality in the United States. In addition to being subject to Federal requirements, air quality in California is also governed by more stringent regulations under the California Clean Air Act. At the Federal level, the United States Environmental Protection Agency (USEPA) administers the Federal Clean Air Act. The California Clean Air Act is administered by the California Air Resources Board (CARB) at the State level and by the Air Quality Management Districts at the regional and local levels. The Bay Area Air Quality Management District (BAAQMD) regulates air quality at the regional level in the San Francisco Bay Area.

United States Environmental Protection Agency

The USEPA is responsible for enforcing the Federal Clean Air Act and establishing the National Ambient Air Quality Standards (NAAQS). NAAQS are required under the 1970 Clean Air Act and subsequent amendments. The USEPA regulates emission sources that are under the exclusive authority of the Federal government, such as aircraft, ships, and certain types of locomotives. The agency has jurisdiction over emission sources outside State waters (e.g., beyond the outer continental shelf) and establishes various emission standards, including those for vehicles sold in States other than California. Automobiles sold in California must meet the stricter emission standards established by CARB.

California Air Resources Board

CARB, which is part of the California Environmental Protection Agency (CalEPA), is responsible for enforcing the State requirements of the Federal Clean Air Act, administering the California Clean Air Act, and establishing the California Ambient Air Quality Standards (CAAQS). The California Clean Air Act requires all air districts in the State to achieve and maintain CAAQS. CARB regulates mobile air pollution sources, such as motor vehicles. The agency sets emission standards for vehicles sold in California and for other emission sources, such as consumer products and certain off-road equipment. CARB established passenger vehicle fuel specifications and oversees the functions of local air pollution control districts and air quality management districts, which in turn administer air quality activities at the regional and county level. CARB researches the effects of air pollution on the public and develops innovative approaches to reducing air pollutant emissions.

Bay Area Air Quality Management District

BAAQMD is the regional agency tasked with managing air quality in the region. BAAQMD is primarily responsible for assuring that the Federal and State ambient air quality standards are

maintained in the San Francisco Bay Area. Air quality standards are set by the Federal government (the 1970 Clean Air Act and its subsequent amendments) and the State (California Clean Air Act of 1988 and its subsequent amendments). Regional air quality management districts, such as BAAQMD, prepare air quality plans specifying how State standards will be met. BAAQMD's most recently adopted Clean Air Plan is the 2010 Clean Air Plan (2010 CAP).

The 2010 CAP provides an updated comprehensive plan to improve Bay Area air quality and protect public health, taking into account future growth projections to 2035. The CAP contains district-wide control measures to reduce ozone precursor emissions (i.e., reactive organic gases [ROG] and nitrogen oxides [NO_x]), particulate matter, and greenhouse gas emissions.

City of Morgan Hill 2035 General Plan

Various policies in the City's General Plan have been adopted for the purpose of avoiding or mitigating air quality impacts resulting from development within the City, including the following:

Air Quality Policy NRE-10.4 – To reduce air pollution and frequency and length of automobile trips and the amount of traffic congestion by controlling sprawl, promoting infill development, and encouraging mixed uses and higher density development near transit. Support the expansion and improvement of alternative modes of transportation. Encourage development project designs that protect and improve air quality and minimize direct and indirect air pollutant emissions by including components that reduce vehicle trips.
Air Quality Policy NRE-11.3 – For proposed development that emits toxic air contaminants, require project proponents to prepare health risk assessments in accordance with Bay Area Air Quality Management District (BAAQMD) procedures as part of environmental review and implement effective mitigation measures to reduce potential health risks to less-than-significant levels. Alternatively, require these projects to be located an adequate distance from residences and other sensitive receptors to avoid health risks. Consult with the BAAQMD to identify stationary and mobile toxic air contamination sources and determine the need for and requirement of a health risk assessment for proposed development.
Air Quality Policy NRE-12.1 – Requirement that development projects implement best management practices to reduce air pollutant emissions associated with construction and operation of the project.
Air Quality Policy NRE-11.6 – Encourage the use of pollution-absorbing trees and vegetation in buffer areas between substantial sources of toxic air contaminants and sensitive receptors.

2.2.1.2 *Background Information*

Regional Criteria Air Pollutants

Air quality and the amount of a given pollutant in the atmosphere are determined by the amount of pollutant released and the atmosphere's ability to transport and dilute the pollutant. The major determination of transport and dilution are wind, atmospheric stability, terrain, and for photochemical pollutants, sunlight.

The project site is located in the southern portion of Santa Clara County, which is in the San Francisco Bay Area Air Basin. The Bay Area meets all State and Federal ambient air quality standards with the exception of ground-level ozone, respirable particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$).

High ozone levels are caused by the cumulative emissions of reactive organic gases (ROG) and nitrogen oxides (NOx). These precursor pollutants react under certain meteorological conditions to form high ozone levels. Controlling the emissions of these precursor pollutants is the focus of BAAQMD's attempt to reduce ozone levels. The highest ozone levels in the Bay Area occur in the eastern and southern inland valleys that are downwind of air pollutant sources. High ozone levels aggravate respiratory and cardiovascular diseases, reduce lung function, and increase coughing and chest discomfort.

Particulate matter is another problematic air pollutant in the Bay Area. Particulate matter is assessed and measured in terms of respirable particulate matter or particles that have a diameter of 10 micrometers or less (PM_{10}) and fine particulate matter with a diameter of 2.5 micrometers or less ($PM_{2.5}$). Elevated concentrations of PM_{10} and $PM_{2.5}$ are the result of both region-wide (or cumulative) emissions and localized emissions. High particulate matter levels aggravate respiratory and cardiovascular diseases, reduce lung function, increase mortality (e.g., lung cancer), and result in reduced lung function growth in children.

Local Criteria Air Pollutants

Operational carbon monoxide emissions are typically the criteria pollutant of greatest concern at the local level. Congested intersections with large traffic volumes have the greatest potential to cause high-localized carbon monoxide concentrations. Air pollutant monitoring data shows that carbon monoxide levels in the Bay Area have been at healthy levels (i.e., below State and Federal standards) since the early 1990s. As a result, the region has been designated as attainment for the standard.

Local Community Risk/Toxic Air Contaminants and Fine Particulate Matter

Toxic air contaminants (TACs) are a broad class of compounds known to cause morbidity or mortality (usually because they cause cancer) and include, but are not limited to, the criteria air pollutants listed above. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter near a freeway). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, State, and Federal level.

Diesel exhaust (or diesel particulate matter - DPM) is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs (based on the Bay Area average). Diesel exhaust is a complex mixture of gases, vapors and fine particles, such as benzene and formaldehyde. CARB has adopted and implemented a number of regulations for stationary and mobile sources to reduce emissions of DPM. Several of these regulatory programs affect medium and heavy duty diesel trucks that represent the bulk of DPM emissions from California highways. These regulations include the solid waste collection vehicle (SWCV) rule, in-use public and utility

fleets, and the heavy-duty diesel truck and bus regulations. In 2008, CARB approved a new regulation to reduce emissions of DPM and nitrogen oxides from existing on-road heavy-duty diesel fueled vehicles. The regulation requires affected vehicles to meet specific performance requirements between 2011 and 2023, with all affected diesel vehicles required to have 2010 model-year engines or equivalent by 2023. These requirements are phased in over the compliance period and depend on the model year of the vehicle.

2.2.1.3 *Existing Conditions – Sensitive Receptors*

There are groups of people more affected by air pollution than others (sensitive receptors). CARB has classified the following groups as sensitive receptors: children under 14, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, elementary schools, and parks.

Phase I (Main Avenue to DeWitt/Spring Avenue)

The closest sensitive receptors to the proposed Hale Avenue extension include numerous residences, a nursing home, and a private Kindergarten through 8th grade (K-8) school. Residences are located east and west of the proposed alignment within 25 feet. The nursing home and the K-8 school are located approximately 400 feet west and approximately 750 feet west of the proposed alignment, respectively. The proposed Phase I alignment does not contain an existing roadway and, therefore, there are no vehicles currently travelling within the alignment.

Phase II (DeWitt Avenue to Watsonville Road)

Sensitive receptors in the area of the planned future widening and realignment of the Santa Teresa Corridor include residences along Dewitt Avenue, Edmundson Road, and Sunnyside Avenue. The nearest residences are located approximately 40 feet, 70 feet, and 20 feet from the nearest travel lane on Dewitt Avenue, Edmundson Road, and Sunnyside Avenue, respectively. The roadway segments that currently make up the Phase II alignment contain 11,492 average daily vehicle trips (ADT).

2.2.3 **Air Quality Impacts**

2.2.3.1 *Thresholds of Significance*

For the purposes of this EIR, an air quality impact is considered significant if the project would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations; or
- Create objectionable odors affecting a substantial number of people.

The significance thresholds identified by BAAQMD and used in this analysis are summarized in Table 2.2-1 below.

Table 2.2-1: Project-Level Significance Thresholds

Pollutant	Construction	Operation-Related	
	Average Daily Emissions (pounds/day)	**Average Daily Emissions** (pounds/day)	**Maximum Annual Emissions** (tons/year)
ROG, NO_x	54	54	10
PM_{10}	82 (exhaust)	82	15
$PM_{2.5}$	54 (exhaust)	54	10
Fugitive Dust (PM_{10}/$PM_{2.5}$)	Best Management Practices	None	None
Local CO	None	9.0 ppm (8-hr average)	20.0 ppm (1-hr average)
Risk and Hazards for New Sources and Receptors* (Project)	Same as Operational Threshold	• Increased cancer risk of >10.0 in one million • Increased non-cancer risk of > 1.0 Hazard Index (chronic or acute) • Ambient $PM_{2.5}$ increase: > 0.3 μ/m^3 [Zone of influence: 1,000-foot radius from property line of source or receptor]	
Risk and Hazards for New Sources and Receptors* (Cumulative)	Same as Operational Threshold	• Increased cancer risk of >100 in one million • Increased non-cancer risk of > 10.0 Hazard Index (chronic or acute) • Ambient $PM_{2.5}$ increase: > 0.8 μ/m^3 [Zone of influence: 1,000-foot radius from property line of source or receptor]	
Accidental Release of Acutely Hazardous Materials	None	Storage or use of acutely hazardous materials locating near receptors or new receptors locating near stored or used acutely hazardous materials considered significant	
Odors	None	Five confirmed complaints per year averaged over three years	

µ/m3 = micrograms per cubic meter

2.2.3.2 *Consistency with 2010 Clean Air Plan*

Phase I (Main Avenue to DeWitt/Spring Avenue)

The 2010 CAP addresses air quality impacts with respect to attaining ambient air quality standards for non-attainment pollutants (i.e., ozone and particulate matter or PM_{10} and $PM_{2.5}$), reducing exposure of sensitive receptors to TACs, and reducing greenhouse gas (GHG) emissions such that the region can meet Assembly Bill 32 goals of reducing GHG emissions to 1990 levels by 2020. The potential for Phase I construction and operation to expose sensitive receptors to substantial TAC concentrations and/or result in a cumulative considerable net increase of one or more criteria pollutants are discussed below. Mitigation measures are included in the proposed project to avoid or reduce criteria pollutant emissions and the exposure of sensitive receptors to substantial TAC concentrations. The potential for construction and operation of Phase I to result in a significant greenhouse gas emissions impact is discussed in *Section 2.7, Greenhouse Gas Emissions*. The proposed project would not conflict with the latest Clean Air Plan planning efforts since measures are included in the project to avoid or reduce criteria pollutant and greenhouse gas emissions to a less than significant level. **(Less Than Significant Impact)**

Phase II (DeWitt Avenue to Watsonville Road)

Similar to the proposed extension of Hale Avenue, the planned future widening and realignment of the Santa Teresa Corridor between DeWitt Avenue and Watsonville Road could result in TAC and criteria pollutant impacts. As discussed in *Section 2.7, Greenhouse Gas Emissions,* the planned future roadway improvements under Phase II are not expected to result in a significant GHG emissions impact. In conformance with General Plan Policy NRE-11.3, an air quality analysis would be prepared for the Phase II roadway improvements at the time of future development and the Phase II roadway improvements would be evaluated at a project-level in accordance with the then-current Clean Air Plan. **(Less Than Significant Impact)**

2.2.3.3 *Construction Air Quality Impacts*

Construction Criteria Pollutant Emissions

Phase I (Main Avenue to DeWitt/Spring Avenue)

Average daily construction exhaust emissions were estimated for the proposed extension of Hale Avenue, based on the anticipated schedule. The extension of Hale Avenue would be built out over a period of approximately 10 months. Average daily emissions were computed by dividing the total construction emissions by the number of construction days. As shown in Table 2.2-2 below, predicted emissions from construction would not exceed the BAAQMD significance thresholds. Therefore, criteria pollutant emissions during the construction of the proposed Hale Avenue extension from Main Avenue to DeWitt/Spring Avenue would not be substantial and the impact is considered less than significant. **(Less Than Significant Impact)**

Table 2.2-2: Construction Period Emissions

	ROG	NO_x	PM_{10} Exhaust	$PM_{2.5}$ Exhaust
Construction Emissions (tons)	0.49	5.23	0.24	0.22
Average daily Emissions (pounds)[1]	4.1	47.6	2.2	2.0
BAAQMD Thresholds (pounds per day)	54	54	82	54

[1]Assumes 220 construction workdays.

Phase II (DeWitt Avenue to Watsonville Road)

Construction of the planned future widening and realignment of the Santa Teresa Corridor is anticipated to be similar in size and scope to that of Phase I. In conformance with General Plan Policy NRE-11.3, an air quality analysis would be prepared for the Phase II roadway improvements at the time of future development, which would include projected construction period emissions. If construction period criteria pollutant emissions are projected to be above BAAQMD thresholds in place at the time, applicable mitigation measures to reduce construction period emissions below their respective BAAQMD thresholds would be implemented. **(Less Than Significant Impact)**

Construction Dust Emissions

Construction activities (e.g., roadway grading and preparation) associated with the proposed project, including both Phase I and Phase II, would temporarily generate fugitive dust in the form of PM_{10} and $PM_{2.5}$, Sources of fugitive dust could include wind blowing over exposed dry soil at the construction site and trucks hauling soil and gravel to/from the project site. Unless properly controlled, vehicles leaving the site could deposit mud on local streets, which could be an additional source of airborne dust after it dries. Project construction impacts are considered significant since they can generate dust that could pose health and nuisance impacts if uncontrolled. The BAAQMD CEQA Air Quality Guidelines consider these impacts to be less than significant if best management practices are implemented to reduce these emissions. As described below, the proposed project includes mitigation measures to reduce this impact to a less than significant level.

Impact AQ-1: Construction activities associated with the proposed project, including both Phase I and Phase II, could temporarily generate fugitive dust in the form of PM_{10} and $PM_{2.5}$. **(Significant Impact)**

Mitigation Measures: The following measures, which are consistent with the Basic Construction Mitigation Measures identified in the BAAQMD CEQA Guidelines to reduce impacts from construction dust emissions to a less than significant level, would be implemented:

MM AQ-1: The project applicant shall ensure the following measures are implemented during construction of the proposed project:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.

- All haul trucks transporting soil, sand, or other loose material offsite shall be covered.

- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph)

- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

- A publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints shall be posted. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

With implementation of the mitigation measures listed above, dust emissions during construction of the proposed project, including both Phase I and Phase II, would be reduced to a less than significant level. **(Less than Significant Impact with Mitigation Incorporated)**

Construction TAC Emissions

Phase I (Main Avenue to DeWitt/Spring Avenue)

The use of diesel-powered equipment and diesel truck traffic to and from the alignment during project construction would be a temporary source of toxic air contaminant (TAC) emissions in the form of diesel particulate matter (DPM). Construction exhaust and $PM_{2.5}$ dust emissions may pose

community risks for sensitive receptors in the vicinity of construction activities. A community risk assessment of the project construction activities was completed that evaluates potential health effects on sensitive receptors from construction DPM and $PM_{2.5}$ emissions. Community risk impacts are assessed by predicting cancer risk, non-cancer hazards, and annual $PM_{2.5}$ concentrations at the Maximum Exposed Individual (MEI) from TAC sources and comparing the predicted levels to the thresholds listed in Table 2.2-1. Results of the community risk assessment for the MEI and other nearby sensitive receptors are shown in Table 2.2-3, below.

Table 2.2-3: Maximum Community Risks from Project Construction Activities

Location and Exposure Type	Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)[1]	Chronic Hazard Index
Maximum Residential			
Child	28.0	0.5	0.03
Adult	0.5	0.5	0.03
Pacific Hills Manor			
Adult	0.2	0.1	0.01
St. Catherine School			
Child	0.9	0.1	0.01
BAAQMD Significance Threshold	>10.0	>0.3	>1.0

[1]The annual $PM_{2.5}$ concentration is the sum of the DPM and fugitive dust $PM_{2.5}$ concentrations.

As shown in Table 2.2-3, the maximum computed hazard index (HI) for each sensitive receptor type would be much lower than the BAAQMD significance criterion of 1.0. The maximum increased cancer risk for a residential child exposure, however, would be above the BAAQMD significance threshold of a cancer risk of 10 in one million or greater. Additionally, the maximum modeled annual residential $PM_{2.5}$ concentration would exceed the BAAQMD threshold of 0.3 $\mu g/m^3$.

Impact AQ-2: The maximum increased residential cancer risk due to TAC emissions during construction would be 28.0 in one million for a child exposure, which exceeds the single-source threshold of 10.0 per million. The maximum modeled annual residential $PM_{2.5}$ concentration would be 0.5 $\mu g/m^3$, which exceeds the single-source threshold of 0.3 $\mu g/m^3$. **(Significant Impact)**

Mitigation Measure: The following mitigation measure shall be implemented to reduce the impact of construction TAC emissions upon nearby sensitive receptors to a less than significant level:

MM AQ-2: The project shall develop a plan to demonstrate at least a 65 percent reduction in DPM emissions. This can be accomplished several ways.[4] Two examples

[4] Note that the construction contractor could use other measures to minimize construction period DPM emissions to reduce the predicted cancer risk below the thresholds. Such measures may be the use of alternative powered equipment (e.g., LPG powered forklifts), alternative fuels (e.g., biofuels), added exhaust devices, or a combination of such measures, provided that these measures are shown to be effective by a qualified air quality specialist and approved by the lead agency.

of measures that could be implemented to achieve such reductions are provided, below:

- All diesel-powered construction equipment larger than 50 hp and operating on site for more than two days continuously shall meet U.S. EPA particulate matter emissions standards for Tier 4 engines or equivalent, or

- All diesel-powered construction equipment larger than 50 hp and operating on site for more than two days continuously shall be retrofitted with CARB Level 3 Verified Diesel Emissions Control Strategy (VDECS).

Implementation of MM AQ-2 would reduce on-site diesel exhaust emissions by at least 65 percent and implementation of MM AQ-1, identified above, would further reduce on-site diesel exhaust emissions by five percent. Therefore, residential child cancer risk would be reduced to 9.8 in one million or less and annual $PM_{2.5}$ emissions would be reduced such that the maximum concentration would be 0.3 $\mu g/m^3$ or less. **(Less Than Significant Impact with Mitigation Incorporated)**

Cumulative Construction Risk Assessment

In addition to the project community risk impacts described above, cumulative TAC impacts associated with construction of the project were assessed by predicting the combined community risk impacts from the project and nearby emission sources that would be experienced by nearby sensitive receptors (residents, private school, and nursing home). A review of the project area identified the other sources of TAC emissions that could adversely affect the project construction MEI. The combined maximum cancer risk, non-cancer HI, and annual $PM_{2.5}$ concentration at the MEI is shown in Table 2.2-4, below.

Table 2.2-4: Combined Community Risk Impacts

Source	Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)[1]	Chronic Hazard Index
Unmitigated Project Construction	28.0	0.5	0.03
Hale Avenue	8.7	0.3	<0.03
Plant 12813, Dryclean A+	>7.5	0.0	<0.02
Cumulative Total	**<44.2**	**0.8**	**<0.08**
BAAQMD Significance Threshold	>100	>0.8	>10.0

[1]The annual $PM_{2.5}$ concentration is the sum of the DPM and fugitive $PM_{2.5}$ concentrations.

As shown in Table 2.2-4, the predicted combined maximum cancer risk, non-cancer HI, and annual $PM_{2.5}$ concentration from construction would be below their respective BAAQMD significance thresholds. Additionally, implementation of MM AQ-1 and AQ-2 would reduce construction dust

and TAC emissions to less than significant project levels, thereby reducing the combined community risk impacts. **(Less Than Significant Impact)**

Phase II (DeWitt Avenue to Watsonville Road)

The use of diesel-powered equipment during construction of the Santa Teresa Corridor widening and realignment and diesel truck traffic to and from the alignment during project construction would be a temporary source of toxic air contaminant (TAC) emissions in the form of diesel particulate matter (DPM). Construction exhaust and $PM_{2.5}$ dust emissions may pose community risks for sensitive receptors in the vicinity of construction activities. At the time of future development, an air quality analysis would be completed for Phase II of the proposed project, which would include analysis of project and combined community risk impacts from project construction activities. If combined construction community risk impacts are found to be above BAAQMD significance thresholds in place at the time, in accordance with General Plan Policy NRE-11.3 mitigation measures would be implemented to reduce increased community risks to below their respective BAAQMD significance thresholds. **(Less Than Significant Impact)**

2.2.3.4 *Operational Air Quality Impacts*

Criteria Air Pollutants – Regional Air Quality

Phase I (Main Avenue to DeWitt/Spring Avenue)

Most operational air pollutant emissions from the proposed extension of Hale Avenue would be generated primarily by the vehicles on the roadway. As discussed in *Section 2.13 Transportation*, roadway volumes along the proposed roadway extension would be approximately 18,560 average daily trips (ADT) upon buildout of the General Plan. Operation of the proposed extension was modeled to predict emissions. The predicted annual air pollutant emissions resulting from the operation of the proposed extension of Hale Avenue are shown in Table 2.2-5, below.

Table 2.2-5: Project Operational Emissions

Scenario	ROG	NO_x	PM_{10}	$PM_{2.5}$
Annual Project Operation (tons)	0.001	0.004	0.001	0.001
BAAQMD Thresholds (tons per year)	**10**	**10**	**10**	**10**
Net Average daily emissions (pounds per day)[1]	11.6	23.9	2.7	1.7
BAAQMD Thresholds (pounds per day)	**54**	**54**	**82**	**54**

[1]Assumes 365-day operation.

Average daily and annual emissions of ROG, NO_x, $PM_{10,}$ and $PM_{2.5}$ emissions from the operation of the proposed extension of Hale Avenue (i.e. the use of the roadway by vehicles that would otherwise have used existing alternate streets) would not exceed the BAAQMD significance thresholds.

Therefore, the proposed extension of Hale Avenue would not result in a significant operational criteria pollutant emissions impact. **(Less Than Significant Impact)**

Phase II (DeWitt Avenue to Watsonville Road)

Most criteria air pollutant emissions during operation of the planned future widening and realignment of Santa Teresa Corridor would be by the vehicles on the roadway. As discussed in *Section 2.13, Transportation*, future roadway volumes are projected to increase 6,408 ADT along the Phase II roadway alignment. At the time of future development, an air quality analysis would be completed for Phase II of the proposed project, which would evaluate criteria pollutant emissions during operation of the Phase II roadway improvements. If projected operational criteria pollutant emissions are found to be above the then-current BAAQMD significance thresholds, feasible mitigation measures would be implemented to reduce criteria pollutant emissions below respective BAAQMD thresholds. **(Less Than Significant Impact)**

Criteria Air Pollutants – Local Air Quality

Phase I and Phase II

Congested intersections with high traffic volumes have the greatest potential to generate substantial localized carbon monoxide concentrations. Per the BAAQMD CEQA Air Quality Guidelines, a project would not have a significant carbon monoxide impact if the hourly volumes at the intersections affected by the proposed project remain below 44,000 vehicle trips per hour with the addition of project re-distributed traffic. The traffic impact analysis prepared for the proposed project, including the extension of Hale Avenue (Phase I) and the planned future widening and realignment of the Santa Teresa Corridor (Phase II), evaluates intersection and roadway segment volumes in the project area with and without the proposed project (refer to *Section 2.13, Transportation*). The Monterey Road and Dunne Avenue intersection was calculated in the Traffic Operations Analysis as having the greatest post-project intersection volume with 35,154 ADT under the 2035 General Plan Plus Project Condition. Intersection volumes in the project area, therefore, would remain below 44,000 vehicles per hour. For this reason, the proposed project would not exceed local ambient air quality standards or considerably contribute to cumulative local air quality impacts. **(Less Than Significant Impact)**

Community Risk Impacts during Operation

Phase I (Main Avenue to DeWitt/Spring Avenue)

Residences are located adjacent to the proposed alignment for the extension of Hale Avenue. Air pollutant emissions from the vehicles travelling on the proposed Hale Avenue extension could negatively affect nearby sensitive receptors. For local roadways, BAAQMD developed the Roadway Screening Analysis Calculator to determine whether roadway volumes would expose sensitive receptors to substantial pollutant concentrations. Inputs to the BAAQMD Roadway Screening Analysis Calculator included proposed roadway orientation, sensitive receptor distance and direction from the proposed roadway, and future roadway traffic volumes. Per the traffic impact analysis completed for the proposed project (refer to *Section 2.13, Transportation*), Year 2035 General Plan

traffic volumes with the proposed project (i.e., conservatively high traffic volumes with the greatest potential to generate substantial air pollutant emissions) were used. According to the traffic impact analysis, roadway volumes along the proposed roadway extension would be approximately 18,560 ADT upon buildout of the General Plan. The BAAQMD Roadway Screening Analysis Calculator estimated that the potential excess cancer risk would be 8.7 in one million, which is below the BAAQMD significance threshold of 10.0 in one million. Annual $PM_{2.5}$ concentrations would be 0.3 $\mu g/m^3$, which would not exceed the BAAQMD significance threshold of greater than 0.3 $\mu g/m^3$. Non-cancer hazards from the future roadway would be below the BAAQMD significance threshold of 1.0 Hazard Index for a single source.

Per the traffic impact analysis completed for the proposed project, the roadway segments north and south of the proposed Hale Avenue extension would increase by approximately 2,830 and 3,380 ADT, respectively. This increase in ADT is substantially less than that evaluated above for the residences located along the proposed alignment and found not to expose sensitive receptors to substantial pollutant concentrations. Therefore, increased roadway volumes north and south of the proposed Hale Avenue extension would not expose sensitive receptors to substantial pollutant concentrations. For these reasons, future operation of the proposed Hale Avenue extension would not result in a significant community risk impact. **(Less Than Significant Impact)**

Phase II (DeWitt Avenue to Watsonville Road)

Similar to Phase I of the proposed project, the future planned widening and realignment of the Santa Teresa Corridor could expose sensitive receptors to substantial air pollutant emissions. At the time of future road improvements, an air quality analysis would be prepared for Phase II of the project, which would include project operational community risk impacts. If operational emissions exceed applicable BAAQMD significance thresholds at the time, in accordance with General Plan Policy NRE-11.3 mitigation measures would be implemented to reduce operational air pollutant emissions below respective BAAQMD significance thresholds. **(Less Than Significant Impact)**

2.2.3.5 *Odor Impacts*

Operation of the proposed project, including both Phase I and Phase II, is not expected to produce objectionable odors. Odors from the use of diesel powered equipment during construction activities may by noticeable in the project area; however, these odors would be short-term. For these reasons, the proposed project, including both would not create odors affecting a substantial number of people. **(Less Than Significant Impact)**

2.2.4 Cumulative Air Quality Impacts

The San Francisco Bay Area Air Basin (SFBAAB) is currently designated as a non-attainment area for state and federal ozone standards and federal particulate matter ambient air quality standards. SFBAAB's nonattainment status is attributed to the region's development history. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts.

In developing thresholds of significance for air pollutants, BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions.

2.2.4.1 *Phase I (Main Avenue to DeWitt/Spring Avenue)*

As described above and in the air quality and greenhouse gas emissions assessment (refer to Appendix B) for the proposed Hale Avenue extension, with implementation of the standard construction BMPs recommended in the BAAQMD CEQA Air Quality Guidelines to reduce emissions, the proposed extension of Hale Avenue would not exceed the thresholds for criteria pollutants and, therefore, would not make a cumulatively considerable contribution to regional criteria pollutant air quality impacts. **(Less Than Significant Cumulative Impact with Mitigation)**

2.2.4.2 *Phase II (DeWitt Avenue to Watsonville Road)*

As described above, with implementation of the standard construction BMPs recommended in the BAAQMD CEQA Air Quality Guidelines to reduce emissions, construction activities associated with the planned future widening and realignment of the Santa Teresa corridor would not exceed the thresholds for criteria pollutants. At the time of future development, an air quality analysis would be completed for Phase II of the proposed project, which would evaluate criteria pollutant emissions during operation of the Phase II roadway improvements. If projected operational criteria pollutant emissions are found to be above the then-current BAAQMD significance thresholds, feasible mitigation measures would be implemented to reduce criteria pollutant emissions below respective BAAQMD thresholds. For these reasons, the planned future widening of the Santa Teresa corridor would not make a cumulatively considerable contribution to regional criteria pollutant air quality impacts. **(Less Than Significant Cumulative Impact with Mitigation)**

2.2.5 Conclusion

The proposed project, with implementation of mitigation measures MM AQ-1 and MM AQ-2 in compliance with the City of Morgan Hill General Plan and existing air quality laws and regulations would not result in a significant air quality impact. **(Less Than Significant Impact with Mitigation)**

2.3 BIOLOGICAL RESOURCES

The following discussion is based in part upon a Biological Resources Assessment (BRA) prepared by *WRA, Inc.*, for the Phase I project site in March 2016. This report is attached as Appendix C of this EIR.

2.3.1 Existing Setting

2.3.1.1 *Applicable Plans, Policies, and Regulations*

Regulated Habitats

United States Army Corps of Engineers Jurisdiction

Areas meeting the regulatory definition of "Waters of the United States" (jurisdictional waters) are subject to the jurisdiction of the US Army Corps of Engineers (USACE). The USACE, under provisions of Section 404 of the Clean Water Act (1972) and Section 10 of the Rivers and Harbors Act (1899), has jurisdiction over "Waters of the US." These waters may include all waters used, or potentially used, for interstate commerce, including all waters subject to the ebb and flow of the tide, all interstate waters, all other waters (intrastate lakes, rivers, streams, mudflats, sandflats, playa lakes, natural ponds, etc.), all impoundments of waters otherwise defined as Waters of the US., tributaries of waters otherwise defined as Waters of the US, the territorial seas, and wetlands adjacent to Waters of the US.

Areas not considered to be jurisdictional waters include non-tidal drainage and irrigation ditches excavated on dry land, artificially-irrigated areas, artificial lakes or ponds used for irrigation or stock watering, small artificial water bodies such as swimming pools, and water-filled depressions. West Little Llagas Creek flows adjacent to the proposed Hale Avenue alignment for approximately 260 feet (see discussion below).

Waters of the State of California

The California Water Code defines waters of the State of California as, "any surface water or groundwater, including saline waters, within the boundaries of the State" (Water Code section 13050(e)). Waters of the State are broadly interpreted to include all waters within the State's boundaries, whether private or public, including waters in both natural and artificial channels.[5]

California Department of Fish and Wildlife Jurisdiction

Activities that result in the diversion or obstruction of the natural flow of a stream, or which substantially change its bed, channel or bank, or which utilize any materials (including vegetation) from the streambed requires that the project proponent enter into a Streambed Alternation Agreement with the California Department of Fish and Wildlife (CDFW), under Sections 1601-1603 of the State

[5] State Water Resources Control Board. "Waters of the State." Accessed September 12, 2016. Available at: http://www.waterboards.ca.gov/academy/courses/wqstandards/materials/water_us_ca/ca_water_042508.pdf.

Fish and Game Code. The CDFW potentially extends the definition of stream to include "intermittent and ephemeral streams, rivers, creeks, dry washes, sloughs, blue-line streams (USGS), and watercourses with subsurface flows. Canals, aqueducts, irrigation ditches, and other means of water conveyance can also be considered streams if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife." West Little Llagas Creek flow adjacent to the proposed Hale Avenue alignment for approximately 260 feet (see discussion below).

Special-Status Plant and Wildlife Species

Federal Endangered Species Act

The Federal Endangered Species Act (FESA) protects listed wildlife species from harm or "take," which is broadly defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct. A take can also include habitat modification or degradation that directly results in death or injury to members of a listed wildlife species. An activity can be defined as "take" even if it is unintentional or accidental. Listed plant species are provided less protection than listed wildlife species. Listed plant species are legally protected from take under FESA, if they occur on Federal lands or if the project requires a Federal action, such as a Section 404 fill permit.

California Endangered Species Act

The California Endangered Species Act (CESA) prohibits the take of any plant or animal listed or proposed for listing as rare (plants only), threatened, or endangered. In accordance with the CESA, CDFW has jurisdiction over State-listed species (California Department of Fish and Game Code 2070). Additionally, the CDFW maintains lists of "species of special concern" that are defined as species that appear to be vulnerable to extinction because of declining populations, limited ranges, and/or continuing threats.

Federal Migratory Bird Treaty Act

The Federal Migratory Bird Treaty Act (16 U.S.C. Sec. 703) prohibits killing, possessing, or trading in migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs.

California Department of Fish and Game Code Section 3503.5

Birds of prey are protected under Fish and Game Code section 3503.5, which states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto."

The California Native Plant Society

The California Native Plant Society (CNPS), a non-governmental conservation organization, has developed lists of plant species of concern in California. Although the CNPS is not a regulatory

agency and plants on these lists have no formal regulatory protection, plants appearing on List 1B or List 2 are, in general, considered to meet CEQA's Section 15380 criteria and adverse effects to these species may be considered significant.

Santa Clara Valley Habitat Plan

The Santa Clara Valley Habitat Plan (Habitat Plan) is a regional planning document that allows covered projects to use a streamlined process for permitting and mitigation. The Habitat Plan is both a Habitat Conservation Plan (HCP) and a Natural Community Conservation Plan (NCCP). The Habitat Plan provides a higher level of environmental protection and conservation for 18 species of plants and wildlife including eight that are listed as threatened or endangered, under either the Federal Endangered Species Act (ESA), the California Endangered Species Act (CESA) or both, and one species, tricolored blackbird (*Agelaius tricolor*), which was recently designated as a State-Candidate for listing in December 2015. The Habitat Plan also protects wetland, streams, and riparian habitats that are subject to the Federal Clean Water Act (CWA) and California's Porter-Cologne Water Quality Control Act, and Section 1600-1616 of the CFGC, and other sensitive biological communities as defined by the NCCP. The Habitat Plan also includes an agreement between State/Federal wildlife and wetland regulators and local jurisdictions, which allow public and private entities to engage in the "incidental take" of listed species (i.e., to destroy or degrade habitat) in exchange for the implementation of Habitat Plan prescribed measures to avoid, minimize or compensate for adverse effects on endangered species and natural communities.

The geographic scope of the Habitat Plan extends from the Santa Clara/Alameda County border south to the Santa Clara/San Benito County border and from the western edge of San Jose east to the eastern edge of the Coyote Creek watershed or the County boundary. The Habitat Plan covers approximately 510,000 acres, primarily within south Santa Clara County. Both the Phase I and II project areas are located within the Habitat Plan study area.

Habitat Plan Land Designation and Fee Zones

Phase I (Main Avenue to DeWitt/Spring Avenue)

Phase I is located within the Habitat Plan study area and is primarily designated as *Grain, Row-crop, Hay and Pasture, Disked/Short-term Fallowed*; the area north of Warren Avenue is designated *Urban-Suburban* and the existing detention basin is designated *Pond.*

Except for the area north of Warren Avenue, which is not located in a land cover fee zone, the entire Phase I project area is mapped in Fee Zone B (Agricultural and Valley Floor Lands). The existing detention basin is mapped as a potential Wetland Fee Zone. No other fee zones are mapped within the Phase I project area. No Plant Survey Areas are mapped within the Phase I project area. The detention basin and surrounding area is mapped a Wildlife Survey Area for the Tricolored Blackbird; however, as discussed below, the basin does not currently contain suitable tricolored blackbird habitat.

Phase II (DeWitt Avenue to Watsonville Road)

Phase II is located within the Habitat Plan study area and is designated *Rural Residential*, *California Annual Grassland, Grain, Row-crop, Hay and Pasture, Disked/Short-term Fallowed*, and *Urban-Suburban.*

Most of the Phase II project area is mapped in Fee Zone B (Agricultural and Valley Floor Lands), smaller areas are mapped in Fee Zone A (Ranchlands and Natural Lands) and Fee Zone C (Small Vacant Sites under 10 Acres). The area north of the intersection of Edmundson Avenue and Sunnyside Avenue is mapped as a potential Wetland Fee Zone and the area east of DeWitt Avenue, approximately 750 feet north of Edmundson Avenue, is mapped as potential Serpentine Fee Zone. The area mapped as a potential Serpentine Fee Zone is also mapped a Plant Survey Area, and the area surrounding the potential Wetland Fee Zone is mapped a Wildlife Survey Area for the Tricolored Blackbird and Least Bell's Vireo.

City of Morgan Hill Burrowing Owl Habitat Mitigation Plan

The Morgan Hill Citywide Burrowing Owl Habitat and Mitigation Plan (Citywide Plan; City of Morgan Hill 2003) requires burrowing owl (*Athene cunicularia*) surveys before land is disturbed or graded and assesses fees for burrowing owl mitigation. Per recent changes to the City's policy, the fees are provided to the Santa Clara Valley Habitat Agency for managing burrowing owl habitat under the Habitat Plan. The City of Morgan Hill is bound by a settlement agreement with the National Audubon Society to collect these burrowing owl mitigation fees until 2020. The City assesses these burrowing owl mitigation fees regardless of the potential for burrowing owl presence at a particular property.

City of Morgan Hill Tree Protection Ordinance

The City of Morgan Hill has a tree ordinance that protects significant trees within City limits. Chapter 12.32, "Restrictions on Removal of Significant Trees", of the Morgan Hill Municipal Code defines a "significant tree" as all native species indigenous to the Morgan Hill region, including but not limited to oaks (*Quercus* spp.), California bay (*Umbellularia californica*), madrone (*Arbutus menziesii*), California sycamore (*Platanus racemosa*), and alder (*Alnus* spp.) with a circumference of 18 inches (5.7 inches diameter) or more measured at 4.5 feet above the ground or immediately below the lowest branch, whichever is lower, or any non-indigenous tree with a circumference of 40 inches (12.7 inches diameter) or more measured at 4.5 feet above the ground or immediately below the lowest branch, whichever is lower. In addition, all trees within the City right-of-way (e.g. street trees) regardless of species and size are protected.

City of Morgan Hill 2035 General Plan

Various policies in the City's General Plan have been adopted for the purpose of avoiding or mitigating biological resources impacts resulting from planned development within the City, including the following:

Biological Resources Policy NRE-5.2 – Coordinate with jurisdictional agencies, as required, as part of the environmental review process for development project.
Biological Resources Policy NRE-5.3 – Retain natural streamside and riparian areas in their natural state in order to preserve their value as percolation and recharge areas, natural habitat, scenic resources, and recreation corridors, and to stabilize banks.
Biological Resources Policy NRE-5.4 – Consider development impacts upon wildlife in riparian areas and mitigate those environmental impacts.
Biological Resources Policy NRE-5.6 – Protect existing stream channels and riparian vegetation by requiring buffering or landscaped setbacks and storm runoff interception as specified in Table NRE-1 in the General Plan.
Biological Resources Policy NRE-5.7 – Require creek areas in new developments to be visible from the public right-of-way to ensure safety, maintenance, access, and integration into the neighborhood.
Biological Resources Policy NRE-6.1 – Preserve all fish and wildlife habitats in their natural state whenever possible. Consider development impacts upon wildlife and utilize actions to mitigate those environmental impacts.
Biological Resources Policy NRE-6.2 – Support the implementation of the Santa Clara Valley Habitat Plan to protect wildlife, rare and endangered plants and animals, and sensitive habitats from loss and destruction.
Biological Resources Policy NRE-6.4 – Preserve and protect mature, healthy trees whenever feasible, particularly native trees, historically significant trees, and other trees which are of significant size or of significant aesthetic value to the immediate vicinity or to the community as a whole.
Biological Resources Policy NRE-6.5 – Require development to be designed to conserve soil and avoid erosion.
Biological Resources Policy NRE-6.6 – Encourage use of native plants, especially drought-resistant species, in landscaping.
Biological Resources Policy NRE-6.7 – Encourage the protection, restoration, and enhancement of remaining native grasslands, oak woodlands, marshlands, and riparian habitat.

2.3.1.2 *Existing Conditions*

The Phase I and II roadway alignments contain both small, rolling hills and sections that are relatively flat. The alignments are located in a largely suburban area with a mix of housing developments, schools, and churches among patches of remnant oak woodland and rolling grassland. The alignments consist primarily of non-native grassland bordered by residential uses.

West Little Llagas Creek

North of West Main Avenue, West Little Llagas Creek flows in a roadside ditch along the eastern side of Hale Avenue. The creek then flows through a culvert and under West Main Avenue, daylighting on the southern side of West Main Avenue in a manmade earthen channel that is located adjacent to the proposed alignment. The manmade earthen channel contains reeds and other aquatic vegetation and a row of landscape trees are planted within the channel and parallel to the proposed alignment. West Little Llagas Creek flows within the manmade channel and adjacent to the

proposed extension of Hale Avenue for approximately 295 feet until veering east toward Downtown Morgan Hill and away from the proposed roadway alignment.

On-site Habitats

Phase I (Main Avenue to DeWitt/Spring Avenue)

The area within and adjacent to the proposed alignment for the extension of Hale Avenue was surveyed by biologists on November 15, 2011 and January 29 and February 5, 2016. The biological communities within the survey area are shown on Figure 2.3-1. As shown on Figure 2.3-1, most of the habitat within and adjacent to the proposed alignment for the extension of Hale Avenue can be characterized as highly disturbed non-native annual grassland. Non-native annual grasslands include areas that have been partially developed or have been used in the past for agriculture. These areas, however, are not currently used for agricultural activities and have been allowed to revert to a semi-natural condition.

As also shown on Figure 2.3-1, several aquatic features are also located within and/or adjacent to the proposed roadway alignment. West Little Llagas Creek flows along the northern section of the proposed Hale Avenue extension for 295 feet. The northern section also contains an approximately 0.16-acre stormwater collection basin. In addition, a total of approximately 0.12-acres of seasonal wetland are present within or adjacent to the proposed alignment.

