Channel Law Group, LLP

8383 Wilshire Blvd.
Suite 750
Beverly Hills, CA 90211

Phone: (310) 347-0050
Fax: (323) 723-3960
www.channellawgroup.com

JULIAN K. QUATTLEBAUM, III
JAMIE T. HALL *
CHARLES J. McLURKIN

Writer's Direct Line: (310) 982-1760
jamie.hall@channellawgroup.com

*ALSO Admitted in Texas

June 21, 2021

VIA ELECTRONIC MAIL

Board of Forestry and Fire Protection
Attention: Edith Hannigan
Land Use Planning Program Manager P.O. Box 944246
Sacramento, CA 94244–2460

PublicComments@BOF.ca.gov

RE: Need for Environmental Review of Proposed State Minimum Fire Safe Regulations, 2021 (14CCR), Division 1.5, Chapter 7 Subchapter 2, Articles 1-5[1]

Dear Members of the Board of Forestry and Fire Protection:

This firm represents State Alliance for Firesafe Road Regulations ("SAFRR") with regard to the 2021 State Minimum Fire Safe Standards ("Standards", "Action" or "Project") proposed to be adopted by the Board of Forestry and Fire Protection ("Board").[2] This letter is intended to reiterate to the Board that the Standards cannot be adopted without first conducting an environmental analysis as required by the California Environmental Quality Act ("CEQA"). As we detailed in our March 21, 2021 letter (see **Attachment A**), the proposed Project is not exempt from CEQA. This letter augments our March 21, 2021 letter and further demonstrates that the Board cannot consider the proposed Project without first conducting CEQA review. The

[1] California Regulatory Notice Register, April 23, 2021, Register 2021, Number 17-Z, Title 14. Board of Forestry and Fire Protection, State Minimum Fire Safety Regulations – Notice File Number Z2021-0413-05
https://oal.ca.gov/wp-content/uploads/sites/166/2021/04/2021-Notice-Register-Number-17-Z-April-23-2021.pdf

[2] A redlined version of the March 15, 2021 version of the Proposed Standards showing differences between the proposed project and the existing standards is available at:
https://www.rcrcnet.org/sites/default/files/uploads/Documents/Barbed_Wire/March_26_2021/BOF%20state-minimum-fire-safe-regulations-march-15-draft_with-errata.pdf
A redline copy of the rule package is available at: https://bof.fire.ca.gov/regulations/proposed-rule-packages/
It is included in **Attachment D.**

public hearing and any further action should be postponed until full CEQA review has been conducted for the proposed Project.

INTRODUCTION

In 2018, the Legislature passed and the Governor signed SB 901 (Dodd)[3], which expanded the applicability of the regulations promulgated under PRC 4290 to land in the Local Responsibility Area (LRA)[4] Very High Fire Hazard Severity Zone (VHFHSZ)[5]. As noted in the Hearing Notice:[6]

> The regulations set certain minimum standards for structures, subdivisions and developments in State Responsibility Area (SRA) and LRA VHFHSZ and provide for basic emergency access and perimeter wildfire protection, as well as standards for fuel breaks, greenbelts, and measures to protect undeveloped ridgelines. This proposed action amends the existing regulations for the purposes of addressing the general applicability of these standards; regulating fuel breaks and greenbelts near communities; including measures to protect undeveloped ridgelines; and improving regulatory clarity and ensuring the uniform implementation of wildfire protection standards association with residential, commercial, and industrial building construction.

Section 4290(a) of the act requires that the regulations shall include all of the following:

> (1) Road standards for fire equipment access.
> (2) Standards for signs identifying streets, roads, and buildings.
> (3) Minimum private water supply reserves for emergency fire use.
> (4) Fuel breaks and greenbelts.

Section 4290(b) of the act specifies that the:

> board shall, on and after July 1, 2021, periodically update regulations for fuel breaks and greenbelts near communities to provide greater fire safety for the perimeters to all residential, commercial, and industrial building construction within state responsibility areas and lands classified and designated as very

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[3] The text of SB 901 (Dodd) as available at: https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180SB901

[4] Mapping of the LRA areas is available at: https://calfire-forestry.maps.arcgis.com/apps/webappviewer/index.html?id=468717e399fa4238ad86861638765ce1
An explanation of the criteria used to identify Very High Fire Severity Zones is available at: https://www.sccgov.org/sites/dpd/DocsForms/Documents/Fire_Hazard_Zone_Fact_Sheet.pdf

[5] Mapping of the LRA Very High Fire Severity Zone is available at: https://osfm.fire.ca.gov/media/6827/fhszl06_1_map.pdf
Mapping of the SRA Very High Fire Severity Zone is available at: https://osfm.fire.ca.gov/media/6636/fhszs_map.pdf

[6] https://bof.fire.ca.gov/media/fpdlx2bd/1-state-minimum-fire-safe-regulations-45-day-notice_ada.pdf

> high fire hazard severity zones, as defined in subdivision (i) of Section 51177 of the Government Code, after July 1, 2021. These regulations shall include measures to preserve undeveloped ridgelines to reduce fire risk and improve fire protection. The board shall, by regulation, define "ridgeline" for purposes of this subdivision.

