This section addresses potential wildfire impacts that may result from implementation of the proposed San Rafael Transit Center Replacement Project (proposed project) and other build alternatives. The following discussion addresses existing wildfire hazard conditions of the project area and surroundings, considers applicable goals and policies, identifies and analyzes environmental impacts, and recommends measures to reduce or avoid adverse impacts anticipated from project implementation, as applicable. Impacts related to the No-Project Alternative are discussed in Chapter 5, Alternatives to the Project.

3.17.1 Existing Conditions

3.17.1.1 Regulatory Setting

Federal

Federal Wildland Fire Management Policy

The 1995 Federal Wildland Fire Management Report produced the first single comprehensive federal fire policy for the Departments of the Interior and Agriculture. That review was stimulated not only by the 1994 fire season with its 34 fatalities, but also by growing recognition of fire problems caused by fuel accumulation. The resulting 1995 Federal Fire Policy recognized, for the first time, the essential role of fire in maintaining natural systems.

In the aftermath of the uncontrolled spread of the Cerro Grande Prescribed Fire in May of 2000, the Secretaries of the Interior and Agriculture requested a review of the 1995 Federal Fire Policy and its implementation. The subsequent 2001 Federal Fire Policy and its implementation are founded on the following guiding principles:

- Firefighter and public safety is the first priority in every fire management activity.
- The role of wildland fire as an essential ecological process and natural change agent will be incorporated into the planning process.
- Fire management plans, programs, and activities support land and resource management plans and their implementation.
- Sound risk management is a foundation for all fire management activities.
- Fire management programs and activities are economically viable, based upon values to be protected, costs, and land and resource management objectives.
- Fire management plans and activities are based upon the best available science.
- Fire management plans and activities incorporate public health and environmental quality considerations.
- Federal, State, tribal, local, interagency, and international coordination and cooperation are essential.

• Standardization of policies and procedures among federal agencies is an ongoing objective.

Disaster Mitigation Act of 2000

The Disaster Mitigation Act of 2000 provides the legal basis for the Federal Emergency Management Agency's mitigation planning requirements for state, local, and tribal governments as a precursor to mitigation grant assistance. The Disaster Mitigation Act of 2000 requires that local governments prepare a Local Hazard Mitigation Plan that must be reviewed by the State Mitigation Officer, approved by the Federal Emergency Management Agency, and renewed every 5 years. The plan must include a planning process, a risk assessment, a mitigation strategy, and plan maintenance and updating procedures to identify the natural hazards, risks, and vulnerabilities of the area under the jurisdiction of the government. Natural hazards include earthquakes, tsunamis, tornadoes, hurricanes, flooding, and wildfires.

State

2018 Strategic Fire Plan for California

2018 Strategic Fire Plan for California (CAL FIRE 2018) is a cooperative effort between the California Department of Forestry and Fire Protection (CAL FIRE) and the Board of Forestry and Fire Protection. The goals that are critical to achieving the 2018 plan's vision revolve around fire prevention, natural resource management, and fire suppression efforts, as broadly construed. Major components include:

- Improving the availability and use of consistent, shared information about hazard and risk assessment;
- Promoting the role of local planning processes, including general plans, new development, and existing developments, and recognizing individual landowner/homeowner responsibilities;
- Fostering a shared vision among communities and multiple fire protection jurisdictions, including county-based and community-based plans, such as Community Wildfire Protection Plans (CWPP);
- Increasing awareness and actions to improve fire resistance of man-made assets at risk and fire resilience of wildland environments through natural resource management;
- Integrating implementation of fire and vegetative fuels management practices consistent with the priorities of landowners or managers;
- Determining and seeking the needed level of resources for fire prevention, natural resource management, fire suppression, and related services; and
- Implementing needed assessments and actions for post-fire protection and recovery.