Phase II (DeWitt Avenue to Watsonville Road)

Similar to Phase I, the area adjacent to the planned future widening and realignment of the Santa Teresa Corridor can be characterized as highly disturbed non-native annual grassland, but most of the area within the planned future alignment are DeWitt Avenue and Sunnyside Road (i.e., paved asphalt, cement, and roadway shoulders that provide poor ruderal habitat). Approximately 500 feet and 1,300 feet north of Edmundson Avenue, respectively, Little Llagas Creek and a tributary to Little Llagas Creek flow under DeWitt Avenue in a southeasterly direction towards the intersection of Edmundson Avenue and Sunnyside Avenue and converge to form Edmundson Creek. The area along the east side of DeWitt Avenue, between the two creek crossings is mapped as a Potential Serpentine Fee Zone and the area north and east of the Edmundson Avenue and Sunnyside Avenue intersection is mapped as a Potential Mixed Riparian Forest and Woodland Fee Zone by the Habitat Plan. There are no other known aquatic features or sensitive habitats within or adjacent to the planned future alignment of Phase II.

Special-Status Plant and Wildlife Species

Special-status species include those plants and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the Federal Endangered Species Act (ESA) or California Endangered Species Act (CESA).

Source: WRA, 3/15/16.

PROJECT AREA BIOLOGICAL COMMUNITIES FIGURE 2.3-1

Phase I (Main Avenue to DeWitt/Spring Avenue)

Special-Status Plant Species

Based upon a review of resources and databases, 42 special-status plant species have been documented in the project area, including nine that are covered species per the Habitat Plan. No special-status plant species were observed in the project area during the 2011 or 2016 site surveys. A large portion of these plant species occur in habitats such as coastal dunes/scrub, chaparral, broad leaved upland forest, or cismontane woodland which are not found in the Phase I project area. Of the special-status plant species that occur in grasslands, most occur on unique substrates such as serpentine or alkaline soils, which are also absent from the Phase I project area. The heavy disturbance level (mowing, discing, herbicide treatments) in the Phase I project area is likely to preclude other special-status plant species from be present.

Special-Status Wildlife Species

Fifty-five special-status wildlife species have been recorded to occur or may occur in the vicinity of the Phase I project area. Two special-status wildlife species were observed on or adjacent to the proposed alignment in 2011, the oak titmouse (*Baeolophus inornatus*) and Nuttall's woodpecker (*Picoides nuttallii*) and, therefore, have a high potential of occurring in the Phase I project area. Four special-status wildlife species have a moderate potential to occur in the Phase I project area, the Burrowing owl, (*Athene cunicularia*), Loggerhead shrike (*Lanius ludovicianus*), Yellow-billed magpie (*Pica nuttalli*), and White-tailed kite (*Elanus leucurus*).

The White-tailed kite is common in the Santa Clara Valley, and the Phase I project area provides open foraging habitat and trees suitable for nesting, although adjacent human disturbance may reduce nesting potential. For these reasons, the kite has a moderate potential to nest and forage in the Phase I project area.

Although the Burrowing owl is not recently known to nest in the Morgan Hill area and no evidence of owl occupancy was observed at any burrows during the site visits, suitable burrow habitat is available within the Phase I project area. In 2002, the owl was documented to occur approximately 0.5 mile south of the project area. Given the proximity of documented occurrences and the presence of suitable habitat in the project area, there is a moderate potential for burrowing owl to occur in the Phase I project area.

Loggerhead shrike are a year-round resident and winter visitor in lowlands and foothills throughout California. This species is associated with open areas containing short vegetation and scattered trees, shrubs, fences, utility lines and/or other perches. The shrike can be found in suburban areas, and the Phase I project area contains suitable open grasslands for foraging and trees for nesting. For these reasons, the Loggerhead shrike has a moderate potential to nest in the Phase I project area.

Yellow-billed magpie occurs year-round in the State, including the central-southern Coast Ranges. The magpie inhabits oak savanna and open oak woodland habitat similar to that provided in the Phase I project area. For this reason, the magpie has a moderate potential to occur and nest in the Phase I project area.

Currently, the tricolored blackbird (*Agelaius tricolor*) is unlikely to occur within the Phase I project area. Historic aerials and the Habitat Plan suggest, however, that the excavated stormwater basin in the northwest portion of the Phase I project area once provided tricolored blackbird habitat (i.e., emergent vegetation). The basin does not currently contain suitable tricolored blackbird habitat. If emergent vegetation is allowed to grow within the basin, there is a moderate potential that this species may use this vegetation for nesting.

Phase II (DeWitt Avenue to Watsonville Road)

The potential for special status plant and wildlife species to be present within the area of the planned future alignment under Phase II of the proposed project is similar to that described above for the proposed Phase I alignment. The Habitat Plan maps the Phase II project area north of Edmundson Avenue as a potential Serpentine Fee Zone and a Plant Survey Area, which indicates a potential for special-status plants to be present. The area north of the intersection of Edmundson Avenue and Sunnyside Avenue is mapped as a potential Wetland Fee Zone, and the area surrounding the potential Wetland Fee Zone is mapped a Wildlife Survey Area for the Tricolored Blackbird and Least Bell's Vireo. No additional special-status plant or wildlife species are known or expected to occur within the Phase II project area of the planned future widening and realignment of the Santa Teresa Corridor.

Trees

The City of Morgan Hill defines a tree as "any live woody plant rising above the ground with a single stem or trunk with a circumference of 40 inches or more for non-indigenous species, and eighteen inches or more for indigenous species measured at four and one-half feet vertically above the ground or immediately below the lowest branch, whichever is lower..." Trees which are indigenous to the City of Morgan Hill include all types of oak trees.

Phase I (Main Avenue to DeWitt/Spring Avenue)

There are numerous trees and shrubs located within and adjacent to the proposed Hale Avenue extension roadway alignment. The trees located within the proposed alignment were surveyed and are listed below in Table 2.3-1. As shown in Table 2.3-1, there are a total of 45 trees located within the proposed Hale Avenue alignment, 17 of which meet or exceed the significant tree size requirements identified in the City's Tree Protection Ordinance.

Table 2.3-1: Tree Survey – Phase I

Tree Number	Common Name	Scientific Name	Circumference
1	Ash	*Fraxinus sp.*	29, 35
2	Ash	*Fraxinus sp.*	39
3	Ash	*Fraxinus sp.*	**42**
4	Chinese Pistache	*Pistacia Chinensis*	**76**
5	Valley Oak	*Quercus Lobata*	11
6	Valley Oak	*Quercus Lobata*	12
7	Valley Oak	*Quercus Lobata*	11
8	Coast Live Oak	*Quercus Agrifolia*	**18**
9	Coast Live Oak	*Quercus Agrifolia*	**21**
10	Valley Oak	*Quercus Lobata*	12
11	Plum	*Prunus Domestica*	18
12	Plum	*Prunus Domestica*	10
13	Plum	*Prunus Domestica*	18
14	Chinese Pistache	*Pistacia Chinensis*	19
15	Walnut	*Juglans sp.*	10, 19, 18
16	Valley Oak	*Quercus Lobata*	**28***
17	Valley Oak	*Quercus Lobata*	**40***
18	Almond	*Prunus Dulcis*	23, 22, 21, 11, 10, 10, 30
19	Coast Live Oak	*Quercus Agrifolia*	**28***
20	Atlas Cedar	*Cedrus Atlantica*	**76**
21	Plum	*Prunus Domestica*	15, 15, 10
22	Elm	*Ulmus sp.*	7
23	Coast Live Oak	*Quercus Agrifolia*	10*
24	Almond	*Prunus Dulcis*	**46***
25	Chinese Pistache	*Pistacia Chinensis*	23*
26	Chinse Pistache	*Pistacia Chinensis*	**120***
27	Walnut	*Juglans sp.*	**60**
28	Valley Oak	*Quercus Lobata*	10
29	Acacia	*Racosperma*	
30	Chinese Pistache	*Pistacia Chinensis*	27
31	Chinese Pistache	*Pistacia Chinensis*	26
32	Coast Live Oak	*Quercus Agrifolia*	10
33	Chinese Pistache	*Pistacia Chinensis*	36, **42**
34	Redwood	*Sequoia Sempervirens*	**117**
35	Valley Oak	*Quercus Lobata*	**55**
36	Chinese Pistache	*Pistacia Chinensis*	32
37	Plum	*Prunus Domestica*	Five trunks ranging from 7 to 18 inches.
38	Chinese Pistache	*Pistacia Chinensis*	**42**
39	Plum	*Prunus Domestica*	27, 17, 32
40	Chinese Pistache	*Pistacia Chinensis*	**47**
41	Chinese Pistache	*Pistacia Chinensis*	32
42	Plum	*Prunus Domestica*	38
43	Chinese Pistache	*Pistacia Chinensis*	22
44	Willow	*Salix sp.*	Five trunks ranging from 20 to **40** inches
45	Walnut	*Juglans sp.*	Ten trunks ranging from 4 to 15 inches.

Bold indicates an ordinance sized tree. * indicates a tree to be protected-in-place.

Phase II (DeWitt Avenue to Watsonville Road)

A tree survey was not completed for the Phase II alignment because it would become obsolete by the time project-level review for the Phase II roadway improvements is completed. Most of the Phase II alignment is comprised of DeWitt Avenue and Sunnyside Road and vacated right-of-way that is not planted with trees. Nonetheless, numerous trees are located within the Phase II alignment adjacent to DeWitt Avenue, Edmundson Avenue and Sunnyside Avenue, many of which are protected under the City of Morgan Hill Tree Protection Ordinance.

2.3.2 Biological Resources Impacts

2.3.2.1 *Thresholds of Significance*

- 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;
- 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;
- Have a substantial adverse effect on Federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- 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;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.

2.3.2.2 *Special-status Species*

Phase I (Main Avenue to DeWitt/Spring Avenue)

Special-status Plant Species

No special-status plant species were observed in the project area during the 2011 or 2016 site surveys. Most special-status plant species occurring in the project area are located in habitats (e.g., coastal dunes/scrub, chaparral, broad leaved upland forest, or cismontane woodland) or soil substrates (e.g., serpentine or alkaline soils) not found in the Phase I project area. The heavy level of disturbance (mowing, discing, herbicide treatments) in the Phase I project area also precludes special-status plant species from being present. For these reasons, construction and operation of the proposed Hale Avenue extension would not significantly impact special-status plant species. **(Less Than Significant Impact)**

Special-status Wildlife Species

All but seven of the 55 special-status wildlife species that are known to occur or may occur in the project vicinity are not expected to occur within the Phase I project area. Two special-status wildlife species, the oak titmouse and Nuttall's woodpecker were observed on or adjacent to the proposed alignment and, therefore, have a high potential to occur in the Phase I project area. Four special-status wildlife species, the Burrowing owl, Loggerhead shrike, Yellow-billed magpie, and White-tailed kite have a moderate potential to occur in the Phase I project area. Overall, the habitat suitability for grassland-associated species in the Phase I project area is reduced due to habitat fragmentation, previous and existing disturbance, and adjacent development. For these reasons, the loss of the habitat as a result of the proposed extension of Hale Avenue is not considered significant. Seven special-status bird species may use the project area for nesting, and burrowing owl may also winter within the project area. Potential impacts to and mitigation measures for the special-status bird species, if they are nesting on or adjacent to the proposed alignment during project construction, are discussed below in *Section 2.3.2.7 Santa Clara Valley Habitat Plan/Natural Community Conservation Plan Impacts*. **(Less Than Significant Impact)**

Phase II (DeWitt Avenue to Watsonville Road)

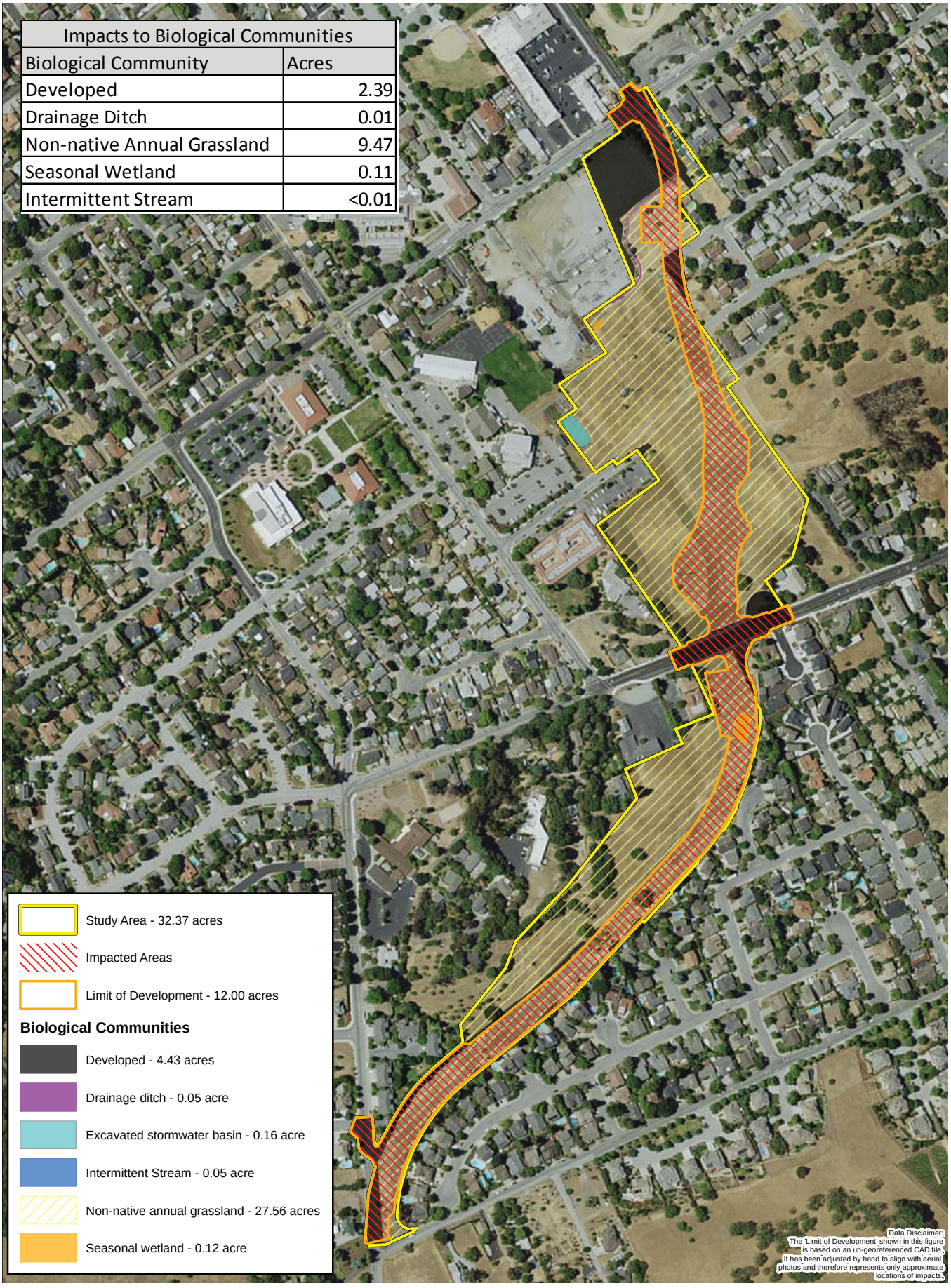
The potential for special status plant and wildlife species to be present within the area of the planned future alignment under Phase II of the proposed project is similar to that described above for the proposed Phase I alignment. At the time of future development (i.e., when sufficiently detailed roadway designs exist for analysis and to reflect then-current baseline conditions), a biological resources assessment would be prepared for the Phase II roadway improvements, which would identify special-status plant and animal species that were observed or expected to occur within the project area. Any surveys conducted now would become obsolete by the time project-level review for the Phase II roadway improvements is completed. If, at the time project-level review, special-status species are determined to be present or could be present within the Phase II project area, mitigation measures would be implemented (e.g., preconstruction surveys) to avoid impacts to special-status species. In addition and as discussed below in Section 2.3.2.7, *Santa Clara Valley Habitat Plan/Natural Community Conservation Plan Impacts*, Phase II of the project would implement standard measures in conformance with the Habitat Plan, as necessary, to reduce impacts to special-status plant and wildlife species. **(Less Than Significant Impact)**

2.3.2.3 *Sensitive Habitats and Wetlands*

Phase I (Main Avenue to DeWitt/Spring Avenue)

As shown on Figure 2.3-2, sensitive habitats in the form of West Little Llagas Creek, a drainage ditch, and seasonal wetlands are located within the alignment of the proposed extension of Hale Avenue. It is estimated that the proposed extension of Hale Avenue would impact approximately 0.01 acre of sensitive habitat associated with West Little Llagas Creek, 0.11 acre of seasonal wetlands, and less than 0.01 acre of sensitive habitat associated with the drainage ditch. These areas are potentially under the jurisdiction of the USACE and CDFW. As discussed below in *Section 2.3.2.7, Santa Clara Valley Habitat Plan/Natural Community Conservation Plan Impacts*, the proposed extension of Hale Avenue is located within the Habitat Plan study area and would be

Impacts to Biological Communities	
Biological Community	Acres
Developed	2.39
Drainage Ditch	0.01
Non-native Annual Grassland	9.47
Seasonal Wetland	0.11
Intermittent Stream	<0.01



Source: WRA Environmental Consultants, 3/15/2016.

IMPACTS TO BIOLOGICAL COMMUNITIES FIGURE 2.3-2

subject to all applicable Habitat Plan fees and surveys. The proposed extension of Hale Avenue, in conformance with the Habitat Plan, would not result in significant impacts to sensitive habitats.

Impact BIO-1: The proposed extension of Hale Avenue (Phase I) would impact sensitive creek, drainage, and wetland habitats. **(Significant Impact)**

Mitigation Measure: The following mitigation measure shall be implemented to reduce impacts to sensitive habitats to a less than significant level:

MM BIO-1: The proposed project is located within the Habitat Plan coverage area. As part of the Habitat Plan application process, a wetland delineation will be completed and the square footage of project impacts to sensitive creek, drainage, and wetland habitats will be calculated. The Habitat Plan fees paid by the project will be based, in part, upon the calculated square footage of each sensitive habitat.

The proposed Hale Avenue Extension, with implementation of MM BIO-1, would not result in a significant impact to sensitive habitats and wetlands. **(Less Than Significant Impact with Mitigation Incorporated)**

Phase II (DeWitt/Spring Avenue to Watsonville Road)

At the time Phase II design is sufficiently detailed to allow project-level review, a biological resources assessment would be prepared for the Phase II roadway improvements, which would determine the potential for sensitive habitats to be present within the area of the planned future widening and realignment of the Santa Teresa Corridor between the intersection of DeWitt Avenue and Spring Avenue to Watsonville Road. As with the proposed extension of Hale Avenue, the Phase II project is located within the Habitat Plan study area and would be subject to all applicable Habitat Plan fees and surveys at the time of future development. Approximately 500 and 1,300 feet north of Edmundson Avenue, Little Llagas Creek and an unnamed tributary to Little Llagas Creek flow under DeWitt Avenue in a southeasterly direction towards the intersection of Edmundson Avenue and Sunnyside Avenue. These areas are potentially under the jurisdiction of the USACE and CDFW. The Habitat Plan maps the area north of the intersection of Edmundson Avenue and Sunnyside Avenue as a potential Wetland Fee Zone and the area east of DeWitt Avenue, approximately 750 feet north of Edmundson Avenue, as a potential Serpentine Fee Zone. The area mapped as a potential Serpentine Fee Zone is also mapped a Plant Survey Area, and the area surrounding the potential Wetland Fee Zone is mapped a Wildlife Survey Area for the Tricolored Blackbird and Least Bell's Vireo. Conformance with the Habitat Plan would likely reduce potential impacts to sensitive habitats to a less than significant level. **(Less Than Significant Impact)**

2.3.2.4 *Federal Wetlands*

The potential for the proposed project to impact Federal wetlands is addressed in *Section 2.3.2.3, Sensitive Habitats*, above. As discussed in *Section 2.3.2.3*, the proposed extension of Hale Avenue would impact approximately 0.01 acre of sensitive habitat associated with West Little Llagas Creek, 0.11 acre of seasonal wetlands, and less than 0.01 acre of sensitive habitat associated with a drainage

ditch; all of which are potentially Federal wetlands under the jurisdiction of the USACE. The Phase II project area may also contain Federal wetlands. Approximately 500 and 1,300 feet north of Edmundson Avenue, Little Llagas Creek and an unnamed tributary to Little Llagas Creek flow under DeWitt Avenue in a southeasterly direction towards the intersection of Edmundson Avenue and Sunnyside Avenue. The area north of the intersection of Edmundson Avenue and Sunnyside Avenue is mapped as a potential Wetland Fee Zone by the Habitat Plan. Both Phase I and Phase II of the proposed project are located within the Habitat Plan study area and would be subject to all applicable fees and surveys required under the Habitat Plan, including fees for impacts to Federal wetlands. As discussed above under MM BIO-1, a wetland delineation will be completed and the square footage of project impacts to sensitive creek, drainage, and wetland habitats will be calculated. The Habitat Plan fees paid by the project will be based, in part, upon the calculated square footage of each sensitive habitat. For this reason, the proposed project (i.e., Phase I and Phase II), in conformance with the Habitat Plan, would not result in significant impacts to Federal wetlands. **(Less Than Significant Impact)**

2.3.2.5 *Wildlife Movement and Nurseries*

Phase I (Main Avenue to DeWitt/Spring Avenue)

Roadways have the potential to limit wildlife movement. Given the extent and density of surrounding development and the associated nighttime lighting, noise, and human disturbance, however, the Phase I project area does not function as a wildlife or habitat corridor. There are no know wildlife nursery sites within the Phase I project area. **(Less Than Significant Impact)**

Phase II (DeWitt/Spring Avenue to Watsonville Road)

The planned future widening and realignment of the Santa Teresa Corridor (i.e., Phase II) would not construct a new roadway or add vehicle lanes that would limit wildlife movement. Similar to the Phase I project area, the Phase II project area is also surrounded by development. There are no known wildlife nursery sites within the Phase II project area. For these reasons, the planned future widening and realignment of the Santa Teresa Corridor is not expected to substantially interfere with wildlife movement or impede the use of native nursery sites. At the time Phase II design is sufficiently detailed to allow project-level review, a biological resources assessment would be prepared for the Phase II project, which would evaluate project impacts upon wildlife movement and native nursery sites. **(Less Than Significant Impact)**

2.3.2.6 *Local Policies and Ordinances Protecting Biological Resources*

City of Morgan Hill Tree Protection Ordinance

Phase I (Main Avenue to DeWitt/Spring Avenue)

There are 45 trees located within the proposed Hale Avenue alignment, 17 of which meet or exceed the significant tree size requirements identified in the City's Tree Protection Ordinance as shown on Table 2.3-1. Construction of the planned extension would remove 12 of the 17 ordinance sized trees.

The remaining five ordinance sized trees would be protected-in-place along with two-non ordinance sized trees.

Impact BIO-2: Construction of the proposed Hale Avenue alignment would result in the removal of 12 ordinance sized trees, and construction activities near the five ordinance sized and two non-ordinance sized trees designated to be retained could impact tree health and survival. **(Significant Impact)**

Mitigation Measures: The following measures shall be implemented during construction of the Phase I roadway improvements to reduce construction impacts to trees to a less than significant level:

MM BIO-2.1: TREE PROTECTION: Unless tree removal has been previously approved, all trees located within the project shall be protected using the following minimum protection measures (these guidelines shall be included with all site development plans):

- Mark all trees to be saved with a survey flag or ribbon. Do not nail or staple directly to the tree.
- Erect a temporary fence enclosing an area equal to at least the dripline of the tree (or as far from the trunk as possible). This tree protection zone shall not be used for parking, storage of building materials, or other equipment or the placement of temporary or permanent fill. Signs should be posted identifying the restriction of uses in the tree protection zone.
- Locate structures, grade changes, and other ground or surface disturbances (e.g. concrete pours) as far as feasible from the "dripline" area of the tree.
- Avoid root damage through grading, trenching, compaction, etc at least within an area 1.5 times the dripline area of the tree. Where root damage cannot be avoided, roots encountered over 1" in diameter should be exposed approximately 12" beyond the area to be disturbed (towards the tree stem), by hand excavation, or with specialized hydraulic or pneumatic equipment, cut cleanly with hand pruners or power saw and immediately back-filled with soil. Avoid tearing or otherwise disturbing that portion of the roots to remain.
- The addition of plant or other landscaping materials shall remain outside of the dripline of all trees.
- Any tree subject to Chapter 12.32 Restrictions On Removal Of Significant Trees of the Morgan Hill Municipal Code requires approval from the Planning Division. The applicant shall request approval prior to removing any significant trees.

MM BIO-2.2: TREE ASSESSMENT: Prior to site development, the applicant shall retain the services of a certified arborist to assess all trees that may be impacted by the proposed project. The arborist will conduct a tree assessment and submit a report to the City detailing all trees subject to the Chapter 12.32 Restrictions on Removal of Significant Trees. The report will include:

- Tree species and common name.

- Size (dbh) and approximate height of tree(s)
- Current health of the tree including at a minimum: bark, foliage, structure/integrity, and roots.
- Evaluation of current health and potential impacts to future health.
- Recommendations for protection or removal of tree (if removal of tree is recommended, provide justification).
- Proposed mitigation measures and/protection measures.

With implementation of the mitigation measures identified above, impacts to trees during construction of the Hale Avenue extension would be reduced to a less than significant level. **(Less Than Significant Impact with Mitigation Incorporated)**

Phase II (DeWitt Avenue to Watsonville Road)

Construction of the Santa Teresa Corridor widening and realignment could include removal of ordinance sized trees as well as potentially damage ordinance sized trees designated to remain in place. Consistent with tree protection measures implemented during construction of the Phase I roadway improvements, at the time of future construction of the planned Phase II roadway improvements the tree protection measures required by the City of Morgan Hill and identified in MM BIO-2 would be implemented to reduce impacts to trees to a less than significant level. **(Less Than Significant Impact with Mitigation Incorporated)**

Morgan Hill Citywide Burrowing Owl Habitat Mitigation Plan

Phase I (Main Avenue to DeWitt/Spring Avenue)

The Morgan Hill Citywide Burrowing Owl Habitat Mitigation Plan requires compensatory mitigation for impacts to potential burrowing owl habitat. Per recent changes to the City of Morgan Hill's policy, burrowing owl habitat mitigation fees are provided to the Santa Clara Valley Habitat Agency for managing burrowing owl habitat under the Habitat Plan. The proposed Hale Avenue alignment is outside of the Habitat Plan Burrowing Owl Fee Zone and, therefore, no additional mitigation fees for burrowing owls would be required. Although the species is not known to nest in the Morgan Hill area in recent years and no evidence of occupancy by burrowing owls was observed at any burrows during the site visits, suitable burrow habitat was identified by the Biological Resources Assessment on the Phase I alignment. Therefore, the proposed Hale Avenue alignment could result in significant impacts to burrowing owls and/or burrowing owl habitat. The project shall implement standard measures identified in the Morgan Hill Citywide Burrowing Owl Habitat Mitigation Plan and Habitat Plan to reduce impacts to burrowing owls, as outlined below.

Standard Measures: The following standard measures shall be implemented in conformance with the Morgan Hill Citywide Burrowing Owl Habitat Mitigation Plan and the Habitat Plan to reduce impacts to burrowing owls and burrowing owl habitat to a less than significant level.

In addition to compensatory mitigation required by the Morgan Hill Citywide Burrowing Owl Habitat Mitigation Plan that shall be payed to the Santa Clara Valley Habitat Agency, pre-construction surveys for burrowing owls shall be conducted prior to conducting any site grading

activities, and are required by both the Habitat Plan and the Citywide Burrowing Owl Habitat Mitigation Plan. The project shall implement the Habitat Plan survey requirements, which are outlined below:

- A minimum of two pre-construction burrowing owl surveys are required, with the first survey initiated no more than 14 days prior to grading initiation and the final survey concluded no more than two days prior to grading initiation. In the event that burrowing owls are discovered in the Phase I alignment, a qualified biologist shall delineate the extent of western burrowing owl habitat in the alignment, and additional avoidance measures shall be implemented according to the Habitat Plan as follows, depending on whether owls are encountered during the non-nesting or nesting seasons:

    - If the survey finds burrowing owls in or adjacent to the Phase I alignment during the non-nesting season (September 1 through January 31), impacts to individuals may be avoided by establishing a 250-foot exclusion buffer between active burrows and any earth-moving activities or other disturbance in the Phase I alignment. Construction activities outside of this 250-foot buffer would be allowed. Construction activities within the non-disturbance buffer would be allowed if: a qualified biologist monitors the owls for at least 3 days prior to construction to determine baseline foraging behavior and monitors the owls during construction and finds no change in owl foraging behavior in response to construction activities. If there is any change in owl nesting and foraging behavior as a result of construction activities, these activities will cease within the 250-foot buffer. If the owls are gone for at least one week, the project proponent may request approval from the Santa Clara Valley Habitat Agency (Implementing Entity) that a qualified biologist excavate usable burrows to prevent owls from re-occupying the site. After all usable burrows are excavated, the buffer zone will be removed and construction may continue. Monitoring must continue as described above for the non-breeding season as long as the burrow remains active.

    - If the survey finds burrowing owls in or adjacent to the Phase I alignment during the nesting season (February 1 through August 31), all nest sites that could be disturbed by project construction during the remainder of the breeding season or while the nest is occupied by adults or young will be avoided. Avoidance will include establishment of a 250-foot exclusion zone required between each nest burrow and any earth-moving activities or other disturbance in the Phase I alignment. Construction may occur outside of the 250-foot non-disturbance buffer zone. Construction may occur inside of the 250-foot non-disturbance buffer during the breeding season if: the nest is not disturbed, and the project proponent develops an avoidance, minimization, and monitoring plan that will be reviewed by the Santa Clara Valley Habitat Agency and the CDFW prior to project construction based on criteria set forth in the Habitat Plan. The exclusion zone can be removed once it is determined by a qualified biologist that the nest is abandoned prior to the end of the nesting season and the burrow is no longer in use by owls.

With implementation of the standard measures identified above, impacts to burrowing owls and burrowing owl habitat from development of the proposed Hale Avenue alignment would not result in a significant impact. **(Less Than Significant Impact)**

Phase II (DeWitt Avenue to Watsonville Road)

As discussed above for the proposed Hale Avenue extension, the planned future Santa Teresa Corridor widening and realignment could result in significant impacts to burrowing owls and burrowing owl habitat. At the time of future development, the Phase II roadway improvements would be constructed in conformance with both the Morgan Hill Citywide Burrowing Owl Habitat Mitigation Plan and the Habitat Plan. The Phase II alignment is outside of the Habitat Plan Burrowing Owl Fee Zone and, therefore, no mitigation fees in addition to those required by the Morgan Hill Citywide Burrowing Owl Habitat Mitigation Plan would be required. A biological resources assessment for the Phase II roadway improvements would be completed at the time of future development. If suitable burrowing owl habitat and/or burrowing owls are observed within the alignment, the standard measures identified above for the Phase I alignment would be implemented, as necessary, to reduce impacts to burrowing owls and burrowing owl habitat to a less than significant level. **(Less Than Significant Impact)**

2.3.2.7 *Santa Clara Valley Habitat Plan/Natural Community Conservation Plan Impacts*

Phase I (Main Avenue to DeWitt/Spring Avenue)

Land Cover Types and Fee Zones

The proposed Hale Avenue alignment is located within the Habitat Plan study area and is primarily designated as *Grain, Row-crop, Hay and Pasture, Disked/Short-term Fallowed*; the area north of Warren Avenue is designated *Urban-Suburban* and the existing detention basin is designated *Pond*. Except for the area north of Warren Avenue, which is not located in a land cover fee zone, the entire Phase I project area is mapped in Fee Zone B (Agricultural and Valley Floor Lands). The existing detention basin is mapped as a potential Wetland Fee Zone. The proposed project will be required to pay the appropriate fees for development within these fee zones upon submittal of the Habitat Plan application.

Special Status Plant and Wildlife Species

No special-status plant species were observed in the proposed Hale Avenue alignment during the 2011 or 2016 site surveys completed for the Biological Resources Assessment. Two special-status wildlife species, however, were observed on or adjacent to the proposed alignment during the 2011 site survey; the oak titmouse and Nuttall's woodpecker. These species, therefore, have a high potential of occurring in the Phase I project area. Four special-status wildlife species have a moderate potential to occur in the Phase I project area; the Burrowing owl, Loggerhead shrike, Yellow-billed magpie, and White-tailed kite. Currently, the tricolored blackbird is unlikely to occur within the Phase I project area; however, if emergent vegetation is allowed to grow within the stormwater basin in the northwest portion of the project area, there is a moderate potential that this species may use this vegetation for nesting. The following standard measures would be implemented in conjunction with the proposed Phase I roadway improvements in conformance with the Habitat Plan to reduce potential impacts to special-status bird species observed or that have the potential to occur in the project area. These measures would also reduce impacts to non-special-status native nesting birds on and adjacent to the project site to a less than significant level.

Standard Measures: Implementation of following Habitat Plan standard measures will reduce impacts to special-status and non-special-status native nesting birds from the proposed Hale Avenue alignment to a less than significant level:

Special-Status and Non-Special-Status Native Nesting Birds

- To reduce potential nesting habitat and impacts to nesting birds in the Phase I alignment, all vegetation scheduled for removal shall be cleared during the non-nesting season (September 1st through January 31st) prior to grading activities. This will reduce suitable nesting habitat for many common species.

- During the avian nesting season (February 1st through August 31st), a qualified biologist shall conduct a nesting bird survey no more than 14 days prior to initial vegetation removal and ground disturbance to determine if any birds are nesting on or adjacent to the Phase I alignment. If active nests are found close enough to the alignment to impact nesting success, a qualified biologist shall establish an appropriate exclusion zone around the nest. This exclusion zone may be modified depending upon the species, nest location, and existing visual or auditory buffers. Once all young have become independent of the nest, vegetation removal and ground disturbance may take place in the former exclusion zone.

Tricolored Blackbird

- To avoid impacts to nesting tricolored blackbirds, any existing emergent vegetation deemed suitable by a qualified biologist for tricolored blackbird nesting shall be removed. Removal shall occur outside of the nesting season (September 1st through January 31st) and vegetation shall be maintained such that it does not grow to a sufficient height and density to support nesting. If construction of the proposed Hale Avenue alignment during the nesting season cannot be avoided, Section 6 of the Habitat Plan requires a pre-construction survey of any potential tri-colored blackbird nesting habitat that shall be completed no more than two days prior to initial vegetation removal or ground disturbance. A preliminary survey may be additionally conducted up to 14 days prior to the start of construction. If nesting activity is observed, a 250-foot exclusion zone shall be implemented around the active nesting area, and the appropriate wildlife agencies shall be notified. The exclusion zone shall remain in place until the colony abandons the site or the nesting season ends (beginning September 1st).

With implementation of the standard measures identified above, the proposed Hale Avenue alignment would not result in significant impacts to special status plant or wildlife species and non-special-status native nesting birds. **(Less Than Significant Impact)**

Phase II (DeWitt Avenue to Watsonville Road)

Land Cover Types and Fee Zones

The planned future Santa Teresa Corridor widening and realignment is located within the Habitat Plan study area and is designated *Rural Residential, California Annual Grassland, Grain, Row-crop, Hay and Pasture, Disked/Short-term Fallowed,* and *Urban-Suburban.* Most of the area within the

Phase II alignment is mapped in Fee Zone B (Agricultural and Valley Floor Lands), smaller areas are mapped in Fee Zone A (Ranchlands and Natural Lands) and Fee Zone C (Small Vacant Sites under 10 Acres). The area north of the intersection of Edmundson Avenue and Sunnyside Avenue is mapped as a potential Wetland Fee Zone and the area east of DeWitt Avenue, approximately 750 feet north of Edmundson Avenue, is mapped as potential Serpentine Fee Zone. At the time of future construction, the proposed project will be required to pay the appropriate fees for development within these fee zones upon submittal of the Habitat Plan application.

Special Status Plant and Wildlife Species

The potential for special-status plant and wildlife species identified in the Habitat Plan to be present within the area of the planned future alignment under Phase II of the proposed project is similar to that for the proposed Phase I alignment. At the time of future construction (i.e., when sufficiently detailed roadway designs exist for analysis and to reflect then-current baseline conditions), a biological resources assessment would be prepared for the Phase II roadway improvements, which would identify special-status plant and animal species that were observed or expected to occur within the project area. Any surveys conducted at the present time would become obsolete by the time project-level review the planned Phase II is initiated. Standard measures in conformance with the Habitat Plan would be implemented in conjunction with the Phase II roadway improvements, as necessary, to reduce impacts to special-status plant and wildlife species and non-special-status native nesting birds to a less than significant level. **(Less Than Significant Impact)**

2.3.3 Cumulative Biological Resources Impacts

As with the proposed project, including both Phase I and Phase II, the cumulative projects analyzed in this Draft EIR may affect sensitive habitats, special-status species, migratory birds, and/or other native species, many of which are protected by state or federal law. As with the proposed project, the cumulative projects could also result in impacts to trees. As discussed above, the potential for the proposed project to result in impacts to biological resources would be reduced to a less than significant level with the implementation of mitigation measures and standard measures in conformance with the Habitat Plan and the City of Morgan Hill Burrowing Owl Habitat Mitigation Plan. The Habitat Plan was designed to reduce the biological resource impacts, including the cumulative biological resource impacts, from planned development within the Habitat Plan study area. As with the proposed project, the cumulative projects analyzed in this Draft EIR would also be required to adhere to the requirements of state and federal law, the Habitat Plan, the City of Morgan Hill Burrowing Owl Habitat Mitigation Plan, and the City's Tree Removal Ordinance and tree protections measures, as applicable. For these reasons, the cumulative projects, including the proposed project, would not result in significant cumulative impacts to biological resources.

2.3.4 Conclusion

The proposed project, with implementation of mitigation measures MM BIO-1 and MM BIO-2 and standard measures in compliance with the City of Morgan Hill Burrowing Owl Habitat Mitigation Plan and Tree Ordinance and the Habitat Plan would not result in a significant biological resource impact. **(Less Than Significant Impact with Mitigation)**

2.4 CULTURAL RESOURCES

The following discussion is based, in part, upon an Archaeological Resources Assessment Report completed by *Basin Research Associates* in April 2016 and a Historical and Architectural Evaluation completed by *Urban Programmers* in June 2016. The Historical and Architectural Evaluation report is attached as Appendix D to this EIR. Due to the sensitive information contained in the Archaeological Resources Assessment Report, it is not attached as an appendix to this EIR. The Archaeological Resources Assessment Report is available to qualified individuals for review at the City of Morgan Hill Community Development Department during regular business hours.

2.4.1 Existing Setting

2.4.1.1 *Applicable Plans, Policies, and Regulations*

Archaeological Resource Evaluation

Section 18.75.110 of the City's Municipal Code states that proposals for the development or redevelopment of a site identified as archaeologically sensitive by the City's adopted archaeological sensitivity map shall be subject to the following review process and standard conditions of project approval:

- The City will consult with the Northwest Information Center for information about whether the project is located within or adjacent to a known archaeological site, and if it is determined that it is so located, then a historical alteration permit is required for the project, and CEQA review of the project shall consider potentially significant impacts on archaeological resources and identify appropriate mitigation measures to be imposed by the City as conditions of approval in addition to the standard conditions identified in the City's Municipal Code 18.75.110, Subsection B.

- If the project is not located within or adjacent to a known archaeological site, then the project applicant has the option to either have an archaeological survey be completed for the site to determine what, if any, conditions of approval will be required as mitigation measures; or agree to comply with the standard conditions of approval (as listed in the Municipal Code), which shall be conclusively deemed to reduce potentially significant impacts on archaeological resources to a less than significant level (no archaeological resources report is required as part of any CEQA review of the project as long as the applicant accepts these conditions and incorporates them into the project).

Assembly Bill 52 – Tribal Resources

Assembly Bill (AB) 52 requires that, by July 1, 2016, the Native American Heritage Commission (NAHC) must provide the tribes on its contact list with a list of all public agencies that may serve as a lead agency for projects within the geographic area within which the tribe is traditionally and culturally affiliated. NAHC must also inform these tribes how to request project notifications from public agencies. Where a tribe requests, in writing, that a public agency inform it of proposed projects, the lead agency must notify the tribe within 14 days of determining that a project application is complete or deciding to undertake a project (i.e., prior to the release of the

environmental document). The notification must be in writing and include a brief description of the project and its location, contact information, and statement that the tribe has 30 days to request consultation. If the tribe responds by requesting consultation, in writing, within 30 days of the notification, the lead agency must begin the consultation process within 30 days of receiving the request. No tribes have contacted the City of Morgan Hill in writing and requested to be informed of proposed projects, as required under AB 52.

Historic Resource Evaluation

The historic significance of resources on sites are evaluated according to the standards of the City of Morgan Hill's Historic Resource Criteria, California Register of Historic Resources (CRHR) Criteria, and National Register of Historic Places (NRHP) Criteria.

City of Morgan Hill Historic Resources and Local Register

The City's Municipal Code Chapter 18.75, classifies historical resources as follows: buildings, structures, sites, objects, historic district and archaeological resources that have been determined to have a) age, b) integrity and c) historical significance.

In accordance with CEQA and the Municipal Code, historical resources include the following characteristics:

a. a resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the National Register or the California Register of Historical Resources.

b. a resource 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 California Public Resources Code will be presumed to be historically or culturally significant, unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

c. any object, building, structure, site, area, place, record, or manuscript which the City determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California or of Morgan Hill.

If the City determines that a resource is a potentially significant historical resource, and this resource is not listed in or determined to be eligible for listing in the California Register (and is not listed in a local register), the City may require further evaluation of the resource for historic significance.

An object, building, structure, site, area, district, unique archaeological resource, place, record, or manuscript may be classified as a designated historical resource and placed on the local register by the City's Planning Commission if it is determined through survey and documentation to be a historical resource.

California Register of Historic Resources Criteria

Properties that are eligible for listing in the CRHR must meet one of the following criteria:

a. Association 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. Association with the lives of persons important to local, California, or national history;
c. Embodying the distinctive characteristics of a type, period, region, or method of construction, or representing the work of a master, or possessing high artistic values; or
d. Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

A property may be automatically listed in the CRHR if it is formally determined eligible for the NRHP. Properties that are formally determined eligible for the NRHP are those that are designated as such through one of the Federal preservation programs administered by the California Office of Historic Preservation (i.e., the National Register, Tax Certification, and Section 106 of the Historic Preservation Act review of Federal undertakings).