While Section 4290(c) of the act specifies that these "regulations do not supersede local regulations which equal or exceed minimum regulations adopted by the state," the act does not prohibit local jurisdictions, undergoing development pressures, from replacing more stringent local regulations with the newly adopted minimum State standards. In addition, the act does not mandate that the new regulation be more stringent or at least equal in protective value to existing regulations which provide more protection. This is despite the fact that SB 901 states that the "act is intended to improve forest health and reduce the risk and intensity of wildfires, thereby protecting the state from loss of life and property damage, reducing greenhouse gas emissions, enhancing ecosystem function, improving wildlife habitats, increasing water supply, improving water quality, reducing the amount of money the state must spend on wildfire response and rebuilding, and increasing carbon sequestration in our forests." According to the California Regulatory Notice (Register 2021, Volume Number 17-z, page 467, the intended benefit of the proposed Action:

> . . . is the continued protection of new and existing development in the SRA and LRA VHFHSZ from wildfire. These protection measures will increase the safety of people and property by providing minimum fire safety standards related to defensible space that may allow them to escape an oncoming wildfire; allow firefighters to find, defend, and protect their property from a wildfire; prevent the ignition of property due to flying embers or structure–to–structure ignition; and to protect natural resources and the environment. The proposed action will also increase government efficiency through the reduction of duplicative or inconsistent regulations. The action will improve regulatory compliance through considering stakeholder feedback to clarify the standards and requirements.

However, this is not the reality. Unfortunately, aspects of the proposed regulations provide less protection and will therefore result in greater fire risk and more environmental impacts in some areas than existing regulations. This is particularly true in the case of the proposed road and access specifications. See for example the Comparison of Article 2 Road Specifications of Current 2020 Fire Safe Regulations vs. 2021 April 23 Proposed Regulations contained in **Attachment B;** also see **Attachment C**.

Despite the proposed Project's potential to result in significant environmental impacts, according to page 52 the Initial Statement of Reasons for the proposed Project, the Board has yet to determine whether or not it will conduct environmental review of the proposed Project

pursuant to the requirements of the California Environmental Quality Act (CEQA), or the nature of such review:[7]

> The Board has not made a determination as to whether the present rulemaking action is a project under CEQA, nor whether, if it is a project, the development of the regulations is exempt from CEQA or another CEQA document, such as an EIR or a Negative Declaration, is required. If the Board determines that the development of the regulations is a project, and the project is not exempt, then CEQA will constitute one of the "other matters as are prescribed by statute applicable to the specific state agency or to any specific regulation or class of regulations" under § 11346.5(a)(4). If CEQA applies, the Board shall comply with all applicable CEQA requirements.

It is inappropriate for the Board to be conducting a public hearing on the proposed regulations without first conducting CEQA review, or disclosing to the public whether or not the Board will comply with CEQA and the nature of the environmental document to be produced, if any. This is important to informed comment, public participation, and decision-making. CEQA Section 15004 requires that:

> **15004. TIME OF PREPARATION**
>
> (a) **Before granting any approval** of a project subject to CEQA, every Lead Agency or Responsible Agency shall consider a final EIR or Negative Declaration or another document authorized by these Guidelines to be used in the place of an EIR or Negative Declaration. (See: The definition of "approval" in Section 15352.)
>
> (b) Choosing the precise time for CEQA compliance involves a balancing of competing factors. **EIRs and negative declarations should be prepared as early as feasible in the planning process to enable environmental considerations to influence project program and design and yet late enough to provide meaningful information for environmental assessment.**
>
> (1) **With public projects, at the earliest feasible time, project sponsors shall incorporate environmental considerations into project conceptualization, design, and planning.** CEQA compliance should be

[7] The Initial Statement of Reasons is available at: https://bof.fire.ca.gov/media/gm3ghql0/2-state-minimum-fire-safe-regulations-initial-statement-of-reasons_revised-04152021_ada.pdf

completed prior to acquisition of a site for a public project.