Fire Hazard Severity Zones: California Public Resources Code Sections 4201–4204

In 1965, California Public Resources Code (PRC) Sections 4201–4204 and Government Code Sections 51175–89 directed CAL FIRE to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. These zones, referred to as fire hazard severity zones (FHSZ), define the application of various mitigation strategies to reduce risk associated with wildland fires.

Senate Bill 1241

In 2012, Senate Bill 1241 added Section 66474.02 to Title 7, Division 2, of the California Government Code, commonly known as the Subdivision Map Act. The statute prohibits subdivision of parcels that are designated as Very High FHSZs or located in a State Responsibility Area (SRA), unless certain findings are made prior to approval of the tentative map. The statute requires that a city or county planning commission make three new findings regarding fire hazard safety before approving a subdivision proposal: (1) the design and location of the subdivision and its lots are consistent with defensible space regulations found in PRC Section 4290–91, (2) structural fire protection services will be available for the subdivision through a publicly funded entity, and (3) ingress and egress road standards for fire equipment are met per any applicable local ordinance and PRC Section 4290.

California Building Code and Fire Code

The California Code of Regulations, Title 24, is a compilation of building standards, including fire safety standards for residential and commercial buildings. The California Building Code standards serve as the basis for the design and construction of buildings in California; the California Fire Code is a component of the California Building Code. Typical fire safety requirements of the California Fire Code include the installation of sprinklers in all high-rise buildings; the establishment of fire resistance standards for fire doors, building materials, and particular types of construction; and the clearance of debris and vegetation within a prescribed distance from occupied structures in wildfire hazard areas. The California Fire Code applies to all occupancies in California, except where more stringent standards have been adopted by local agencies.

State Fire Safe Regulations

The State Fire Safe Regulations section of Title 14 are being revised by the Board of Forestry and Fire Protection with basic wildfire protection standards for development in Very High FHSZs of both the SRA and the Local Responsibility Area (LRA) beginning July 1, 2021. These revisions feature stricter fire-safe building improvements and standards including but not limited to prohibiting future development that would be serviced by roads that do not meet current standards (including dead-end roads). Road modifications to meet this new standards include resurfacing, road widening, bridge improvements, and leveling grading and curves, which must all be up to standard between the property line and the nearest fire station (Rural County Representatives of California 2020). Stakeholder meetings are still taking place and updates will not be finalized until later in 2021. These final changes are anticipated to be effective July 1, 2021.

California's Wildfire and Forest Resilience Action Plan

The California Forest Management Task Force was created in 2018 to introduce a more holistic approach to forest management. *California's Wildfire and Forest Resilience Action Plan*, a comprehensive strategy of the Governor's Forest Management Task Force, was released in January 2021 in response to the 2020 fire season breaking numerous state records for the number of largest fires burning simultaneously. The plan is intended to accelerate efforts that "restore the health and resilience of California forests, grasslands and natural places; improve the fire safety of our communities; and sustain the economic vitality of rural forested areas" (California Forest Management Task Force 2021). The following goals are included:

- Goal 1: Increase the pace and scale of forest health projects
- Goal 2: Strengthen protection of communities

- Goal 3: Manage forests to achieve the State's economic and environmental goals
- Goal 4: Drive innovation and measure progress

Local

Marin Operational Area Emergency Operations Plan

The Marin Operational Area (OA) Emergency Operations Plan is intended to address extraordinary emergency situations affecting Marin County, including wildfire disasters. The Marin OA includes all the cities/towns, special districts, and unincorporated areas within the county. Wildland fire hazards exists for approximately 85 percent of Marin County. In the event of a fire disaster, if two or more of the County's local jurisdictions' emergency operations centers are activated, the Marin OA will serve as the main point of contact for information transfer and support requests and will administer mutual aid requests (Marin County Sheriff's Office of Emergency Services 2014).