National Register Criteria

The NRHP was established to recognize resources associated with the accomplishments of all peoples who have contributed to the country's history and heritage. Guidelines were designed for Federal and State agencies in nominating cultural resources to the National Register. These guidelines are based upon integrity and significance of the resource. Integrity applies to specific items such as location, design, setting, materials, workmanship, feeling, and association. Quality of significance in American history, architecture, archaeology, engineering, and culture is present in resources association, and meet at least one of the following criteria:

a. That are associated with events that have made a significant contribution to broad patterns of our history;
b. That are associated with the lives of persons significant in our past;
c. That embody distinctive characteristics of type, period, or method of construction, or that represent the work of master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction;
d. That have yielded, or are likely to yield, information important in prehistory or history.

City of Morgan Hill 2035 General Plan

Various policies in the City's General Plan have been adopted for the purpose of avoiding or mitigating cultural resource impacts resulting from planned development within the City, including the following:

Cultural and Historic Resources Policy HC-8.1 – Encourage the preservation and rehabilitation of the City's historic structures.
Cultural and Historic Resources Policy HC-8.4 – Consult with Native American tribes that have

ancestral ties to Morgan Hill regarding proposed new development projects and land use policy changes.
Cultural and Historic Resources Policy HC-8.5 – Require that if cultural resources, including tribal, archaeological, or paleontological resources, are uncovered during grading or other on-site excavation activities, construction shall stop until appropriate mitigation is implemented.

2.4.1.2 *Existing Conditions*

Archaeological Resources

Phase I (Main Avenue to DeWitt/Spring Avenue)

An archaeological field inventory that included the Phase I alignement was completed by *Basin Research Associates* in 1995. No significant prehistoric or historic cultural materials were observed during the archaeological field inventory. Another field inventory of the Phase I project site was completed in November 2011 by a Mr. Christopher Canzonieri (M.A.). Once again, no significant prehistoric or historic cultural materials were observed during the archaeological field inventory. No field inventory was conducted as part of the most recent Archaeological Resources Assessment Report completed by *Basin Research Associates* for the site as the project area has not materially changed since the most recent field inventory in 2011. The City of Morgan Hill General Plan Archaeologic Sensitivity Map, maps the northern end of the Phase I project area in an area of archaeological sensitivity due to the proximity of West Little Llagas Creek. Other sources researched by *Basin Research Associates* place the project site within an area of low archaeological sensitivity. The Archaeological Resources Assessment identified 12 cultural resource reports on file with the Northwestern Information Center (NWIC) that included portions of the Phase I alignment. All reports were negative for prehistoric archaeological resources.

Phase II (DeWitt Avenue to Watsonville Road)

An archaeological field inventory that included the Phase II alignment was completed by *Basin Research Associates* in 1995. No significant prehistoric or historic cultural materials were observed during the archaeological field inventory. The City of Morgan Hill General Plan Archaeologic Sensitivity Map maps the central portion of the Phase II project area, including segments of DeWitt Avenue, Edmundson Avenue, and Sunnyside Avenue, as an area of archaeological sensitivity. This area of archaeological sensitivity corresponds with the two unnamed creeks that cross under DeWitt Avenue and eventually converge to form Edmundson Creek. The City's Archaeologic Sensitivity Map shows no recorded sites or structures within the planned future widening and realignment of the Santa Teresa Corridor.

Historic Resources

Phase I (Main Avenue to DeWitt/Spring Avenue)

Four privately owned parcels that contain structures over 50 years in age would be affected by construction of Phase I of the proposed project. The Historical and Architectural Evaluation

reviewed the historical background of the subject parcels. The report describes the buildings, structures, and objects located on the affected properties, which may have the potential to be eligible for listing in the California Register of Historical Resources or meet criteria for historical significance in the Morgan Hill Municipal Code Section 18.75. The following parcels were evaluated:

Parcel 767-12-041, located south of West Main Avenue at the intersection of West Main Avenue and Hale Avenue, is a 3.29 acre former PG&E electrical substation. The parcel contains a small, one-story concrete building (as shown in Photo 1), which functioned as a storage building for the substation. The building is over 50 years in age; however, the building is not associated with events or people who are significant in the history of Morgan Hill nor is it a significant example of industrial architecture in Morgan Hill. Therefore, the building is not eligible for listing in the National Register of Historic Places, the California Register of Historical Resources, and/or the Morgan Hill Historic Resource Inventory and is not considered an historic resource under CEQA.

Parcel 767-05-024, located at 205 Warren Avenue, contains a one-story, single-family residence (as shown in Photo 2) that was constructed circa 1930. The structure is not listed on the Morgan Hill Historic Resource Inventory. Considering the seven aspects of integrity of the National Register of Historic Places, the residence retains location, but the other six are diminished. Considering the four criteria of the California Register of Historical Resources, the residence is not important as part of a broad trend, is not associated with a significant event or individual, was not designed by a master, nor does it exhibit unusual qualities of a style or period and/or listed on the Morgan Hill Historic Resource Inventory. For these reasons, the residence is not considered an historic resource as defined under CEQA.

Parcel 767-06-035, located at 230 Warren Avenue, contains a one-story, single family residence (as shown in Photo 3). The residence was constructed between 1934 and 1936. The structure is not listed on the Morgan Hill Historic Resource Inventory. Considering the seven aspects of integrity of the National Register of Historic Places, the residence retains location, but the other six are diminished. Considering the four criteria of the California Register of Historical Resources, the residence is not important as part of a broad trend, is not associated with a significant event or individual, was not designed by a master, and does not exhibit unusual qualities of a style or period. For these reasons, the residence is not considered an historic resource as defined under CEQA.

Parcel 767-12-024, located at 310 West Dunne Avenue, contains a one-story, single family residence (as shown in Photo 4) that was constructed circa 1945. The structure is not listed on the Morgan Hill Historic Resource Inventory. Considering the seven aspects of integrity of the National Register of Historic Places, the residence retains location, but the other six are diminished. Considering the four criteria of the California Register of Historical Resources, the residence is not important as part of a broad trend, is not associated with a significant event or individual, was not designed by a master, and does not exhibit unusual qualities of a style or period. For these reasons, the residence is not considered an historic resource as defined under CEQA.

Photo 1

Photo 2

PHOTOS 1 AND 2

Photo 3

Photo 4

PHOTO 3 AND 4

Phase II (DeWitt Avenue to Watsonville Road)

Portions of the Phase II project area traverse privately owned parcels that contain structures that could be over 50 years of age and, therefore, would meet one of the criteria to be eligible for listing on the National Register of Historic Places, the California Register of Historical Resources, and/or the Morgan Hill Historic Resource Inventory. None of the structures located within or immediately adjacent to the planned future widening of the Santa Teresa Corridor are listed on the Morgan Hill Historic Resource Inventory, National Register of Historic Places, or the California Register of Historical Resources.

2.4.3 Cultural Resource Impacts

2.4.3.1 *Thresholds of Significance*

For the purposes of this EIR, a cultural resources impact is considered significant if the project would:

- Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5;
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5;
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature;
- Disturb any human remains, including those interred outside of formal cemeteries; or
- Cause a substantial adverse impact to tribal cultural resources.

2.4.3.2 *Impacts to Cultural Resources*

Impacts to Archaeological Resources

Phase I (Main Avenue to DeWitt/Spring Avenue)

No significant prehistoric or historic cultural materials were observed during the archaeological field inventory of the Phase I project area. Due to the proximity of West Little Llagas Creek, the City's Archaeologic Sensitivity Map shows the northern end of the proposed Hale Avenue alignment near West Main Avenue in an area of archaeological sensitivity. An archaeological sensitivity map completed for another project in the region and included in the Archaeological Resources Assessment Report, however, indicates that the Phase I project area is within an area of low archaeological sensitivity. Therefore, the Archaeological Resources Assessment Report prepared for the project does not recommend subsurface testing. If cultural resources are exposed during construction, the City of Morgan Hill's standard cultural resource measures identified in Municipal Code Section 18.75 would be implemented, as outlined below.

Standard Measures: Although unlikely, the proposed project could impact undocumented human remains or unintentionally discover significant historic or archaeological materials. The following policies and procedures for treatment and disposition of inadvertently discovered human remains or archaeological materials shall apply:

- If human remains are discovered, it is probable they are the remains of Native Americans. If human remains are encountered they shall be treated with dignity and respect as due to them. Discovery of Native American remains is a very sensitive issue and serious concern. Information about such a discovery shall be held in confidence by all project personnel on a need to know basis. The rights of Native Americans to practice ceremonial observances on sites, in labs and around artifacts shall be upheld:

    - Remains should not be held by human hands. Surgical gloves should be worn if remains need to be handled.
    - Surgical mask should also be worn to prevent exposure to pathogens that may be associated with the remains.

- In the event that known or suspected Native American remains are encountered or significant historic or archaeological materials are discovered, ground-disturbing activities shall be immediately stopped. Examples of significant historic or archaeological materials include, but are not limited to, concentrations of historic artifacts (e.g., bottles, ceramics) or prehistoric artifacts (chipped chert or obsidian, arrow points, groundstone mortars and pestles), culturally altered ash-stained midden soils associated with pre-contact Native American habitation sites, concentrations of fire-altered rock and/or burned or charred organic materials and historic structure remains such as stone-lined building foundations, wells or privy pits. Ground-disturbing project activities may continue in other areas that are outside the exclusion zone as defined below.

- An "exclusion zone" where unauthorized equipment and personnel are not permitted shall be established (e.g., taped off) around the discovery area plus a reasonable buffer zone by the contractor foreman or authorized representative, or party who made the discovery and initiated these protocols, or if on-site at the time or discovery, by the monitoring archaeologist (typically twenty-five to fifty feet for single burial or archaeological find).

- The exclusion zone shall be secured (e.g., twenty-four hour surveillance) as directed by the City or county if considered prudent to avoid further disturbances.

- The contractor foreman or authorized representative, or party who made the discovery and initiated these protocols shall be responsible for immediately contacting by telephone the parties listed below to report the find and initiate the consultation process for treatment and disposition:

    - The City of Morgan Hill Community Development Director,
    - The contractor's point(s) of contact,
    - The coroner of the county of Santa Clara (if human remains found),
    - The Native American Heritage Commission (NAHC) in Sacramento, and
    - The Amah Mutsun Tribal Band.

- The coroner has two working days to examine the remains after being notified of the discovery. If the remains are Native American, the Coroner has twenty-four hours to notify the NAHC.

- The NAHC is responsible for identifying and immediately notifying the Most Likely Descendant (MLD) from the Amah Mutsun Tribal Band. (Note: NAHC policy holds that the Native American Monitor will not be designated the MLD.).

- Within twenty-hour hours of their notification by the NAHC, the MLD will be granted permission to inspect the discovery site if they so choose.

- Within twenty-four hours of their notification by the NAHC, the MLD may recommend to the City's community development director the recommended means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The recommendation may include the scientific removal and non-destructive or destructive analysis of human remains and items associated with Native American burials. Only those osteological analyses or DNA analyses recommended by the Amah Mutsun Tribal Band may be considered and carried out.

- If the MLD recommendation is rejected by the City of Morgan Hill, the parties will attempt to mediate the disagreement with the NAHC. If mediation fails then the remains and all associated grave offerings shall be reburied with appropriate dignity on the property in a location not subject to further subsurface disturbance.

The proposed extension of Hale Avenue, from West Main Avenue to the intersection of DeWitt Avenue and Spring Avenue with implementation of the standard measures listed above, would not result in a significant archaeological resource impact. **(Less Than Significant Impact)**

Phase II (DeWitt Avenue to Watsonville Road)

No significant prehistoric or historic archaeological materials were observed during the archaeological field inventory completed in 1995. The City of Morgan Hill General Plan Archaeologic Sensitivity Map maps the central portion of the Phase II project area as archaeologically sensitive, because Edmundson Creek and a tributary flow through this area. The City's Archaeologic Sensitivity Map shows no recorded sites or structures within the planned future widening and realignment of the Santa Teresa Corridor.

Standard Measures: At the time of future implementation of Phase II and consistent with the recommendations in Section 18.75 of the City of Morgan Municipal Code, the following standard measures would be implemented:

The City will consult with the Northwest Information Center for information about whether the project is located within or adjacent to a known archaeological site, and if it is determined that it is so located, then a historical alteration permit is required for the project, and CEQA review of the project shall consider potentially significant impacts on archaeological resources and identify appropriate mitigation measures to be imposed as conditions of approval in addition to the standard conditions identified below.

- An archaeologist shall be present on-site to monitor all ground-disturbing activities. Where historical or archaeological artifacts are found, work in areas where remains or artifacts are found will be restricted or stopped until proper protocols are met, as described below:

    - Work at the location of the find will halt immediately within thirty feet of the find. If an archaeologist is not present at the time of the discovery, the applicant shall contact an archaeologist for evaluation of the find to determine whether it qualifies as a unique archaeological resource as defined by this chapter;

    - If the find is determined not to be a Unique Archaeological Resource, construction can continue. The archaeologist will prepare a brief informal memo/letter that describes and assesses the significance of the resource, including a discussion of the methods used to determine significance for the find;

    - If the find appears significant and to qualify as a unique archaeological resource, the archaeologist will determine if the resource can be avoided and will detail avoidance procedures in a formal memo/letter; and

    - If the resource cannot be avoided, the archaeologist shall develop within forty-eight hours an action plan to avoid or minimize impacts. The field crew shall not proceed until the action plan is approved by the community development director. The action plan shall be in conformance with California Public Resources Code 21083.2.

In addition to standard conditions listed above, all development projects located within an archaeological sensitivity area and/or containing known archaeological resources on-site shall also be subject to the following measures as standard conditions of project approval. The following policies and procedures for treatment and disposition of inadvertently discovered human remains or archaeological materials shall apply:

- If human remains are discovered, it is probable they are the remains of Native Americans. If human remains are encountered they shall be treated with dignity and respect as due to them. Discovery of Native American remains is a very sensitive issue and serious concern. Information about such a discovery shall be held in confidence by all project personnel on a need to know basis. The rights of Native Americans to practice ceremonial observances on sites, in labs and around artifacts shall be upheld:

    - Remains should not be held by human hands. Surgical gloves should be worn if remains need to be handled.
    - Surgical mask should also be worn to prevent exposure to pathogens that may be associated with the remains.

- In the event that known or suspected Native American remains are encountered or significant historic or archaeological materials are discovered, ground-disturbing activities shall be immediately stopped. Examples of significant historic or archaeological materials include, but are not limited to, concentrations of historic artifacts (e.g., bottles, ceramics) or prehistoric artifacts (chipped chert or obsidian, arrow points, groundstone mortars and pestles), culturally

altered ash-stained midden soils associated with pre-contact Native American habitation sites, concentrations of fire-altered rock and/or burned or charred organic materials and historic structure remains such as stone-lined building foundations, wells or privy pits. Ground-disturbing project activities may continue in other areas that are outside the exclusion zone as defined below.

- An "exclusion zone" where unauthorized equipment and personnel are not permitted shall be established (e.g., taped off) around the discovery area plus a reasonable buffer zone by the contractor foreman or authorized representative, or party who made the discovery and initiated these protocols, or if on-site at the time or discovery, by the monitoring archaeologist (typically twenty-five to fifty feet for single burial or archaeological find).

- The exclusion zone shall be secured (e.g., twenty-four hour surveillance) as directed by the City or county if considered prudent to avoid further disturbances.

- The contractor foreman or authorized representative, or party who made the discovery and initiated these protocols shall be responsible for immediately contacting by telephone the parties listed below to report the find and initiate the consultation process for treatment and disposition:

    - The City of Morgan Hill Community Development Director,
    - The contractor's point(s) of contact,
    - The coroner of the county of Santa Clara (if human remains found),
    - The Native American Heritage Commission (NAHC) in Sacramento, and
    - The Amah Mutsun Tribal Band.

- The coroner has two working days to examine the remains after being notified of the discovery. If the remains are Native American, the Coroner has twenty-four hours to notify the NAHC.

- The NAHC is responsible for identifying and immediately notifying the Most Likely Descendant (MLD) from the Amah Mutsun Tribal Band. (Note: NAHC policy holds that the Native American Monitor will not be designated the MLD.).

- Within twenty-hour hours of their notification by the NAHC, the MLD will be granted permission to inspect the discovery site if they so choose.

- Within twenty-four hours of their notification by the NAHC, the MLD may recommend to the City's community development director the recommended means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The recommendation may include the scientific removal and non-destructive or destructive analysis of human remains and items associated with Native American burials. Only those osteological analyses or DNA analyses recommended by the Amah Mutsun Tribal Band may be considered and carried out.

- If the MLD recommendation is rejected by the City of Morgan Hill, the parties will attempt to mediate the disagreement with the NAHC. If mediation fails then the remains and all associated

grave offerings shall be reburied with appropriate dignity on the property in a location not subject to further subsurface disturbance.

The planned future widening of the Santa Teresa Corridor from the intersection of DeWitt Avenue and Spring Avenue to Watsonville Road, with implementation of the standard measures listed above, would not result in a significant archaeological resource impact. **(Less Than Significant Impact)**

Impacts to Historic Resources

Phase I (Main Avenue to DeWitt/Spring Avenue)

The properties affected by the proposed Hale Avenue extension alignment do not contain structures that are currently listed or are eligible for listing on the National Register of Historic Places, the California Register of Historical Resources, or the Morgan Hill Historic Resource Inventory. Therefore, the proposed extension of Hale Avenue from West Main Avenue to the intersection of DeWitt Avenue and Spring Avenue would not result in a significant impact to historic resources. **(Less Than Significant Impact)**

Phase II (DeWitt Avenue to Watsonville Road)

There are no known designated historic structures located within or immediately adjacent to the planned future widening of the Santa Teresa Corridor from the intersection of DeWitt Avenue and Spring Avenue to Watsonville Road. The planned future Phase II roadway improvements could, however, affect structures over 50 years of age and, therefore, potentially impact structures that may be eligible for listing on the National Register of Historic Places, the California Register of Historical Resources, and/or the Morgan Hill Historic Resource Inventory. At the time of future Phase II implementation, a Historical and Architectural Evaluation would be completed for the properties that would be affected by the roadway widening and realignment. If, based on the findings of the Historical and Architectural Evaluation, a property or structure affected by the planned future widening and realignment is determined to meet the historic resource criteria, then measures would be identified to avoid or reduce the impact to a less than significant level. **(Less Than Significant Impact)**

Impacts to Tribal Cultural Resources

Phase I (Main Avenue to DeWitt/Spring Avenue)

The NAHC was contacted for a search of the Sacred Lands Inventory for the Phase I project site. A search of the Sacred Lands Inventory was negative for Native American resources within or adjacent to the proposed Hale Avenue Extension. Letters soliciting additional information were sent by *Basin Research Associates* to five Native American groups recommended by the NAHC. Responses from three of the five groups were received. All three of the groups recommended construction crew sensitivity training, two of the groups recommended the retention of a qualified Native American monitor, and one group recommended that proper protocols be followed in the event of discovery of Native American cultural materials. No tribes have contacted the City of Morgan Hill in writing and requested to be informed of proposed projects, as required under AB 52. For these reasons, the

proposed extension of Hale Avenue from West Main Avenue to the intersection of DeWitt Avenue and Spring Avenue is not expected to impact known tribal cultural resources. **(Less Than Significant Impact)**

Phase II (DeWitt Avenue to Watsonville Road)

As stated above, no tribes have contacted the City of Morgan Hill in writing and requested to be informed of proposed projects, as required under AB 52. The potential for tribal cultural resources to be within or immediately adjacent to the planned future widening and realignment of the Santa Teresa Corridor would be evaluated at the time of future development, at which time an archaeological resources assessment would be prepared. The archaeological resources assessment would include a search of the NAHC Sacred Lands Inventory and the solicitation of additional information by tribes recommended by the NAHC. At the time of future development, tribes that have requested to be informed of projects in the City of Morgan Hill under AB 52 would be notified of the proposed widening and realignment of the Santa Teresa Corridor. If it is determined that tribal cultural resources are present within the proposed alignment, then the impact will be identified along with feasible measures to avoid or substantially lessen the impact. For these reasons, the planned future Phase II roadway improvements are not result in a significant impact to tribal cultural resources. **(Less Than Significant Impact)**

2.4.4 Cumulative Cultural Resources Impacts

The cumulative projects analyzed in this Draft EIR may require excavation and grading or other activities that may affect unknown archaeological resources. As with the proposed project, all projects with the potential to impact unknown archaeological resources would be required to implement measures to avoid impacts to archaeological resources and/or reduce them to a less than significant level. As with the proposed project, the cumulative projects would also be subject to federal, state, and county laws regulating archaeological resources.

As previously discussed, there are no listed historic resources on the project site, including both Phase I and Phase II, and the structures affected by the proposed extension of Hale Avenue are not eligible for listing on the National Register of Historic Places, the California Register of Historical Resources, or the Morgan Hill Historic Resource Inventory. The planned future widening and realignment may require the demolition of one structure… This structure does not appear eligible for listing on the National Register of Historic Places, the California Register of Historical Resources, or the Morgan Hill Historic Resource Inventory. For these reasons and those stated above, the cumulative projects, including the proposed project, would not result in significant cumulative impacts to archaeological resources, and the proposed project would not contribute to a cumulative historic resources impact. **(Less Than Significant Cumulative Impact)**

2.4.5 Conclusion

The proposed project, with implementation of the standard measures listed above, and in compliance with the City of Morgan Hill Municipal Code, General Plan, and existing laws and regulations would not result in a significant cultural resource impact. **(Less Than Significant Impact)**

2.5 ENERGY

This section was prepared pursuant to CEQA Guidelines Section 15126(c) and Appendix F (Energy Conservation of the Guidelines), which require that EIRs include a discussion of the potential energy impacts of proposed projects with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy.

2.5.1 Existing Setting

2.5.1.1 *Applicable Plans, Policies, and Regulations*

Federal and State Regulations

Many Federal and State statutes and policies address energy conservation. At the Federal level, energy standards apply to numerous products (e.g., the *EnergyStar*™ program) and transportation (fuel economy standards). In 2012, the Federal government raised the fuel economy standard to 54.5 miles per gallon for cars and light-duty trucks by Model Year 2025.[6] At the State level, Title 24 of the California Administrative Code sets forth energy standards for buildings, rebates/tax credits are provided for installation of renewable energy systems, and the *Flex Your Power* program promotes conservation in multiple areas.

City of Morgan Hill Municipal Code

Chapter 18.73 of the Municipal Code, titled Water Conservation in Landscaping, includes requirements to reduce water waste in landscaping by promoting the use of region-appropriate plants that require minimal supplemental irrigation, and by establishing standards for irrigation efficiency.

City of Morgan Hill 2035 General Plan

Various policies in the City's General Plan have been adopted for the purpose of avoiding or mitigating energy impacts resulting from planned development within the City, including the following.

Energy Efficiency Policy NRE-16.5 – Encourage development project designs that protect and improve air quality and minimize direct and indirect air pollutant emissions by including components that promote energy efficiency.
Circulation System and Complete Streets Policy TR-2.1 – A balanced multi-modal system offers viable choices for residents, employees, customers, visitors, and recreational users. Use smart growth and Sustainable Communities principles throughout the City to provide a balanced transportation system which assures access to all, and which integrates all appropriate modes of transportation into an effectively functioning system, including modes such as auto, ride sharing,

[6] United States Environmental Protection Agency. *Light-Duty Automotive Technology, Carbon Dioxide Emissions and Fuel Economy Trends: 1975 through 2015.* Accessed January 29, 2016. Available at: http://www.epa.gov/otaq/fetrends.htm

public rail and bus transit, paratransit, bicycling, and walking.
Pedestrian Network Policy TR-9.2 – Promote walking as an alternate transportation mode for its contribution to health and reduction of energy consumption and pollution.

2.5.1.1 *Background*

Energy consumption is analyzed in an EIR because of the environmental impacts associated with its production and usage. Such impacts include the depletion of nonrenewable resources (oil, natural gas, coal, etc.) and emissions of pollutants during both the production and consumption phases.

Energy usage is typically quantified using the British Thermal Unit (BTU). The BTU is the amount of energy that is required to raise the temperature of one pound of water by one degree Fahrenheit. As points of reference, the approximate amount of energy contained in a gallon of gasoline, a cubic foot of natural gas, and a kilowatt hour (kWh) of electricity are 123,000 BTUs, 1,000 BTUs, and 3,400 BTUs, respectively. Natural gas usage is expressed in terms of therms. A therm is equal to 100,000 BTUs.

Electrical energy is expressed in units of kilowatts (kW = 1,000 watts),[7] megawatts (MW = 1,000 kW), gigawatts (GW = one million kW), or terawatts (TW = one billion kW). One kilowatt hour (kWh) is equal to 1,000 watts supplied or consumed over the period of an hour. For example, running a 1,000 watt hand-held hair dryer for one hour consumes one kWh.

2.5.1.2 *Energy Usage*

Total energy usage in California was approximately 7,578 trillion BTUs in the year 2014 (the most recent year for which this specific data was available).[8] The breakdown by sector was approximately 19 percent for residential uses, 19 percent for commercial uses, 24 percent for industrial uses, and 38 percent for transportation.[9] This energy is primarily supplied in the form of natural gas, petroleum, nuclear electric power, and hydroelectric power.

Electricity and Natural Gas Supply and Consumption

Electricity

Electricity supply in California involves a complex grid of power plants and transmission lines. In 2014, California produced approximately 68 percent of the electricity it consumed, and imported the remaining 30 percent from 11 western states, Canada, and Mexico.[10]

[7] Under the International System of Units (SI), one kWh is equivalent to 3.6 megajoules, which is the amount of energy converted if work is done at an average rate of one thousand watts for one hour.
[8] US EIA. California Energy Consumption Estimates 2013. Accessed July 11, 2016. http://www.eia.gov/state/?sid=CA#tabs-2.
[9] US EIA. California Energy Consumption by End-Use Sector, 2013. Accessed April 18, 2016. http://www.eia.gov/beta/state/seds/data.cfm?incfile=/state/seds/sep_sum/html/sum_btu_1.html&sid=CA.
[10] California Energy Commission, Energy Almanac. *California Electricity Statistics and Data.* 2014. Accessed January 29, 2016. Available at: http://energyalmanac.ca.gov/electricity/

The bulk of California's electricity comes from power plants. Statewide electricity consumption in 2014 was 293,268 gigawatt-hours (GWh), with a one percent decrease from 2013. Updated forecasts for electricity consumption statewide shows a projected increase to 297,618-322,266 GWh in 2025.[11] PG&E transmits and delivers electricity to residents and businesses in the City of Morgan Hill.

Most of the area within the proposed alignment for the extension of Hale Avenue is undeveloped, except for a few small structures including a vacant storage building, single-family residence, and a shed. The vacant storage building and shed do not generate energy demand. The existing residence likely generates demand for electricity to power lighting and household appliances. The area within the planned future widening and realignment of the Santa Teresa corridor predominantly consists of existing roadways, which do not generate demand for electricity, except for streetlights. The area within planned future widening and realignment also includes portions of residential properties that consume electricity.

Natural Gas

In 2013, approximately 10 percent of California's natural gas supply came from in-state production, while 90 percent was imported from other western states and Canada.[12] The most recent data from the U.S. Energy Information Administration shows that in 2014, approximately 36 percent of the natural gas delivered for consumption in California was for electricity generation, 35 percent for industrial uses, 17.5 percent for residential uses, 11 percent for commercial uses, and less than one percent for transportation.[13] As with electricity usage, natural gas usage depends on the type of uses in a building, the type of construction materials used, and the efficiency of gas-consuming devices. PG&E transmits and delivers natural gas to residents and businesses in the City of Morgan Hill. The existing residence likely generates demand for natural gas for home heating and cooking purposes. The area within the planned future widening and realignment of the Santa Teresa corridor predominantly consists of existing roadways, which do not generate demand for natural gas. The area within planned future widening and realignment; however, does include portions of residential properties that consume natural gas.

Fuel for Motor Vehicles

California accounts for more than six percent of the United States' crude oil production and petroleum refining capacity.[14] Nearly 18 billion gallons of gasoline, diesel, and jet fuel are consumed in California each year.[15] The average fuel economy for light-duty vehicles (autos,

[11] California Energy Commission. *2015 Integrated Energy Policy Report* (CEC-100-2015-001-CMF). 2015. Page 171. Available at: http://docketpublic.energy.ca.gov/PublicDocuments/15-IEPR-01/TN210036_20160127T151510_2015_Integrated_Energy_Policy_Report_Proposed_for_Adoption.pdf
[12] California Energy Commission. *Natural Gas Supply by Region*. 2013. Accessed January 29, 2016. Available at: http://www.energyalmanac.ca.gov/naturalgas/natural_gas_supply.html
[13] United States Energy Information Administration. *Natural Gas Summary*. January 31, 2013. Accessed January 23, 2014. Available at: http://www.eia.gov/dnav/ng/ng_sum_lsum_dcu_SCA_a.htm
[14] United States Energy Information Administration. *Natural Gas Summary*. Accessed January 29, 2016. Available at: http://www.eia.gov/dnav/ng/ng_sum_lsum_dcu_SCA_a.htm
[15] California Energy Commission. *Draft Integrated Energy Policy Report Update* (CEC-100-2014-001-CMF). 2011. Page 8. Available at: http://www.energy.ca.gov/2014publications/CEC-100-2014-001/CEC-100-2014-001-CMF-small.pdf

pickups, vans, and SUVs) in the United States has steadily increased from about 13.1 miles-per-gallon (mpg) in the mid-1970's to 24.3 mpg in 2014.

Fuel is used to maintain the area within the proposed Hale Avenue alignment, which is periodically disked for fire control and for vehicle trips to and from the existing residence.

The area within the planned future widening and realignment of the Santa Teresa corridor predominantly consists of existing roadways, which are used by motor vehicles that consume fuel. Additionally, fuel is required for maintenance of the roadway and for vehicle trips to and from the properties within the planned future widening and realignment.

2.5.2 Energy Impacts

2.5.2.1 *Thresholds of Significance*

For the purposes of this EIR, an energy impact is considered significant if the project will:

- Result in a wasteful, inefficient, and unnecessary consumption of energy; or
- Result in a substantial increase in demand upon energy resources in relation to projected supplies.

2.5.2.2 *Project Energy Consumption*

Construction

Energy would be consumed during construction of the proposed project. Construction would require energy for the manufacture and transportation of building materials, site preparation (e.g., grading), and the actual roadway construction and improvements. Project construction, however, would not use energy in a wasteful manner or substantially increase energy usage when compared to the overall energy used in the City of Morgan Hill or in relation to projected energy supplies. **(Less Than Significant Impact)**

Operation

The roadway project, once built and in active use, would consume energy in the form of electricity to power street lights and gasoline and diesel for cars and other motor vehicles that would utilize the extension. The project would provide a vehicular, bicycle, and pedestrian alternative to existing north-south arterials in the City. As discussed in *Section 2.13 Transportation*, the proposed project would result in only a negligible increase (less than one percent) in daily vehicle miles traveled within the City of Morgan Hill, as the project's purpose is not to attract or generate additional vehicle trips, but to provide an alternate north-south road option on the west side of US 101 to relieve congestion on parallel routes such as Monterey Road and Butterfield Boulevard. Therefore, the project would serve to re-direct vehicle trips already on the roadways or that are planned to be on the roadway as the General Plan is implemented. The project would generally improve LOS of local roadways and intersections by providing an alternate route. Improved roadway and intersection LOS result in improved traffic flow (e.g. reduced congestion and delay, and increased freedom to

maneuver), which reduces energy (i.e., gasoline and diesel) consumed by vehicles traveling more efficiently in and through the City of Morgan Hill.

The proposed project would also facilitate bicycle and pedestrian access in the area, which could lead to a reduction in the number of vehicle trips. Because the project would likely result in reduced energy (i.e., gasoline) consumption per vehicle mile traveled compared to more congested levels of service, operation of the project would not use energy in a wasteful manner or substantially increase energy usage when compared to the overall energy used in the City of Morgan Hill or in relation to projected energy supplies. **(Less Than Significant Impact)**

2.5.3 Cumulative Energy Impacts

The cumulative projects analyzed in this Draft EIR would incrementally increase energy demand. This incremental increase in energy demand would not result in a significant cumulative impact resulting from energy production and use. This is due, in part, to the energy conservation requirements and programs that have been established under the Morgan Hill 2035 General Plan. Additionally, with the implementation of AB 32 and Title 24 requirements, future development throughout California would be required to integrate energy efficiency measures that would reduce energy demand. All cumulative development would be required to increase energy efficiency and, therefore, would not encourage wasteful or inefficient use of energy. For these reasons, implementation of the proposed project would not make a cumulatively considerable contribution to impacts resulting from energy production and use. **(Less Than Significant Cumulative Impact)**

2.5.3 Conclusion

Construction and operation of the proposed project, including both the extension of Hale Avenue and the planned future widening and realignment of the Santa Teresa corridor, would not use energy in a wasteful manner or substantially increase energy usage compared to projected energy supplies. **(Less Than Significant Impact)**

2.6 GEOLOGY AND SOILS

2.6.1 Existing Setting

2.6.1.1 *Applicable Plans, Policies, and Regulations*

City of Morgan Hill 2035 General Plan

Various policies in the City's General Plan have been adopted for the purpose of avoiding or mitigating geology and soils impacts resulting from planned development within the City, including the following:

Geologic and Seismic Hazards Policy SSI-2.1 – Limit uses on lands with geologic hazards, but allow uses on previously urbanized lands with proper mitigation. Keep development in hazardous areas to a minimum by encouraging low-density, low- intensity uses and the types of uses least disruptive to the soil and vegetative cover.
Geologic and Seismic Hazards Policy SSI-2.3 – Require site preparation in hazardous areas to be designed to achieve long-term geologic stability.
Geologic and Seismic Hazards Policy SSI-2.6 – Protect hillsides and carefully control development on steep slopes. When hillside land is developed, it should be done with minimum disruption of topography and vegetative cover.
Geologic and Seismic Hazards Policy SSI-2.7 – Prohibit development on known active landslides and limit development in areas where such development might initiate sliding or be affected by sliding on adjacent parcels.
Geologic and Seismic Hazards Policy SSI-2.10 – Enforce and maintain strict grading and building regulations to minimize instability of slopes sloping areas and reduce public costs associated with maintaining roads and utilities on unstable slopes.
Geologic and Seismic Hazards Policy SSI-2.11 – Require geotechnical investigations on all projects in unstable areas, including areas of expansive soils, prior to construction to insure that the potential hazards are identified and can be properly mitigated.

2.6.1.2 *Soils and Topography*

Morgan Hill is located in the southern Santa Clara Valley. The Santa Clara Valley is bounded by the Santa Cruz Mountains to the west and the Diablo Mountain Range to the east. Alluvial materials from these mountains have been deposited on the valley floor, which overlies bedrock.

On-Site Soils

Phase I (Main Avenue to DeWitt/Spring Avenue)

Most of the Phase I alignment from West Main Avenue to midway between West Dunne Avenue and the DeWitt/Spring Avenue intersection is underlain by Old Alluvium and Greenstone.[16] Old Alluvium consists of poorly consolidated to consolidated deposits of gravel, sand, silt, and clay that underlie the Santa Clara Valley floor and local hillside basins. Greenstone consists of red-brown to dark-green altered submarine volcanic rocks. The remaining portion of the site is underlain by Fill Material and Alluvial Fan Deposits. Fill Material consists of deposits of soil colluvium, and fragments of bedrock that have been placed by grading activities. Alluvial Fan Deposits consist of poorly to moderately consolidated deposits of gravel, sand, silt, and clay that accumulated in cone-shaped deposits at the mouth of drainages along valley margins.

Phase II (DeWitt Avenue to Watsonville Road)

The northern half of the Phase II alignment, from the DeWitt/Spring Avenue intersection to West Edmundson Avenue, is underlain by several soil types, including Alluvial Fan Deposits, Old Alluvium, and Greenstone, and Active Alluvium associated with Edmundson Creek. The southern half from West Edmundson Avenue to the Sunnyside Avenue/Watsonville Road intersection, is underlain by a mix of Old Alluvium and Greenstone.

Topography

Phase I (Main Avenue to DeWitt/Spring Avenue)

The Phase I alignment contains both flat areas and areas of rolling hills. Most of the alignment is on and adjacent to relatively stable ground that is not likely subject to landslides or other types of ground failures.[17] There are, however, two areas directly adjacent the alignment that are identified as areas of potentially unstable ground. These include the Nob Hill area located north of West Dunne Avenue and the hillside along the western side of the alignment, between West Dunne Avenue and the DeWitt/Spring Avenue intersection. These two areas are subject to potential ground failure, generally in the form of downslope movement related to landslides or similar process.

Phase II (DeWitt Avenue to Watsonville Road)

The Phase II alignment also contains both flat areas and areas of rolling hills. The alignment is predominantly on and adjacent to relatively stable ground. An area of potentially unstable ground is adjacent to the segment between DeWitt Avenue and West Edmundson Avenue. Additionally, the segment between West Edmundson Avenue and the Sunnyside Avenue and Encino Drive intersection is located on and adjacent to potentially unstable ground that is subject to landslides.

[16] City of Morgan Hill. *Geologic Map.* December 1991.
[17] City of Morgan Hill. *Geology, Geologic and Geotechnical Hazards.* December 1991.

2.6.1.2 *Seismicity and Seismic Hazards*

Seismicity

The San Francisco Bay Area is one of the most seismically active regions in the United States. An earthquake of moderate to high magnitude generated within the San Francisco Bay region could cause considerable ground shaking at the project site. The degree of shaking is dependent on the magnitude of the event, the distance to its zone of rupture and local geologic conditions.

The two major faults near the Phase I and Phase II alignments are the San Andreas Fault and the Calaveras Fault, located approximately nine miles west and five miles east, respectively. The Phase I and Phase II alignments are not located within an Alquist-Priolo Earthquake Fault Zone.[18]

Liquefaction

Soil liquefaction is a condition where saturated granular soils near the ground surface undergo a substantial loss of strength during a seismic event. Loose, water-saturated soils are transformed from a solid to a liquid state during ground shaking. Soils most susceptible to liquefaction are loose, uniformly saturated, fine-grained sands that lie close to the ground surface.

Phase I (Main Avenue to DeWitt/Spring Avenue)

A segment of the Phase I alignment, between the DeWitt/Spring Avenue intersection and West Dunne Avenue, is identified as an area of potential liquefaction. The remainder of the Phase I alignment is not located within areas of potential liquefaction.

Phase II (DeWitt Avenue to Watsonville Road)

The southern half of the planned Phase II alignment, between West Edmundson Avenue and Watsonville Road, is within an area of potential liquefaction. The northern half of the Phase II alignment, from DeWitt Avenue to West Edmundson Avenue, is not located within areas of potential liquefaction.

Differential Settlement

Differential settlement is the unequal settlement of material that results in gradual, uneven downward movement, which can damage improvements. Differential settlement can be induced by liquefaction or the presence of undocumented fill. Both the Phase I and Phase II alignments area located within areas of potential liquefaction, and fill is located on the southern half of the Phase I alignment. For these reasons, the Phase I and Phase II alignments are located within areas of potential differential settlement.

[18] Santa Clara County. "Santa Clara County Planning Office Featured Mapping Applications – Geologic Hazard Zones." Accessed March 10, 2016. Available at: https://sccplanning.maps.arcgis.com/home/index.html.

Lateral Spreading

Lateral spreading is a type of ground failure related to liquefaction. It consists of the lateral movement of saturated soil deposits towards an open face. The open channels of West Little Llagas Creek and Edmundson Creek are located adjacent to sections of the Phase I and Phase II alignments, respectively. The northern section of the Phase I alignment that is adjacent to West Little Llagas Creek is not located within an area of liquefaction potential; therefore, the potential for lateral spreading towards West Little Llagas Creek is low. The section of the Phase II alignment near Edmundson Creek is located within an area of potential liquefaction; therefore, there is the potential for lateral spreading towards Edmundson Creek.

2.6.2 Geology and Soils Impacts

2.6.2.1 *Thresholds of Significance*

For the purposes of this EIR, a geology and soils impact is considered significant if the project would:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
  - 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);
  - Strong seismic ground shaking;
  - Seismic-related ground failure, including liquefaction; or
  - Landslides.
- Result in substantial soil erosion or the loss of topsoil;
- 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;
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property; or
- 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 wastewater.

As discussed at the beginning of this section, the California Supreme Court confirmed that CEQA, with several specific exceptions, is concerned with the impacts of a project on the environment, not the effects the existing environment may have on a project. As described below, there are instances when the proposed project may be exposed to geology and soils hazards, i.e. be at risk from existing environmental conditions, but would not exacerbate existing geology and soils conditions and, therefore, would have no impact on the environment.

2.6.2.2 *Geology and Soils Impacts*

Seismicity and Seismic Hazards

The Phase I and II alignments are not located within an Alquist-Priolo Earthquake Fault Zone. The alignments are, however, located in a seismically active region. Therefore, roadway improvements within the Phase I and Phase II alignments would be subjected to strong ground shaking. Additionally, portions of the alignments are located within areas of potential liquefaction and are located on and/or adjacent to areas of potentially unstable ground. In conformance with General Plan Policy SSI-2.11, the proposed and planned roadway improvements would be designed and constructed in conformance with standard engineering practices and the design recommendations contained in the design-level geotechnical investigations that would be prepared for the roadway projects, which would avoid and minimize potential damage from seismic shaking and seismic related hazards. For these reasons, the proposed project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death as a result of geology, soil, and seismic conditions. The proposed project would not exacerbate seismic and seismic hazards. **(No Impact)**

Expansive Soil

Soils in the City of Morgan Hill and the surrounding area are known to have a high potential for expansion. The Phase I and II alignments include a large area of land and, therefore, expansive soils are likely to be present within the alignments. In conformance with General Plan Policy SSI-2.11, implementation of standard engineering and design techniques in conformance with the recommendations of the design-level geotechnical investigations that would be prepared for the roadway projects would reduce the risk of damage to the roadway improvements from expansive soils. The proposed project would not exacerbate expansive soil hazards. **(No Impact)**

Soil Erosion

The proposed project includes excavation, grading, earthmoving, and other construction activities that could disturb and expose soils to erosive forces of wind and rain, which can result in off-site deposition of sediments. Construction and grading along West Little Llagas Creek may involve removal of vegetation and/or disturbance of surface soils, which could result in increased erosion and deposition of sediments within the waterway.