(2) To implement the above principles, **public agencies shall not undertake actions concerning the proposed public project that would have a significant adverse effect or limit the choice of alternatives or mitigation measures, before completion of CEQA compliance**. For example, agencies shall not:

(A) Formally make a decision to proceed with the use of a site for facilities which would require CEQA review, regardless of whether the agency has made any final purchase of the site for these facilities, except that agencies may designate a preferred site for CEQA review and may enter into land acquisition agreements when the agency has conditioned the agency's future use of the site on CEQA compliance.

(B) **Otherwise take any action which gives impetus to a planned or foreseeable project in a manner that forecloses alternatives or mitigation measures that would ordinarily be part of CEQA review of that public project.**

(3) With private projects, the lead agency shall encourage the project proponent to incorporate environmental considerations into project conceptualization, design, and planning at the earliest feasible time.

(4) While mere interest in, or inclination to support, a project does not constitute approval, a public agency entering into preliminary agreements regarding a project prior to approval shall not, as a practical matter, commit the agency to the project. For example, an agency shall not grant any vested development entitlements prior to compliance with CEQA. Further, any such pre-approval agreement should, for example:

(A) Condition the agreement on compliance with CEQA;

(B) Not bind any party, or commit to any definite course of action, prior to CEQA compliance;

(C) **Not restrict the lead agency from considering any feasible mitigation measures and alternatives, including the "no project" alternative**; and

(D) Not restrict the lead agency from denying the project.

(c) **The environmental document preparation and review should be coordinated in a timely fashion with the existing planning, review, and project approval processes being used by each public agency.** These procedures, to the maximum extent feasible, are to run concurrently, not consecutively. When the lead agency is a state agency, the environmental document shall be included as part of the regular project report if such a report is used in its existing review and budgetary process. **(Emphasis added).**

Note: Authority cited: Section 21083, Public Resources Code; Reference: Sections 21003, 21061 and 21105, Public Resources Code; Friends of Mammoth v. Board of Supervisors, (1972) 8 Cal.3d 247; Mount Sutro Defense Committee v. Regents of the University of California, (1978) 77 Cal.App.3d 20; and Save Tara v. City of West Hollywood (2008) 45 Cal.4th 116.

As will be demonstrated in the letter: (1) the proposed Project weakens some existing fire safety standards and would encourage increased development, increased use intensity and increased population density in high fire-prone communities and wildlands in both the LRA VHFHSZ and the SRA, creating the potential for significant environmental impacts; (2) the proposed Action is a Project subject to the requirements of CEQA; (3) the proposed Project is not eligible for a Categorical Exemption under CEQA; (4) to date the Board has failed to comply with both CEQA and GOV § 11346.5(a)(13) requirements to consider alternatives; and, (5) an Environmental Impact Report must be prepared for the proposed Project prior to any additional action on the Proposed State Minimum Fire Safe Regulations.

1. THE PROPOSED PROJECT WEAKENS SOME EXISTING FIRE SAFETY STANDARDS

As detailed in **Attachments B and C**, the proposed Project would weaken some of the existing fire safety regulations. This is particularly true in terms of the proposed emergency access and egress standards for existing roads. In terms of roadway and access standards, the existing regulations apply to both existing and new roads.[8] (A redline copy of the existing

[8] The Existing Fire Safety Regulations are contained in Subchapter 2 available at: https://casetext.com/regulation/california-code-of-regulations/title-14-natural-resources/division-15-department-of-forestry-and-fire-protection/chapter-7-fire-protection/subchapter-2-sra-fire-safe-regulations
Emergency Access and Egress requirements are contained in Article 2 (Sections 1273.00 – 1272.11) and are available at: https://casetext.com/regulation/california-code-of-regulations/title-14-natural-resources/division-15-

regulations showing the proposed changes is contained in **Attachment D**.) Under the proposed Project, many of the standards no longer apply to existing roads or existing roads are subject to separate, lesser requirements. In addition, the proposed Project fails to define what constitutes increased zoning intensity or density or increased use intensity or density, providing a loophole in the application of the proposed standards. Specifically, as detailed in **Attachments B and C**, the proposed Project weakens requirements related to:

1. Safe Access and Egress
2. Road Width
3. Dead-end Roads
4. Road Surface
5. Road Grade
6. Road Curve Radius
7. Turnarounds
8. Turnouts
9. One-way Roads
10. Bridges or Elevated Structures on Roads and Driveways
11. Post Fire Rebuilds and ADUs
12. Exceptions; Change in Zoning or Use Intensity or Density; and Existing Roads

Under the proposed Project, Article 2 full road specifications only apply to existing roads **within the parcel (e.g. driveways)**(§ 1273.00(b) p. 22) and not to outside access to the parcel perimeter, creating a risk of public harm from wildfires. These changes will jeopardize the safe evacuation of civilians on substandard roads and significantly hinder the ability of firefighting apparatus to reach structures.