San Rafael Local Hazard Mitigation Plan

The *San Rafael Local Hazard Mitigation Plan* was adopted by the City of San Rafael (City) in 2017 and was prepared to guide hazard mitigation planning to protect the people and property in San Rafael from natural disasters and hazard events including wildfires (City of San Rafael 2017). Wildfire mitigation actions in this plan include:

- 42. Funding for Vegetation Management Coordinator Position
- 43. Create a City of San Rafael specific Community Wildfire Protection Plan (CWPP).
- 44. Create new strategic fuel interruption zones in WUI [wildland-urban interface] areas and maintain and expand existing fuel interruption zones already in place.
- 45. Juniper and Bamboo Clearing Program from Residential Properties within WUI.
- 46. Create new point specific wildfire prevention programs specifically targeting areas where homeless encampments are known to exist.

San Rafael Wildfire Prevention and Protection Action Plan

The San Rafael *Wildfire Prevention and Protection Action Plan* was approved by the City Council in August 2020. The document is intended to serve as a master planning guide to reduce the wildfire risk in the City. The document incorporates lessons learned from past wildfires, ongoing local and county efforts, existing plans, and public input. The plan includes 38 objectives related to vegetation management, safety, public education, wildland-urban interface map updates, fire roads, increasing Police Ranger staffing, improvement of emergency capabilities, improvement of infrastructure, enhancement of coordination between County fire agencies and programs, and more (City of San Rafael 2020a).

City of San Rafael Municipal Code – Fire Ordinance

The Fire Ordinance, Chapter 4.12 Wildland-Urban Interface – Vegetation Management Standards, establishes a wildland-urban interface in the City of San Rafael, which is a designation of a Very High FHSZ, and specific vegetation management standards required to minimize the spread of fires from wildlands to structures and vice versa.

City of San Rafael General Plan 2020

The Safety Element of *The City of San Rafael General Plan 2020*, adopted in 2004, contains the following goals and policies that are applicable to the proposed project (City of San Rafael 2016).

Goal 30: **A Safe Community**. It is the goal of San Rafael, as the first priority for city government, to provide excellent fire, public safety and paramedic services and to be prepared in the case of disaster or emergency. San Rafael residents deserve to feel safe and secure wherever they live, work and play.

S-14. Hazardous Materials Storage, Use and Disposal. Enforce regulations regarding proper storage, use and disposal of hazardous materials to prevent leakage, potential explosions, fires, or the escape of harmful gases, and to prevent individually innocuous materials from combining to form hazardous substances, especially at the time of disposal.

S-21a. Local Hazard Mitigation Plan. Prepare and adopt a local/multi-hazard mitigation plan, which includes addressing rise in sea level and measures for disaster preparedness and adaptation.

S-26. Fire and Police Services. Maintain adequate cost-effective fire protection, paramedic and police services. Minimize increases in service needs from new development through continued fire prevention and community policing programs.

S-26a. Public Safety Training. Provide and encourage public safety employee training to ensure team members' skills remain current. Encourage and support new employees to join programs, such as Urban Search and Rescue and disaster relief training programs (CERT).

S-26b. Vehicle and Equipment Maintenance. Maintain and upgrade vehicles and equipment as necessary.

S-26c. Fire Prevention and Safe Design. Through the development review process, require review by Fire Department and Police Department for fire prevention and safe design.

S-27c. Community Fire Servicing. Continue to provide health and fire safety outreach programs to community groups.

S-30. Maintenance and Landscaping for Fire Safety. Encourage, where appropriate, special planting, removal and maintenance programs to reduce potential fire hazards in the hills, wildland areas and urban interface areas.

S-30a. Fire Hazard Maps. As part of the City's Fire Hazard Program, maintain maps identifying potential fire hazard areas in San Rafael.

S-30b. Fire Protection Ordinance. Continue to implement Wildlife Urban Interface (WUI) standards within the Ordinance to reduce fire hazards in areas in the urban interface area.

S-31. New Development in Fire Hazard Areas. Design new development located on or adjacent to natural hillsides to minimize fire hazards to life and property.