As discussed in *Section 2.8, Hydrology and Water Quality*, project construction would implement erosion control measures consistent with the Best Management Practices (BMPs) required under the Small MS4s National Pollutant Discharge Elimination System (NPDES) permit issued to the City of Morgan Hill by the Central Coast Regional Water Quality Control Board (RWQCB). The proposed project would also implement BMPs consistent with the requirements of the NPDES Construction General Permit. Implementation of these standard measures would reduce the potential for substantial erosion and sedimentation during project construction to a less than significant level. **(Less Than Significant Impact)**

Landslides

The proposed project would be located on or adjacent to areas that are potentially subject to landslides. In conformance with General Plan SSI-2.11, implementation of standard engineering and design techniques in conformance with the recommendations of the design-level geotechnical investigations that would be prepared for the roadway projects would reduce the risk of damage to the roadway improvements from landslides and/or exacerbating the potential for landslides. **(Less Than Significant Impact)**

Differential Settlement

Both the Phase I and Phase II roadway improvements could be damaged by differential settlement. In conformance with General Plan Policy SSI-2.11, implementation of standard engineering and design techniques in conformance with the recommendations of the design-level geotechnical investigations that would be prepared for the roadway projects would reduce the risk of damage to the roadway improvements due to differential settlement. The proposed project would not exacerbate differential settlement hazards. **(No Impact)**

Lateral Spreading

A segment of the Phase II alignment is located adjacent to an open channel of Edmundson Creek and within an area of potential liquefaction. Therefore, there is the potential for lateral spreading to occur in this area of the Phase II alignment during a seismic event, which could damage the proposed roadway improvements. In conformance with General Plan Policy SSI-2.11, implementation of standard engineering and design techniques in conformance with the recommendations of the design-level geotechnical investigation that would be prepared for the planned Phase II project would reduce the risk of lateral spreading. The proposed project would not exacerbate the potential for lateral spreading. **(No Impact)**

Other Geology and Soils Impacts

The proposed project would not require the use of a septic system or other alternative wastewater disposal system. **(No Impact)**

2.6.3 Cumulative Geology and Soils Impacts

The cumulative projects analyzed in this Draft EIR could result in geology, soils, and seismicity impacts. Similar to the proposed project, the cumulative projects would each be required to implement measures to avoid and/or reduce the potential for geology and soils impacts to a less than significant level. As with the proposed project, the cumulative projects would also be subject to applicable federal and state laws for building and construction in seismic hazard areas. For these reasons, the cumulative projects, including the proposed project, would not result in significant cumulative geology and soils impacts. **(Less Than Significant Cumulative Impact)**

2.6.4 Conclusion

The proposed project, with implementation of standard engineering and design techniques in conformance with design-level geotechnical investigations recommendations and the RWQCB Small MS4s and NPDES Construction General Permit, would not result in significant geology and soils impacts or exacerbate existing geologic and soil hazards. **(Less Than Significant Impact)**

2.7 GREENHOUSE GAS EMISSIONS

The following discussion is based on an Air Quality and Greenhouse Gas Assessment prepared for Phase I of the proposed project by *Illingworth & Rodkin, Inc.* in June 2016. The report is attached as Appendix B to this EIR.

2.7.1 Existing Setting

2.7.1.1 *Applicable Plans, Policies, and Regulations*

State of California

AB 32 and Related Executive Orders and Regulations

The Global Warming Solutions Act (also known as "Assembly Bill (AB) 32") sets the State of California's 2020 greenhouse gas emissions reduction goal into law. AB 32 requires that the greenhouse gas emissions in California be reduced to 1990 levels by 2020. Prior to the adoption of AB 32, the Governor of California also signed Executive Order S-3-05 which identified the California Environmental Protection Agency (CalEPA) as the lead coordinating State agency for establishing climate change emission reduction targets in California. Under Executive Order S-3-05, the State plans to reduce greenhouse gas emissions to 80 percent below 1990 levels by 2050 and Executive Order B-16-2012 established benchmarks for increased use of zero emission vehicles and zero emission vehicle infrastructure by 2020 and 2025. Additional State law and regulations related to the reduction of greenhouse gas emissions includes SB 375, the Sustainable Communities and Climate Protection Act (see discussion below), the State's Renewables Portfolio Standard for Energy Standard (Senate Bill 2X) and fleet-wide passenger car standards (Pavley Regulations).

In December 2008, the CARB approved the Climate Change Scoping Plan, which proposes a comprehensive set of actions designed to reduce California's dependence on oil, diversify energy sources, save energy, and enhance public health, among other goals. Per AB 32, the Scoping Plan must be updated every five years to evaluate the mix of AB 32 policies to ensure that California is on track to achieve the 2020 greenhouse gas reduction goal. In May 2014, CARB approved the First Update to the Climate Change Scoping Plan.[19] The 2014 First Update defines CARB's climate change priorities for the next five years and lays the groundwork to start the transition to the post-2020 goals set forth in Executive Orders S-3-05 and B-16-2012. The 2014 First Update highlights California's progress toward meeting the "near-term" 2020 GHG emission reduction goals defined in the 2008 Scoping Plan and evaluates how to align the State's longer-term greenhouse gas reduction strategies with other State policy priorities, such as for water, waste, natural resources, agriculture, clean energy, and transportation and land use.

[19]California Air Resources Board. *First Update First Update to the AB 32 Scoping Plan*. May 2014. Accessed June 6, 2014. Available at http://www.arb.ca.gov/cc/scopingplan/document/updatedscopingplan2013.htm.

CEQA

The California Natural Resources Agency, as required under State law (Public Resources Code Section 21083.05), amended the State CEQA Guidelines to address the analysis and mitigation of greenhouse gas emissions. In these changes to the CEQA Guidelines, Lead Agencies, such as the City of Morgan Hill, retain discretion to determine the significance of impacts from greenhouse gas emissions, based upon individual circumstances. A Lead Agency may describe, calculate, or estimate greenhouse gas emissions resulting from a project and use a model and/or qualitative analysis or performance based standards to assess impacts.

Senate Bill 375

Senate Bill 375 (SB 375), known as the Sustainability Communities Strategy and Climate Protection Act, was signed into law in September 2008. It builds on AB 32 by requiring CARB to develop regional GHG reduction targets to be achieved from the automobile and light truck sectors for 2020 and 2035 when compared to emissions in 2005. The per capita reduction targets for passenger vehicles in the San Francisco Bay Area include a seven percent reduction by 2020 and a 15 percent reduction by 2035.[20] The four major requirements of SB 375 are:

1. Metropolitan Planning Organizations (MPOs) must meet GHG emission reduction targets for automobiles and light trucks through land use and transportation strategies.
2. MPOs must create a Sustainable Communities Strategy (SCS), to provide an integrated land use/transportation plan for meeting regional targets, consistent with the Regional Transportation Plan (RTP).
3. Regional housing elements and transportation plans must be synchronized on eight-year schedules, with Regional Housing Needs Assessment (RHNA) allocation numbers conforming to the SCS.
4. MPOs must use transportation and air emissions modeling techniques consistent with guidelines prepared by the California Transportation Commission (CTC).

Consistent with the requirements of SB 375, the Metropolitan Transportation Commission (MTC) has partnered with the Association of Bay Area Governments (ABAG), BAAQMD, and the Bay Conservation and Development Commission (BCDC) to prepare the region's SCS as part of the RTP process.[21] The SCS is referred to as *Plan Bay Area*.

MTC and ABAG adopted *Plan Bay Area* in July 2013. The strategies in the plan are intended to promote compact, mixed-use development close to public transit, jobs, schools, shopping, parks, recreation, and other amenities, particularly within Priority Development Areas (PDAs) identified by local jurisdictions. The area around the Morgan Hill Caltrain Station is identified as a PDA.[22] The proposed project, including Phase I and Phase II, is not located within a PDA.

[20] The emission reduction targets are for those associated with land use and transportation strategies, only. Emission reductions due to the California Low Carbon Fuel Standards or Pavley emission control standards are not included in the targets.
[21] ABAG, BAAQMD, BCDC, and MTC. *One Bay Area Frequently Asked Questions*. Accessed June 4, 2013. Available at: http://onebayarea.org/about/faq.html#.UQceKR2_DAk.
[22] Association of Bay Area Governments and Metropolitan Transportation Commission. *Plan Bay Area*. July 2013.

Bay Area 2010 Clean Air Plan

The 2010 CAP is a multi-pollutant plan that addresses greenhouse gas emissions along with other air emissions in the San Francisco Bay Area Air Basin. One of the key objectives in the 2010 CAP is climate protection. The 2010 CAP includes emission control measures in five categories: Stationary Source Measures, Mobile Source Measures, Transportation Control Measures, Land Use and Local Impact Measures, and Energy and Climate Measures. Consistency of a project with current control measures is one measure of its consistency with the 2010 CAP. The current 2010 CAP also includes performance objectives, consistent with the State's climate protection goals under AB 32 and SB 375, designed to reduce emissions of greenhouse gas to 1990 levels by 2020 and 40 percent below 1990 levels by 2035.

Morgan Hill Municipal Code

Water Conserving Landscapes Ordinance

The City of Morgan Hill Municipal Code Chapter 18.73 includes requirements for water conservation for new and existing development within the City. These measures include the Water Conserving Landscapes Ordinance adopted in February 2006.[23] This ordinance regulates landscape design, construction, and maintenance. It promotes efficient water use and management of peak season water demands.

City of Morgan Hill Environmental Agenda

In 2007, the City Council adopted an Environmental Agenda to enhance the long-term sustainability of Morgan Hill by reducing environmental impacts, increasing community health, and protecting environmental resources for future generations. Progress on environmental goals is assessed on a yearly basis.

To promote and provide opportunities for residents to reduce GHG emissions, the City of Morgan Hill has taken the following steps:

- Posting a carbon calculator on the City's website that is specifically designed for Morgan Hill residents to help conceptualize their contribution to global warming and to provide strategies for reducing emissions;
- Promoting bicycling and walking to City of Morgan Hill events through giveaways;
- Requiring green building checklists to be filled out with building permits, and updating residential development control system criteria to strengthen green building incentives;
- Researching programs that would allow residents to purchase local carbon offsets that would directly benefit the community;
- Implementing programs to reduce the cost of installing solar systems;
- Arranging free bus service for VTA community bus route 16 on Earth Day;
- Providing educational material with utility bills; and

[23] City of Morgan Hill. *Water Supply Assessment for the Southeast Quadrant Area. Final Draft (Revised).* December 2013.

- Adopting the Sustainable Buildings Ordinance on December 16, 2009, which established "green building" requirements for both residential and non-residential development.

City of Morgan Hill 2035 General Plan

Various policies in the City's General Plan have been adopted for the purpose of avoiding or mitigating greenhouse gas emissions impacts resulting from planned development within the City, including the following:

Circulation System and Complete Streets Policy TR-2.1 – A balanced multi-modal system offers viable choices for residents, employees, customers, visitors, and recreational users. Use smart growth and Sustainable Communities principles throughout the City to provide a balanced transportation system which assures access to all, and which integrates all appropriate modes of transportation into an effectively functioning system, including modes such as auto, ride sharing, public rail and bus transit, paratransit, bicycling, and walking.
Pedestrian Network Policy TR-9.2 – Promote walking as an alternate transportation mode for its contribution to health and reduction of energy consumption and pollution.
Climate Change Policy NRE-15.1: - Maintain a greenhouse gas reduction trajectory that is consistent with the greenhouse gas reduction targets of Executive Orders B-30-15 (40 percent below 1990 levels by 2030) and S-03-05 (80 percent below 1990 levels by 2050) to ensure the City is consistent with statewide efforts to reduce greenhouse gas emissions.
Climate Change Policy NRE-15.2 – Encourage land use transportation patterns that reduce dependence on automobiles.
Climate Change Policy NRE-15.4 – Promote land use patterns that reduce the number and length of motor vehicle trips.
Climate Change Policy NRE-15.10 – Continue to work with the Santa Clara Valley Transportation Authority on regional transportation solution that will reduce vehicle miles travelled and greenhouse gas emissions.
Energy Efficiency Policy NRE-16.7 – Encourage new and existing development to incorporate renewable energy generating features, like solar panels and solar hot water heaters.

2.7.1.2 *Background Information*

Unlike emissions of criteria and toxic air pollutants, which have local or regional impacts, emissions of greenhouse gases have a broader, global impact. Global warming associated with the "greenhouse effect" is a process where greenhouse gases accumulating in the atmosphere contribute to an increase in the temperature of the earth's atmosphere. The principal greenhouse gases contributing to global warming and associated climate change are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated compounds. Emissions of greenhouse gases contributing to global climate change are attributable in large part to human activities associated with the transportation, industrial/manufacturing, utility, residential, commercial, and agricultural sectors.

Impacts to California from climate change include shifting precipitation patterns, increasing temperatures, increasing severity and duration of wildfires, earlier melting of snow pack and effects

on habitats and biodiversity. Sea levels along the California coast have risen up to seven inches over the last century, and average annual temperatures have been increasing. These and other effects will likely intensify in the coming decades and significantly impact the State's public health, natural and manmade infrastructure, and ecosystems.[24]

2.7.1.3 *Existing Conditions*

The majority of the Phase I and Phase II project sites are unoccupied. The site generates minimal greenhouse gas emissions from human activity. Indirect emissions are generated from the burning of fuel required for site maintenance (e.g., infrequent disking and/or mowing to control fire hazards, etc.).

2.7.2 Greenhouse Gas Emissions Impacts

2.7.2.1 *Thresholds of Significance*

For the purposes of this EIR, a greenhouse gas emissions impact is considered significant if the project will:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Greenhouse gas emissions worldwide contribute, on a cumulative basis, to the significant adverse environmental impacts of global climate change. No single land use project could generate sufficient greenhouse gas emissions on its own to noticeably change the global average temperature. The combination of greenhouse gas emissions from past, present, and future projects in Morgan Hill, the entire State of California, and across the nation and around the world, contribute cumulatively to global climate change and its associated environmental impacts.

The following discussion focuses on whether project emissions represent a cumulatively considerable contribution to climate change as determined by consistency with the City of Morgan Hill and Statewide efforts to curb GHG emissions.

BAAQMD Threshold of Significance

The City of Morgan Hill and other jurisdictions in the San Francisco Bay Area Air Basin have used the thresholds and methodology for assessing air emissions and/or health effects in the BAAQMD CEQA Air Quality Guidelines (May 2011), which are based upon scientific and factual data prepared by BAAQMD in developing the thresholds.

[24] State of California Energy Commission. *2009 California Climate Adaptation Strategy Discussion Draft. Frequently Asked Questions.* August 3, 2009. www.climatechange.ca.gov/adaptation/documents/2009-07-31_Discussion_Draft-Adaptation_FAQs.pdf.

The City of Morgan Hill considers the BAAQMD thresholds to be based on the best information available for the San Francisco Bay Area Air Basin. Under the BAAQMD CEQA Air Quality Guidelines, if a project will result in operational-related GHG emissions of 1,100 metric tons (also referred to as the "brightline" threshold) or 4.6 metric tons per service population[25] of carbon dioxide equivalents (CO_2e) [26] per year or more, the project would make a cumulatively considerable contribution to greenhouse gas emissions and result in a significant impact to global climate change. The bright-line numeric threshold of 1,100 MT CO_2e/year is a numeric emissions level below which a project's contribution to global climate change would be less than cumulatively considerable. For projects that are above this bright-line cutoff level, emissions from these projects would still be less than cumulatively significant if the annual GHG emissions from the project, as a whole, are less than or equal to 4.6 MT CO2e per service population or less, indicating GHG emissions rates are below AB32 2020 targets.

2.7.2.2 *Project GHG Emissions*

Construction GHG Emissions

GHG emissions during construction of Phase I and Phase II of the proposed project would be similar and would be the result of processing and manufacturing construction supplies, operating construction equipment, and construction-related vehicle trips (construction crews, material and equipment deliveries, off hauling demolition debris and soil, etc.). GHG emissions will be generated at different levels throughout project construction activities. Construction-related GHG emissions vary depending on the level of activity, duration of the construction, specific construction operations, equipment-type use, and number of construction personnel. Currently, neither the City of Morgan Hill nor BAAQMD have adopted GHG significance thresholds that apply to construction projects. For informational purposes, Phase I construction GHG emissions are estimated to be approximately 600 metric tons of CO_2 over the course of construction. Phase II construction GHG emissions would be similar. Given that the proposed project is in an urban setting near construction supplies, equipment, and workforces, GHG emissions resulting from project-related construction activities would not contribute substantially to local or regional greenhouse gas emissions. For these reasons and because construction GHG emissions would be a temporary condition and would not result in permanent ongoing emissions that would interfere with the implementing AB 32, GHG emissions during construction of the proposed project (including Phase I and Phase II) would be less than significant. **(Less Than Significant Impact)**

[25] Service population is defined as the sum of the number of residents and the number of employees at the development.

[26] CO_2e is a measurement used to account for the fact that different GHGs have different potential to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. This potential, known as the global warming potential (GWP) of a GHG, is dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. For example, one ton of CH_4 has the same contribution to the greenhouse effect as approximately 23 tons of CO_2. Therefore, CH_4 is a much more potent GHG than CO_2. Expressing emissions in CO_2e takes the contributions of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted. [BAAQMD. *CEQA Air Quality Guidelines.* 2012.]

Operational GHG Emissions

Phase I (Main Avenue to DeWitt/Spring Avenue)

Upon completion of Phase I, operation of the transportation system in the project area would improve, which would have a positive effect on GHG emissions. Daily vehicle miles traveled (VMT) would increase less than one percent upon completion and operation of Phase I. GHG emissions resulting from the increase in VMT were evaluated using the CT-Emfac 2014 model, which provides composite emission rates based on vehicle mix, speed, year, and area (i.e., County). GHG emissions upon completion and operation of Phase I were calculated to be approximately 800 metric tons per year, which is below the BAAQMD significance threshold of 1,100 MT CO_2e per year. **(Less Than Significant Impact)**

Phase II (DeWitt Avenue to Watsonville Road)

As with Phase I of the proposed project, the completion of Phase II would improve the transportation system and positively effect GHG emissions in the project area. Year 2035 VMT calculations were completed for the proposed project and include the completion of both Phase I and Phase II of the proposed project. VMT would increase less than one percent as a result of the realignment and widening of the Santa Teresa Corridor. GHG emissions from the increased VMT would be approximately 755 metric tons per year, which is below the BAAQMD significance threshold of 1,100 MT CO_2e per year. **(Less Than Significant Impact)**

2.7.2.3 *Conformance with Applicable Plans, Policies, and Regulations*

GHG emissions during construction and operation the proposed project, including Phase I and Phase II, would be below BAAQMD thresholds. The proposed would be subject to new requirements under rule making developed at the State and local level regarding greenhouse gas emissions and would be subject to local policies that may affect emissions of greenhouse gases. For these reasons, the proposed project, including both Phase I and Phase II, would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing greenhouse gas emissions. **(Less Than Significant Impact)**

2.7.3 Cumulative Greenhous Gas Emissions Impacts

As discussed above, greenhouse gas emissions worldwide contribute, on a cumulative basis, to the significant adverse environmental impacts of global climate change. No single project in the City could generate sufficient greenhouse gas emissions on its own to noticeably change the global average temperature. The combination of greenhouse gas emissions from past, present, and future projects in Morgan Hill, the entire State of California, and across the nation and around the world, contribute cumulatively to global climate change and its associated environmental impacts. For these reasons, the discussion above focuses on whether project emissions represent a cumulatively considerable contribution to climate change as determined by consistency with the City of Morgan Hill and Statewide efforts to curb GHG emissions. As discussed above, the proposed project, including both Phase I and Phase II, would not result in a significant cumulative greenhouse gas emissions impact. **(Less Than Significant Cumulative Impact)**

2.7.4 Conclusion

The proposed project, including both Phase I and Phase II of the proposed project, would not result in a significant GHG emissions impact. **(Less Than Significant Impact)**

2.8 HAZARDS AND HAZARDOUS MATERIALS

The following discussion is based in part on a Phase I Environmental Site Assessment (ESA) prepared by *Cornerstone Earth Group* in March 2016 for the Phase I (Main Avenue to DeWitt/Spring Avenue) project segment. This report is attached as Appendix E to this EIR.

2.8.1 Existing Setting

2.8.1.1 *Applicable Plans, Policies, and Guidelines*

City of Morgan Hill 2035 General Plan

Various policies in the City's General Plan have been adopted for the purpose of avoiding or mitigating hazards and hazardous materials impacts resulting from planned development within the City, including the following:

Hazardous Materials Policy SSI-4.11 – Monitor the transportation of hazardous materials and wastes to reduce risks and ensure notification of South County jurisdictions in the event of a leak or spill.
Hazardous Materials Policy SSI-4.16 – Require new or expanding development projects in areas contaminated from previous discharges to mitigate their environmental effects.

2.8.1.2 *Background*

Hazardous materials encompass a wide range of substances, some of which are naturally-occurring and some of which are man-made. Examples include pesticides, herbicides, petroleum products, metals (e.g., lead, mercury, arsenic), asbestos, and chemical compounds used in manufacturing and other uses. Determining if such substances are present on or near project sites is important because, by definition, exposure to hazardous materials above regulatory thresholds can result in adverse health effects on humans, as well as harm to the natural environment.

Due to the fact that these substances have properties that are toxic to humans and/or the ecosystem, there are multiple regulatory programs in place that are designed to minimize the chance for unintended releases and/or exposures to occur. Other programs set forth remediation requirements at sites where contamination has occurred.

Hazardous waste generators and hazardous materials users in the City of Morgan Hill are required to comply with regulations enforced by several Federal, State, and County agencies. The regulations are designed to reduce the risk associated with the human exposure to hazardous materials and minimize adverse environmental effects. State and Federal construction worker health and safety regulations require protective measures during construction activities that may expose construction workers to asbestos, lead, and/or other hazardous materials.

2.8.1.3 *Site Existing and Historic Uses*

Existing Uses

Phase I (Main Avenue to DeWitt/Spring Avenue)

The Phase I alignment consists primarily of undeveloped grassland bordered by residential and commercial uses. The alignment includes two structures: a small, one-story cement building on the adjacent PG&E property and a single-family residence on the southerly side of the westerly terminus of Warren Avenue. There is a shallow containment basin on the southern side of the PG&E cement building that is likely to have been used as a secondary containment feature associated with oil-containing electrical transformers. Additionally, there is a fenced stormwater detention basin on the southern portion of the site. No hazardous materials were observed on the site during the reconnaissance performed for the Phase I ESA.

Phase II (DeWitt Avenue to Watsonville Road)

The Phase II project site consists primarily of undeveloped grassland, residential uses, and some agricultural uses.

Historic Uses

Phase I (Main Avenue to DeWitt/Spring Avenue)

Based on historical aerial photographs and topographic maps, historically the Phase I alignment consisted primarily of agricultural lands. Aerial photographs taken between 1939 and 1948 show the alignment used for agricultural production (orchards), with the southern portion of the site partially occupied by a plant nursery with greenhouses. The existing PG&E substation and building are also present. Many of the orchard trees were removed by 1948. Aerial photographs taken between 1956 and 1980 show most of the remaining orchard trees being removed by 1965 and the plant nursery removed by 1975. The existing on-site residence on the southerly side of the westerly terminus of Warren Avenue is also shown. Aerials taken between 1982 and 2006 depict the site similar to that of existing conditions.

Phase II (DeWitt Avenue to Watsonville Road)

Historically, uses within the Phase II alignment have been similar to existing conditions. The land adjacent to the roadways has primarily consisted of agricultural and residential uses and grassland. Over the years, the grassland and agricultural uses were replaced with residential uses.

2.8.1.3 *Surrounding Area Uses*

Existing and Historic Uses

Phase I (Main Avenue to DeWitt/Spring Avenue)

The area surrounding the Phase I alignment is currently developed with residential and commercial uses. Historically, much of the Morgan Hill area was used for agricultural production, including the area surrounding the Phase I alignment.

Phase II (DeWitt Avenue to Watsonville Road)

Similar to the area within the planned Santa Teresa corridor widening and realignment, the area surrounding the Phase II alignment currently consists of residential uses, grassland, and agricultural uses. Historically, much of the Morgan Hill area was used for agricultural production, including the area surrounding the Phase II alignment.

2.8.1.4 *On-Site Sources of Contamination*

Phase I (Main Avenue to DeWitt/Spring Avenue)

Agriculture

The area within the Phase I alignment was historically used for agricultural production and a plant nursery with greenhouses. Pesticides may have been applied to crops in the normal course of farming operations; therefore, residual pesticide concentrations may remain in soil within the alignment. Additionally, hazardous materials (e.g., polychlorinated biphenyls (PCBs), petroleum hydrocarbons, and heavy metals) may have been used or stored within and around the small concrete building on the PG&E substation property.

Hazardous Material Spills or Releases

State regulatory agency, Santa Clara County Department of Environmental Health, and Morgan Hill Fire Department records were reviewed to evaluate potential chemical hazards within the alignment. Based on the records review, no chemical spills and/or releases have been reported within the alignment, including the PG&E substation property. None of the properties within the Phase I alignment are on a list compiled pursuant to Section 65962.5 of the Government Code (Cortese List).[27]

Building Materials

Asbestos was commonly used in building materials until 1981, and the use of lead in paint and polychlorinated biphenyls (PCBs) in ballasts was not regulated until 1978. The two existing

[27] CalEPA. "Cortese List Data Resources." Accessed March 25, 2016. Available at: http://www.calepa.ca.gov/SiteCleanup/CorteseList/.

structures within the proposed Phase I alignment (the cement PG&E building and the residence on Warren Avenue) were constructed prior to 1975. As a result, asbestos containing materials (ACMs), lead-based paint, and/or fluorescent light ballasts containing PCBs may be present in the structures.

Phase II (DeWitt Avenue to Watsonville Road)

Agriculture

Areas within the Phase II alignment have historically been used for agricultural production, which likely included the use of pesticides in the normal course of operations. For this reason, elevated levels of residual pesticides may exist in the soil adjacent to the existing roadways.

Hazardous Material Spills or Releases

Government Code Section 65962.5 (Cortese List) requires the California Environmental Protection Agency (CalEPA) to develop and update (at least annually) a list of hazardous waste and substances sites. This list is used by the State, local agencies, and developers to comply with CEQA requirements. The list includes hazardous substance release sites identified by the Department of Toxic Substances Control (DTSC) and the State Water Resources Control Board (SWRCB). Based on a search of the State regulatory databases (i.e., Geotracker database managed by the California Water Board, a list of solid waste disposal sites identified by the California Water Board, a list of "active" Cease and Desist Orders and Cleanup and Abatement Orders managed by the California Water Board, EnviroStor managed by DTSC, and a list of hazardous waste facilities subject to corrective action identified by DTSC), none of the parcels within or adjacent to the planned future widening and realignment of the Santa Teresa corridor are listed on the hazardous waste or substances sites updated annually per Section 65962.5 of the Government Code.[28]

Building Materials

Asbestos was commonly used in building materials until 1981and the use of lead in paint and polychlorinated biphenyls (PCBs) in ballasts was not regulated until 1978. Numerous existing structures along the Phase II alignment were constructed prior to 1978. As a result, asbestos containing materials (ACMs), lead-based paint, and/or fluorescent light ballasts containing PCBs may be present in the structures.

Lead Concentrations Adjacent Existing Roadways

Until 1996, lead was commonly added to gasoline.[29] As a result, lead was emitted as a component of motor vehicle exhaust. Soil sampling along many roadways has found that lead concentrations exceed applicable thresholds for classification as a hazardous material. This phenomenon known as "aerially-deposited lead" (ADL) is widespread. Because the existing roadways within the Phase II

[28] CalEPA. "Cortese List Data Resources." Accessed September 12, 2016. Available at: http://www.calepa.ca.gov/SiteCleanup/CorteseList/.

[29] Lead is a heavy metal that is poisonous to humans. It is especially toxic to the nervous system, although it can adversely affect many systems and organs. Lead has been removed from certain products such as paint (1978) and gasoline (1996) in order to reduce the potential for chronic exposure.

alignment (i.e., DeWitt Avenue, Edmundson Avenue, and Sunnyside Avenue were built prior to the phaseout of lead as a gasoline additive, elevated concentrations of lead are likely to be present in the soil along these roadways. For these reasons, soil contaminated with lead could be encountered during construction of the planned future widening and realignment of the Santa Teresa corridor.

2.8.1.5 *Off-Site Sources of Contamination*

Phase I (Main Avenue to DeWitt/Spring Avenue)

As part of the Phase I ESA, a search of applicable regulatory databases was completed to identify properties with documented environmental releases and/or those that use, store, or dispose of regulated chemicals. Based on the regulatory database search, no hazardous materials incidents have been reported in the site vicinity that would be likely to significantly impact the area within the Phase I alignment.

Phase II (DeWitt Avenue to Watsonville Road)

Based on the current and historic use of the Phase II project area for residential and agricultural uses, it is not expected that hazardous material incidents in the vicinity of the Phase II alignment have contaminated the soil and/or groundwater beneath the site. As noted above, none of the properties within or adjacent to the Phase II alignment are included in the databases created pursuant to Section 65962.5 of the Government Code (Cortese List).

2.8.1.6 *Airports*

The San Martin Airport is approximately 4.1 miles and 2.6 miles southeast of the Phase I and II alignments, respectively. The Phase I and Phase II alignments are not located within the San Martin Airport Safety zones.[30]

2.8.1.7 *Emergency Response Plan*

The Phase I and II alignments are not specifically identified in the City of Morgan Hill's Emergency Operations Plan. The existing roadways within the Phase II alignment, however, provide access to the City of Morgan Hill from the north and the south.

2.8.1.8 *Wildland Fires*

Segments of both the Phase I and II alignments are located within designated very high fire hazard severity zones.[31] [32]

[30] Santa Clara County. *South County Airport Comprehensive Land Use Plan*. November 2008.
[31] CalFire. *Very High Fire Hazard Severity Zones in LRA.* October 2008.
[32] CalFire. *Fire Hazard Severity Zones in SRA.* November 2007.

2.8.2 Hazards and Hazardous Materials Impacts

2.8.2.1 *Thresholds of Significance*

For the purposes of this EIR, a hazards and hazardous materials impact is considered significant if the project would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- 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;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- 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;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area;
- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

2.8.2.2 *On-Site Hazardous Materials Impacts*

Transport, Use, and Disposal of Hazardous Materials

The proposed project, including both Phase I and Phase II, would not involve the routine transport, use, or disposal of hazardous materials. Hazardous materials, however, could be transported by commercial and/or private vehicles using the proposed and planned roadway improvements. Vehicles operating on public roads, such as those that would be improved under the proposed project, are subject to all local, State, and Federal regulations governing the transport of hazardous materials. This includes, but is not limited to, the Hazardous Materials Transportation Act. Additionally, all public roadways constructed within the City of Morgan Hill and County of Santa Clara, are required to adhere to all applicable roadway design standards and regulations. For these reasons, the proposed project, including both Phase I and Phase II, would not result in a significant impact related to the routine transport, use, and disposal of hazardous materials. **(Less Than Significant Impact)**

Soil Contamination

Phase I (Main Avenue to DeWitt/Spring Avenue)

The area within the Phase I alignment was previously used for agricultural purposes. Residual pesticides may remain in the soil within the alignment. Additionally, hazardous materials (e.g., PCBs, petroleum hydrocarbons, and heavy metals) may have been used or stored within and around the small concrete building on the PG&E substation property. The proposed extension of Hale Avenue would require substantial earthwork. If residual pesticides are present at elevated levels and/or the soil in the vicinity of the concrete PG&E building is contaminated with hazardous materials, grading and excavation activities associated with the Phase I project could expose construction workers and/or the environment to harmful chemicals.

Impact HAZ-1: Grading and excavation activities associated with the Phase I project could expose construction workers and/or the environment to harmful chemicals. **(Significant Impact)**

The following measure would be implemented to reduce and/or avoid significant impacts related to possible soil contamination within the Phase I alignment to a less than significant level.

MM HAZ – 1.1: Soil sampling and testing could be completed at the time of future implementation when the project design has been finalized. Prior to the start of demolition, grading, and excavation activities associated with the proposed extension of Hale Avenue, soil within the proposed Phase I alignment will be sampled and tested for pesticides and the soil in the area of the PG&E building will be sampled and tested for PCBs, petroleum hydrocarbons, and heavy metals to determine whether contamination is present at levels that exceed applicable standards. The number and location of the test samples shall be determined by a qualified hazardous materials specialist in consultation with the Santa Clara County Department of Environmental Health (SCCDEH) and the City of Morgan Hill. If contamination is found to be present above applicable screening levels, then a soil management plan will be prepared by the hazardous material specialist under SCCDEH oversight. The soil management plan will identify the specific procedures for the excavation, storage, transport, and disposal of contaminated soil, as necessary, consistent with applicable regulations.

With implementation of the mitigation measure identified above, the potential for the proposed extension of Hale Avenue to expose construction workers and/or the environment to harmful chemicals would be reduced to a less than significant level. **(Less Than Significant Impact with Mitigation Incorporated)**

Phase II (DeWitt Avenue to Watsonville Road)

The area within and adjacent to the planned future widening and realignment of the Santa Teresa corridor was historically used for agricultural purposes; therefore, soil within the Phase II alignment

could contain elevated levels of residual pesticides. Additionally, the existing roadways within the Phase II alignment were built prior to the phaseout of lead as a gasoline additive. As a result, elevated concentrations of lead are likely to be present in the soil along these roadways. In accordance with General Plan Policy SSI-4.16, at the time of future project-level environmental review for Phase II and prior to a decision to commit to a specific design, a Phase I Environmental Site Assessment would be prepared to determine the potential for hazardous materials to be present within the area of ground disturbance and, if necessary, soil sampling and testing would be completed. If contamination is found to be present above applicable screening levels, then a soil management plan will be prepared by a qualified hazardous material specialist under SCCDEH oversight. The soil management plan will identify the specific procedures for the excavation, storage, transport, and disposal of contaminated soil, as necessary, consistent with applicable regulations. **(Less Than Significant Impact)**

Building Materials

Phase I (Main Avenue to DeWitt/Spring Avenue)

Two structures (the cement PG&E building and the residence on Warren Avenue) are located within the proposed alignment for the extension of Hale Avenue. Due to the age of the structures, building materials may contain asbestos and/or lead based paint and fluorescent light ballasts may contain PCBs. These structures would be demolished as part of Phase I of the proposed project. The following standard measures would be implemented prior to the demolition of structures:

Standard Measures: Phase I of the proposed project includes the following standard measures to reduce impacts related to asbestos and lead-based paint containing building materials:

- All potentially friable asbestos-containing materials shall be removed in accordance with National Emissions Standards for Hazardous Air Pollutants (NESHAP) guidelines prior to building demolition or renovation that may disturb the materials.
- All demolition activities will be undertaken in accordance with Cal/OSHA standards, contained in Title 8 of the California Code of Regulations (CCR), Section 1529, to protect workers from exposure to asbestos. Materials containing more than one percent asbestos are also subject to BAAQMD regulations.
- During demolition activities, all building materials containing lead-based paint shall be removed in accordance with Cal/OSHA Lead in Construction Standard, Title 8, CCR 1532.1, including employee training, employee air monitoring, and dust control. Any debris or soil containing lead-based paint or coatings will be disposed of at landfills that meet acceptance criteria for the waste being disposed.

With implementation of the standard measures identified above, Phase I of the proposed project would not result in a significant impact from the release of hazardous building materials during demolition activities. **(Less Than Significant Impact)**

Phase II (DeWitt Avenue to Watsonville Road)

Numerous existing structures along the Phase II alignment were constructed prior to 1978 and, as a result, asbestos containing materials (ACMs), lead-based paint, and/or fluorescent light ballasts containing PCBs may be present in the structures. Therefore, the planned future widening and realignment of the Santa Teresa corridor could require the demolition and/or alteration of structures that contain ACMs, lead-based paint, and/or PCBs. At the time of Phase II construction, the following standard measures would be implemented prior to the demolition of structures:

Standard Measures: Phase II of the proposed project includes the following standard measures to reduce impacts related to asbestos and lead-based paint containing building materials:

- All potentially friable asbestos-containing materials shall be removed in accordance with National Emissions Standards for Hazardous Air Pollutants (NESHAP) guidelines prior to building demolition or renovation that may disturb the materials.
- All demolition activities will be undertaken in accordance with Cal/OSHA standards, contained in Title 8 of the California Code of Regulations (CCR), Section 1529, to protect workers from exposure to asbestos. Materials containing more than one percent asbestos are also subject to BAAQMD regulations.
- During demolition activities, all building materials containing lead-based paint shall be removed in accordance with Cal/OSHA Lead in Construction Standard, Title 8, CCR 1532.1, including employee training, employee air monitoring, and dust control. Any debris or soil containing lead-based paint or coatings will be disposed of at landfills that meet acceptance criteria for the waste being disposed.

With implementation of the standard measures identified above, Phase II of the proposed project would not result in a significant impact from the release of hazardous building materials during demolition activities. **(Less Than Significant Impact)**

Government Code 65962.5

Phase I (Main Avenue to DeWitt/Spring Avenue)

None of the properties within the proposed Phase I alignment are included on a list compiled pursuant to Section 65962.5 of the Government Code (Cortese List). Therefore, the proposed extension of Hale Avenue would not create a significant hazard to the public or environment due to being located on a site with known hazardous material contamination. **(No Impact)**

Phase II (DeWitt Avenue to Watsonville Road)

None of the parcels within the Phase II alignment are listed on the hazardous waste or substances sites updated annually per Section 65962.5 of the Government Code. Therefore, the planned future widening and realignment of the Santa Teresa corridor would not create a significant hazard to the public or environment due to being located on a site with known hazardous material contamination. **(No Impact)**

Phase I (Main Avenue to DeWitt/Spring Avenue)

St. Catherine School and Britton Middle School are located approximately 400 feet west and 200 feet north of the proposed Phase I alignment, respectively. The potential for air pollutant emissions from vehicles travelling on the proposed extension of Hale Avenue to affect adjacent receptors, including nearby schools, is evaluated in *Section 2.2, Air Quality*. Traffic projections indicate that the Hale Avenue extension could serve approximately 12,400 trips per day under Year 2035 General Plan project conditions. As discussed in *Section 2.2, Air Quality*, the adverse health risks associated with proposed extension of Hale Avenue are below BAAQMD significance thresholds. The proposed extension of Hale Avenue would not handle hazardous or acutely hazardous materials, substances, or waste. Materials used in construction of the proposed alignment would not contain acutely hazardous substances. For these reasons, the proposed Phase I alignment would not result in a significant hazardous material impact upon schools in the project area. **(Less Than Significant Impact)**

Phase II (DeWitt Avenue to Watsonville Road)

There are no schools located within one-quarter mile of the planned Phase II alignment. Therefore, the planned future widening and realignment of the Santa Teresa corridor from the intersection of DeWitt Avenue and Spring Avenue to Watsonville Road would not result in hazardous materials impacts to schools. **(No Impact)**

2.8.2.3 *Off-Site Hazardous Materials Impacts*

Phase I (Main Avenue to DeWitt/Spring Avenue)

Based on the regulatory database search completed as part of the Phase I ESA, no hazardous materials incidents have been reported in the vicinity of the Phase I alignment that would have been likely to contaminate the soil or groundwater beneath the site. Therefore, the proposed project would not create a significant hazard to the public or the environment. **(Less Than Significant Impact)**

Phase II (DeWitt Avenue to Watsonville Road)

Based on the current and historic use of the Phase II project area for residential and agricultural uses, it is not expected that hazardous material incidents in the vicinity of the Phase II alignment have contaminated soil or groundwater beneath the site. This is supported by the fact that none of the properties within or adjacent to the Phase II alignment are included on a list compiled pursuant to Section 65962.5 of the Government Code (Cortese List). Therefore, the planned future widening and realignment of the Santa Teresa corridor would not create a significant hazard to the public or the environment. **(Less Than Significant Impact)**

2.8.2.4 *Other Hazardous Materials Impacts*

Airports and Aircraft Hazards

The proposed project, including both Phase I and II, are not located within the San Martin Airport safety zones. There are no private airports in the project area. **(No Impact)**

Implementation of Safety Plans

The proposed project, including both Phase I and II, would improve roadway connectivity in the project area, thereby, improving the ability of the City of Morgan Hill's Office of Emergency Services to implement the Emergency Operations Plan. **(No Impact)**

Wildland Fire Hazards

The proposed project, including both Phase I and II, would improve roadway connectivity in the project area, thereby, improving the ability of the Morgan Hill Fire Department and other fire crews to control and extinguish wildland fires. **(No Impact)**

2.8.3 Cumulative Hazardous Material Impacts

Similar to the proposed project, some of the projects that would be constructed under the cumulative scenario would occur on properties that were historically or currently used for agricultural production and, as a result, on-site soils may contain elevated levels of pesticides and fertilizers. As with the proposed project, existing buildings to be demolished by the cumulative projects could contain asbestos containing materials (ACMs), lead-based paint, or polychlorinated biphenyls (PCBs). All cumulative projects with the potential to result in hazards and hazardous materials impacts would be required to implement measures as conditions of approval. These measures could include incorporating the requirements of applicable existing local, State, and Federal laws, regulations, and agencies such as the State Department of Toxic Substances (DTSC), Regional Water Quality Control Board, and the California Occupational Safety and Health Administration (Cal/OSHA), during one or more phases of project development. Prior to the demolition of structures with the potential to contain hazardous building materials (e.g., ACMs or lead-based paint), surveys would be required as conditions of approval to determine if hazardous building materials are present. If determined to be present, the hazardous building materials would be handled and disposed of in a manner that minimizes exposure to people and the environment.

Hazards and hazardous material issues are generally specific to the area of concern and would not combine with contamination on other sites in Santa Clara County that are not geographically related. For example, investigation and possible subsequent remediation of a development or redevelopment site in the City of Morgan Hill would not typically affect the investigation and remediation of sites in other cities. For this reason and those stated above, the cumulative projects, including the proposed project, would not result in significant cumulative hazardous materials impacts. **(Less Than Significant Cumulative Impact)**

2.8.4 Conclusion

The proposed project, with implementation of mitigation measures MM HAZ-1.1 and the standard measures listed above, would not result in a significant hazards or hazardous materials impact. **(Less Than Significant Impact)**

2.9 HYDROLOGY AND WATER QUALITY

This section is based, in part, on a Hydrology and Water Quality Report prepared by *Schaaf & Wheeler* for Phase I of the proposed project in August 2016. The report is attached as Appendix F to this EIR.

2.9.1 Existing Setting

2.9.1.1 *Applicable Plans, Policies, and Regulations*

Federal

National Flood Insurance Program

The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP) to provide subsidized flood insurance to communities that comply with FEMA regulations protecting development in floodplains. As part of the NFIP, FEMA publishes Flood Insurance Rate Maps (FIRMs) that identify flood hazard zones within a community.