The weakening of standards applicable to existing roads is important to an understanding of proposed Project impacts because almost all new development in the SRA and VHFSHSZ of the LRA, occurs on existing roads. The proposed Project contains vastly differing standards for development on existing vs. new roads, resulting in a substantial weakening of the regulations for most new development, as most new development occurs on existing roads. By reducing the requirements for all existing roads, the proposed Project will allow substantially more development in fire prone areas than under the existing regulations. Development in high fire-prone wildlands is leading to more human-caused ignitions where people live (Radeloff et al.

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department-of-forestry-and-fire-protection/chapter-7-fire-protection/subchapter-2-sra-fire-safe-regulations/article-2-emergency-access-and-egress

The Attorney General's office issued an Opinion in 1993 confirming that existing roads were covered under PRC 4290, which was confirmed by BOF in an October 23, 2020 letter to Sonoma County.

2018[9], Syphard et al. 2007[10]; Balch et al. 2017[11]). The proposed Project substantially increases hazards and will expose the public and structures to significant risk related to evacuations from wildfires as well as impact the ability for firefighting apparatus to access areas in which fires may be occurring in proximity to structures.

2. THE PROPOSED REGULATIONS CONSTITUTE A PROJECT UNDER CEQA

The proposed Action constitutes a project subject to CEQA. Public Resources Code (PRC) § 21065 defines a project as:

> "Project" means an activity which may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and which is any of the following:
>
> (a) An activity directly undertaken by any public agency.
> (b) An activity undertaken by a person which is supported, in whole or in part, through contracts, grants, subsidies, loans, or other forms of assistance from one or more public agencies.
> (c) An activity that involves the issuance to a person of a lease, permit, license, certificate, or other entitlement for use by one or more public agencies.

The adoption of the proposed regulations constitutes an activity directly undertaken by a public agency and the proposed regulations would cause both direct and indirect physical changes in the environment as detailed in this letter.

PRC § 21080(a) makes clear that CEQA applies to discretionary projects including those that involve rulemaking and adoption of land use controls, such as the proposed project:

> (a) Except as otherwise provided in this division, this division shall apply to discretionary projects proposed to be carried out or approved by public agencies, including, but not limited to, the enactment and amendment of zoning ordinances, the issuance of zoning variances, the issuance of conditional use permits, and the approval of tentative subdivision maps unless the project is exempt from this division.

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[9] Radeloff, V. C., Helmers, D. P., Kramer, H. A., Mockrin, M. H., Alexandre, P. M., Bar-Massada, A., ... Stewart, S. I. (2018). Rapid growth of the US wildland-urban interface raises wildfire risk. *Proceedings of the National Academy of Sciences*, *115*(13), 3314–3319 3319 https://pubmed.ncbi.nlm.nih.gov/29531054/

[10] Syphard, A. D., Radeloff, V. C., Keeley, J. E., Hawbaker, T. J., Clayton, M. K., Stewart, S. I., ... Hammer, R. B. (2007). Human influence on California fire regimes. *Ecological Society of America*, *17*(5), 1388–1402. https://pubs.er.usgs.gov/publication/70029709

[11] Balch, J. K., Bradley, B. A., Abatzoglou, J. T., Nagy, R. C., Fusco, E. J., & Mahood, A. L. (2017). Human-started wildfires expand the fire niche across the United States. *Proceedings of the National Academy of Sciences*, *114*(11), 2946–2951. https://www.pnas.org/content/114/11/2946

The proposed modifications to the State Minimum Fire Safe Regulations are a project subject to CEQA because, like the amendment of a zoning ordinance or General Plan, the proposed Project embodies a package of fundamental land use regulations that will guide future growth and development and which have the potential for causing ultimate physical changes in the environment. Furthermore, the proposed Project will result in land that was protected by the existing standards being no longer protected, or protected to a lesser degree under the proposed standards, than under existing regulations, as detailed in **Attachments B and C**.

3. THE PROPOSED PROJECT IS NOT ELIGIBLE FOR A CATEGORICAL EXEMPTION UNDER CEQA

The proposed regulations clearly represent a project subject to CEQA. Given that the proposed Action is a project, the question becomes whether the proposed Project is eligible for a Categorical Exemption under CEQA, as no Statutory Exemptions apply.[12] As detailed below, the proposed Project is not eligible for a "common sense" exemption or a Class 8 Exemption. In addition, exceptions in CEQA preclude the use of any other Categorical Exemption.