S-31a. New Development. Through the development review process, require appropriate mitigation measures such as fire preventive site design, landscaping and building materials, and the use of fire suppression techniques such as sprinklering.

S-32. Safety Review of Development Projects. Require crime prevention and fire prevention techniques in new development, including adequate access for emergency vehicles.

S-32a. Safe Buildings. Continue to review development applications to insure that landscaping, lighting, building siting and design, emergency access, adequate water pressure and peakload storage capacity, and building construction materials reduce the opportunity for crime and fire hazards.

S-33c. Neighborhood Disaster Preparedness. Continue to coordinate neighborhood disaster response preparedness planning efforts through Fire and Police Department programs and through

coordination with the American Red Cross, American Heart Association and other community groups. Provide technical assistance as needed to review adequacy of neighborhood disaster plans.

S-35b. Mutual Aid Agreements. Continue to explore the feasibility of mutual aid agreements that provide public safety personnel in times of emergency.

S-38. Building Code and Fire Code Update. Continue updating the Building and Fire Codes as necessary to address earthquake, fire and other hazards and support programs for the identification and abatement of existing hazardous structures.

S-39. Public Safety Facilities. Ensure that public safety facilities are designed and constructed adequately to efficiently operate paramedic, fire and police services, including in times of disaster.

S-40. Outreach. Encourage educational outreach to promote awareness and caution among residents regarding disaster preparedness of possible natural hazards, including soil conditions, earthquakes, flooding, and fire hazards. Establish an outreach program, including establishing programs. Publicize disaster plans by neighborhood.

S-40a. City's Website. Manage and update the Fire Department's website to provide information and links to meet the fire servicing needs of the community.

Draft City of San Rafael General Plan 2040

The City is in the process of updating *The City of San Rafael General Plan 2020*. Published in October 2020, the public review Draft *San Rafael General Plan 2040* includes goals and policies relevant to wildfire under the following elements, which resemble the previous general plan: the Land Use Element; Neighborhoods Element; Conservation and Climate Change Element; Parks, Recreation, and Open Space Element; Safety and Resilience Element; Mobility Element; Community Services and Infrastructure Element; and Equity, Diversity, and Inclusion Element (City of San Rafael 2020b).

Draft Downtown San Rafael Precise Plan

As part of the updated general plan process, the City of San Rafael is preparing the *Downtown San Rafael Precise Plan*. The City released a public review draft of the document in December 2020. The *Downtown San Rafael Precise Plan* includes chapters relevant to wildfire safety and response. Chapter 2, Existing Conditions, discusses the parts of Downtown that are at risk for wildfire. Chapter 3, Design Principles and Guiding Policies, principle 7, discusses strategies for managing wildfire risks. Principal 7's main objective is to "Develop growth and adaptive strategies to increase Downtown's resilience to climate change" (City of San Rafael 2020c).

3.17.1.2 Environmental Setting

A wildfire is a nonstructural fire that occurs in vegetative fuels, excluding prescribed fire. Wildfires can occur in undeveloped areas and spread to urban areas where the landscape and structures are not designed and maintained to be ignition resistant. A wildland-urban interface is an area where urban development is in proximity to open space or wildland areas. The potential for wildland fires represents a hazard where development is adjacent to open space or close to wildland fuels or designated FHSZs. The City of San Rafael has a Mediterranean climate, which is typically characterized by mild winters and dry summers with the highest temperatures of the year occurring in July and August. The arid climate of the City and Marin County, especially during the summer and fall, can dry out vegetation and cause dry brush to be prone to fires caused by lightning strikes and spontaneous combustion. Steep hillsides and varied topography within portions of the county also contribute to the risk of wildland fires. Topography in the county is typical of mountains in the Coast

Ranges where they abruptly rise upward from the shoreline to more than 200 feet in elevation. Fires that occur in wildland-urban interface areas may affect natural resources as well as life and property.