Clean Water Act

The major Federal legislation governing water quality is the Clean Water Act, as amended by the Water Quality Act of 1987. The Clean Water Act establishes the basic structure for regulating discharges of pollutants into the waters of the US and regulating quality standards for surface waters. Under the Clean Water Act, the US Environmental Protection Agency (EPA) has implemented pollution control programs such as setting wastewater standards and water quality standards for all contaminants in surface waters.

Section 303(d) of the Clean Water Act requires that States develop a list of water bodies that do not meet water quality standards, establish priority rankings for waters on the list and develop action plans, called Total Maximum Daily Loads (TMDL), to improve water quality. The project segments are located in the vicinity of Llagas Creek, which is listed as an impaired water body for pH, chloride, low dissolved oxygen, sodium, and total dissolved solids.

National Pollutant Discharge Elimination System Permit Program

The EPA's regulations, as called for under Section 402 of the Clean Water Act, also include the National Pollutant Discharge Elimination System (NPDES) permit program, which controls sources that discharge pollutants into waters of the US (e.g., streams, lakes, bays, etc.).[33] These regulations are implemented at the regional level by the Regional Water Quality Control Boards (RWQCBs),

[33] Historically, efforts to prevent water pollution focused on "point" sources, meaning the source of the discharge was from a single location (e.g., a sewage treatment plant, power plant, factory, etc.). More recent efforts are focusing on pollution caused by "non-point" sources, meaning the discharge comes from multiple locations. The best example of this latter category is urban stormwater runoff, the source of which is a myriad of impervious surfaces (e.g., highways, rooftops, parking lots, etc.) that are found in a typical City or town.

which for areas in Morgan Hill south of Cochrane Road, such as the location of the proposed project, is the Central Coast Regional Water Quality Control Board (CCRWQCB).

The RWQCBs are responsible for protecting the quality of surface water and groundwater by issuing and enforcing compliance with the NPDES permits and by preparing and revising the applicable Regional Water Quality Control Plan. The NPDES permit, though a Federal program, is administered at the local level.

State of California

Porter-Cologne Act

The State of California's Porter-Cologne Water Quality Control Act provides the basis for water quality regulation within California and assigns primary responsibility for the protection and enhancement of water quality to the State Water Resources Control Board (SWRCB) and the nine RWQCBs. The CCRWQCB regulates water quality in accordance with the Water Quality Control Plan or "Basin Plan," which was adopted in 2016. The CCRWQCB implements the Basin Plan by issuing and enforcing waste discharge requirements to control water quality and protect beneficial uses.

NPDES General Permit for Construction Activity

The SWRCB has implemented a NPDES General Construction Permit for the State of California. Construction activity subject to this permit includes clearing, grading, and ground disturbances such as stockpiling or excavation. The permit requires a Notice of Intent (NOI) and Storm Water Pollution Prevention Plan (SWPPP) must be prepared prior to commencement of construction.

Pursuant to the nonpoint source control practices and procedures required by the City of Morgan Hill and the CCRWQCB, the project SWPPP shall prescribe construction-phase Best Management Practices (BMPs) to adequately contain sediment on-site and prevent construction activities from degrading surface runoff. As a component of the SWPPP, an erosion control plan is required. The erosion control plan shall include measures for erosion control, such as phasing of grading, limiting areas of disturbance, designation of restricted-entry zones, diversion of runoff away from disturbed areas, protective measures for sensitive areas, outlet protection, and provision for re-vegetation or mulching. Once grading begins, the SWPPP must be kept on-site and updated as needed while construction progresses.

NPDES Municipal Stormwater Permit

The EPA has delegated management of NPDES requirements for municipal urban runoff discharges in California to the SWRCB and the nine RWQCB's. The City of Morgan Hill is designated a smaller municipal separate storm sewer system (small MS4s) serving less than 100,000 people. The City has prepared and adopted a Storm Water Management Plan (SWMP) and been issued the NPDES Small MS4s General Permit by the CCRWQCB [Water Quality Order Number 2013-0001-DWQ]. The City's SWMP outlines a comprehensive five year plan to establish Best Management Practices (BMPs) through six Minimum Control Measures (MCMs) to help reduce the discharge of

pollutants into waterways and to protect local water quality caused by stormwater and urban run-off within the corporate limits of Morgan Hill.

Projects resulting in the addition and/or replacement of 5,000 sf of impervious surfaces are required to comply with the City's NPDES Small MS4s General Permit and implement a project specific SWMP. The project SWMP shall implement post-construction water quality BMPs that control pollutant levels to pre-development levels, or to the maximum extent practicable for the project. BMPs shall be designed in accordance with engineering criteria in the *California Stormwater BMP Handbook for New and Redevelopment* or other accepted guidance.

Dam Safety

The California Department of Water Resources (DWR), Division of Safety of Dams is responsible for regular inspection of dams in California. Dams located near the proposed project include Anderson Dam, Chesbro Dam, and Coyote Dam. The northern portion of the Phase I alignment is partially located in the Anderson Dam inundation zone. The Phase II alignment is not located in a dam inundation zone.

The Santa Clara Valley Water District (SCVWD) operates a comprehensive dam safety program that includes Anderson and Chesbro dams to ensure public safety. Elements of the safety program include dam maintenance, periodic studies, annual inspections with the Division of Safety of Dams, review and evaluation of monitoring data year-round, a program to evaluate the conditions of the dam following earthquakes, an Emergency Action Plan coordinated with local emergency management agencies, and capital improvements when major repairs or improvements are needed.[34] Anderson Dam is currently limited to approximately 68 percent capacity due to a recent SCVWD seismic analysis.

City of Morgan Hill 2035 General Plan

Various policies in the City's General Plan have been adopted for the purpose of avoiding or mitigating hydrology and water quality impacts resulting from planned development within the City, including the following:

Water Quality and Conservation Policy NRE-7.3 – Promote water conservation and efficient water use in all public and private landscaping plans.
Water Quality and Conservation Policy NRE-8.7 – In order to provide greater protection of the aquifers which supply drinking water to the South County, give special consideration to the management of contaminants (e.g., hazardous materials, sanitary effluents) in groundwater recharge areas where no protective aquitard layer exists.
Water Quality and Conservation Policy NRE-8.8 – Implement Best Management Practices to improve water quality, in conformance with the South Santa Clara County and City of Morgan Hill Total Maximum Daily Load (TMDL) Monitoring Plan for the Pajaro River Watershed and findings

[34] Santa Clara Valley Water District. "Dam Safety Program." Accessed August 16, 2016. Available at: http://www.valleywater.org/EkContent.aspx?id=8144&terms=chesbro+dam

in subsequent annual status updates, as required for compliance with community standards and applicable state and federal provisions.
Flood Hazards Policy SSI-5.3 – Prior to the start of construction, a Flood Clearance shall be obtained from the Floodplain Administrator for the City of Morgan Hill that provides plans drawn to scale showing the nature, location, dimensions, and elevation of the area; existing or proposed structures, fill, storage of material, and drainage facilities, and floodproofing provisions.
Flood Hazards Policy SSI-5.5 – Require all local development to provide appropriate mitigation of off-site flooding impacts, including limiting runoff to pre-development levels and/or complete solutions to flooding and local drainage problems in the vicinity of the development using such methods as detention or retention.
Flood Hazards Policy SSI-5.8 – Send all subdivisions and private and public project referrals where activity is located near to floodplain areas to Santa Clara Valley Water District for review prior to City approval.
Flood Hazards Policy SSI-6.6 – Encourage flood management designs that respect the natural topography and vegetation of waterways while retaining dynamic flow and functional integrity.
Flood Hazards Policy SSI-6.7 – Preserve the existing floodplain capacity of urban creeks and channels.
Stormwater Policy SSI-16.2 – Ensure that the level of detention or retention provided on the site of any new development is compatible with the capacity of the regional storm drainage system.
Stormwater Policy SSI-16.3 – Require a storm water management plan for each proposed development, to be presented early in the development process and describe the design, implementation and maintenance of the local drainage facilities.

2.9.1.2 *Water Quality*

Phase I (Main Avenue to DeWitt/Spring Avenue)

The Phase I alignment is mostly comprised of undeveloped grassland. The alignment is divided by topographic features into two drainage areas (Basin 1 and Basin 2). Basin 1 includes the northern 3.4 acres of the alignment that drain towards West Main Avenue. Basin 2 includes the remaining 6.9 acres that drain towards East Dunne Avenue. The entire Phase I alignment is tributary to West Little Llagas Creek. Stormwater runoff from the alignment drains into the City of Morgan Hill storm drain system and Llagas Creek and its tributaries.

Phase II (DeWitt Avenue to Watsonville Road)

The Phase II alignment is comprised of two-lane roadways (i.e., DeWitt Avenue, West Edmundson Avenue, and Sunnyside Avenue), undeveloped right-of-way adjacent to either side of the roadways, and undeveloped grassland north of West Edmundson Avenue. Stormwater runoff from the Phase II alignment drains into the City of Morgan Hill storm drain system and Llagas Creek and its tributaries.

2.9.1.3 *Groundwater*

The proposed project, including Phase I and Phase II, is underlain by the Llagas groundwater basin. Recharge of the Llagas groundwater basin is achieved through an equal combination of natural recharge and recharge activities of the SCVWD through percolation ponds. Each recharge method contributes approximately 23,000 acre-feet of water per year (af/y) to the groundwater basin. The Llagas groundwater basin is estimated to have an operational storage capacity between 150,000 and 165,000 af. Groundwater pumping activities in the Llagas groundwater basin ranged from 44,000 to 50,000 af annually between 2001 and 2009.

2.9.1.4 *Flooding*

Phase I (Main Avenue to DeWitt/Spring Avenue)

The Phase I alignment is located within two flood zones, as designated by FEMA. Nearly all of the Phase I alignment is located in special flood hazard area Zone X, which represents areas of 0.2 percent annual chance of flood, or the 500-year flood zone. The portion of the alignment located at the intersection of Hale Avenue and West Main Avenue is in Zone AE, which represents areas of one percent annual chance flood, or the 100-year flood zone.

Phase II (DeWitt Avenue to Watsonville Road)

The Phase II alignment is located within two flood zones, as designated by FEMA. The northern and southern most portions of the Phase II alignment are located in Zone D, which are areas where flood hazards are undetermined, but possible. The central portion of the Phase II alignment is located in special flood hazard area Zone X, which represents areas of 0.2 percent annual chance of flood, i.e. 500-year flood zone.

2.9.1.5 *Seiches, Tsunamis, and Mudflows*

Seiches

A seiche is an oscillation of the surface of a lake or landlocked sea varying in period from a few minutes to several hours. The Phase I and Phase II alignments are not located near a lake or other landlocked body of water. Therefore, the potential for the alignments to be subject to seiches is considered low.

Tsunamis

A tsunami or tidal wave is a series of water waves caused by the displacement of a large volume of a body of water, such as an ocean, bay, or large lake. Due to the immense volumes of water and energy involved, tsunamis can be devastating to areas along shorelines. There are no large bodies of water in the project area that in the event of a tsunami would affect the Phase I and II alignments.

Mudflows

Phase I (Main Avenue to DeWitt/Spring Avenue)

The segment of the Phase I alignment that traverses Nob Hill is located near areas that are susceptible to rainfall induced landslides or mudflows. The remainder of the Phase I alignment is not located on or near steep slopes that are susceptible to mudflow hazards.[35]

Phase II (DeWitt Avenue to Watsonville Road)

The hillside area adjacent to the segment of the Phase II alignment on Sunnyside Avenue between Apian Way and La Vista Court is susceptible to rainfall induced landslides or mudflows. The remainder of the Phase II alignment is not located on or near steep slopes that are susceptible to mudflow hazards.[36]

2.9.2 Hydrology and Water Quality Impacts

2.9.2.1 *Thresholds of Significance*

For the purposes of this EIR, a hydrology and water quality impact is considered significant if the project will:

- Violate any water quality standards or waste discharge requirements;
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there will be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells will drop to a level which will not support existing land uses or planned uses for which permits have been granted);
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which will result in substantial erosion or siltation on- or off-site;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of a course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which will result in flooding on- or off-site;
- Create or contribute runoff water which will exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- Otherwise substantially degrade water quality;
- Place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;
- Place within a 100-year flood hazard area structures which will impede or redirect flood flows;

[35] Association of Bay Area Governments. "Rainfall-induced Landslide Areas." Accessed September 13, 2016. Available at: http://resilience.abag.ca.gov/landslides/.
[36] Ibid.

- Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam; or
- Expose people or structures to inundation by seiche, tsunami, or mudflow.

2.9.2.2 *Water Quality Impacts*

Construction Impacts

Short-term adverse impacts to water quality could occur during construction of the proposed project, including Phase I and Phase II. During construction, areas of disturbed soils would be exposed to the erosive forces of water and wind, which could result in downstream sedimentation. Grading and vegetation removal in proximity to drainage features would increase the potential for bank erosion, affecting both water quality and slope stability along the drainage feature.

The proposed project would disturb more than one acre of soil and, therefore, would be subject to the NPDES General Construction Permit. Per the requirements of the NPDES General Construction Permit, the project would implement the following standard measures to reduce impacts to water quality from construction activities:

Standard Measures: The following standard measures would be implemented in conformance with Federal and State requirements:

- Preparation of a Notice of Intent (NOI) and Storm Water Pollution Prevention Plan (SWPPP) prior to construction activities. The SWPPP shall include the following:
  - Erosion Control Plan. The Erosion Control Plan shall include components for erosion control, such as phasing of grading, limiting areas of disturbance, designation of restricted-entry zones, diversion of runoff away from disturbed areas, protective measures for sensitive areas, outlet protection, and provision for re-vegetation or mulching. The plan would also prescribe treatment measures to trap sediment once it has been mobilized, at a scale and density appropriate to the size and scale of the catchment.
  - Identification of construction best management practices (BMPs). BMPs shall be implemented in accordance with criteria in the *California Stormwater BMP Handbook for Construction* or other accepted guidance.
  - The City shall identify a SWPPP manager. The SWPPP manager shall be the responsible party to ensure proper implementation, maintenance, and performance of the identified BMPs.

With implementation of the standard measures identified above, construction of the proposed project, including Phase I and Phase II, would not result in significant water quality impacts. **(Less Than Significant Impact)**

Post-Construction Impacts

Once built and put into use, the proposed roadway project, including both Phase I and Phase II, could impact water quality. The roadway surface and other impervious surfaces associated with the proposed project would contain pollutants and chemicals that would be carried by runoff into the

City of Morgan Hill storm drain system and Llagas Creek and its tributaries. Examples of these pollutants include heavy metals, oil, grease, debris, rubber, and air pollution residue. If untreated, roadway runoff from the proposed project would degrade downstream water quality. The proposed project would add and/or replace over 5,000 sf of impervious surfaces and, therefore, would be subject to the NPDES Small MS4s General Permit that has been issued to the City of Morgan Hill. Consistent with the requirements of the NPDES Small MS4s General Permit, the standard measures listed below would be implemented to reduce post-construction water quality impacts to a less than significant level.

Standard Measures: The following standard measures would be implemented in conformance with the City of Morgan Hill's NPDES Small MS4s General Permit:

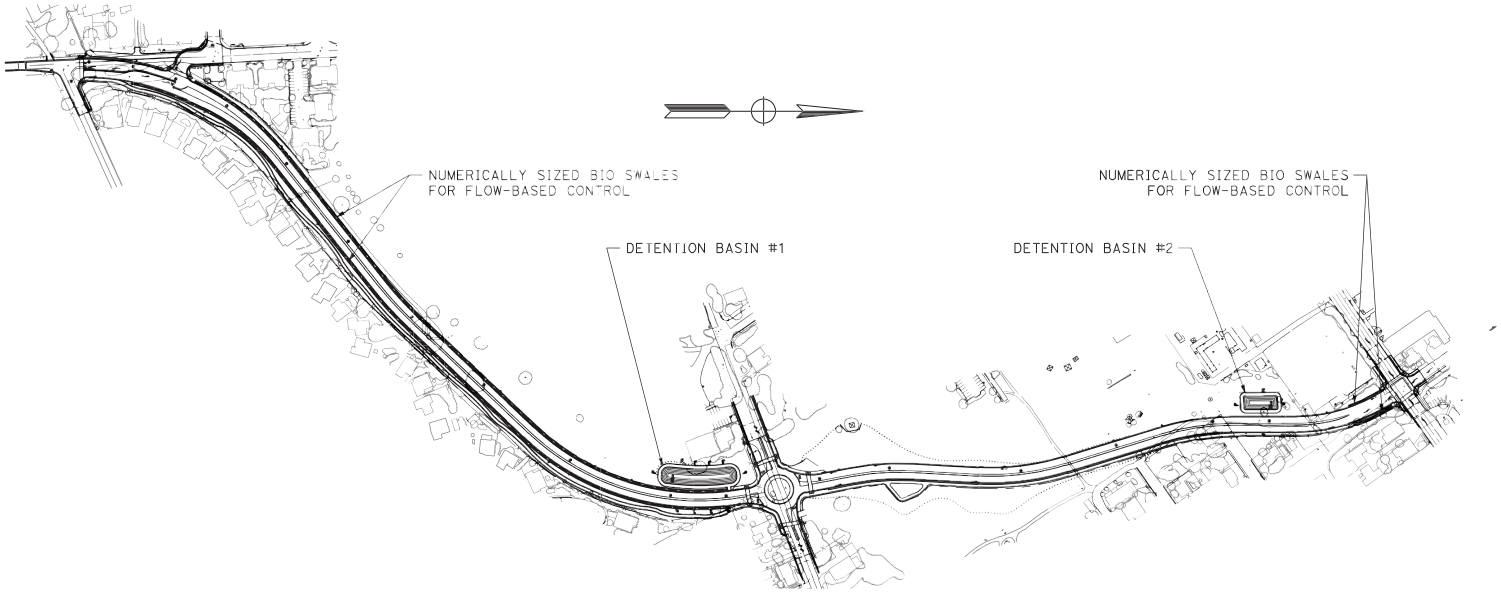
- Preparation of a SWMP. The SWMP shall implement post-construction water quality BMPs that control pollutant levels to pre-development levels, or to the maximum extent practicable.
- Preparation of an operations and maintenance plan for water quality and quality control measures. The design and maintenance documents shall include measures to limit vector concerns, especially with respect to control of mosquitoes.

The conceptual SWMP for the Phase I alignment is shown on Figure 2.9-1. As shown on Figure 2.9-1, stormwater runoff from the Phase I alignment would be treated using bioswales located along the proposed roadway. The bioswales would be designed to meet the requirements set forth in the City's NPDES Small MS4s General Permit and SWMP. Stormwater runoff from the bioswales would then drain to two retention basins, one located at the low point of Basin 1 and the other located at the low point of Basin 2. At the time of future project-level environmental review for the Phase II segment, a SWMP will be developed and implemented to address the post-construction stormwater runoff from that segment. With implementation of the standard measures identified above, stormwater runoff from the proposed roadway improvements, including both Phase I and Phase II would not degrade water quality downstream of the project site. **(Less Than Significant Impact)**

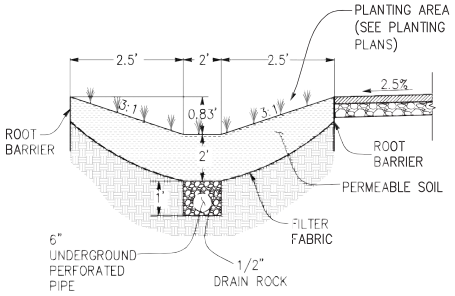
2.9.2.3 *Groundwater Impacts*

The proposed project, including both Phase I and Phase II, is entirely underlain by the Llagas groundwater basin. The surface area of the groundwater basin is 56,000 acres with an average annual infiltration volume of 0.4 acre-feet of water per acre of surface area (af/acre) per year. This equates to 22,400 acre-feet of water per year. The proposed Phase I alignment would result in the addition of approximately 6.2 acres of impervious surfaces. Applying the average annual infiltration volume of 0.4 af/acre and conservatively assuming that no rainfall onto the proposed roadway extension is able to percolate into the groundwater basin, the extension of Hale Avenue would decrease groundwater infiltration approximately 2.4 acre-feet per year. This decrease in groundwater infiltration is equal to a one-tenth of one percent decrease from existing conditions and, therefore, is not considered significant.

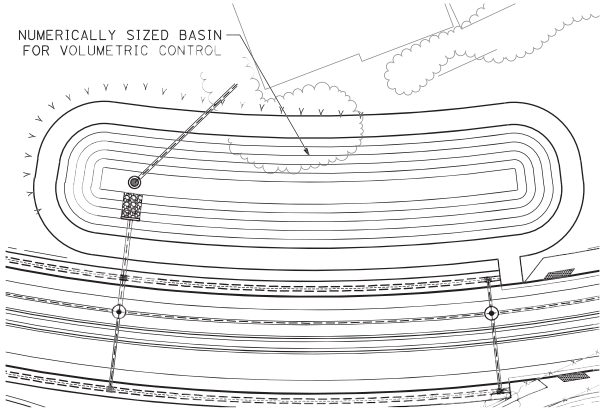
Phase II would increase impervious surfaces, which would incrementally decrease groundwater infiltration. The Phase II alignment, however, is mostly comprised of existing paved, impervious roadway surfaces (i.e., DeWitt Avenue, West Edmundson Avenue, and Sunnyside Avenue), which



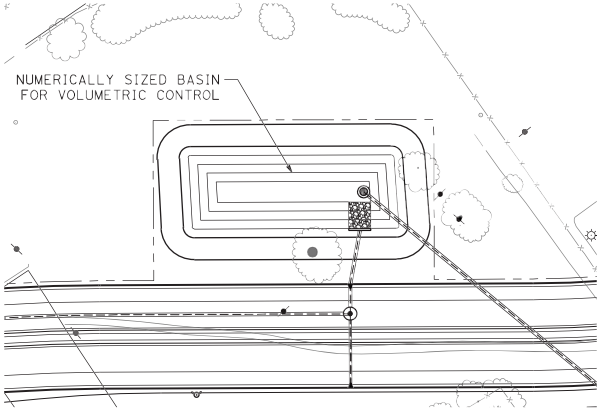
PROJECT LAYOUT



BIO SWALE



DETENTION BASIN #1



DETENTION BASIN #2

Source: Mark Thomas & Company, Inc.

would partially offset the amount of impervious surfaces created by the planned future widening and realignment of these roadways. The decrease in groundwater infiltration upon completion of the Phase II alignment would be similar to that estimated for the Phase I extension of Hale Avenue. For this reason, the planned future widening and realignment of the Santa Teresa corridor, with implementation of the Phase II segment at a later date, is not expected to substantially interfere with groundwater recharge and would not result in a significant groundwater impact. **(Less Than Significant Impact)**

2.9.2.4 *Drainage Pattern Impacts*

Flooding Impacts

Phase I (Main Avenue to DeWitt Avenue)

The entire area within the Phase I alignment is tributary to West Little Llagas Creek. Flooding occurs along West Little Llagas Creek downstream of the Phase I project area. The extension of Hale Avenue would increase the amount of impervious surfaces within the proposed alignment, which is currently undeveloped and almost 100 percent pervious. As a result, the extension of Hale Avenue would increase both the rate and volume of stormwater runoff generated as compared to existing conditions. During large storm events, the runoff generated by the proposed extension of Hale Avenue could exacerbate flooding downstream of the Hale Avenue extension. This is a significant impact.

Impact HYD-1: During large storm events, the runoff generated by the proposed extension of Hale Avenue (Phase I) could exacerbate flooding downstream of the Hale Avenue extension. **(Significant Impact)**

As previously discussed in *Section 2.9.2.2*, stormwater runoff from the Phase I alignment would be treated using bioswales located along the proposed extension of Hale Avenue. The bioswales would empty into one of two stormwater retention basins constructed as part of the proposed extension. As described in the mitigation measures MM HYD-1.1 through MM HYD-1.4, below, the retention basins would be sized to reduce or avoid exacerbating flooding downstream of the Hale Avenue extension.

MM HYD-1.1: The proposed retention basins shall be sized to meet the Hydromodification Management requirement. In order to meet this requirement, the post-project runoff shall not exceed pre-project flow rates for the two-year, 24-hour storm.

MM HYD-1.2: The proposed retention basins shall be sized to meet the City of Morgan Hill storm drain design standards. In order to meet these standards, the basins shall be designed to provide storage for a 25-year, 24-hour storm with an additional capacity of 25 percent for freeboard. The storm drain outlet from the detention basins to the public storm drain system would be sized to limit the runoff rate from the proposed roadway improvements to existing conditions. If there is no outlet, the retention basins shall designed to contain the 100-year storm event.

MM HYD-1.3: The stormwater runoff generated by the proposed roadway improvements shall be treated using bioretention areas that are designed to meet the requirements set forth in the Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast Region.

MM HYD-1.4: The stormwater runoff generated by the proposed roadway improvements shall be retained onsite through the use of infiltration, evaporation, or rainwater harvesting. If retention is deemed infeasible due to poorly draining soils, 10 percent of the equivalent impervious surface shall be set aside for stormwater management controls as described in the Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast Region. This will be incorporated into the two retention basins.

With implementation of the mitigation measure identified above, the potential for the proposed extension of Hale Avenue to exacerbate flooding downstream of the project area would be reduced to a less than significant level. **(Less Than Significant Impact with Mitigation Incorporated)**

Phase II (DeWitt Avenue to Watsonville Road)

The northern half (i.e., DeWitt Avenue) of the Phase II alignment is tributary to Edmundson Creek and the southern half (i.e., Sunnyside Avenue) is tributary to Llagas Creek. Flooding occurs downstream of the Phase II project area. The planned Phase II roadway improvements would increase impervious surfaces, which would increase the rate and volume of stormwater runoff from the Phase II alignment. Under existing conditions, however, the Phase II alignment is mostly comprised of existing paved, impervious roadway surfaces (i.e., DeWitt Avenue, West Edmundson Avenue, and Sunnyside Avenue), which would partially offset the increased rate and volume of runoff resulting from the planned future widening and realignment of these roadways. During large storm events, the runoff generated by the proposed widening and realignment could exacerbate flooding downstream of the planned Phase II alignment. This is a significant impact.

Impact HYD-2: During large storm events, the runoff generated by the planned future widening and realignment of the Santa Teresa Corridor (Phase II) could exacerbate flooding downstream of the proposed roadway improvements. **(Significant Impact)**

At the time of future project-level environmental review for the planned future Phase II roadway improvements, the following measure would be implemented as part of the environmental review process:

MM HYD – 2: A Hydrology and Water Quality Report would be prepared for the proposed roadway improvements, which would evaluate the potential for the proposed improvements to cause or exacerbate downstream flooding. Mitigation measures would be identified to ensure that the existing frequency of capacity exceedance of the storm drain system downstream of the planned future roadway improvements is maintained or decreased. These measures may be similar to mitigation measures MM HYD-1.1 through MM HYD-1.4

identified above to reduce potential flooding impacts from the proposed Phase I roadway improvements to a less than significant level.

With implementation of the mitigation measure identified above, the potential for the planned future widening and realignment of the Santa Teresa Corridor to cause or exacerbate downstream flooding would be reduced to a less than significant level. **(Less Than Significant Impact with Mitigation Incorporated)**

Erosion and Siltation Impacts

Phase I (Main Avenue to DeWitt/Spring Avenue)

The extension of Hale Avenue would increase impervious surfaces within the proposed alignment, which would increase the rate and volume of the stormwater runoff from the alignment. During large storm events, the increased rate and volume of stormwater runoff, if not controlled, could result in erosion and siltation downstream of the proposed roadway extension. This is a significant impact.

Impact HYD-3: During large storm events, the increased rate and volume of stormwater runoff resulting from the proposed extension of Hale Avenue could result in downstream erosion and siltation. **(Significant Impact)**

As described above under mitigation measures MM HYD-1.1 through MM HYD-1.4, the proposed retention basins will be designed to reduce the rate of stormwater runoff from the proposed Hale Avenue extension to existing conditions. In addition to reducing downstream flooding impacts to a less than significant level, implementation of mitigation measures MM HYD-1.1 through MM HYD-1.4 would also reduce downstream erosion and siltation to a less than significant level. **(Less Than Significant Impact with Mitigation Incorporated)**

Phase II (DeWitt Avenue to Watsonville Road)

The planned Phase II roadway improvements would increase impervious surfaces, which would increase the rate and volume of stormwater runoff from the Phase II alignment. During large storm events, the increased rate and volume of stormwater runoff, if not controlled, could result in erosion and siltation downstream of the planned future widening and realignment of the Santa Teresa Corridor. This is a significant impact.

Impact HYD-4: During large storm events, the runoff generated by the planned future widening of the Phase II segment of the Santa Teresa Corridor could result in downstream erosion and siltation. **(Significant Impact)**

As described above under mitigation measure MM HYD-2, a Hydrology and Water Quality Report would be prepared for the planned future Phase II roadway improvements, which would evaluate the potential for the roadway improvements to cause or exacerbate downstream flooding. Mitigation measures would be identified to ensure that the existing frequency of capacity exceedance of the storm drain system downstream of the planned future roadway improvements is maintained or decreased. These measures may be similar to mitigation measures MM HYD-1.1 through MM

HYD-1.4 identified above to reduce potential flooding impacts from the proposed Phase I roadway improvements to a less than significant level. In addition to reducing flooding, implementation of MM HYD-2 would also reduce downstream erosion and siltation to a less than significant level. **(Less Than Significant Impact with Mitigation Incorporated)**

2.9.2.5 *Flooding Impacts*

100-Year Flood Hazard Area

Phase I (Main Avenue to DeWitt/Spring Avenue)

The north end of the proposed Phase I alignment, comprised of the existing Hale Avenue and West Main Avenue intersection, is located in Zone AE, which represents areas of one percent annual chance of flood, i.e. 100-year flood zone. The proposed reconfiguration of the intersection is not anticipated to block or redirect flood flows. The remainder of the Phase I alignment is not located in a 100-year flood hazard zone. Additionally, the proposed roadway project does not include any residential development. For these reasons, the proposed extension of Hale Avenue would not result in a significant flood hazard impact. **(Less Than Significant Impact)**

Phase II (DeWitt Avenue to Watsonville Road)

The planned future widening of the Phase II segment of the Santa Teresa Corridor would not occur within a 100-year flood hazard area and, therefore, would not result in a significant flood hazard impact. **(Less Than Significant Impact)**

2.9.2.6 *Other Hydrology and Water Quality Impacts*

Waste Discharge

The proposed project, including both Phase I and Phase II, would not generate wastewater or otherwise result in waste discharge impacts. **(No Impact)**

Dam Failure, Mudflows, Seiches, and Tsunamis

The proposed project, including Phase I and Phase II, is a roadway project. The project does propose the construction of structures and, therefore, would not expose people or structures to inundation as a result of dam failure, seiche, tsunami, or mudflow. **(No Impact)**

2.9.3 Cumulative Hydrology and Water Quality Impacts

Build-out of the cumulative projects would increase impervious surfaces. As with the proposed project, the cumulative projects would be required to conform to applicable General Plan goals and policies, the City's Municipal Code, the City's stormwater management guidelines, and the NPDES Municipal Stormwater Permit and General Permit for Construction Activity, as applicable. Conformance with these existing goals, policies, laws, and regulations would require future cumulative development to implement stormwater pollution best management practices (BMPs)

during construction and incorporate low impact development (LID) project design measures to reduce water quality impacts. For these reasons, the cumulative projects, including the proposed project, would not result in significant cumulative hydrology and water quality impacts. **(Less Than Significant Cumulative Impact)**

2.9.4 Conclusion

The proposed project (both Phase I and Phase II), with implementation of the mitigation measures identified above, would not result in significant hydrology and water quality impacts. **(Less Than Significant Impact)**

2.10 LAND USE

2.10.1 Existing Setting

2.10.1.1 *Existing Land Uses*

On-site Land Uses

Phase I (Main Avenue to DeWitt/Spring Avenue)

The Phase I alignment is undeveloped grassland, except for three structures: a small, one-story cement building on the PG&E substation property, a single-family residence on the southern end of Warren Avenue, and a small outbuilding adjacent West Dunne Avenue.

Phase II (DeWitt Avenue to Watsonville Road)

The Phase II alignment consists mostly of undeveloped land and existing right-of-way that is located directly adjacent the existing alignments of DeWitt, West Edmundson, and Sunnyside Avenues. One residence on the east side of DeWitt Avenue is located within the Phase II alignment, and the alignment passes through the front yards of several residences.

Surrounding Land Uses

Phase I (Main Avenue to DeWitt/Spring Avenue)

The area surrounding the Phase I alignment includes a mix of residential and commercial uses and undeveloped land. North of West Dunne Avenue, the Phase I alignment is located immediately adjacent to single-family residences, a PG&E substation, and undeveloped grassland. South of West Dunne Avenue, the alignment is located immediately adjacent to single-family residences and undeveloped grassland. Immediately south of West Dunne Avenue, the alignment is directly adjacent the Morgan Hill Masonic Center.

Phase II (DeWitt Avenue to Watsonville Road)

The area surrounding the Phase II alignment includes a mix of residential and agricultural uses and undeveloped grassland. North of West Edmundson Avenue, the alignment is located immediately adjacent a large area of undeveloped grassland, agricultural fields, and single-family residences. South of West Edmundson Avenue, the area immediately adjacent to the alignment is mostly developed with single-family residences and several agricultural fields.

Agricultural and Forestry Resources

Phase I (Main Avenue to DeWitt/Spring Avenue)

The land within and immediately adjacent to the Phase I alignment is not designated farmland. The Santa Clara County Important Farmland 2012 Map designates the area within and immediately

adjacent to the Phase I alignment as *Urban and Built-Up Land*, which is defined as land that, "is occupied by structures with a building density of at least one unit to 1.5 acres, or approximately six structures to a 10-acre parcel." [37] The land within and adjacent to the Phase I alignment is not designated by the California Resources Agency as farmland of any type and is not the subject of a Williamson Act contract. There is no forest land on or adjacent to the Phase I alignment. [38]

Phase II (DeWitt Avenue to Watsonville Road)

The area affected by the planned future widening and realignment of the Santa Teresa Corridor between Dewitt Avenue and Watsonville Road is not designated farmland. The land within and adjacent to the Phase II alignment is designated *Grazing Land, Urban and Built-Up Land*, or *Other Land*. *Grazing Land* is land suitable for grazing livestock, and *Other Land* is land that is not included in any other mapping category.

The Santa Clara County Williamson Act 2013/2014 Map designates three parcels located within or immediately adjacent to the Phase II alignment that are under a Williamson Act contract, two of which are designated *Williamson Act-Non-Renewal*, and the other is designated *Williamson Act-Non-Prime Agricultural Land.*[39] *Williamson Act-Non Renewal* land is land that is currently under Williamson Act Contract for which non-renewal has been filed pursuant to Government Code Section 51245. *Williamson Act-Non-Prime Agricultural Land* is land under Williamson Act Contract that is not *Prime Farmland*. The land within and immediately adjacent to the Phase II alignment does not meet the definition of forest land.

Mineral Resources

The proposed project, including both Phase I and II, is located within a developed area. The land within and adjacent to the proposed and planned roadway improvements does contain known mineral resources and is not designated a mineral resource site.[40]

2.10.1.2 *General Plan Designation and Zoning District*

General Plan Designation

Phase I (Main Avenue to DeWitt/Spring Avenue)

The proposed extension of Hale Avenue is shown on City of Morgan Hill 2035 General Plan Land Use Map (2016). According to the General Plan Land Use Map, the areas adjacent to the Phase I

[37] California Department of Conservation. S*anta Clara County Important Farmland 2012*. 2014.
[38] According to California Public Resources Code Section 12220(g), Forest Land is land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits. According to California Public Resources Code Section 4526, "Timberland" means land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees.
[39] California Department of Conservation. *Santa Clara County Williamson Act FY 2013/2014*. 2013
[40] City of Morgan Hill. *Morgan Hill 2035 Draft EIR.* January 2016.

alignment are designated either *Mixed Use, Open Space, Residential Attached Low (6-16 du/ac), Residential Detached Medium (up to 7 du/ac),* or *Residential Estate (up to 1 du/ac)*.

Phase II (DeWitt Avenue to Watsonville Road)

The entire northern half (i.e., West Edmundson Road and north) of the planned Phase II alignment is located outside the City of Morgan Hill and is unincorporated Santa Clara County land. Most of southern half (i.e., Sunnyside Avenue) of the alignment is located within the City of Morgan Hill, except the north end of Sunnyside Avenue, which is also unincorporated County land.

According to the City of Morgan Hill General Plan the areas along and within the planned Phase II alignment are designated either *Residential Detached Medium (up to 7 du/ac), Residential Detached Low (up to 4 du/ac), Residential Estate (up to 1 du/ac),* or *Rural County*. According to the County of Santa Clara General Plan, the northern half of the alignment that is outside the City of Morgan Hill is designated either *Hillside* or *Rural Residential*.

Zoning Districts

Phase I (Main Avenue to DeWitt/Spring Avenue)

According to the City of Morgan Hill zoning map, the Phase I alignment includes parcels with a base zoning district of either *Single-Family District, Medium-Density Residential District, Central Commercial/Residential District,* or *Administrative Office District.*

Phase II (DeWitt Avenue to Watsonville Road)

The portion of the Phase II alignment located within the City of Morgan Hill includes parcels zoned for either *Single-Family District, Residential Estate District,* or *Planned Unit Development District.* The parcels outside the City of Morgan Hill are zoned *Hillside* or *Rural Residential*.

2.10.1.3 *Applicable Plans, Policies, and Regulations*

City of Morgan Hill 2035 General Plan

Various policies in the City's General Plan have been adopted for the purpose of avoiding or mitigating land use impacts resulting from development within the City, including the following:

Circulation System and Complete Streets Action TR-4.D – Construct the missing segments and improve the Hale/Santa Teresa Corridor to provide a single continuous route. New segments and improvements within Morgan Hill are planned as a two-lane multi-modal arterial, with a separated Class 1 bikeway and pedestrian path in a linear parkway. The two-lane multi-modal segments would have sufficient right-of-way to enable a future four-lane configuration, if needed. The City will work the County of Santa Clara to seek funding to improve the existing segments within the County to better accommodate bicyclists and pedestrians.
Agricultural Resources Policy NRE-4.9 – Require new urban development adjacent to an existing

agricultural operation to create an appropriate buffer area, on land within the proposed development, between urban uses and agricultural activities.
Agricultural Resources Policy NRE-4.17 – Support the preservation of land under Williamson Act contracts within the Morgan Hill Sphere of Influence.
Biological Resources Policy NRE-6.2 – Support the implementation of the Santa Clara Valley Habitat Plan to protect wildlife, rare and endangered plants and animals, and sensitive habitat from loss and destruction.

Santa Clara County General Plan

Various policies in the Santa Clara County General Plan have been adopted for the purpose of avoiding or mitigating land use impacts resulting from planned development within the County, including the following:

C-TR 34	Bicycling and walking should be encouraged and facilitated as energy conserving, non-polluting alternatives to automobile travel.
C-TR 35	A bicycle transit system should be provided that is safe and convenient for the user and which will provide for the travel needs of bicyclists.
C-TR 36	Facilities should be provided to make bicycle and pedestrian travel more safe, direct, convenient and pleasant for commuting and other trips to activity centers and to support the use of other commute alternatives. Implement the County policy to maximize bicycle access on expressways.
R-TR 9	Rural roads should be designed and built to standards that will assure driving safety and provide access for emergency vehicles.
R-LU 79	New public transportation facilities shall be compatible with the land uses in the areas in which they are located and consistent with the County's General Plan.
R-LU 80	Proposed County transportation facilities shall be subject to the same requirements for minimizing visual and aesthetic impacts as those required of private development.

C = Countywide
R = Rural

Santa Clara Valley Habitat Plan

The Santa Clara Valley Habitat Plan (Habitat Plan) was developed through a partnership between Santa Clara County, the cities of San José, Morgan Hill, and Gilroy, Santa Clara Valley Water District (SCVWD), Santa Clara Valley Transportation Authority (VTA), U.S. Fish and Wildlife Service (USFWS), and California Department of Fish and Wildlife (CDFW). The Habitat Plan is a conservation program intended to promote the recovery of endangered species and enhance ecological diversity and function, while accommodating planned growth on approximately 500,000 acres of southern Santa Clara County.

The proposed project, including both Phase I and Phase II, is within the Habitat Plan study area and the proposed project is a covered activity under the Habitat Plan. A complete discussion of the

Habitat Plan, including the land designations and fee zones within and adjacent to the alignments is included in *Section 2.3, Biological Resources*.

2.10.2 Land Use Impacts

2.10.2.1 *Threshold of Significance*

- Physically divide an established community;
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect;
- Conflict with any applicable habitat conservation plan or natural community conservation plan;
- Induce substantial 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);
- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere;
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere;
- Result in substantial shading of existing residences and/or a public park or open space area;
- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use;
- Conflict with existing zoning for agricultural use, or a Williamson Act contract;
- Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g));
- Result in the loss of forest land or conversion of forest land to non-forest use; or
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use;
- Result in the loss of availability of a known mineral resource that will be of value to the region and the residents of the state;
- Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

2.10.2.2 *Divide an Established Community*

The proposed extension of Hale Avenue would connect the community by providing a multi-modal roadway between two currently disconnected roadway segments, thereby improving connectivity for the communities within the City. The planned future widening and realignment of the Santa Teresa Corridor would also connect the community by providing safe bicycle and pedestrian facilities to an

area where these facilities do not currently exist. The proposed project, including both Phase I and Phase II, would not divide an established community. **(No Impact)**

2.10.2.3 *Applicable Land Use Plans and Policies*

The proposed project, including both Phase I and Phase II, would construct a multi-modal roadway that provides safe bicycle and pedestrian facilities, including bicycle lanes, sidewalks, and a pathway. This is specifically consistent with applicable land use plans and policies that encourage the provision of a multi-modal roadway network that provides a safe, direct route for all modes of transit. Therefore, the project would not conflict with applicable land use plans and policies. **(No Impact)**

2.10.2.4 *Habitat Conservation Plan*

The proposed project, including both Phase I and Phase II, is within the Habitat Plan study area and the proposed project is a covered activity under the Habitat Plan. A complete discussion of the Habitat Plan, including the land designations and fee zones within and adjacent to the alignments is included in *Section 2.3, Biological Resources*. The project will comply with and participate in the Habitat Plan by paying applicable fees and implementing applicable conditions on covered activities.