CAL FIRE has mapped areas of significant fire hazards in the state through its Fire and Resources Assessment Program. These maps place areas of the state into different FHSZs, based on a hazard scoring system using subjective criteria for fuels, fire history, terrain influences, housing density, and occurrence of severe fire weather where urban conflagration could result in catastrophic losses (see Figure 3.17-1). As part of this mapping system, land where CAL FIRE is responsible for wildland fire protection and generally located in unincorporated areas is classified as an SRA. Where local fire protection agencies, such as the San Rafael Fire Department (SRFD), are responsible for wildfire protection, the land is classified as an LRA. Due to the urban location of the proposed project in Downtown San Rafael, the proposed project is not within or close to an LRA. The closest FHSZ is classified as a moderate SRA, and is approximately 2 miles west of the project area (California Department of Technology 2020). On a local level, the City has a wildland-urban interface, which are areas where homes have been built near lands prone to wildfire. According to the wildland-urban interface map, the project area is not within the wildland-urban interface. However, the project area is approximately 0.2 mile south of the wildland-urban interface (City of San Rafael 2007).

Urban and wildfire, paramedic, and emergency services in San Rafael are provided by SRFD. See Section 3.13, Public Services, of this draft Environmental Impact Report (EIR) for further information on the SRFD.

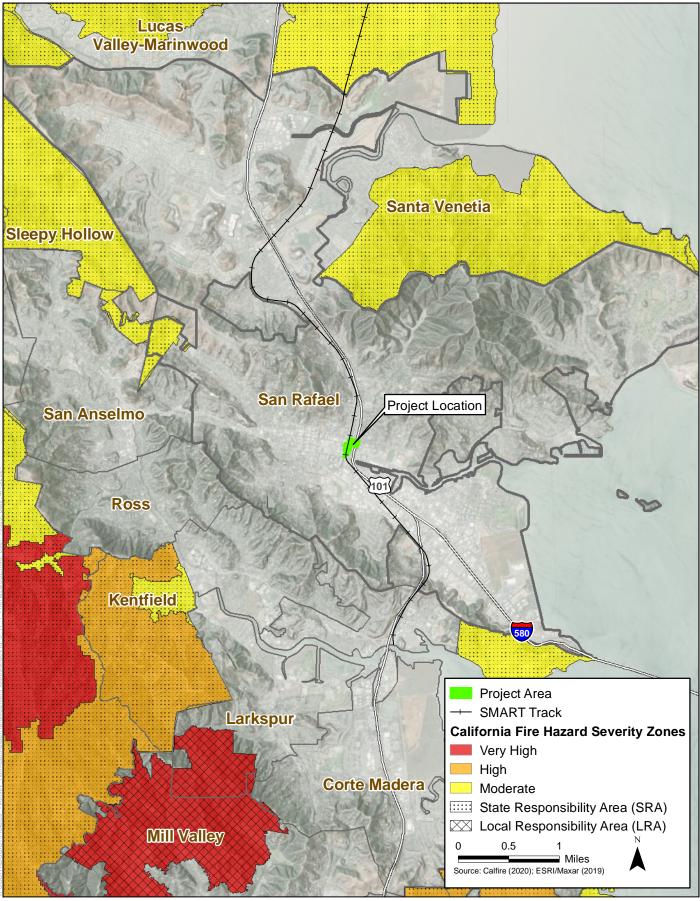




Figure 3.17-1 Fire Hazard Severity Zones near the Project Alternatives

3.17.2 Environmental Impacts

3.17.2.1 Methodology

Four different build alternatives, which are all in Downtown San Rafael within 500 feet of the existing transit center, are being evaluated. Wildfire impacts were analyzed for the proposed project in regard to all alternatives, as the specific location for each alternative would experience a nearly equivalent impact. The study area for wildfire consists of the project area and area within a half-mile radius of the proposed project with consideration of the closest SRA or VHFHSZ zones. Analysis of potential impacts related to wildfire was based on the ability of fire personnel to adequately serve the existing and future population of the four build alternatives, as well as federal, state, and local regulations regarding wildfire. Impacts for the build alternatives are presented together unless they differ substantially among alternatives. Information for this section was obtained through resources available online, including *The City of San Rafael General Plan 2020*, database maps, CAL FIRE resources, planning documents, and the SRFD website.