2.10.2.5 *Impacts to Population and Housing*

The proposed project, including Phase I and Phase II, would provide an alternate north-south route through the City of Morgan Hill and increase the connectivity of the roadway network. The proposed project could prompt incremental population growth in the Morgan Hill area by improving the local roadway network, but would not remove a substantial existing infrastructure constraint on growth in the area, as the City has not been limiting growth due to the absence of the Phase I roadway segment, and the City manages its growth in an orderly fashion through the Residential Development Control System (RDCS) process, and that would continue to apply after the roadway extension is complete. The roadway extension would connect two existing segments, and would not, however, extend utilities and services to areas where they currently do not exist or otherwise facilitate future unplanned development. The proposed project would accommodate planned growth and is consistent with the existing, longstanding City and County planned alignment for the Santa Teresa Corridor. For these reasons, the proposed project, including both Phase I and Phase II, would not induce substantial population growth by removing an existing infrastructure constraint on development. **(Less Than Significant Impact)**

The proposed Phase I alignment would result in the demolition of an existing residence on Warren Avenue and the planned Phase II alignment would result in the demolition of an existing residence on DeWitt Avenue and possibly up to three additional residences along Sunnyside Avenue, depending on the proximity of the planned alignment to existing residences at that future time. The loss of up to five residences is not considered substantial in relation to the existing housing supply and population in the project area. Therefore, the proposed project, including both Phase I and Phase II, would not displace substantial numbers of existing housing or people. **(Less Than Significant Impact)**

2.10.2.6 *Impacts to Agricultural and Forest Resources*

Phase I (Main Avenue to DeWitt/Spring Avenue)

The land within and adjacent to the Phase I alignment is not designated by the California Resources Agency as farmland of any type and is not the subject of a Williamson Act contract. Per Sections 12220(g) and 4526 of the California Public Resources Code, the project site does not meet the definition of forest land or timberland. The Phase I project site and adjacent land does not contain any known mineral resources and is not designated a mineral resource site **(No Impact)**

Phase II (DeWitt Avenue to Watsonville Road)

The land within and adjacent to the planned future widening and realignment of the Santa Teresa Corridor between Dewitt Avenue and Watsonville Road is not designated farmland. Per Sections 12220(g) and 4526 of the California Public Resources Code, the project does not meet the definition of forest land or timberland. Three parcels located within or immediately adjacent to the Phase II alignment are under a Williamson Act contract. Two of the three parcels are designated *Williamson Act-Non-Renewal*. *Williamson Act-Non-Renewal* land is land that is in the process of non-renewal. At the end of a nine year non-renewal period, the Williamson Act Contract expires and the land use is no longer restricted. The remaining parcel, which is under a Williamson Act contract, is not prime farmland. The planned future widening and realignment of the Santa Teresa Corridor may require additional right-of-way from one or more of these three parcels. The existing Williamson Act contract would remain in effect in the event additional right-of-way is necessary. The Phase II project site and adjacent land does not contain any known mineral resources and is not designated a mineral resource site. For these reasons, the planned future widening and realignment of the Santa Teresa Corridor would not result in a significant impact to agricultural and forest resources or mineral resources. **(Less Than Significant Impact)**

2.10.3 Cumulative Land Use Impacts

As with the proposed project, including both Phase I and Phase II, the cumulative projects analyzed in this Draft EIR could result in a change of uses and/or an intensification of development. The compatibility of new development with adjacent land uses, and the general character of surrounding areas are considered as a part of the City of Morgan Hill's project development and environmental review processes. Through appropriate site design and review, land use compatibility impacts such as visual intrusion and noise would be avoided. All future development projects in the City would be subject to Morgan Hill 2035 General Plan goals and policies that require appropriate setbacks and transition areas between dissimilar land uses. In addition, the setback, design, and operational requirements contained in the Morgan Hill Municipal Code would also limit land use compatibility issues.

The proposed project, in conformance with the Morgan Hill 2035 General Plan goals and policies and with the implementation of mitigation measures and standard measures, would not result in significant land use compatibility impacts or conflict with a policy or regulation adopted for the purpose of avoiding or mitigating an environmental impact. For this reason and those stated above,

the proposed project, in combination with other development in the area, would not result in significant cumulative land use impacts. (**Less Than Significant Cumulative Impact)**

2.10.4 Conclusion

The proposed project, including both Phase I and Phase II, would not result in a significant land use impact. **(Less Than Significant Impact)**

2.11 NOISE AND VIBRATION

The following discussion is based in part on an Environmental Noise Assessment prepared by *Illingworth & Rodkin, Inc.* in June 2016 for the Phase I project alignment. The report is attached as Appendix G to this EIR.

2.11.1 Existing Setting

2.11.1.1 *Background Information*

Fundamentals of Environmental Noise

Noise is defined as unwanted sound. Airborne sound is a rapid fluctuation of air pressure above and below atmospheric pressure. Sound levels are usually measured and expressed in decibels (dB) with 0 dB corresponding roughly to the threshold of hearing.

Most of the sounds which we hear in the environment do not consist of a single frequency, but rather a broad band of frequencies, with each frequency differing in sound level. The intensities of each frequency add together to generate a sound. The method commonly used to quantify environmental sounds consists of evaluating all of the frequencies of a sound in accordance with a weighting that reflects the facts that human hearing is less sensitive at low frequencies and extreme high frequencies than in the frequency mid-range. This is called "A" weighting, and the decibel level so measured is called the A-weighted sound level (dBA). In practice, the level of a sound source is conveniently measured using a sound level meter that includes an electrical filter corresponding to the A-weighting curve.

Although the A-weighted noise level may adequately indicate the level of environmental noise at any instant in time, community noise levels vary continuously. Most environmental noise includes a conglomeration of noise from distant sources which create a relatively steady background noise in which no particular source is identifiable. To describe the time-varying character of environmental noise, the statistical noise descriptors, L_{01}, L_{10}, L_{50}, and L_{90}, are commonly used. They are the A-weighted noise levels equaled or exceeded during 1%, 10%, 50%, and 90% of a stated time period. A single number descriptor called the L_{eq} is also widely used. The L_{eq} is the average A-weighted noise level during a stated period of time.

In determining the daily level of environmental noise, it is important to account for the difference in response of people to daytime and nighttime noises. During the nighttime, exterior background noises are generally lower than the daytime levels; however, most household noise also decreases at night and exterior noise becomes very noticeable. Furthermore, most people sleep at night and are very sensitive to noise intrusion. To account for human sensitivity to nighttime noise levels, a descriptor, L_{dn} (day/night average sound level), was developed. The L_{dn} divides the 24-hour day into the daytime of 7:00 AM to 10:00 PM and the nighttime of 10:00 PM to 7:00 AM. The nighttime noise level is weighted 10 dB higher than the daytime noise level. The Community Noise Equivalent Level (CNEL) is another 24-hour average which includes both an evening and nighttime weighting.

Fundamentals of Groundborne Vibration

Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Several different methods are typically used to quantify vibration amplitude. One is the Peak Particle Velocity (PPV) and another is the Root Mean Square (RMS) velocity. The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. The RMS velocity is defined as the average of the squared amplitude of the signal. The PPV and RMS vibration velocity amplitudes are used to evaluate human response to vibration.

Low-level vibrations frequently cause irritating secondary vibration, such as a slight rattling of windows, doors, or stacked dishes. The rattling sound can give rise to exaggerated vibration complaints, even though there is very little risk of actual structural damage. In high noise environments, which are more prevalent where groundborne vibration approaches perceptible levels, this rattling phenomenon may also be produced by loud airborne environmental noise causing induced vibration in exterior doors and windows.

2.11.1.2 *Applicable Plans, Policies, and Regulations*

City of Morgan Hill 2035 General Plan

Various policies in the City's General Plan have been adopted for the purpose of avoiding or mitigating noise and vibration impacts resulting from development within the City, including the following:

Noise Policy SSI-8.2 – The impact of a proposed development project on existing land uses should be evaluated in terms of the potential for adverse community response based on significant increase in existing noise levels, regardless of compatibility guidelines.
Noise Policy SSI-8.5 – Consider noise level increases resulting from traffic associated with new projects significant if: a) the noise level increase is 5 dBA L_{dn} or greater, with a future noise level of less than 60 dBA L_{dn}, or b) the noise level increase is 3 dBA L_{dn} or greater, with a future noise level of 60 dBA L_{dn} or greater.
Noise Policy SSI-8.9 – Require attention to site planning and design techniques other than sound walls to reduce noise impacts, including: a) installing earth berms, b) increasing the distance between the noise source and the receiver; c) using non-sensitive structures such as parking lots, utility area, and garages to shield noise-sensitive areas; d) orienting buildings to shield outdoor spaces from the noise source; and e) minimizing the noise at its source.
Noise Policy SSI-9.1 – Use roadway design, traffic signalization, and other traffic planning techniques (such as limiting truck traffic in residential areas) to reduce noise caused by speed or acceleration of vehicles.
Noise Policy SSI-9.2 – If noise barriers are deemed the only effective mitigation for development along major transportation corridors, require an acoustical analysis to determine necessary dimensions.
Noise Policy SSI-9.3 – The maximum height of sound walls shall be eight feet. Residential projects adjacent to the freeway shall be designed to minimize sound wall height through location of a frontage road, use of two sound walls or other applicable measures. Sound wall design and

location shall be coordinated for an entire project area and shall meet Caltrans noise attenuation criteria for a projected eight-lane freeway condition. If two sound walls are used, the first shall be located immediately adjacent to the freeway right-of-way and the second shall be located as necessary to meet Caltrans noise requirements for primary outdoor areas. The minimum rear yard setback to the second wall shall be 20 feet.

Noise Policy SSI-9.7 – Require non-earthen sound barriers to be landscaped, vegetated, or otherwise designed and/or obscured to improve aesthetics and discourage graffiti and other vandalism.

City of Morgan Hill Municipal Code

Chapter 8.28, Section 8.28.040 of the City of Morgan Hill Municipal Code states that construction activities are not permitted except within the hours of 7:00 AM and 8:00 PM on weekdays and 9:00 AM and 6:00 PM on Saturdays. No construction is permitted on Sundays or holidays. Public work projects are exempt from this section and the public works director shall determine the hours of construction for public works projects.

2.11.1.3 *Existing Noise Environment*

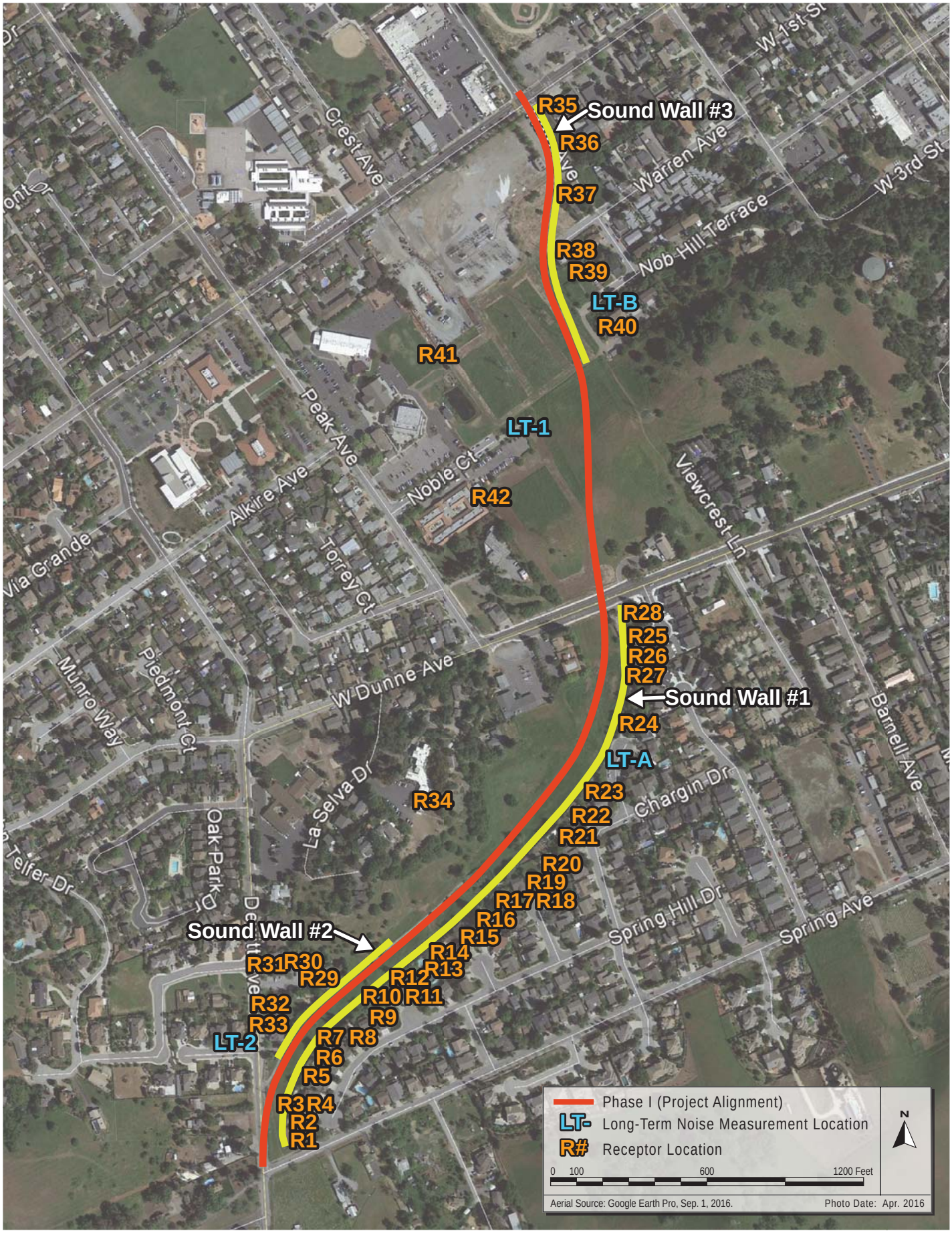
Phase I (Main Avenue to DeWitt/Spring Avenue)

The Phase I alignment is located in central Morgan Hill and extends from the intersection of Hale Avenue and West Main Avenue to the intersection of Dewitt Avenue and Spring Avenue. The alignment is approximately 4,500 feet (0.85 miles) in length and is currently comprised of mostly undeveloped grassland. Existing land uses adjoining the proposed alignment are primarily residential, with some undeveloped land and commercial uses located east and west of the alignment.

Two noise monitoring surveys were completed along the proposed alignment to document existing ambient noise levels; the first survey was completed in November 2011. Due to the time that has passed since these noise measurements were taken, additional noise measurements were completed in March 2016, which confirmed existing ambient noise levels have not changed in the project area. Each noise monitoring survey included two long-term (24-hour) measurements. The location and calculated day/night average sound level at each noise measurement location are summarized below in Table 2.11-1, and the location of each noise measurement is shown on Figure 2.11-1.

Table 2.11-1: Existing Day/Night Average (L_{dn}) Sound Levels

ID	Location	Date	L_{dn}
LT-1	Near the end of Noble Ct.	11/21/2011	53
LT-2	Light pole across Dewitt Av from Buck Hill Ct.	11/21/2011	67
LT-A	On a light pole in front of 16820 Edwin Jones Ct.	3/30/2016	54
LT-B	435 feet south of relay station on Nob Hill Terrace.	3/30/2016	57



NOISE MEASUREMENT AND RECEPTOR LOCATIONS FIGURE 2.11-1

As shown in Table 2.11-1, baseline ambient noise levels along the existing alignment range from 53 to 67 dBA L_{dn}. The main source of ambient noise levels in the project area is traffic along the surrounding roadways. The existing noise level data collected during the noise monitoring surveys was used to calculate existing noise levels at the receptors adjacent to the proposed alignment. The locations of the adjacent receptors that were modeled are shown on Figure 2.11-1, and the corresponding baseline noise levels at the adjacent receptors are shown in Table 2.11-2.

Table 2.11-2: Existing Noise Levels at Receptor Locations

Receptor #	Existing L_{dn}
R1	58
R2	57
R3	56
R4	54
R5	54
R6	54
R7	54
R8	54
R9	54
R10	54
R11	54
R12	54
R13	54
R14	54
R15	54
R16	54
R17	54
R18	54
R19	54
R20	54
R21	54
R22	54
R23	54
R24	54
R25	54
R26	54
R27	54
R28	60
R29	54
R30	62
R31	62
R32	62
R33	54

R34	54
R35	61
R36	57
R37	57
R38	57
R39	57
R40	57
R41	53
R42	53

Phase II (DeWitt Avenue to Watsonville Road)

According to the Morgan Hill 2035 Draft EIR, noise levels along the entire length of the Phase II alignment (DeWitt Avenue to Watsonville Road) are approximately 70 dBA CNEL when measured 17 feet from the road's centerline. Noise levels are approximately 66 dBA CNEL when measured 50 feet from the road's centerline.

Vibration

There are no sources of vibration in the area of the proposed project, including both Phase I and Phase II, nor are there any existing uses (e.g. microchip manufacturing) or structures (e.g., ancient or historic structures) along the proposed and future planned alignments that are particularly sensitive to vibration.

2.11.2 Noise and Vibration Impacts

2.11.2.1 *Thresholds of Significance*

For the purposes of this EIR, a noise impact is considered significant if the project will result in:

- Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels;
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;
- 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, will the project expose people residing or working in the project area to excessive noise levels; or
- For a project within the vicinity of a private airstrip, will the project expose people residing or working in the project area to excessive noise levels.

The proposed and planned future roadway improvements are not a sensitive use; therefore, the last two bulleted thresholds pertaining to the location of a project in the vicinity of an airport are not applicable and not discussed further in this EIR.

The following criteria were used to quantitatively evaluate noise and vibration impacts resulting from the project:

- **Construction Vibration:** The proposed project would result in a significant impact if project construction activity or project-related vehicle traffic would result in vibration levels of 0.3 inches per second (in/sec) PPV or greater.

- **Traffic Noise Increases:** A significant permanent noise impact would occur if the project resulted in an increase of three dBA L_{dn} or greater at noise-sensitive land uses where existing or projected noise levels would exceed 60 dBA L_{dn} or an increase of five dBA L_{dn} or greater at noise-sensitive land uses where noise levels would continue to be below 60 dBA L_{dn}.

- **Construction Noise:** Due to the temporary nature of construction activities, construction noise levels are treated differently than operational noise levels. When construction activities are predicted to cause prolonged interference with normal activities at noise-sensitive receptor locations and exceed 60 dBA L_{eq} and ambient noise levels by five dBA L_{eq} or more, the impact would be considered significant. Prolonged interference is defined as a noise level increase that occurs for more than one year.

2.11.2.2 *Construction Noise and Vibration Impacts*

Temporary Construction Noise Impacts

Phase I (Main Avenue to DeWitt/Spring Avenue)

Construction of the Phase I roadway improvements would require the temporary use of heavy equipment that could generate high noise levels in the immediate vicinity. Noise impacts resulting from construction activities depend on the noise levels generated, the timing and duration of noise generating activities, and the distance between construction noise sources and noise sensitive receptors. Based on the types of construction activities and equipment required for the proposed extension of Hale Avenue, unshielded noise levels at a distance of 50 feet from the center of construction activities would generally range from 80 to 85 dBA L_{eq} during peak periods, with the highest maximum instantaneous noise levels typically ranging from 80 to 89 dBA L_{max}.[41] Because not all of the equipment would be operating at the same time or for the entire day, however, hourly average construction noise levels would be lower. Some construction would occur closer than 50 feet to receptors, and noise could exceed those levels.

[41] Noise produced by construction equipment typically attenuates over distance at a rate of about six dB per doubling of distance; construction noise levels would be highest at receptors closest to the roadway under construction.

Construction is anticipated to occur over a total period of 10 months with noise generating activities occurring over the entire construction period; however, individual locations and residences along the Phase I alignment would not be exposed to construction noise for the entire 10 months. This is because construction activities would continue along the alignment as progress occurs. Additionally, construction of the Hale Avenue extension would be limited to the allowable day and hours specified in the Municipal Code. The City of Morgan Hill Municipal Code allows construction noise occurring between the hours of 7:00 AM and 8:00 PM on weekdays, and 9:00 AM and 6:00 PM on Saturdays, with no construction occurring on Sundays or holidays. Furthermore, the proposed project would implement the standard measures listed below to reduce noise from construction activities.

Standard Measures: The follow standard construction noise suppression measures would be implemented during construction activities to reduce noise:

- Equip all internal combustion engine-driven equipment with mufflers, air-inlet silencers, and any other shrouds shields, or other noise-reducing features that are in good operating condition and appropriate for the equipment;

- Use "quiet" models of air compressors and other stationary noise sources where such technology exists;

- Use electrically powered equipment instead of pneumatic or internal combustion powered equipment, where feasible;

- Limit noise-producing signals, including horns, whistles, alarms, and bells, to safety warning purposes only;

- Locate stationary noise-generating equipment, construction parking, and maintenance areas as far as reasonable from sensitive receptors when sensitive receptors adjoin or are near the construction project area;

- Avoid unnecessary idling of internal combustion engines (i.e., in excess of five minutes);
- Place temporary sound walls or enclosure around stationary noise-generating equipment when located near noise sensitive areas;

- Ensure that project-related public address or music systems are not audible at adjacent receptors; and

- Notify adjacent residents in advance of construction work.

Noise levels during construction of the Hale Avenue extension would at times exceed the 60 dBA L_{eq} noise threshold and the ambient noise environment by at least five dBA L_{eq}. The proposed project would implement the standard noise reduction measures identified above, which would reduce noise levels from construction activities. Additionally, construction activities and associated noise would generally move along the alignment as construction proceeds; therefore, individual receptors would

not be continually exposed to construction noise. For these reasons and because the overall construction duration would be limited to less than one year, construction of Phase I of the project would not result in a significant impact from construction noise. **(Less Than Significant Impact)**

Phase II (DeWitt Avenue to Watsonville Road)

Noise levels during construction of the planned future widening and realignment of the Santa Teresa Corridor would be similar to those described above for the Phase I roadway improvements. Construction of the Phase II roadway improvements is not anticipated to take more than one year to complete. At the time of future construction, standard measures for construction noise reduction would be implemented and the construction days and hours would be limited to those allowed under the City's Municipal Code, as identified above for Phase I. For these reasons, construction of the planned Phase II roadway improvements would not result in a significant temporary construction noise impact. **(Less Than Significant Impact)**

Temporary Construction Groundborne Vibration Impacts

Phase I (Main Avenue to DeWitt/Spring Avenue)

Heavy equipment (e.g., jackhammers, backhoes, scrapers, rollers, compactors, pavers, and dozers) would be used during construction of the Hale Avenue extension. Pile driving would not be required to construct the proposed roadway. Construction activities with the greatest potential of generating perceptible vibration levels would include the removal of pavement and soil, the movement of heavy tracked equipment, and vibratory compacting of roadway base materials by use of a roller. Vibration levels generated during construction of the proposed extension of Hale Avenue would be below the 0.3 in/sec PPV criteria when construction occurs at distances of 25 feet or greater from sensitive structures. Vibration during construction activities would be perceptible at nearby residences; however, architectural damage to adjacent residential and commercial building would not be anticipated. Additionally, the duration of vibration generating construction activities at individual locations along the Phase I alignment would be limited, because construction would move from place to place as progress occurs. For these reasons, the proposed extension of Hale Avenue would not result in a significant groundborne vibration impact. **(Less Than Significant Impact)**

Phase II (DeWitt Avenue to Watsonville Road)

The widening and realignment of the Santa Teresa Corridor would require similar construction equipment and activities to that described for the extension of Hale Avenue. Construction activities would occur near existing residences. Depending on the final location of the planned future alignment in relation to the existing structures, groundborne vibration levels could exceed 0.3 in/sec PPV during construction of the planned Phase II roadway improvements.

Impact NOI-1: Groundborne vibration levels at adjacent structures could be substantial during the construction of planned Phase II roadway improvements. **(Significant Impact)**

The following measure would be implemented to reduce groundborne vibration levels at adjacent residences during construction of the planned Phase II roadway improvements:

MM NOI – 1: An environmental noise assessment would be completed at the time of future project-level environmental review prior to commitment to implement a specific Phase II alignment to identify potential noise and vibration impacts during construction and operation of the Phase II roadway improvements. If vibration levels at adjacent residences during construction is projected to exceed 0.3 in/sec PPV, then mitigation measures would be identified to reduce the vibration impact to less than significant.

With implementation of the mitigation measure identified above, the potential for construction activities associated with the planned future widening and realignment of the Santa Teresa Corridor would be reduced to a less than significant level. **(Less Than Significant Impact with Mitigation Incorporated)**

Conflict with Established Standards

Phase I (Main Avenue to DeWitt/Spring Avenue)

Construction of the Hale Avenue extension would be limited to the allowable days and hours specified in the Municipal Code. Therefore, construction of the Hale Avenue extension would not conflict with established noise standards. **(Less Than Significant Impact)**

Phase II (DeWitt Avenue to Watsonville Road)

As with Phase I, the planned future widening and realignment of the Santa Teresa Corridor would be limited to the allowable days and hours specified in the Municipal Code. Therefore, construction of the Phase II roadway improvements would not conflict with established noise standards. **(Less Than Significant Impact)**

2.11.2.3 *Operational Noise Impacts*

Permanent Traffic Noise Increases

Phase I (Main Avenue to DeWitt/Spring Avenue)

The proposed extension of Hale Avenue would construct a new two lane roadway through central Morgan Hill within an existing undeveloped alignment. Traffic on the proposed extension would generate noise. Traffic noise modeling was completed to predict noise levels at the existing receptors along the alignment upon completion and operation of the Hale Avenue extension with the proposed sound walls in place. As stated in the project description (refer to *Section 1.2.1.2, Sound Walls*), three sound walls would be constructed along proposed extension of Hale Avenue to reduce roadway noise levels at nearby residences. Sound Wall #1 would begin at the southeast side of the proposed alignment near Spring Avenue. The sound wall would extend for approximately 2,500 feet along the easterly side of the alignment and terminate at West Dunne Avenue. Sound Wall #2 would begin at

the southwest side of the proposed alignment near Dewitt Avenue. The sound wall would extend for approximately 400 feet along the westerly side of the alignment. Sound Wall #3 would begin at the northeast end of the alignment near West Main Street. The sound wall would extend for approximately 1,000 feet along the easterly side of the alignment. The approximate location of the proposed sound walls are shown on Figure 2.11-1. The sound walls would be eight feet in height, except for three segments located south of West Dunne Avenue that would be nine feet in height. Peak-hour traffic noise levels were calculated at each adjacent receptor under Year 2035 General Plan Plus Project conditions using the traffic volumes contained in the Traffic Operations Analysis that was prepared for the proposed project (refer to *Section 2.13 Transportation*). Year 2035 General Plan Plus Project conditions includes the traffic from all planned future development and planned future roadway improvements, including the planned future widening and realignment of the Santa Teresa Corridor (i.e., Phase II). The calculated Peak-hour Year 2035 General Plan Plus Project noise levels were compared to existing ambient noise levels at each receptor along the proposed extension of Hale Avenue. The results of the comparison are shown in Table 2.11-3, below. As stated previously, a significant impact would occur if future operations of the proposed roadway increased ambient noise levels at sensitive receptors in the project vicinity by five dBA L_{dn} or greater with future levels less than 60 dBA L_{dn} or by three dBA L_{dn} or greater with future levels of 60 dBA L_{dn} or greater. As shown in Table 2.11-3, the extension of Hale Avenue, with the proposed sound walls, would not result in a significant noise impact.

Existing noise levels at certain locations along the alignment of the proposed Hale Avenue extension currently exceed the normally acceptable residential limit of 60 dBA L_{dn}. At these locations, future noise levels with or without the proposed extension of Hale Avenue would continue to exceed the 60 dBA L_{dn} limit. These exceedances of the General Plan noise level goal occur due to traffic on adjacent existing roadways (i.e., Dewitt Avenue, West Dunne Avenue, and West Main Avenue). The increased traffic noise resulting from the operation of the Hale Avenue extension would be less than three dBA, and the proposed extension of Hale Avenue, with the proposed sound walls, would not conflict with the General Plan noise standards. **(Less Than Significant Impact)**

Table 2.11-3: Modeled Traffic Noise Levels at Receptor Locations with Proposed Sound Walls

Receptor #	Existing	Year 2035 General Plan Plus Project	Increase Above Existing
R1	58	60	2
R2	57	59	2
R3	56	58	2
R4	54	58	4
R5	54	57	3
R6	54	57	3
R7	54	57	3
R8	54	58	4
R9	54	57	3
R10	54	58	4
R11	54	57	3
R12	54	58	4

Table 2.11-3: Modeled Traffic Noise Levels at Receptor Locations with Proposed Sound Walls			
Receptor #	**Existing**	**Year 2035 General Plan Plus Project**	**Increase Above Existing**
R13	54	57	3
R14	54	57	3
R15	54	57	3
R16	54	57	3
R17	54	58	4
R18	54	58	4
R19	54	58	4
R20	54	58	4
R21	54	57	3
R22	54	58	4
R23	54	58	4
R24	54	58	4
R28B	60	62	2
R29	54	58	4
R30	62	63	1
R31[A]	62	63	1
R32[A]	62	63	1
R33[A]	54	57	3
R35[A]	61	62	1
R36	57	59	2
R37	57	58	1
R38	57	58	1
R39	57	58	1
R40	57	59	2
[A] Primary noise source at receiver is either Dewitt Avenue, West Dunne Avenue or West Main Street.			

Phase II (DeWitt Avenue to Watsonville Road)

Given that 1) existing noise levels along the Santa Teresa Corridor are relatively high; 2) traffic volumes upon completion and operation of the proposed project, including both Phase I and Phase II, would not substantially increase (refer to *Section 2.13, Transportation*); and 3) the centerline of the Santa Teresa Corridor would not substantially change, except for the area of the planned future realignment (i.e., between DeWitt Avenue and Sunnyside Avenue); 4) the planned future widening and realignment of the Santa Teresa Corridor would be designed to avoid or minimize operational noise impacts to the greatest extent feasible; and 5) recent residential development along the alignment has been constructed in anticipation of the Phase II roadway improvements, noise levels upon completion of the Phase II roadway improvements are not expected to substantially increase at most adjacent receptors. Nonetheless, numerous existing residences would be located adjacent to the planned future Phase II roadway improvements. For this reason, it is possible that operation of the planned future widening and realignment of the Santa Teresa Corridor could substantially increase noise levels at adjacent receptors.

Impact NOI-2: Operation of the planned future widening and realignment of the Santa Teresa Corridor (Phase II) could substantially increase noise levels at adjacent receptors. **(Significant Impact)**

The following measure would be implemented to reduce noise levels at receptors along the planned future Phase II roadway improvements to a less than significant level:

MM NOI – 2: An environmental noise assessment would be completed at the time of future project-level environmental review prior to commitment to implement a specific Phase II alignment to identify potential noise and vibration impacts during construction and operation of the Phase II roadway improvements. If noise levels at adjacent receptors during operation are projected to substantially increase, then feasible mitigation measures (e.g., sound walls) would be identified to reduce traffic noise to a less than significant level.

With implementation of the mitigation measure identified above, the potential for operation of the planned future widening and realignment of the Santa Teresa Corridor to substantially increase noise levels at adjacent receptors would be reduced to a less than significant level. **(Less Than Significant Impact with Mitigation Incorporated)**

Conflict with Established Standards

Phase I (Main Avenue to DeWitt/Spring Avenue)

With implementation of the mitigation measure MM NOI-2, the potential for operation of the proposed Hale Avenue extension to substantially increase noise levels at adjacent receptors would be reduced to a less than significant level and, therefore, would not conflict with General Plan noise standards. **(Less Than Significant Impact)**

Phase II (DeWitt Avenue to Watsonville Road)

With implementation of mitigation measure MM NOI-3, traffic noise upon completion and operation of the planned future widening and realignment of the Santa Teresa Corridor is not expected to substantially increase noise levels at adjacent receptors and, therefore, would not conflict with the General Plan noise standards. **(Less Than Significant Impact)**

2.11.3 Cumulative Noise Impacts

2.11.3.1 *Phase I (Main Avenue to DeWitt/Spring Avenue)*

As described above under project conditions, upon completion of the Phase I roadway improvements (i.e., Hale Avenue extension), traffic volumes along the proposed Hale Avenue extension would substantially increase noise levels in the project area and, therefore, result in a significant noise impact (Impact NOI-2). Impact NOI-2 is based on Year 2035 General Plan Plus Project traffic volumes, which includes the traffic from all planned future development and planned future roadway improvements, including the planned future Phase II roadway improvements. Therefore, Impact

NOI-2, which would be reduced to less than significant with implementation of mitigation measure MM NOI-2, is also the noise impact that would occur under cumulative conditions. For these reasons, the proposed extension of Hale Avenue, with implementation of mitigation measure MM NOI-2, would not result in a significant cumulative noise impact. **(Less Than Significant Cumulative Impact with Mitigation Incorporated)**

2.11.3.2 *Phase II (DeWitt Avenue to Watsonville Road)*

Noise levels upon completion of the Phase II roadway improvements are not expected to substantially increase at most adjacent receptors. Nonetheless, numerous existing residences would be located adjacent to the planned future Phase II roadway improvements. For this reason, it is possible that operation of the planned future widening and realignment of the Santa Teresa Corridor could substantially increase noise levels at adjacent receptors.

Impact NOI-4: Operation of the planned future widening and realignment of the Santa Teresa Corridor in combination with planned future development in the project area could substantially increase noise levels at adjacent receptors.

The following measure, as identified in Impact NOI-3, would be implemented to reduce noise levels at receptors along the planned future Phase II roadway improvements to a less than significant level:

MM NOI – 3: An environmental noise assessment would be completed at the time of future project-level environmental review prior to commitment to implement a specific Phase II alignment to identify potential noise and vibration impacts during construction and operation of the Phase II roadway improvements. If noise levels at adjacent receptors during operation are projected to substantially increase, then feasible mitigation measures (e.g., sound walls) would be identified to reduce traffic noise to a less than significant level.

Implementation of MM NOI-3 would reduce the potential for cumulative noise impacts to result from the Phase II roadway improvements to a less than significant level. **(Less Than Significant Cumulative Impact with Mitigation Incorporated)**

2.11.3.3 *Cumulative Construction Noise Impacts*

The cumulative projects analyzed in this Draft EIR are not located in the vicinity of the proposed Hale Avenue extension or the planned future widening of the Santa Teresa corridor. It is also unlike that the cumulative projects would be constructed simultaneously with the proposed and planned roadway improvements. For these reasons, construction noise impacts resulting from the proposed project, including both Phase I and Phase II, would not combine with construction noise from the cumulative projects to substantially increase the construction noise impacts, as discussed above. **(Less Than Significant Cumulative Impact)**

2.11.4 Conclusion

The proposed project, including both Phase I and Phase II, with implementation of the mitigation measures identified above, would not result in a significant noise impact. **(Less Than Significant Impact with Mitigation Incorporated)**

2.12 PUBLIC SERVICES

2.12.1 Existing Setting

Public facilities and services are provided to the community as a whole, usually from a central location or from a defined set of nodes. The resource base for delivery of these services, including the physical service delivery mechanisms, is financed on a community-wide basis, usually from a unified or integrated financial system. The service delivery agency can be a City, county, or special district. Usually, new development will create an incremental increase in the demand for these services; the amount of demand will vary widely, depending on both the nature of the development (residential vs. commercial, for instance) and the type of services, as well as on the specific characteristics of the development (such as senior housing vs. family housing).

A project's impact on public facility services is generally a fiscal impact. By increasing the demand for a type of service, a group of projects could cause an eventual increase in the cost of providing the service (more personnel hours to patrol an area, additional fire equipment needed to service a tall building, etc.). That is a fiscal impact, not an environmental one. CEQA does not require an analysis of fiscal impacts.

CEQA analysis is, however, required if the increased demand is of sufficient size to trigger the need for a new or expanded facility (such as a school or fire station), since the new or expanded facility will have a physical impact on the environment. CEQA requires that an EIR then identify and evaluate the physical impacts that such a facility will have on the environment.

2.12.1.1 *Applicable Plans, Policies, and Regulations*

City of Morgan Hill 2035 General Plan

Various policies in the City's General Plan have been adopted for the purpose of avoiding or mitigating public services impacts resulting from planned development within the City, including the following:

Police and Fire Policy SSI-11.1 – Provide police and fire staffing and facilities as necessary to provide adequate public safety protection.

2.12.1.2 *Existing Conditions*

Fire Service and Emergency Medical Service

The City of Morgan Hill contracts with the California Department of Forestry and Fire Protection (CalFire) for fire and emergency medical services. The City is served by three stations at the following locations: 1) El Toro Fire Station, located at 18300 Old Monterey Road (approximately one mile northeast of the Phase I alignment), 2) Dunne Hill Fire Station, located at 2100 East Dunne Avenue (approximately 2.6 miles east of the Phase I alignment), and 3) CalFire Station, 15670

Monterey Street (approximately one mile east of the Phase II alignment). In general, the response time meets the current standard of eight minutes 95 percent of the time; although, it is expected that most responses will be approximately five minutes 90 percent of the time.[42]

Police Service

Police service is provided to the project site by the City of Morgan Hill Police Department (MHPD). The MHPD headquarters is located at 16200 Vineyard Boulevard, approximately 1.2 miles east of the Phase II alignment. The department employs 39 sworn officers.[43] The Police Department's goal is to respond to Priority One calls within five minutes and Priority Two calls within eight minutes.[44] Priority One calls are reports of a crime in progress or where an injury has occurred and Priority Two calls are reports of felonies and other major calls.

Schools

The project site is located within the Morgan Hill Unified School District (District). The District has eight elementary schools, two middle schools, two comprehensive high schools, one continuation high school, and a community adult school, as well as a home schooling program.

Parks

The City owns 70 acres of developed parkland (including the Civic Center, assessment district parks and City owned trails) and 59 acres of recreation facilities. Included within this inventory, the City maintains two community parks, five neighborhood parks, two neighborhood/school parks, and 15 mini-parks, in addition to its public trail system and open space. In addition to publicly-owned parkland, there is also a significant amount of recreational land and open space in the City that is privately owned and maintained. Under the City's General Plan Policy 18c, fifty percent of the private homeowners association (HOA) recreational acreage is counted toward meeting the General Plan goal of five acres per thousand population. Additionally, the General Plan allows for 10 percent of open space to be counted towards meeting this goal. In combination, these various types of public and private parks and recreational facilities in the City of Morgan Hill total about 200 acres to serve an estimated population of 41,197. This nearly equals the City's goal of five acres of parkland per 1,000 residents, or 205 acres for the estimated population.

The City also owns and operates special use facilities for recreational purposes. These facilities include the Morgan Hill Aquatics Center, Community and Cultural Center, Centennial Recreation Center, 38-acre Outdoor Sports Center, and Skateboard/BMX park. Many sports leagues and teams use Morgan Hill School District facilities during weekday non-school hours and on weekends. These facilities include 12 baseball/softball fields, two football fields, two tracks, and four swimming pools.

[42] City of Morgan Hill. City Council Staff Report. *Fire and Emergency Medical Services (EMS) CalFire Proposal Update*. Meeting Date April 4, 2012.
[43] City of Morgan Hill. "Police". Accessed March 10, 2016. Available at: http://www.morgan-hill.ca.gov/129/Police.
[44] City of Morgan Hill. *Operating and CIP Budget, FY 13-14. Police Field Operations, Performance Measures.* 2013.

Morgan Hill residents also utilize County and State parks. These parks include Silveira Park at the southern end of the City, Coyote Creek park chain to the north, and Henry Coe State Park to the east.

2.12.2 Public Service Impacts

2.12.2.1 *Thresholds of Significance*

For the purposes of this EIR, a public services impact is considered significant if the project will:

- Will the project 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; or
  - Other public facilities.
- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility will occur or be accelerated; or
- Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

2.12.2.2 *Fire and Police Protection Impacts*

The proposed project, including both Phase I and Phase II, would be constructed in conformance with current roadway standards and fire codes, including features that will reduce potential fire hazards. Prior to construction, the proposed roadway improvements would be reviewed by CalFire and the MHPD, and safety features to reduce fire hazards and criminal activity would be incorporated, as necessary.

The proposed roadway improvements would not increase the demand for fire and police protection services, or otherwise require construction or expansion of fire or police facilities. The proposed roadway improvements would improve the City's transportation network and, therefore, would improve fire and police response times. **(No Impact)**

2.12.2.3 *Schools Impacts*

The proposed project, including both Phase I and Phase II, would not increase the City's population and, therefore, would not increase demand on local schools. For this reason, the proposed roadway improvements would not impact schools in the project area. **(No Impact)**

2.12.2.4 *Parkland Impacts*

The proposed project, including both Phase I and Phase II, would not increase the City's population or reduce the amount of parkland within the City and, therefore, would not increase demand for parks in the project area. The project would, however, increase connectivity in the project area, which could increase the use of parks by making them somewhat more accessible to more people. The incremental increase in park usage that could result from the increased connectivity would not substantially deteriorate or accelerate deterioration of a park facility. **(Less Than Significant Impact)**

2.12.3 Cumulative Public Services Impacts

The cumulative projects analyzed in this Draft EIR may require the provision of public services. The cumulative projects, however, would implement conditions of approval or mitigation measures that would avoid impacts to public services and/or reduce them to a less than significant level (e.g., school impact fees or parkland dedication fees). The cumulative projects would also be subject to state, county, and City codes regulating these resources. For these reasons, the cumulative projects would not result in significant cumulative impacts to public services. Furthermore, the proposed project's contribution to cumulative public services impact would not be cumulatively considerable. **(Less Than Significant Cumulative Impact)**

2.12.4 Conclusion

The proposed project, including both Phase I and Phase II, would not increase the City's population or otherwise directly increase demand upon public services within the City. The increased connectivity resulting from the project could incrementally increase the use of parks. The incremental increase in park usage that could result from the increased connectivity would not substantially deteriorate or accelerate deterioration of a park facility. The increased connectivity could decrease emergency response times. **(Less Than Significant Impact)**

2.13 TRANSPORTATION

The following discussion is based on a Traffic Operations Analysis (TOA) completed by *Hexagon Transportation Consultants, Inc.* for Phase I of the proposed project in April 2016. This report is attached as Appendix H to this EIR.