3.17.2.2 Thresholds of Significance

The following California Environmental Quality Act Guidelines Appendix G thresholds identify significance criteria to be considered for determining whether a project could have significant impacts related to wildfire.

If located in or near SRAs or lands classified as Very High FHSZs, would the proposed project:

- Substantially impair an adopted emergency response plan or emergency evacuation plan?
- Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?
- Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts on the environment?
- Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

3.17.2.3 Impacts

Substantially Impair an Adopted Emergency Response Plan or Emergency Evacuation Plan

Construction

All Build Alternatives

Construction activities for the proposed project would include mobilization, demolition, tree removal, utility work, civil and vertical structures work, and vertical structures finishing and inspection. In addition, improvements to existing utility infrastructure would occur. All construction and development would occur in already-developed urban areas of Downtown.

As mentioned above in Section 3.17.1.2, Environmental Setting, the project area is not in a Very High FHSZ within an LRA or within a Moderate, High, or Very High SRA. The nearest LRA to this site is approximately 3 miles south. The closest SRAs are Moderate zones and are approximately 1.5 miles north and 2 miles northwest of the project area (CAL FIRE 2020). Marin County has adopted an emergency operations plan developed by the Marin County Sheriff's Office of Emergency Services to respond to large-scale disasters throughout the county (Marin County Sheriff's Office of Emergency Services 2014).

During construction and where feasible, staging for the proposed project has the potential to affect adjacent sidewalks and streets in front of construction areas. If this is the case, traffic control would be employed to reroute pedestrians around the sidewalk construction area and signage would be posted to direct pedestrians and drivers. For temporary lane closures due to sidewalk and/or curb ramp repairs, coordination with San Rafael Public Works, SRFD, and the San Rafael Police Department (SRPD) would be conducted. Because traffic control, signage, and coordination with the appropriate agencies (as needed) would be employed, potential impacts on emergency response or evacuation plans or routes would be less than significant.

No revisions to the adopted Marin OA Emergency Operations Plan or local hazard plans would be required as a result of the proposed project. Therefore, construction of the proposed project would not impair or physically interfere with an adopted emergency response or evacuation plan and the impact would be *less than significant*.

Operations

All Build Alternatives

Operation of the proposed project would not extend beyond the operational activities of the existing transit center. The transit center would be relocated in an effort to improve transit connectivity. For the Move Whistlestop Alternative and the Adapt Whistlestop Alternative, the portion of West Tamalpais Avenue between 3rd and 4th Streets would be closed for vehicles but would be accessible by emergency vehicles. The proposed project would continue to accommodate existing bus service volumes on a daily basis. Maintenance for the buses would be performed off site, and the new location would continue to operate at the same capacity in Downtown. Therefore, operation of the proposed project would not hinder or impair any local emergency response or evacuation plan and the impact would be *less than significant*.

Mitigation Measures

No mitigation is required.

Due to Slope, Prevailing Winds, and Other Factors, Exacerbate Wildfire Risks, and Thereby Expose Project Occupants to Pollutant Concentrations from a Wildfire or the Uncontrolled Spread of a Wildfire

Construction

All Build Alternatives

As identified by CAL FIRE and discussed above, the project area is in an urban area and is not within or adjacent to an FHSZ in an LRA or SRA, or a wildland-urban interface area. The City of San Rafael,

however, is susceptible to wildfire and does have some Moderate SRA zones in the undulating, more rural areas of the City, with the nearest zone approximately 1.5 miles north of the project area. In addition, according to the wildland-urban interface map, the project area is approximately 0.2 mile south of the wildland-urban interface (City of San Rafael 2007). All new construction is expected to follow fire management goals, rules, and regulations established by the City of San Rafael Municipal Code, *The City of San Rafael General Plan 2020*, SRFD, and SRPD. Due to level terrain, moderate Mediterranean climate in Marin County, and urban development surrounding the project area, construction workers in the project area would not be directly exposed to wildfire pollutant or heightened wildfire risk. Compliance with established procedures, rules, and regulations would further reduce potential impacts related to exposure of people to a significant risk of loss, injury, or death from wildfires to *less-than-significant* levels.

Operations

All Build Alternatives

The majority of the project area would be composed of impervious surface area like the existing transit center. The trees and minimal vegetation on site would be contained in planters or controlled areas and would be properly maintained. No hazardous materials such as fuel or other fire risk items would be stored on site. As a result, the risk of operation of the proposed project to expose people to a significant risk of loss, injury, or death from wildfires would be *less than significant*.

Mitigation Measures

No mitigation is required.

Require the Installation or Maintenance of Associated Infrastructure (Such as Roads, Fuel Breaks, Emergency Water Sources, Power Lines, or Other Utilities) that May Exacerbate Fire Risk or that May Result in Temporary or Ongoing Impacts on the Environment

Construction

All Build Alternatives

The proposed transit center facilities would require connection to existing utilities to operate the planned restrooms, kitchenette, and building spaces. Additional electrical requirements and infrastructure may be needed for onsite charging of future battery electric buses at the transit center bus bays. However, because the preferred technology for fleetwide rollout of zero-emission buses has not yet been determined, these utility needs would be incorporated into a project. Fleetwide rollout of zero-emission buses, along with related infrastructure to support the zero-emission fleet, is a separate planning initiative that is outside the scope of the proposed project. The District would implement the fleetwide rollout in a manner that is consistent with CEQA and any additional energy and utility needs for the fleetwide rollout would be addressed as part of that initiative. The proposed project would require the removal of existing storm drain infrastructure and the installation of new inlets, manholes, and bioretention facilities. Utilities, including traffic signal poles, streetlights, and fire hydrants, would need to be relocated and/or removed. All aforementioned utility changes would occur within the project area, and impacts associated with development are analyzed throughout this document. No offsite improvements would be required

that would exacerbate fire risks. Additionally, SRFD, as part of the City's process, will review all plans for adequate fire suppression, fire access, and emergency evacuation. Adherence to standard City policies would reduce potential impacts to a level of *less than significant*.

Operations

All Build Alternatives

As described above, all new facilities and utility upgrades would occur within the project area and would not pose additional fire risks or impacts on the environment. Therefore, the impact would be *less than significant*.

Mitigation Measures

No mitigation is required.

Expose People or Structures to Significant Risks, Including Downslope or Downstream Flooding or Landslides, as a Result of Runoff, Post-Fire Slope Instability, or Drainage Changes

Construction

All Build Alternatives

As stated above, the project area is within Downtown San Rafael, on flat terrain surrounded by urban uses and residential office uses. The proposed project would not exacerbate wildfire risks or hazards due to the location of the project area, and using already developed land on a flat site. In addition, the proposed project would require the removal of existing storm drain infrastructure and the installation of new inlets, manholes, and bioretention facilities. Although there would be utility improvements, the proposed project would use existing drainages in Downtown San Rafael and would not enact any drainage changes, as there are no natural drainage courses on site. Therefore, the proposed project would not result in significant new risks due to post-fire downstream flooding, landslides, slope instability, or drainage changes. Therefore, the impact would be *less than significant*.

Operations

All Build Alternatives

The project area would be on flat terrain and the majority of the area would be composed of impervious surfaces. Therefore, the proposed project would not expose people or structures to significant risks related to slope, flooding, or landslides and the impact would be *less than significant*.

Mitigation Measures

No mitigation is required.