2.13.1 Existing Setting

2.13.1.1 *Applicable Plans, Policies, and Regulations*

City of Morgan Hill 2035 General Plan

Various policies in the City's General Plan have been adopted for the purpose of avoiding or mitigating transportation impacts resulting from planned development within the City, including the following:

Circulation System and Complete Streets Policy TR-1.1 – Plan, construct, and maintain a coordinated and efficient system of local streets and highways throughout the community, meeting local needs and accommodating projected regional and sub-regional traffic, while protecting neighborhoods from cut-through traffic.
Circulation System and Complete Streets Policy TR-2.1 – A balanced multi-modal system offers viable choices for residents, employees, customers, visitors, and recreational users. Use smart growth and Sustainable Communities principals throughout the City to provide a balanced transportation system which assures access to all, and which integrates all appropriate modes of transportation into an effectively functioning system, including modes such as auto, ride sharing, public rail and bus transit, paratransit, bicycling, and walking.
Local Roadways and Level of Service Policy TR-3.4 – As the Level of Service (LOS) policy and design criteria for roadway improvements, use a Tiered LOS Standard.
Local Roadways and Level of Service Policy TR-3.5 - For roadway transportation facilities, when future traffic studies determine that an intersection, roadway segment, or freeway ramp/zone level of service will fall below its adopted standard, then the transportation studies will identify appropriate mitigation measures to ensure that the applicable level of service standard is attained. If a proposed traffic mitigation measure requires improvements for vehicular transportation that are beyond the jurisdiction of the City of Morgan Hill; and/or lead to an over-built intersection; and/or would have unacceptable impacts on existing buildings, or existing or planned transportation facilities and/or alternate modes of transportation, including roads, sidewalks, bicycle and transit facilities, the City may (but would not be required to) impose alternative mitigation measures that do not create the unacceptable impacts. If the measures retain the "pre-project" level of service standard for the affected facilities, then an Environmental Impact Report may not be required. However, it may be necessary for the City to prepare and certify an Environmental Impact Report, and adopt a Statement of Overriding Considerations, if a project's impacts cannot be mitigated in an acceptable manner but the City determines to approve the project. In this situation, the City may still require feasible mitigation measures and/or conditions of approval to require contributions to improving the City's transportation system.

Local Roadways and Level of Service Policy TR-3.11 – Require the Santa Teresa/Hale Corridor to be built to arterial standards.
Local Roadways and Level of Service Policy TR-3.20 – Require development adjacent to arterial streets to minimize the use of fences and walls wherever possible. Strive to accommodate all modes of travel on arterial streets, and improve the Butterfield Corridor, Monterey Road Corridor, and Hale/Santa Teresa Corridor to the extent feasible as well-landscaped multi-modal boulevards. Continue to implement the program for planting street trees and landscaping arterial streets and major intersections.
Local Roadways and Level of Service Action TR-4.D – Construct the missing segments and improve the Hale/Santa Teresa Corridor to provide a single continuous route. New segments and improvements within Morgan Hill are planned as a two-lane multi-modal arterial, with a separated Class 1 bikeway and pedestrian path in a linear parkway. The two-lane multi-modal segments would have sufficient right-of-way to enable a future four-lane configuration, if needed. The City will work with the County of Santa Clara to seek funding to improve the existing segments within the County to better accommodate bicyclists and pedestrians.
Transit Policy TR-6.1 – Coordinate with VTA to provide improved local bus service and to encourage people to ride the bus for local as well as longer trips (e.g., to Gilroy and San José). The design of key arterial streets such as Hale/Santa Teresa, the Butterfield Corridor and Monterey Road should consider incorporating bus curb lanes or duckouts, enhanced stop amenities, transit signal priority, and supporting pedestrian improvements.

2.13.1.2 *Study Methodology*

The key intersections and roadway segments that could be affected by the proposed extension of Hale Avenue from West Main Avenue to the Dewitt/Spring Avenue intersection (i.e., Phase I) were identified by the professional traffic engineer that prepared the TOA in consultation with the City of Morgan Hill. Traffic conditions at the study intersections and roadway segments were evaluated using level of service (LOS). LOS is a qualitative description of operating conditions ranging from LOS A, or free-flow conditions with little or no delay, to LOS F, or jammed conditions with excessive delays. The key intersections and roadway segments were evaluated under the following scenarios:

Existing Conditions: Existing conditions represent existing peak-hour and average daily traffic (ADT) volumes on the existing roadway network. Existing traffic volumes were obtained from new traffic counts collected in January 2016.

Existing Plus Project Conditions: Existing plus project conditions is comprised of the existing traffic volumes and existing transportation network with network adjustments associated with the proposed Phase 1 roadway improvements. This scenario does not include the planned future Phase 2 roadway improvements, as those are not expected to be implemented prior to 2025. Existing plus project conditions are evaluated relative to Existing conditions in order to determine the potential impacts associated with the proposed Phase I improvements.

Year 2020 No Project Conditions: Year 2020 No Project conditions represent future traffic volumes on the existing transportation network at the time the proposed extension of Hale Avenue (Phase I) is

anticipated to be in place and operating. The Year 2020 traffic volumes were developed via interpolation of forecasted Year 2035 General Plan Buildout traffic volumes.

Year 2020 Project Conditions: Year 2020 Project conditions consist of the Year 2020 traffic volumes and existing transportation network with network adjustments associated with proposed Phase 1 roadway improvements. This scenario does not include the planned future Phase 2 roadway improvements, as those are not expected to be implemented prior to 2025 Year 2020 Project conditions are evaluated relative to Year 2020 No Project conditions in order to determine potential impacts associated with proposed Phase I improvements at the time the proposed improvements would be in place and operating.

Year 2035 General Plan No Project Conditions: Year 2035 General Plan No Project conditions represent future traffic volumes on the future transportation network. Year 2035 General Plan No Project conditions includes land use growth projections within the City of Morgan Hill through the year 2035 and the roadway network identified in the City's *2010 Circulation Element*.

Year 2035 General Plan Project Conditions: Year 2035 General Plan Project conditions consists of Year 2035 General Plan traffic volumes and the future transportation network with the addition of the roadway network adjustments associated with the proposed project, including both Phase I and Phase II. Year 2035 General Plan Project conditions are evaluated relative to Existing conditions and Year 2035 General Plan No Project conditions in order to determine potential impacts associated with Phases I and II of the proposed project.

City of Morgan Hill Intersection LOS Analysis

Signalized Intersections

The City of Morgan Hill level of service methodology is TRAFFIX, which is based on the 2000 Highway Capacity Manual (HCM) method for signalized intersections. TRAFFIX evaluates signalized intersections operations based on average delay time for all vehicles at the intersection. Since TRAFFIX is also the CMP level of service methodology, the City of Morgan Hill methodology employs the CMP defaults values for the analysis parameters, which include adjusted saturation flow rates to reflect conditions in Santa Clara County. All intersections within the City of Morgan Hill are required to meet the City's LOS standard of LOS D, with the exception of the following:

- **LOS F** for Downtown intersections and segments including at Main/Monterey, along Monterey Road between Main and Fifth Street, and along Depot Street at First through Fifth Street;

- **LOS E** for the following intersections and freeway zones:

    - Main Avenue and Del Monte Avenue
    - Main Avenue and Depot Street
    - Dunne Avenue and Del Monte Avenue
    - Dunne Avenue and Monterey Avenue
    - Dunne Avenue and Church Street
    - Dunne Avenue and Depot Street

- Cochrane Road and Monterey Road
- Tennant Avenue and Monterey Road
- Tennant Avenue and Butterfield Boulevard
- Cochrane Road Freeway Zone: from Madrone Parkway/Cochrane Plaza to Cochrane Road/DePaul Drive
- Dunne Avenue Freeway Zone: from Walnut Grove Drive/East Dunne Avenue to Condit Road/East Dunne Avenue
- Tennant Avenue Freeway Zone: from Butterfield Boulevard/Tennant Avenue to Condit Road/Tennant Avenue

The correlation between average delay and LOS for signalized intersections is shown in Table 2.13-1 below.

Table 2.13-1: Signalized Intersection LOS Definitions

LOS	Description of Operations	Average Control Delay* (seconds/vehicle)
A	Operations with very low delay occurring with favorable progression and/or short cycle lengths.	Up to 10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths.	10.1 to 20.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.1 to 35.0
D	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.	35.1 to 55.0
E	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.	55.1 to 80.0
F	Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths.	Greater than 80.0

Source: Transportation Research Board. *2000 Highway Capacity Manual.* 2000.

Unsignalized Intersections

The methodology used to determine the LOS for unsignalized intersections is also TRAFFIX and the 2000 HCM methodology for unsignalized intersection analysis. This method is applicable for both two-way and all-way stop-controlled intersections. For the analysis of stop-controlled intersections, the 2000 HCM methodology evaluates intersection operations on the basis of average control delay time for all vehicles on the stop-controlled approaches. For the purpose of reporting LOS for one-

and two-way stop-controlled intersections, the delay and corresponding LOS for the stop-controlled minor street approach with the highest delay is reported. For all-way stop-controlled intersections, the reported average delay and corresponding LOS is the average for all approaches at the intersection. The City uses a minimum acceptable LOS standard of LOS D for unsignalized intersections, in accordance with the adopted thresholds of significance in the City's Guidelines for Preparation of Transportation Impact Reports. The correlation between average delay and LOS for unsignalized intersections is shown in Table 2.13-2 below.

Table 2.13-2: Unsignalized LOS Definitions

LOS	Description	Average Control Delay Per Vehicle (seconds)
A	Operations with very low delays occurring with favorable progression.	Up to 10.0
B	Operations with low delays occurring with good progression.	10.1 to 15.1
C	Operations with average delays resulting from fair progression	15.1 to 25.0
D	Operation with longer delays due to a combination of unfavorable progression and high V/C ratios.	25.1 to 35.0
E	Operation with high delay values indicating poor progression and high V/C ratios. This is considered to be the limited of acceptable delay.	35.1 to 50.0
F	Operation with delays unacceptable to most drivers occurring due to oversaturation and poor progression.	Greater than 50.0

Source: Transportation Research Board, *2000 Highway Capacity Manual* (Washington, D.C., 2000)

Signal Warrants

The LOS analysis at unsignalized intersections is supplemented with an assessment of intersection signalization need. The need for signalization of intersections is assessed based on the Peak Hour Volume Warrant described in the California Manual on Uniform Traffic Control Devices for Streets and Highways (CA MUTCD). This method makes no evaluation of intersection LOS, but simply provides an indication whether vehicular peak hour traffic volumes are, or would be, sufficient to justify installation of a traffic signal.

Roadway Segments Analysis

Traffic operations for local roadways were evaluated by comparing the average daily trips (ADT) to the threshold capacities for various roadway types identified in the 2000 HCM. The 2000 HCM thresholds are based on the local roadway functional classification and these values provide a planning-level analysis of the relative traffic load and approximate capacity on a particular roadway. It is important to note that daily volume thresholds are used for planning purposes, and traffic during the peak commute periods may result in worse operations than depicted by the daily average LOS.

The City of Morgan Hill does not have a formally adopted daily average roadway segment operating standard. Thus, for the purposes of this analysis, LOS D was used as a guideline for the evaluation of daily segment volumes.

2.13.1.3 *Existing Roadway Network*

Roadways surrounding Hale Avenue and their configurations in the Phase I project area are described below:

US 101 is an eight-lane freeway (three mixed-flow lanes and one high-occupancy vehicle (HOV) lane in each direction) north of Cochrane Road. South of Cochrane Road, it is a six-lane freeway with no HOV lanes. The freeway serves as the primary roadway connection between the City of Morgan Hill and Santa Clara County to the north and San Benito County to the south. Interchanges with Tennant Avenue, Dunne Avenue, and Cochrane Road provide access to the most of the City of Morgan Hill.

Monterey Road is generally a four-lane divided major arterial that runs directly through Downtown Morgan Hill. Monterey Road extends from Market Street in Downtown San Jose, through Downtown Morgan Hill, to US 101, south of the City of Gilroy.

Butterfield Boulevard is a four-lane divided arterial with a separated Class I bikeway and pedestrian path that extends southward from Cochrane Road, past Tennant Avenue, to its new intersection with Watsonville Road/Monterey Road. Along with Monterey Road, Butterfield Boulevard serves as a primary north-south route within the City.

Peak Avenue is a two-lane roadway that extends southward from Wright Avenue to West Dunne Avenue.

DeWitt Avenue is a two-lane roadway that runs southward from West Dunne Avenue to West Edmundson Avenue.

Sunnyside Avenue is a two-lane, north-south roadway that runs from West Edmundson Avenue to Watsonville Road, where it transitions to Santa Teresa Boulevard and continues into Gilroy.

Main Avenue is a two-lane roadway that runs eastward from DeWitt Avenue to Coyote Road at the base of the eastern foothills. The roadway has an overcrossing of US 101, however no access to US 101 is provided.

Dunne Avenue is a four-lane arterial that runs eastward from Peak Avenue to the eastern foothills. A full access interchange with US 101 is provided along Dunne Avenue.

Spring Avenue. Spring Avenue is a two-lane roadway that runs between Monterey Road and Dewitt Avenue.

Edmundson Avenue is a two-lane roadway that runs eastward from its intersection with Oak Glen Avenue to Monterey Road, at which point it transitions to Tennant Avenue.

Tennant Avenue is an east-west roadway that runs from Monterey Road to Foothill Avenue at the base of the eastern foothills. Tennant Avenue is a two-lane road between Foothill Avenue and US 101. West of US 101, Tennant Avenue widens to a four-lane divided roadway. West of Monterey Road, Tennant Avenue transitions to West Edmundson Avenue. A full access interchange with US 101 is provided along Tennant Avenue.

Watsonville Road is a two-lane roadway that extends west from Monterey Road to State Route (SR) 152 at the base of the western foothills.

2.13.1.4 *Study Intersections and Roadway Segments*

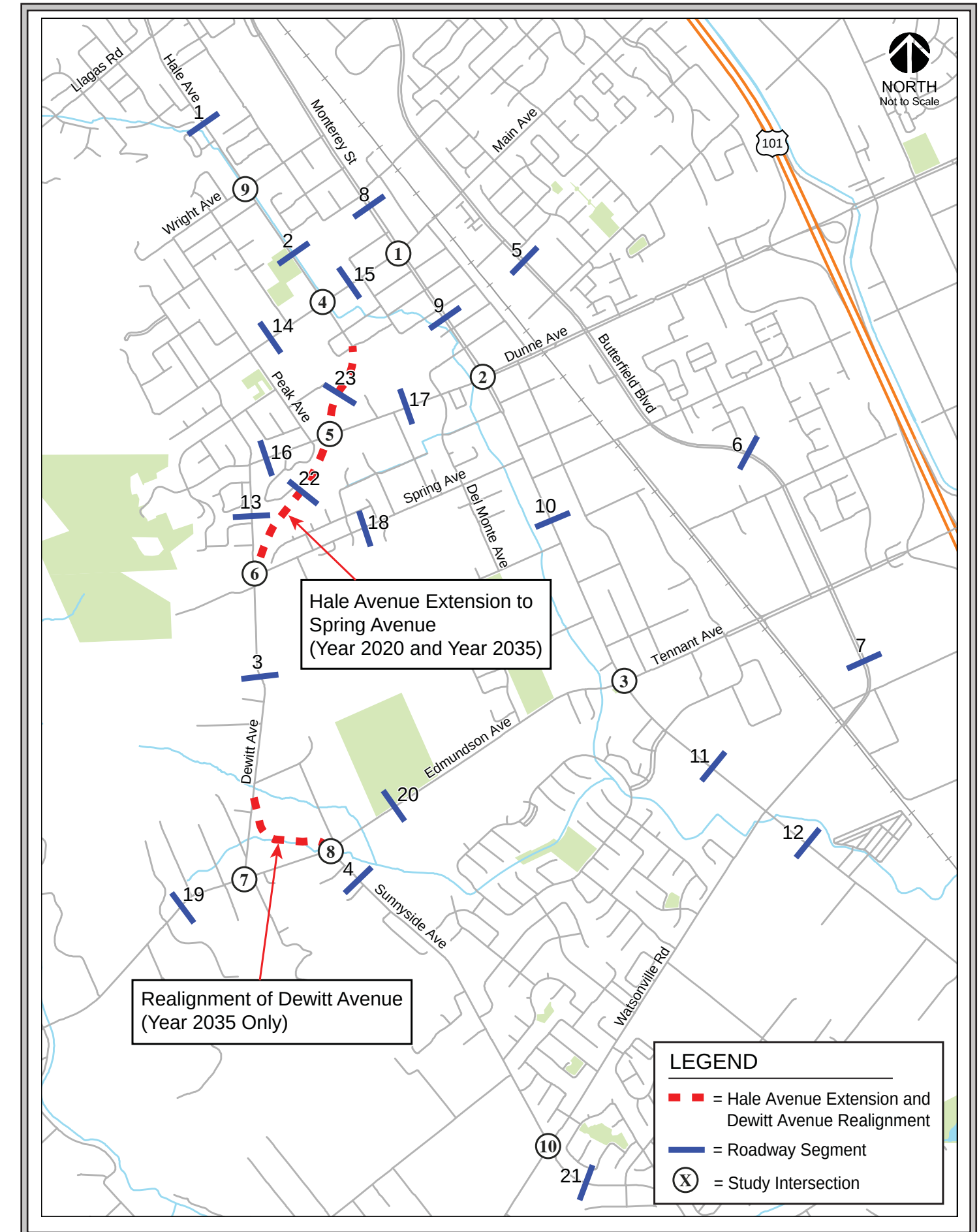
The key intersections and roadway segments that could be affected by the proposed extension of Hale Avenue are listed below and shown on Figure 2.13-1. The intersections and roadway segments were selected by a professional traffic engineer based on the understanding that the proposed extension of Hale Avenue and the future widening and realignment of the Santa Teresa corridor would provide drivers another option to access the western side of the City. Once complete, traffic would shift from parallel north-south traffic corridors west of Highway 101 (i.e., Monterey Road and Butterfield Boulevard) to the Santa Teresa corridor. The proposed project would also provide another option for drivers travelling through the City from the north and south. Therefore, the following intersections and roadway segments that would accommodate this shift in traffic patterns were selected:

<u>Study Intersections</u>

1. Monterey Road and Main Avenue
2. Monterey Road and Dunne Avenue
3. Monterey Road and Tennant Avenue
4. Hale Avenue and Main Avenue
5. Hale Avenue and Dunne Avenue
6. DeWitt Avenue and Spring Avenue
7. DeWitt Avenue and Edmundson Avenue
8. Sunnyside Avenue and Edmundson Avenue
9. Hale Avenue and Wright Avenue
10. Sunnyside Avenue and Watsonville Road

<u>Study Roadway Segments</u>

1. Hale Avenue between Llagas Road and Wright Avenue
2. Hale Avenue between Wright Avenue and West Main Avenue
3. DeWitt Avenue between Spring Avenue and West Edmundson Avenue
4. Sunnyside Avenue between West Edmundson Avenue and Watsonville Road
5. Butterfield Boulevard between West Main Avenue and East Dunne Avenue
6. Butterfield Boulevard between San Pedro Avenue and Barrett Avenue
7. Butterfield Boulevard between Tennent Avenue and Monterey Street
8. Monterey Road between Wright Avenue and Main Avenue
9. Monterey Road between 3rd Street and 4th Street



STUDY INTERSECTIONS AND ROADWAY SEGMENTS FIGURE 2.13-1

10. Monterey Road between San Pedro Avenue and Barrett Avenue
11. Monterey Street between Tennent Avenue and Butterfield Boulevard
12. Monterey Street between Butterfield Boulevard and Middle Avenue
13. DeWitt Avenue between West Dunne Avenue and Spring Avenue
14. Main Avenue between Peak Avenue and Hale Avenue
15. West Main Street between Hale Avenue and Del Monte Street
16. West Dunne Avenue between DeWitt Avenue and Peak Avenue
17. West Dunne Avenue between Peak Avenue and Del Monte Avenue
18. Spring Avenue between Del Monte Avenue and DeWitt Avenue
19. West Edmundson Avenue between DeWitt Avenue and Brewster Lane
20. West Edmundson Avenue between Sunnyside Avenue and Olympic Drive
21. Santa Teresa Boulevard between Watsonville Road and Native Dancer Drive
22. Future Hale Avenue between West Main Avenue and West Dunne Avenue
23. Future Hale Avenue between West Dunne Avenue and Spring Avenue

2.13.1.5 *Existing Conditions*

Existing Intersection LOS

The results of the LOS analysis under Existing conditions are summarized below in Table 2.13-3.

Table 2.13-3: Existing Intersection LOS

#	Intersection	Peak Hour	Delay	LOS
1	Monterey Road and West Main Avenue	AM PM	44.0 44.5	D D
2	Monterey Road and Dunne Avenue	AM PM	29.8 32.9	C C
3	Monterey Road and Tennant Avenue	AM PM	25.0 26.6	C C
4	Hale Avenue and West Main Avenue[1]	AM PM	12.5 16.6	B C
5	Hale Avenue and West Dunne Avenue[2]	AM PM	n/a n/a	n/a n/a
6	DeWitt Avenue and Spring Avenue[1]	AM PM	11.7 10.7	B B
7	DeWitt Avenue and West Edmundson Avenue[1]	AM PM	9.9 10.9	A B
8	Sunnyside Avenue and West Edmundson Avenue[1]	AM PM	12.3 11.3	B B
9	Hale Avenue and Wright Avenue[1]	AM PM	17.6 29.1	C D
10	Sunnyside Avenue and Watsonville Road[1]	AM PM	15.3 18.7	C C

[1]Unsignalized intersection.
[2]Future intersection.

The results show that measured against the City of Morgan Hill LOS standards, all of the study intersections currently operate at an acceptable LOS under Existing conditions during both the AM and PM peak hours.

Existing Roadway Segment Analysis

Peak hour and ADT volumes on the selected study roadway segments under Existing conditions are shown in Table 2.13-4 below.

Table 2.13-4: Existing Roadway Segment Volumes

#	Roadway Segment	Peak Hour		ADT	LOS
		AM	PM		
1	Hale Avenue between Llagas Road and Wright Avenue	716	866	7,898	C
2	Hale Avenue between Wright Avenue and West Main Avenue	505	687	6,544	C
3	DeWitt Avenue between Spring Avenue and West Edmundson Avenue	521	529	5,018	C
4	Sunnyside Avenue between West Edmundson Avenue and Watsonville Road	570	656	6,474	C
5	Butterfield Boulevard between East Main Avenue and East Dunne Avenue	1,668	1,795	19,700	D
6	Butterfield Boulevard between San Pedro Avenue and Barrett Avenue	1,434	1,424	15,387	C
7	Butterfield Boulevard between Tennent Avenue and Monterey Street	1,441	1,113	14,289	C
8	Monterey Road between Wright Avenue and Main Avenue	1,193	1,340	14,706	C
9	Monterey Road between 3rd Street and 4th Street	1,184	1,551	16,165	C
10	Monterey Road between San Pedro Avenue and Barrett Avenue	1,253	1,862	20,994	D
11	Monterey Street between Tennent Avenue and Butterfield Boulevard	1,024	1,452	16,398	C
12	Monterey Street between Butterfield Boulevard and Middle Avenue	1,614	1,614	18,526	C
13	DeWitt Avenue between West Dunne Avenue and Spring Avenue	581	559	5,395	C
14	West Main Avenue between Peak Avenue and Hale Avenue	669	726	7,587	C
15	West Main Avenue between Hale Avenue and Del Monte Street	603	784	8,090	C
16	West Dunne Avenue between DeWitt Avenue and Peak Avenue	318	303	3,628	C

Table 2.13-4: Existing Roadway Segment Volumes					
#	Roadway Segment	Peak Hour		ADT	LOS
		AM	PM		
17	West Dunne Avenue between Peak Avenue and Del Monte Avenue	540	714	7,742	C
18	Spring Avenue between Del Monte Avenue and DeWitt Avenue	93	127	1,381	C
19	West Edmundson Avenue between DeWitt Avenue and Brewster Lane	232	281	3,123	C
20	West Edmundson Avenue between Sunnyside Avenue and Olympic Drive	340	491	5,317	C
21	Santa Teresa Boulevard between Watsonville Road and Native Dancer Drive	691	725	7,642	C
22	Future Hale Avenue between West Main Avenue and West Dunne Avenue	n/a	n/a	n/a	n/a
23	Future Hale Avenue between West Dunne Avenue and Spring Avenue	n/a	n/a	n/a	n/a

The results of the ADT LOS analysis show that the study roadway segments operate at LOS D or better under Existing conditions.

2.13.2 Transportation Impacts

2.13.2.1 *Thresholds of Significance*

For the purposes of this EIR, a transportation impact is considered significant if the project will:

- Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;
- Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways;
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- Result in inadequate emergency access; or
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

2.13.2.2 *Intersection and Roadway Segment Impact Criteria*

Intersection Impact Criteria

For the purpose of this EIR and in accordance with the adopted thresholds of significance in the City's Guidelines for Preparation of Transportation Impact Reports, the following criteria are used to determine significant impacts at signalized and unsignalized intersections:

Definition of Signalized Intersection Impacts

A project is said to create a significant adverse impact on traffic conditions at a signalized intersection if for either peak hour:

1. The LOS at the intersection degrades from an acceptable level (LOS D or LOS E as identified above) under existing conditions to an unacceptable level (LOS E or F) under project conditions, or
2. The LOS at the intersection is an unacceptable level (LOS E or F as identified above) under existing conditions and the addition of project traffic causes the average critical delay to increase by four or more seconds *and* the volume-to-capacity ratio (V/C) to increase by at least 0.01.

An exception to this rule applies when the addition of project traffic reduces the amount of average delay for critical movements (i.e., the change in average delay for critical movements is negative). In this case, the threshold of significance is an increase in the critical V/C value by 0.01 or more.

Definition of Unsignalized Intersection Impacts

A project is said to have a significant adverse impact on traffic conditions at an unsignalized intersection if, for either peak hour, the addition of project traffic causes the worst approach delay to degrade to LOS E or F and the traffic volumes at the intersection are sufficiently high to satisfy the peak hour volume warrant.

Roadway Segment Impact Criteria

The City of Morgan Hill does not have a formally adopted roadway segment operating standard. To be consistent with planning efforts in Morgan Hill, LOS D was used as a guideline for the evaluation of the roadway segments. Any of the study roadway segments projected to operate below LOS D conditions will be considered deficient.

2.13.2.3 *Traffic Projections*

Traffic volume forecasts for Year 2015 baseline, Year 2020, and Year 2035 conditions were completed by *Hexagon Transportation Consultants* using the City of Morgan Hill's travel demand forecasting (TDF) model, which forecasts growth and travel pattern changes that are expected in the future due to the land use changes associated with the Morgan Hill 2035 General Plan. Traffic projections conservatively assumed Monterey Road through Downtown Morgan Hill was reduced to two lanes, one lane in each direction, which results in higher traffic volumes on Hale Avenue.

2.13.2.4 *Existing Plus Project Conditions*

Intersection LOS Impacts

Unlike land use projects, the proposed extension of Hale Avenue would not generate new vehicle trips. The proposed extension would redirect trips already assumed to be on the roadway network. The extension would relieve traffic congestion on existing north-south parallel routes west of US 101 (i.e., Monterey Road and Butterfield Boulevard) by providing drivers another option to access the western portion of the City. The extension would also provide another route for drivers traveling through the City to the north or south. The results of the LOS analysis under Existing Plus Project conditions are summarized in Table 2.13-5, below.

Table 2.13-5: Existing Plus Project Intersection LOS

		Existing			Existing Plus Project		
#	Intersection	Peak Hour	Delay	LOS	Peak Hour	Delay	LOS
1	Monterey Road and Main Avenue	AM	44.0	D	AM	45.2	D
		PM	44.5	D	PM	42.9	D
2	Monterey Road and Dunne Avenue	AM	29.8	C	AM	32.2	C
		PM	32.9	C	PM	36.5	D
3	Monterey Road and Tennant Avenue	AM	25.0	C	AM	24.4	C
		PM	26.6	C	PM	26.7	C
4	Hale Avenue and Main Avenue[1]	AM	12.5	B	AM	27.6	C
		PM	16.6	C	PM	30.7	C
5	Hale Avenue and Dunne Avenue[2]	AM	n/a	n/a	AM	6.5	A
		PM	n/a	n/a	PM	7.9	A
6	DeWitt Avenue and Spring Avenue[1]	AM	11.7	B	AM	13.2	B
		PM	10.7	B	PM	11.7	B
7	DeWitt Avenue and Edmundson Avenue[1]	AM	9.9	A	AM	11.7	B
		PM	10.9	B	PM	12.8	B
8	Sunnyside Avenue and Edmundson Avenue[1]	AM	12.3	B	AM	14.5	B
		PM	11.3	B	PM	12.3	B
9	Hale Avenue and Wright Avenue[1]	AM	17.6	C	AM	20.7	C
		PM	29.1	D	PM	**41.7**	**E**
10	Sunnyside Avenue and Watsonville Road[1]	AM	15.3	C	AM	16.6	C
		PM	18.7	C	PM	20.0	C

[1]Unsignalized intersection.
[2]Future intersection.
Bold and grey indicates significant impact.

As shown in Table 2.13-5, one unsignalized intersection, Hale Avenue and Wright Avenue, would operate at an unacceptable LOS E under Existing Plus Project conditions during the PM peak hour. Based on the City's impact criteria, the proposed extension of Hale Avenue would result in a significant impact at this intersection by diverting trips that would otherwise have been on the roadway utilizing existing routes, and re-directing them through this currently un-signalized intersection. All other study intersections are projected to operate at an acceptable LOS under Existing Plus Project conditions. As depicted in the table, some intersections are projected to experience a decrease in delay as a result of the extension of Hale Ave, as the new roadway will serve to relieve congestion in the area by providing an alternative route.

Impact TRAN-1: Under Existing Plus Project conditions, the proposed extension of Hale Avenue (Phase I) would cause the intersection of Hale Avenue and Wright Avenue to operate at an unacceptable LOS E during the PM peak hour. **(Significant Impact)**

Mitigation Measure: The proposed project would implement the following mitigation measure to reduce the impact at the unsignalized intersection of Hale Avenue and Wright Avenue to a less than significant level:

MM TRAN-1: Peak-hour signal warrants would be met during the PM peak hour under Existing Plus Project conditions. Signalizing the intersection would reduce the impact to a less than significant level.

With implementation of the mitigation measure identified above, the intersection of Hale Avenue and Wright Avenue would operate at LOS B, and the project impact would be reduced to a less than significant level. **(Less Than Significant Impact with Mitigation Incorporated)**

Roadway Segment LOS Impacts

The proposed extension of Hale Avenue would not generate new vehicle trips. The proposed extension would redirect trips on existing north-south parallel routes west of US 101 (i.e., Monterey Road and Butterfield Boulevard) by providing drivers another option to access the western portion of the City. The extension would also provide another route for drivers traveling through the City to the north or south. The results of the roadway segment analysis under Existing Plus Project conditions are summarized in Table 2.13-6, below.

Table 2.13-6: Existing Plus Project Roadway Segment Volumes									
		Existing				Existing Plus Project			
#	Roadway Segment	Peak Hour		ADT	LOS	Peak Hour		ADT	LOS
		AM	PM			AM	PM		
1	Hale Avenue between Llagas Road and Wright Avenue	716	866	7,898	C	783	941	8,800	C
2	Hale Avenue between Wright Avenue and Main Avenue	505	687	6,544	C	592	785	7,530	C
3	DeWitt Avenue between Spring and Edmundson Avenue	521	529	5,018	C	720	669	6,820	C
4	Sunnyside Avenue between Edmundson and Watsonville Road	570	656	6,474	C	662	723	7,690	C
5	Butterfield Boulevard between Main and Dunne Avenue	1,668	1,795	19,700	D	1,581	1,747	19,280	D
6	Butterfield Boulevard between San Pedro and Barrett Avenue	1,434	1,424	15,387	C	1,375	1,409	15,290	C
7	Butterfield Boulevard between Tennent Avenue and Monterey Street	1,441	1,113	14,289	C	1,419	1,077	13,920	C
8	Monterey Road between Wright and Main Avenue	1,193	1,340	14,706	C	1,189	1,313	14,340	C
9	Monterey Road between 3rd and 4th Street	1,184	1,551	16,165	C	935	1,218	12,480	C
10	Monterey Road between San Pedro and Barrett Avenue	1,253	1,862	20,994	D	1,175	1,805	20,210	D
11	Monterey Road between Tennent and Butterfield Boulevard	1,024	1,452	16,398	C	1,006	1,446	15,870	C
12	Monterey Road between Butterfield and Middle Avenue	1,614	1,614	18,526	C	1,606	1,616	18,550	C
13	DeWitt Avenue between Dunne and Spring Avenue	581	559	5,395	C	303	300	2,700	C

Table 2.13-6: Existing Plus Project Roadway Segment Volumes									
		Existing				Existing Plus Project			
#	Roadway Segment	Peak Hour		ADT	LOS	Peak Hour		ADT	LOS
		AM	PM			AM	PM		
14	Main Avenue between Peak Avenue and Hale Avenue	669	726	7,587	C	363	434	4,570	C
15	West Main Street between Hale Avenue and Del Monte Street	603	784	8,090	C	582	648	6,930	C
16	Dunne Avenue between DeWitt and Peak Avenue	318	303	3,628	C	345	310	3,670	C
17	Dunne Avenue between Peak and Del Monte Avenue	540	714	7,742	C	723	1,016	10,720	D
18	Spring Avenue between Del Monte and DeWitt Avenue	93	127	1,381	C	75	113	1,210	C
19	Edmundson Avenue between DeWitt and Brewster Lane	232	281	3,123	C	246	291	3,270	C
20	Edmundson Avenue between Sunnyside and Olympic Drive	340	491	5,317	C	253	431	4,910	C
21	Santa Teresa between Watsonville Road Native Dancer Drive	691	725	7,642	C	744	737	7,780	C
22	Future Hale Avenue between Main and Dunne Avenue	n/a	n/a	n/a	n/a	501	423	4,760	C
23	Future Hale Avenue between Dunne and Spring Avenue	n/a	n/a	n/a	n/a	756	777	8,170	C

As shown in Table 2.13-6, all the study roadway segments would operate at LOS D or better conditions under Existing Plus Project conditions. As depicted in the table, some roadway segments are projected to experience a decrease in ADT as a result of the extension of Hale Ave, as the new roadway will serve to relieve congestion in the area by providing an alternative route. Therefore, the proposed extension of Hale Avenue would not result in a significant roadway segment impact under Year 2020 Plus Project Conditions. **(Less Than Significant Impact)**

2.13.2.6 *Public Transit, Bicycle, or Pedestrian Facilities*

The extension of Hale Avenue from West Main Avenue to the Dewitt/Spring Avenue intersection (Phase I of the proposed project) would consist of a multi-modal, two-lane road (one lane in each direction), which would include bike lanes and a pedestrian/bike path within the right-of-way. Planned roadway improvements for the two-mile segment of the Santa Teresa Corridor under Phase II of the proposed project would include a multi-modal, two-lane road with a pedestrian/bike path that would be constructed within a 96-foot right-of-way. Additionally, existing transit services within the project area would be able to utilize the improved roadways. Therefore, development of the proposed project would result in a beneficial impact to public transit, bicycle, and pedestrian facilities. **(Beneficial Impact)**

2.13.2.7 *Emergency Access*

Phases I and II of the proposed project would increase roadway connectivity in the project area and, therefore, emergency access in the vicinity of the Phase I and II project sites would be improved. **(Beneficial Impact)**

2.13.2.8 *Cumulative Transportation Impacts*

Two cumulative traffic scenarios are evaluated, a Near-term Year 2020 and a Long-term Year 2035. The Near-term Year 2020 scenario reflects conditions at the time the proposed extension of Hale Avenue (i.e., Phase I) is anticipated to be constructed and operating. The Long-term 2035 scenario reflects conditions at the time of General Plan build-out and includes both Phase I and Phase II of the proposed project.

Unlike land use projects, the proposed extension of Hale Avenue would not generate new vehicle trips. The proposed extension would redirect trips already assumed to be on the roadway network. The extension would relieve traffic congestion on existing north-south parallel routes west of US 101 (i.e., Monterey Road and Butterfield Boulevard) by providing drivers another option to access the western portion of the City. The extension would also provide another route for drivers traveling through the City to the north or south. Both the Near-term and the Long-term scenarios include forecasted growth in the adjacent jurisdictions that would use the road (e.g., San Jose, San Martin, and Gilroy).

Year 2020 Near-Term Cumulative Conditions

Year 2020 Near-Term Cumulative Intersection LOS Impacts

The results of the intersection LOS analysis under Year 2020 with and without the proposed extension of Hale Avenue are summarized in Table 2.13-7, below.

Table 2.13-7: Year 2020 Intersection LOS

		Year 2020 No Project			Year 2020 Plus		
#	Intersection	Peak Hour	Delay	LOS	Peak Hour	Delay	LOS
1	Monterey Road and Main Avenue	AM	44.7	D	AM	45.7	D
		PM	45.0	D	PM	43.1	D
2	Monterey Road and Dunne Avenue	AM	30.2	C	AM	32.5	C
		PM	33.1	C	PM	37.0	D
3	Monterey Road and Tennant Avenue	AM	25.2	C	AM	24.7	C
		PM	26.6	C	PM	26.5	C
4	Hale Avenue and Main Avenue[1]	AM	13.4	B	AM	27.1	C
		PM	18.0	C	PM	30.2	C
5	Hale Avenue and Dunne Avenue[2]	AM	n/a	n/a	AM	6.8	A
		PM	n/a	n/a	PM	8.2	A
6	DeWitt Avenue and Spring Avenue[1]	AM	11.7	B	AM	13.3	B
		PM	10.7	B	PM	11.6	B
7	DeWitt Avenue and Edmundson Avenue[1]	AM	10.1	B	AM	12.1	B
		PM	11.0	B	PM	12.9	B
8	Sunnyside Avenue and Edmundson Avenue[1]	AM	12.6	B	AM	15.2	C
		PM	11.6	B	PM	12.7	B
9	Hale Avenue and Wright Avenue[1]	AM	21.4	C	AM	27.0	D
		PM	**41.2**	**E**	PM	**59.5**	**F**
10	Sunnyside Avenue and Watsonville Road[1]	AM	18.1	C	AM	19.3	C
		PM	22.0	C	PM	23.5	C

[1]Unsignalized intersection.
[2]Future intersection.
Bold indicates unacceptable LOS.

As shown in Table 2.13-7, the unsignalized intersection of Hale Avenue and Wright Avenue would operate at an unacceptable LOS E and LOS F under Year 2020 and Year 2020 Plus Project conditions, respectively. Additionally, the intersection would meet peak hour signal warrants under Year 2020 Plus Project conditions during both the AM and PM peak hours and during the AM peak hour under Year 2020 conditions. Based on the City's impact criteria, this is a significant cumulative impact. This is the same impact that is identified to occur under Existing Plus Project conditions (Impact TRAN-1), except intersection operations worsen under Year 2020 conditions due to higher projected traffic volumes. For this reason, the proposed project's contribution to the cumulative impact is cumulatively considerable. This is a significant cumulative impact. As depicted in the table, some intersections are projected to experience a decrease in delay as a result of the extension of Hale Ave, as the new roadway will serve to relieve congestion in the area by providing an alternative route.

Impact TRAN-2: Under Year 2020 Plus Project conditions, the proposed extension of Hale Avenue (Phase I) would cause the intersection of Hale Avenue and Wright Avenue to operate at an unacceptable LOS F during the PM peak hour. **(Significant Cumulative Impact)**

Mitigation Measure: The proposed project would implement the following mitigation measure to reduce the impact at the unsignalized intersection of Hale Avenue and Wright Avenue to a less than significant level:

MM TRAN-2: Peak-hour signal warrants would be met during both the AM and PM peak hours under Year 2020 Plus Project conditions. Signalizing the intersection would reduce the impact to a less than significant level.

With implementation of the mitigation measure identified above, the intersection of Hale Avenue and Wright Avenue would operate at LOS B, and the project cumulative impact be reduced to a less than significant level. **(Less Than Significant Cumulative Impact with Mitigation Incorporated)**

Year 2020 Roadway Segment LOS Impacts

The results of the roadway segment analysis under Year 2020 with and without the proposed extension of Hale Avenue are summarized in Table 2.13-8, below.

Table 2.13-8: Year 2020 Roadway Segment Volumes

		Year 2020				Year 2020 Plus Project			
#	Roadway Segment	Peak Hour		ADT	LOS	Peak Hour		ADT	LOS
		AM	PM			AM	PM		
1	Hale Avenue between Llagas Road and Wright Avenue	856	993	9,100	D	901	1,041	10,325	D
2	Hale Avenue between Wright Avenue and Main Avenue	619	793	7,248	C	674	846	8,608	C
3	DeWitt Avenue between Spring and Edmundson Avenue	666	625	4,988	C	723	668	6,860	C
4	Sunnyside Avenue between Edmundson and Watsonville Road	638	721	6,748	C	673	744	7,935	C
5	Butterfield Boulevard between Main and Dunne Avenue	1,742	1,940	22,053	D	1,712	1,909	21,440	D

Table 2.13-8: Year 2020 Roadway Segment Volumes

#	Roadway Segment	Year 2020				Year 2020 Plus Project			
		Peak Hour		ADT	LOS	Peak Hour		ADT	LOS
		AM	PM			AM	PM		
6	Butterfield Boulevard between San Pedro and Barrett Avenue	1,481	1,575	17,470	C	1,469	1,566	17,300	C
7	Butterfield Boulevard between Tennent and Monterey Street	1,625	1,306	16,785	C	1,618	1,294	16,375	C
8	Monterey Road between Wright and Main Avenue	1,322	1,432	16,050	C	1,312	1,416	15,560	C
9	Monterey Road between 3rd and 4th Street	1,068	1,367	17,005	C	1,007	1,287	13,068	C
10	Monterey Road between San Pedro and Barrett Avenue	1,278	1,895	22,133	D	1,258	1,890	21,405	D
11	Monterey Road between Tennent and Butterfield Boulevard	1,105	1,547	17,688	C	1,100	1,547	17,270	C
12	Monterey Road between Butterfield and Middle Avenue	1,731	1,786	20,698	D	1,734	1,793	20,760	D
13	DeWitt Avenue between Dunne and Spring Avenue	366	354	5,360	C	304	301	2,708	C
14	Main Avenue between Peak Avenue and Hale Avenue	453	518	7,790	C	366	436	4,590	C
15	West Main Street between Hale Avenue and Del Monte Street	582	659	7,975	C	542	593	6,183	C
16	Dunne Avenue between DeWitt and Peak Avenue	335	300	3,540	C	346	311	3,670	C
17	Dunne Avenue between Peak and Del Monte Avenue	700	945	7,830	C	775	1,052	11,388	D
18	Spring Avenue between Del Monte and DeWitt Avenue	79	117	1,385	C	73	111	1,195	C

Table 2.13-8: Year 2020 Roadway Segment Volumes									
		Year 2020				Year 2020 Plus Project			
#	Roadway Segment	Peak Hour		ADT	LOS	Peak Hour		ADT	LOS
		AM	PM			AM	PM		
19	Edmundson Avenue between DeWitt and Brewster Lane	263	308	3,365	C	265	309	3,488	C
20	Edmundson Avenue between Sunnyside and Olympic Drive	354	508	6,188	C	335	489	5,658	C
21	Santa Teresa between Watsonville Road Native Dancer Drive	748	765	7,893	C	767	769	8,055	C
22	Future Hale Avenue between Main and Dunne Avenue	n/a	n/a	n/a	n/a	505	424	4,815	C
23	Future Hale Avenue between Dunne and Spring Avenue	n/a	n/a	n/a	n/a	800	819	9,215	C

As shown in Table 2.13-8, all the study roadway segments would operate at LOS D or better under Year 2020 and Year 2020 Plus Project conditions. Therefore, the proposed extension of Hale Avenue would not result in a significant cumulative roadway segment impact. As depicted in the table, some roadway segments are projected to experience a decrease in ADT as a result of the extension of Hale Ave, as the new roadway will serve to relieve congestion in the area by providing an alternative route. **(Less Than Significant Cumulative Impact)**

2035 Long-term Cumulative Conditions

Year 2035 Long-Term Cumulative Intersection LOS Impacts

The results of the LOS analysis under Year 2035 and Year 2035 Plus Project conditions are summarized below in Table 2.13-9. As shown in Table 2.13-9, two unsignalized intersections would operate at an unacceptable LOS under Year 2035 conditions and Year 2035 Plus Project conditions, Hale Avenue and Wright Avenue and Sunnyside Avenue and Watsonville Road. The unsignalized intersection of Hale Avenue and Wright Avenue would operate at an unacceptable LOS F during both the AM and PM peak hours under both Year 2035 conditions and Year 2035 Plus Project conditions. This is the same impact that is identified to occur under Existing Plus Project conditions (Impact TRAN-1) and Year 2020 Plus Project Conditions, except intersection operations worsen under Year 2035 conditions due to higher projected traffic volumes. For this reason, the proposed project's contribution to the cumulative impact is cumulatively considerable. This is a significant cumulative impact.

Table 2.13-9: Year 2035 Intersection LOS

#	Intersection	Year 2035 No Project			Year 2035 Plus Project		
		Peak Hour	Delay	LOS	Peak Hour	Delay	LOS
1	Monterey Road and Main Avenue	AM	48.9	D	AM	50.1	D
		PM	45.5	D	PM	42.7	D
2	Monterey Road and Dunne Avenue	AM	30.9	C	AM	32.8	C
		PM	32.0	C	PM	35.2	D
3	Monterey Road and Tennant Avenue	AM	26.0	C	AM	25.4	C
		PM	27.0	C	PM	26.4	C
4	Hale Avenue and Main Avenue[1]	AM	17.9	C	AM	27.1	C
		PM	24.9	C	PM	30.2	C
5	Hale Avenue and Dunne Avenue[2]	AM	n/a	n/a	AM	8.9	A
		PM	n/a	n/a	PM	11.0	B
6	DeWitt Avenue and Spring Avenue[1]	AM	11.8	B	AM	20.1	C
		PM	10.7	B	PM	14.8	B
7	DeWitt Avenue and Edmundson Avenue[1]	AM	11.0	B	AM	9.1	A
		PM	11.7	B	PM	9.4	A
8	Sunnyside Avenue and Edmundson Avenue[1]	AM	13.7	B	AM	5.7	A
		PM	13.1	B	PM	4.8	A
9	Hale Avenue and Wright Avenue[1]	AM	**65.0**	**F**	AM	**90.6**	**F**
		PM	**96.5**	**F**	PM	**141.4**	**F**
10	Sunnyside Avenue and Watsonville Road[1]	AM	**44.5**	**E**	AM	**39.3**	**E**
		PM	**49.3**	**E**	PM	**35.3**	**E**

[1]Unsignalized intersection.
[2]Future intersection.
Bold indicates unacceptable LOS.
Bold and grey indicates significant impact.

The unsignalized intersection of Sunnyside Avenue and Watsonville Road would operate at LOS E during the AM and PM peak hours under both Year 2035 and Year 2035 Plus Project Conditions. Intersection operations under 2035 Plus Project Conditions, however, slightly improve due to the planned future roadway improvements under Phase II of the proposed project. For this reason, the proposed project's contribution to this cumulative impact is not cumulatively considerable, and the proposed project does not result in a significant cumulative impact at the intersection of Sunnyside Avenue and Watsonville Road. As depicted in the table, some intersections are projected to experience a decrease in delay as a result of Phase I and Phase II construction, as the new roadway will serve to relieve congestion in the area by providing an alternative route.

Impact TRAN-3: Under Year 2035 Plus Project conditions, the proposed project, including both Phase I and Phase II, would exacerbate unacceptable operations at the intersection of Hale Avenue and Wright Avenue. **(Significant Cumulative Impact)**

Mitigation Measure: The proposed project would implement the following mitigation measure to reduce the impact at the unsignalized intersection of Hale Avenue and Wright Avenue to a less than significant level:

MM TRAN-3: Peak-hour signal warrants would be met during both the AM and PM peak hours under Year 2035 Plus Project conditions. Signalizing the intersection or implementing other measures to reduce delays at the intersection (e.g., traffic circle) would reduce the impact to a less than significant level.

With implementation of the mitigation measure identified above, the project cumulative impact at the intersection of Hale Avenue and Wright Avenue would be reduced to a less than significant level. **(Less Than Significant Cumulative Impact with Mitigation Incorporated)**

Roadway Segment LOS Impacts

The roadway segment capacity analysis under Year 2035 and Year 2035 Plus Project conditions is summarized in Table 2.13-10, below.

Table 2.13-10: Year 2035 Roadway Segment Volumes

		Year 2035				Year 2035 Plus Project			
#	Roadway Segment	Peak Hour		ADT	LOS	Peak Hour		ADT	LOS
		AM	PM			AM	PM		
1	Hale Avenue between Llagas Road and Wright Avenue	1,067	1,149	12,700	D	1,276	1,380	15,230	D
2	Hale Avenue between Wright Avenue and Main Avenue	701	815	9,370	D	946	1,079	12,200	D
3	DeWitt Avenue between Spring and Edmundson Avenue	504	491	4,890	C	912	825	8,270	C
4	Sunnyside Avenue between Edmundson and Watsonville Road	567	714	7,580	C	797	928	9,630	D
5	Butterfield Boulevard between Main and Dunne Avenue	2,223	2,519	29,110	D	2,066	2,381	27,650	D
6	Butterfield Boulevard between San Pedro and Barrett Avenue	1,799	2,073	23,710	D	1,735	2,015	23,190	D
7	Butterfield Boulevard between Tennent and Monterey Street	2,241	1,992	24,720	D	2,190	1,927	23,570	D

Table 2.13-10: Year 2035 Roadway Segment Volumes									
		Year 2035				Year 2035 Plus Project			
#	Roadway Segment	Peak Hour		ADT	LOS	Peak Hour		ADT	LOS
		AM	PM			AM	PM		
8	Monterey Road between Wright and Main Avenue	1,722	1,789	20,070	D	1,687	1,711	19,100	C
9	Monterey Road between 3rd and 4th Street	1,465	1,812	19,510	D	1,198	1,470	14,580	C
10	Monterey Road between San Pedro and Barrett Avenue	1,588	2,164	25,560	D	1,437	2,068	24,500	D
11	Monterey Road between Tennent and Butterfield Boulevard	1,402	1,850	21,550	D	1,365	1,804	21,090	D
12	Monterey Road between Butterfield and Middle Avenue	2,106	2,297	27,200	D	2,120	2,299	27,240	D
13	DeWitt Avenue between Dunne and Spring Avenue	555	517	5,240	C	305	303	2,730	C
14	Main Avenue between Peak Avenue and Hale Avenue	724	768	8,390	C	397	442	4,650	C
15	West Main Street between Hale Avenue and Del Monte Street	580	692	7,630	C	476	501	4,360	C
16	Dunne Avenue between DeWitt and Peak Avenue	303	270	3,270	C	343	312	3,670	C
17	Dunne Avenue between Peak and Del Monte Avenue	632	730	8,100	C	905	1,126	13,080	D
18	Spring Avenue between Del Monte and DeWitt Avenue	91	130	1,400	C	70	105	1,150	C
19	Edmundson Avenue between DeWitt and Brewster Lane	315	359	4,100	C	326	361	4,140	C
20	Edmundson Avenue between Sunnyside and Olympic Drive	656	737	8,790	C	573	638	7,700	C

Table 2.13-10: Year 2035 Roadway Segment Volumes									
		Year 2035				Year 2035 Plus Project			
#	Roadway Segment	Peak Hour		ADT	LOS	Peak Hour		ADT	LOS
		AM	PM			AM	PM		
21	Santa Teresa between Watsonville Road Native Dancer Drive	759	850	8,650	C	856	926	9,240	D
22	Future Hale Avenue between Main and Dunne Avenue	n/a	n/a	n/a	n/a	687	581	6,210	C
23	Future Hale Avenue between Dunne and Spring Avenue	n/a	n/a	n/a	n/a	1,024	1,049	12,350	D

The evaluation of daily roadway segment volumes indicate that all study segments will operate at LOS D or better under both Year 2035 and Year 2035 Plus Project conditions. As shown in Table2.13-10, some roadway segments are projected to experience a decrease in ADT as a result of the Phase I and Phase II roadway improvements, as the roadway improvements would serve to relieve congestion in the area by providing an alternative route. **(Less Than Significant Impact)**

2.13.3 Conclusion

With implementation of the mitigation measures identified above, the proposed project, including both Phase I and Phase II, would not result in a significant transportation impact. **(Less Than Significant Impact with Mitigation Incorporated)**

2.14 UTILITIES AND SERVICE SYSTEMS

2.14.1 Existing Setting

2.14.1.1 *Applicable Plans, Policies, and Regulations*

Senate Bill 610

Senate Bill 610 (SB 610), codified at Water Code Section 10910 et seq., requires that certain water supply and demand information be prepared for "projects" which are the subject of an EIR. Water Codes Section 10912 defines a "project" as, among other things, a proposed residential development of more than 500 dwelling units. The project is not subject to SB 610.

Assembly Bill 939

Assembly Bill 939 established the California Integrated Waste Management Board and required all California counties to prepare integrated waste management plans. AB 939 required all municipalities to divert 25 percent of their solid waste from landfill disposal by January 1, 1995. Fifty percent of the waste stream was to be diverted by the year 2000.

City of Morgan Hill 2035 General Plan

Various policies in the City's General Plan have been adopted for the purpose of avoiding or mitigating utilities and service system impacts resulting from planned development within the City, including the following:

Sewer Capacity, Water Supply and Storm Drainage Policy 21a - Manage the supply and use of water more efficiently through appropriate means, such as watershed protection, percolation, conservation and reclamation. (SCJAP 7.00)
Sewer Capacity, Water Supply and Storm Drainage Policy 21b - Ensure that new development does not exceed the water supply. (SCJAP 7.08)

2.14.1.2 *Existing Conditions*

Water Service

The City of Morgan Hill provides potable water service to its residential, commercial, industrial, and institutional customers within the City limits. The City's water system facilities include 14 groundwater wells, ten potable water storage tanks, 10 booster stations, and over 160 miles of pressured pipes ranging from two to 14 inches in diameter. The City's water distribution system meets the needs of existing customers. The City has planned and constructed water projects in conjunction with new street construction in anticipation of future growth and water needs. The existing Phase I and Phase II roadway alignments do not generate water service demand.

Sewer System and Wastewater Treatment

The City of Morgan Hill sewer collection system consists of approximately 135 miles of six-inch through 30-inch diameter sewers, and includes 15 sewage lift stations and associated force mains.[45] The "backbone" of the system consists of the trunk sewers, generally 12-inches in diameter and larger, that convey the collected wastewater flows through an outfall that continues south to the South County Regional Wastewater Authority (SCRWA) Wastewater Treatment Facility (WWTF) in Gilroy. The WWTF is jointly owned by the cities of Gilroy and Morgan Hill and provides service to the cities of Morgan Hill and Gilroy. The City's existing sewer collection system meets the needs of existing customers. The City has planned and constructed sewer facilities in conjunction with new street construction in anticipation of future growth and sewage needs.

The WWTF has capacity to treat an average dry weather flow (ADWF) of 8.5 million gallons per day (mgd) and is currently permitted by the California Regional Water Quality Control Board, Central Coast Region to treat up to 8.5 mgd.[46] Both the cities of Gilroy and Morgan Hill have growth control systems in place which limit unexpected increases in sewage generation. Based on combined population projections for both cities, the current capacity of 8.5 mgd will be reached in approximately 2019.[47] The Phase I and Phase II roadway alignments do not generate demand upon the City's sanitary sewer and wastewater treatment system.

Solid Waste

Recology South Valley provides solid waste and recycling services to the businesses and residents of the cities of Morgan Hill and Gilroy. Recology South Valley has contracted through 2017 with the Salinas Valley Solid Waste Authority to dispose of municipal solid waste at Johnson Canyon Sanitary Landfill. Johnson Canyon Sanitary Landfill is anticipated to reach capacity in 2040.[48] The existing Phase I and Phase II roadway alignments do not generate solid waste.

Storm Drainage

The City of Morgan Hill is divided into several hydrologically distinct drainage areas. Each drainage area has a system of conveyance facilities, pumps, and detention basins to collect and dispose the runoff. The stormwater runoff from these areas is collected and ultimately discharged into creeks that flow through the City and are tributary to either Monterey Bay or San Francisco Bay. Each drainage area has a system of conveyance facilities, pumps, and basins to collect and dispose the runoff.

The proposed project, including both Phase I and Phase II, is located within the West Little Llagas Creek drainage area, which flows to the Monterey Bay. The Phase I roadway alignment consists

[45] City of Morgan Hill. *Sewer System Master Plan.* January 2002.
[46] California Regional Water Quality Control Board. *Waste Discharge Requirements, South County Regional Wastewater Authority Wastewater Treatment and Reclamation Facility, Santa Clara County (NPDES Permit No. CA0049964) – Order No. R3-2010-0009*. April 2010.
[47] City of Gilroy. South County Regional Wastewater Authority. *Agenda*. November 2011. MWH Global and Akel Engineering Group. *South County Regional Wastewater Authority. Cities of Gilroy and Morgan Hill. Wastewater Flow Projections*. August 2011.
[48] Phil Couchee, General Manager, Recology South Valley. February 3, 2010.

predominantly of pervious surfaces, with some impervious surfaces including roadway segments and structures. The Phase II roadway alignment consists predominantly of impervious surfaces.

2.14.2 Utilities and Service Systems Impacts

2.14.2.1 *Thresholds of Significance*

For the purposes of this EIR, a utilities and service systems impact is considered significant if the project will:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed;
- 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;
- Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs; or
- Comply with Federal, State, and local statutes and regulations related to solid waste.

2.14.2.2 *Water Service and Supply Impacts*

Phase I (Main Avenue to DeWitt/Spring Avenue)

As described in *Section 1.0, Description of the Proposed Project*, the proposed extension of Hale Avenue from West Main Avenue to the DeWitt/Spring Avenue intersection would include a landscaped center median. The landscaping within the center median would be comprised of drought tolerant plant species that, once established, would require little water. For this reason, the Phase I roadway improvements would not result in the need for expanded or new water treatment facilities, nor would it result in the need for expanded or new water entitlements. **(Less Than Significant Impact)**

Phase II (DeWitt Avenue to Watsonville Road)

As described in *Section 1.0, Description of the Proposed Project*, the planned future realignment and widening of the Santa Teresa Corridor from the Dewitt/Spring Avenue intersection to Watsonville Road would include a landscaped center median. The landscaping within the center median would be comprised of drought tolerant plant species that, once established, would require little water. For this reason, the Phase II roadway improvements would not result in the need for expanded or new

water treatment facilities, nor would it result in the need for expanded or new water entitlements. **(Less Than Significant Impact)**

2.14.2.3 *Wastewater Treatment Impacts*

The proposed roadway improvements, including both Phase I and Phase II, would not generate demand upon the wastewater treatment system. **(No Impact)**

2.14.2.4 *Storm Drainage Impacts*

Phase I (Main Avenue to DeWitt/Spring Avenue)

As discussed in *Section 2.9, Hydrology and Water Quality*, the proposed Phase I roadway improvements would increase impervious surfaces and associated stormwater runoff. As described under mitigation measure MM HYD-1.2, the proposed retention basins shall be sized to meet the City of Morgan Hill storm drain design standards. In order to meet these standards, the basins shall be designed to provide storage for a 25-year, 24-hour storm with an additional capacity of 25 percent for freeboard. The storm drain outlet from the detention basins to the public storm drain system would be sized to limit the runoff rate from the proposed roadway improvements to existing conditions. If there is no outlet, the retention basins shall designed to contain the 100-year storm event. For these reasons, the stormwater runoff generated by the proposed Phase I roadway improvements would not exceed the capacity of existing storm drain facilities. **(Less Than Significant Impact)**

Phase II (DeWitt Avenue to Watsonville Road)

As discussed in *Section 2.9, Hydrology and Water Quality*, the planned future Phase II roadway improvements would increase impervious surfaces and associated stormwater runoff. As described under mitigation measure MM HYD-2, a Hydrology and Water Quality Report would be prepared for the planned future Phase II roadway improvements, which would evaluate the potential for the roadway improvements to cause or exacerbate downstream flooding. Mitigation measures would be identified to ensure that the existing frequency of capacity exceedance of the storm drain system downstream of the planned future roadway improvements is maintained or decreased. These measures may be similar to mitigation measures MM HYD-1.1 through MM HYD-1.4 identified above to reduce potential flooding impacts from proposed Phase I roadway improvements to a less than significant level. For these reasons, the stormwater runoff generated by the planned future Phase II roadway improvements would not exceed the capacity of the storm drain facilities in place at the time of future development. **(Less Than Significant Impact)**

2.14.2.5 *Solid Waste Impacts*

The proposed project, including both Phase I and Phase II, would not require solid waste service. **(No Impact)**

2.14.3 Cumulative Utility and Service Systems Impacts

As discussed above, the roadway improvements proposed by the project, including both Phase I and Phase II, would not generate wastewater treatment demand or require solid waste and recycling services. Both the Phase I and Phase II roadway improvements would include a landscaped center median. The landscaping would be comprised of drought tolerant plant species that, once established, would require little water. For these reasons, the proposed project would not contribute to cumulative water, wastewater, or solid waste utility and service system impacts.

Although the proposed project, including both Phase I and Phase II, would increase impervious surfaces and associated stormwater runoff, implementation of mitigation measures MM HYD-1.2 and MM HYD-2 would reduce the rate of runoff from the Phase I and Phase II roadway improvements to existing conditions. For these reasons, the proposed project, including both Phase I and Phase II, would not contribute to a cumulative stormwater drainage system impact. **(Less Than Significant Cumulative Impact)**

2.14.4 Conclusion

The roadway improvements proposed by the project, including both Phase I and Phase II, would not result in a significant utility and service systems impact. **(Less Than Significant Impact)**

SECTION 3.0 GROWTH INDUCING IMPACTS

The proposed roadway improvements, including both Phase I and Phase II, have been planned for the City of Morgan Hill and the County of Santa Clara for over 50 years. Originally envisioned as a four-lane expressway, the proposed project was downgraded to a two-lane, multi-modal roadway in the Morgan Hill 2010 Circulation Element. The existing roadway network in Morgan Hill, including the currently disjointed and circuitous route for the Santa Teresa corridor through Morgan Hill, is not a hindrance to growth within the City. Furthermore, residential growth in the City of Morgan Hill is controlled under the Residential Development Control System (RDCS). For these reasons, the proposed roadway improvements, including both Phase I and Phase II, would not result in growth inducing impacts. **(Less Than Significant Impact)**

SECTION 4.0 SIGNIFICANT, UNAVOIDABLE IMPACTS

The proposed project, including both Phase I and Phase II, would not result in a significant and unavoidable impact.

SECTION 5.0 CONSISTENCY WITH RELEVANT PLANS

The CEQA Guidelines [Section 15125(d)] require that an EIR discuss any inconsistencies between a proposed project and applicable general plans, specific plans, and regional plans. Consistency with adopted plans is addressed throughout the Draft EIR. Plans that may be relevant to implementation of the proposed project and references to the sections of the Draft EIR where they are discussed are listed below.

Relevant Regional and Local Plans	Section Discussed
City of Morgan Hill 2035 General Plan *City of Morgan Hill*	Section 2.10, Land Use (and other sections)
Clean Air Plan *Bay Area Air Quality Management District*	Section 2.2, Air Quality
Climate Change Scoping Plan *State of California*	Section 2.7, Greenhouse Gas Emissions
Comprehensive Dam Safety Program *Santa Clara Valley Water District*	Section 2.9, Hydrology and Water Quality
Morgan Hill Citywide Burrowing Owl Habitat Mitigation Plan *City of Morgan Hill*	Section 2.3, Biological Resources
National Flood Insurance Program *Federal Emergency Management Agency*	Section 2.9, Hydrology and Water Quality
National Pollutant Discharge Elimination System Permit Program *United State Environmental Protection Agency*	Section 2.9, Hydrology and Water Quality
Plan Bay Area *Association of Bay Area Governments and Metropolitan Transportation Commission*	Section 2.7, Greenhouse Gas Emissions
Santa Clara County General Plan *Santa Clara County*	Section 2.10, Land Use
Santa Clara Valley Habitat Plan *Local Partners and Wildlife Agencies*	Section 2.3, Biological Resources
South County Airport Comprehensive Land Use Plan *Santa Clara County*	Section 2.8, Hazards and Hazardous Materials
State Scenic Highways Program *State of California*	Section 2.1, Aesthetics
Storm Water Management Plan *City of Morgan Hill*	Section 2.9, Hydrology and Water Quality
Water Quality Control Plan *Central Coast Regional Water Quality Control Board*	Section 2.9, Hydrology and Water Quality

SECTION 6.0 ALTERNATIVES

CEQA requires that an EIR identify alternatives to a project as it is proposed. The CEQA Guidelines specify that the EIR should identify alternatives which "will feasibly attain most of the basic objectives of the project but will avoid or substantially lessen any of the significant effects of the project." The purpose of this section is to determine whether there are alternatives of design, scope, or location which will substantially lessen the significant impacts, even if those alternatives "impede to some degree the attainment of the project objectives" or are more expensive (§15126.6).

In order to comply with the purposes of CEQA, it is important to identify alternatives that reduce the significant impacts which are anticipated to occur if the project is implemented, but to try to meet as many of the project's objectives as possible. The Guidelines emphasize a common sense approach – the alternatives should be reasonable, "foster informed decision making and public participation," and focus on alternatives that avoid or substantially lessen the significant impacts. The range of alternatives selected for analysis is governed by the "rule of reason" which requires the EIR to discuss only those alternatives necessary to permit a reasoned choice.

The three critical factors to consider in selecting and evaluating alternatives are, therefore: 1) the significant impacts from the proposed project which could be reduced or avoided by an alternative, 2) the project's objectives, and 3) the feasibility of the alternatives available. Each of these factors is discussed below.

6.1 SIGNIFICANT IMPACTS OF THE PROJECT

As mentioned above, the CEQA Guidelines advise that the alternatives analysis in an EIR should be limited to alternatives that will avoid or substantially lessen any of the significant effects of the project and will achieve most of the project objectives. The proposed project, including both Phase I and Phase II, would not result in a significant unavoidable impact. The proposed project would, however, result in the following significant impacts for which mitigation is included in the proposed project to reduce the impacts to a less than significant level:

Impact AQ-1: Construction activities associated with the proposed project, including both Phase I and Phase II, could temporarily generate fugitive dust in the form of PM_{10} and $PM_{2.5}$. **(Significant Impact)**

Impact AQ-2: The maximum increased residential cancer risk due to TAC emissions during construction of Phase I would be 28.0 in one million for a child exposure, which exceeds the single-source threshold of 10.0 per million. The maximum modeled annual residential $PM_{2.5}$ concentration would be 0.5 $\mu g/m^3$, which exceeds the single-source threshold of 0.3 $\mu g/m^3$. **(Significant Impact)**

Impact BIO-1: The proposed extension of Hale Avenue (Phase I) would impact sensitive creek, drainage, and wetland habitats. **(Significant Impact)**

Impact BIO-2: The extension of Hale Avenue (Phase I) would result in the removal of 12 ordinance sized and two non-ordinance sized trees, and construction activities

near the five ordinance sized trees designated to be retained could impact tree health and survival. **(Significant Impact)**

Impact HAZ-1: Grading and excavation activities associated with the Phase I project could expose construction workers and/or the environment to harmful chemicals. **(Significant Impact)**

Impact HYD-1: During large storm events, the runoff generated by the proposed extension of Hale Avenue (Phase I) could exacerbate flooding downstream of the Hale Avenue extension. **(Significant Impact)**

Impact HYD-2: During large storm events, the runoff generated by the planned future widening and realignment of the Santa Teresa Corridor (Phase II) could exacerbate flooding downstream of the proposed roadway improvements. **(Significant Impact)**

Impact NOI-1: Groundborne vibration levels at adjacent structures could be substantial during the construction of planned Phase II roadway improvements. **(Significant Impact)**

Impact NOI-2: Vehicles travelling on the proposed extension of Hale Avenue (Phase I) would substantially increase noise levels in the project area. **(Significant Impact)**

Impact NOI-3: Operation of the planned future widening and realignment of the Santa Teresa Corridor (Phase II) could substantially increase noise levels at adjacent receptors. **(Significant Impact)**

Impact TRAN-1: Under Existing Plus Project conditions, the proposed extension of Hale Avenue (Phase I) would cause the intersection of Hale Avenue and Wright Avenue to operate at an unacceptable LOS E during the PM peak hour. **(Significant Impact)**

6.2 OBJECTIVES OF THE PROJECT

While CEQA does not require that alternatives must be capable of meeting all of the project objectives, their ability to meet most of the objectives is considered relevant to their consideration. As stated in *Section 1.3, Project Objectives*, the objectives for the proposed project include the following:

- Establish an Official Plan Line for the Hale Avenue/Santa Teresa corridor, a two-lane multi-modal arterial in keeping with the "complete streets' approach to roadway planning identified in the Morgan Hill General Plan.
- Provide a more direct/efficient north/south route for the west side of the City, reducing through traffic on neighborhood streets.

- Provide an alternate north-south road option on the west side of US 101 to relieve congestion on parallel routes such as Monterey Road and Butterfield Boulevard.
- Reduce energy (i.e., gasoline and diesel) consumption by providing an efficient multi-modal roadway within the City of Morgan Hill.

6.3 FEASIBILITY OF ALTERNATIVES

CEQA, the CEQA Guidelines, and the case law on the subject have found that feasibility can be based on a wide range of factors and influences. The Guidelines advise that such factors *can* include (but are not necessarily limited to) the suitability of an alternate site, economic viability, availability of infrastructure, consistency with a general plan or with other plans or regulatory limitations, jurisdictional boundaries, and whether the project proponent can "reasonably acquire, control or otherwise have access to the alternative site [§15126.6(f)(1)]."

6.4 SELECTION OF ALTERNATIVES

In addition to "No Project," the CEQA Guidelines advise that the range of alternatives discussed in the EIR should be limited to those that "will avoid or substantially lessen any of the significant effects of the project," or in the case of the proposed project, will further reduce impacts that are considered less than significant with the incorporation of identified mitigation [§15126.6(f)].

Several alternatives that could reduce project impacts are discussed below. The discussion includes a description of the alternative followed by the potential impacts that could result upon implementation of the alternative and how the impacts differ from those of the proposed project.

6.4.1 Alternatives Considered but Rejected

The proposed project is the adoption of an Official Plan Line for the Santa Teresa Corridor from West Main Avenue to Watsonville Road and construction of the proposed roadway improvements. The proposed roadway improvements include extending Hale Avenue from West Main Avenue to the DeWitt/Spring Avenue intersection within an existing corridor that has remained undeveloped for several decades in anticipation of the planned extension. The area surrounding the existing corridor is completely developed with residential and commercial uses. Similarly, existing right-of-way for the planned future widening and realignment of the Santa Teresa Corridor from the Dewitt/Spring Avenue intersection to Watsonville Road has been acquired along much of the proposed alignment.

CEQA encourages consideration of an alternative site when the impacts of the project might be avoided or substantially lessened. As with all alternatives, only alternative sites that will avoid or substantially lessen the impacts of the project and meet most of the project objectives need to be considered for inclusion in the EIR. An alternative alignment for the extension of Hale Avenue would require the demolition of numerous residences and commercial buildings, would result in greater impacts than the proposed alignment, and would not substantially lessen the impacts of the project. For these reasons, an alternative alignment was considered but rejected.

Other alternatives that were considered but rejected include a reduced design speed, below-grade roadway, narrower cross-section, reduced roadway capacity, and a Phase I only alternative. More

noise is generated the faster a vehicle travels on a roadway. Reducing the design speed from the 35 mph (i.e., the proposed design speed) to 25 mph would reduce roadway noise between one and two dBA L_{dn}, which is not noticeable (i.e., a 25 mph roadway design would not be perceived by the human ear as less noisy than a 35 mph roadway) and is not considered a substantial noise reduction.[49] For this reason, a reduced design speed alternative was considered but rejected.

A below-grade (i.e., sunken) roadway would reduce roadway noise levels at the existing residences along the proposed extension of Hale Avenue. The additional excavation of soil necessary to achieve a noticeable noise reduction (i.e., three dBA), however, would likely result significant and unavoidable construction noise and air quality impacts due to the extended duration of construction noise and the diesel exhaust from the extended use of large, off-road, heavy-duty diesel equipment that would be necessary to construct such as project. For these reasons, a below-grade alternative was considered but rejected.

The proposed project would impact West Little Llagas Creek in the vicinity of West Main Avenue. Therefore, a narrow cross-section alternative was considered at this location to avoid impacts to the creek. As shown in Figure 1.1-4, however, the roadway cross-section has already been narrowed to the greatest extent feasible in an effort to avoid creek impacts. The cross-section includes two travel lanes and a sidewalk with no center median. Further narrowing would require eliminating the sidewalk, which would not achieve the project objective of providing a multi-modal roadway. For this reason, a narrow cross-section alternative was considered but rejected.

Reducing the vehicle capacity of the proposed Hale Avenue extension would reduce roadway noise. The proposed project is a two-lane, multi-modal roadway. As discussed in *Section 1.1, Background*, the City of Morgan Hill downsized the Santa Teresa/Hale Avenue corridor from a four-lane expressway to a two-lane multi-modal arterial in 2010, as part of the 2010 General Plan Circulation Element Update. The vehicle capacity cannot be reduced any further than the currently proposed two lanes. For this reason, the reduced roadway capacity alternative was considered but rejected.

Lastly, an alternative that did not include the Phase II roadway improvements was considered as a way to reduce roadway volumes and associated noise and/or avoid the need to install a traffic signal at the intersection of Wright Avenue and Hale Avenue. Omitting the Phase II improvements would not substantially decrease roadway volumes; the increased roadway volumes result from the extension of Hale Avenue (i.e., Phase I).[50] Furthermore, not completing the Phase II improvements would not fully achieve the project objectives. For these reasons, an alternative that did not include the Phase II roadway improvements was considered but rejected.

6.5 PROJECT ALTERNATIVES

6.5.1 No Project Alternative

The CEQA Guidelines stipulate that an EIR specifically include a "No Project" alternative. The purpose of the No Project Alternative is to allow decision-makers to compare the impacts of

[49] Personal communication. Keith Pommerenck. Illingworth & Rodkin Air Quality and Noise Consultants. November 3, 2016.
[50] Personal communication. Robert Del Rio. Hexagon Transportation Consultants. November 3, 2016.

approving the project with the impacts of not approving the project. The CEQA Guidelines specifically advise that the No Project Alternative is "what would be reasonably expected to occur in the foreseeable future if the project is not approved, based on current plans and consistent with available infrastructure and community services." The CEQA Guidelines emphasize that an EIR should take a practical approach, and not "…create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment [Section 15126.6(e)(3)(B)]." Under the No Project Alternative, the alignments would remain unchanged. The proposed project, including both Phase I and Phase II, would not result in a significant unavoidable impact. Therefore, the No Project Alternative would not avoid a significant unavoidable impact. The No Project Alternative would avoid all of the environmental impacts, both from the construction and the ongoing operation of the proposed roadway improvements, which are anticipated to occur under the proposed project and listed in *Section 7.1, Significant Impacts of the Project*. These impacts would, however, be reduced to a less than significant level with the mitigation measures included in the proposed project.

6.5.1.1 *Relationship to Project Objectives*

The No Project Alternative would not meet any of the project objectives.

6.5.1.2 *Conclusion: No Project Alternative*

The No Project Alternative would not avoid a significant unavoidable impact. The No Project Alternative would avoid all of the environmental impacts anticipated to occur under the proposed project for which mitigation is included in the proposed project to reduce the impacts to a less than significant level.

None of the project objectives would be met under the No Project Alternative.

6.5.2 Open Graded Pavement Alternative

Traffic on the proposed extension of Hale Avenue would generate noise. The sound walls included in the proposed project would reduce traffic noise levels at the adjacent residential receivers to a less than significant level. There are many causes of roadway noise, one of which is the air in the tire treads being trapped and compressed against the roadway surface. The trapped air is pushed out of the tire treads, which creates noise.

An alternative to constructing sound walls is the use of open graded pavement. Open graded pavement allows the air in the tire treads to escape through the pavement, reducing noise. The use of open graded pavement along the Hale Avenue extension is estimated to reduce noise roadway noise by approximately nine dBA. The nine dBA reduction would avoid the need to construct the proposed sound walls and, as a result, incrementally reduce construction-related noise, air quality, and water quality impacts. An added benefit of open graded pavement is that the permeable pavement surface allows water to flow through it, which results in safer wet weather driving conditions.

Unlike sound walls, however, open graded pavement needs to be maintained and replaced in order to remain effective. The noise reducing effect of open graded pavement decreases as the voids in the open graded pavement fill with dust and debris. Therefore, open graded pavement requires maintenance (i.e., cleaning), and like all pavement, needs to be replaced periodically. Open graded pavement is also more expensive to install and is not as widely available as standard roadway pavement. These factors should be considered, prior to committing to install open graded pavement as a way to reduce traffic noise levels to a less than significant level.

6.5.2.1 *Relationship to Project Objectives*

The Open Graded Pavement Alternative could achieve all the objectives of the proposed project.

6.5.2.2 *Conclusion: Open Graded Pavement Alternative*

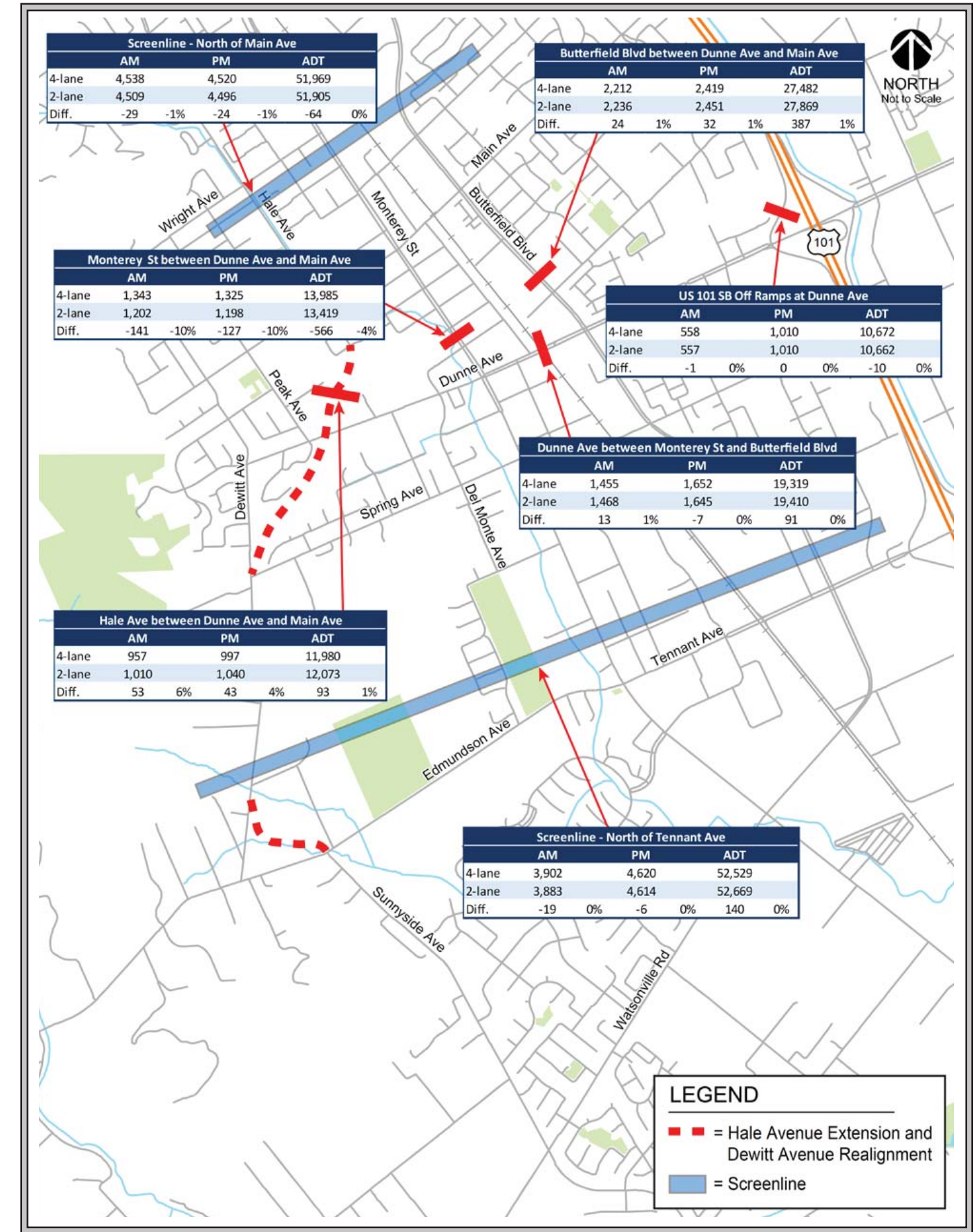
The Open Graded Pavement Alternative would reduce the noise generated by vehicles travelling on the proposed Hale Avenue extension to a less than significant level, thereby, avoiding the need to construct the proposed sound walls and the associated construction-related noise, air quality, and water quality impacts. The Open Graded Pavement Alternative would not reduce or avoid a significant unavoidable impact, because measures are included in the proposed project to reduce all project impacts to a less than significant level.

All of the project objectives would be met under the Open Graded Pavement Alternative.

6.5.3 Four-lane Monterey Road Alternative

The purpose of the Four-lane Monterey Road Alternative is to determine if the noise and/or traffic impacts on Hale Avenue and the Santa Teresa Corridor would be reduced by having Monterey Road remain four-lanes through Downtown. As discussed in *Section 2.13.2.3, Traffic Projections*, the traffic projections for the proposed project conservatively assume Monterey Road through Downtown Morgan Hill is two lanes, one lane in each direction, which results in higher traffic volumes on Hale Avenue and the Santa Teresa Corridor. The Four-lane Monterey Road Alternative assumes Monterey Road through Downtown would remain four-lanes, two lanes in each direction, which results in lower traffic volumes on Hale Avenue and the Santa Teresa Corridor.

Using the City of Morgan Hill's travel demand forecasting (TDF) model, *Hexagon Transportation Consultants* completed Year 2035 traffic volume forecasts for the Four-lane Monterey Road Alternative, which were compared to those completed for the two-lane Monterey Road scenario. The results of the comparison are shown on Figure 6.5-1. As shown on Figure 6.5-1, there would be very little change in traffic volumes on Hale Avenue and the Santa Teresa Corridor assuming Monterey Road remains four lanes through Downtown. Peak-hour and average daily traffic (ADT) volumes on Hale Avenue and the Santa Teresa Corridor would decrease up to six percent and one percent, respectively. This is because the projected future volumes on Monterey Road through Downtown are within the capacity of a two-lane road. The forecasts also indicate that the majority of traffic originating from and bound for destinations south of Downtown would use the



TRAFFIC VOLUMES - MONTEREY ROAD TWO LANES VS. FOUR LANES FIGURE 6.5-1

Monterey/Dunne/US 101 route rather than traveling through Downtown.[51] Therefore, whether Monterey Road is two-lanes or four-lanes through Downtown, the impacts that would occur on Hale Avenue and the Santa Teresa Corridor upon implementation of the proposed project would be the same.

6.5.3.1 *Relationship to Project Objectives*

All the project objectives would be met under the Four-lane Monterey Road Alternative.

6.5.3.2 *Conclusion: Four-lane Monterey Road Alternative*

Traffic volumes on Hale Avenue and the Santa Teresa Corridor under the Four-lane Monterey Road Alternative would be nearly identical to the traffic volumes assuming a two-lane Monterey Road scenario. Whether Monterey Road is two-lanes or four-lanes through Downtown, the impacts that would occur on Hale Avenue and the Santa Teresa Corridor upon implementation of the proposed project would be the same. Therefore, the Four-lane Alternative does not have substantial environmental benefits in terms of reducing future impacts on Hale Avenue and the Santa Teresa Corridor, compared to the scenario that assumes Monterey Road is reduced to two lanes, one in each direction.

All the project objectives would be met under the Four-lane Monterey Road Alternative.

[51] The 2035 roadway network includes the US 101 HOV lane extension through Morgan Hill.

SECTION 7.0 SIGNIFICANT AND IRREVERSIBLE ENVIRONMENTAL CHANGES

This section was prepared pursuant to CEQA Guidelines Section 15126.2(c), which requires a discussion of the significant irreversible changes that will result from the implementation of a proposed project. Significant irreversible changes include the use of nonrenewable resources, the commitment of future generations to similar use, irreversible damage resulting from environmental accidents associated with the project, and irretrievable commitments of resources. Applicable environmental changes are described in more detail below.

7.1 USE OF NONRENEWABLE RESOURCES

The construction and maintenance of the proposed and planned future roadway improvements under Phase I and Phase II of the proposed project would require the use and consumption of nonrenewable resources. Nonrenewable resources include fossil fuels and metals, and cannot be regenerated over time.

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SECTION 9.0 LEAD AGENCY AND CONSULTANTS

9.1 LEAD AGENCY

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John Baty, Principal Planner (Interim)

9.2 CONSULTANTS

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Schaaf & Wheeler
Hydrology Consultants

Urban Programmers
Historical and Architectural Consultants

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