3.1 <u>The Proposed Project is Not Eligible for a "Common Sense" Exemption</u>

The proposed Project is not eligible for the "Common Sense" Exemption provided for in CEQA Guidelines Section 15061(b)(3), which states:

> The activity is covered by the common sense exemption that CEQA applies only to projects which have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA.

It is a Lead Agency's burden to establish the common sense exemption. The Board of Forestry and Fire Protection has provided no analysis which would show that the Project would qualify for a common sense exemption. Instead, this letter, including **Attachment E,** demonstrates the proposed Project's potential to result in significant environmental impacts.

3.1.1 The Proposed Project Has the Potential to Result in Significant Impacts as a Result of the Weakening of Existing Standards

As detailed in **Attachments B and C**, the proposed Project weakens existing regulatory requirements related to:

1. Safe Access and Egress
2. Road Width
3. Dead-end Roads
4. Road Surface
5. Road Grade

[12] Statutory Exemptions are enumerated in Article 18 of the CEQA Guidelines available at: https://www.califaep.org/docs/CEQA_Handbook_2021.pdf

6. Road Curve Radius
7. Turnarounds
8. Turnouts
9. One-way Roads
10. Bridges or Elevated Structures on Roads and Driveways
11. Post Fire Rebuilds and ADUs
12. Exceptions; Change in Zoning or Use Intensity or Density; and Existing Roads

The proposed regulations undermine the stricter existing regulations and will unlock parcels for new residential, commercial and industrial development in the SRA and the LRA VHFHSZ. The reason these areas are mapped VHFHSZ is because they often contain dense native vegetation. As a result of the presence of dense native vegetation in the VHFHSZ, these areas are more likely to contain sensitive species. As a result, the proposed Project has the potential to result in significant impacts under CEQA as detailed in **Section 3.1.2**. (See also discussion in **Section 3.3.2** of this letter).

3.1.2 Potentially Significant Issue Areas

Based on a quick review of the standard CEQA Guidelines Appendix G Initial Study Checklist,[13] the proposed Project, at a minimum, has the potential to result in the following significant impacts:

I AESTHETICS	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project:				
a) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☑	☐	☐	☐
b) In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☑	☐	☐	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☑	☐	☐	☐

Explanation of Checklist Judgments

(a) Potentially Significant

Because the proposed Project has the potential to both encourage development on existing roads in the SRA and the VHFHSZ of the LRA and to increase fire risk, the proposed

[13] http://califaep.org/docs/2019-Appendix_G_Checklist.pdf

Project has the potential to damage scenic resources within state scenic highways in the SRA and the LRA VHFHSZ. Caltrans designates roads that are eligible to be scenic highways.[14]

Figures 1 and 2 provide a rough overlay showing the approximate location of scenic highways in relation to the SRA and the VHFHSZ. (See also **Attachment F** for copies of the maps used to produce the figures).

As can be seen from **Figures 1 and 2**, scenic highways are located within portions of the area subject to the proposed Project. To the degree that the proposed Project reduces fire safety requirements and increases development pressure in areas containing scenic highways, the proposed Project has the potential to impact scenic highways.

The following is a description of some of the Scenic Highways within the SRA and the LRA VHFHSZ subject to the proposed Project. As detailed below, many of these scenic highways are within important natural areas, are already experiencing development pressures, and would be impacted by the additional wildfire risk associated with the proposed Project's relaxation of existing regulatory standards.

[14] An official list of scenic highways that have been designated is available https://en.wikipedia.org/wiki/State_Scenic_Highway_System_(California)

FIGURE 1 – APPROXIMATE LOCATION OF SCENIC HIGHWAYS IN RELATION TO FIRE HAZARD SEVERITY ZONES IN THE LRA (Officially Designated = peach color; Eligible = dark blue; Federal Byways = light blue; County Byways = red)
Source: https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/And, map of Scenic Highways: https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways

FIGURE 2 – APPROXIMATE LOCATION OF SCENIC HIGHWAYS IN RELATION TO FIRE HAZARD SEVERITY ZONES IN THE SRA (Officially Designated = peach color; Eligible = dark blue; Federal Byways = light blue; County Byways = red)
Source: https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/And, map of Scenic Highways: https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways

<u>SR 27, Los Angeles County</u> - SR 27 (Topanga Canyon Blvd.) was officially designated a state scenic highway from SR 1 at Topanga Beach to Mulholland Drive in Los Angeles on March 22, 2017. It winds through riparian, oak woodland, sage scrub and chaparral habitats in the Santa Monica Mountains that has burned historically and could burn in a future wildland fire[15]. It was threatened as recently as October 2019 during the Topanga-Getty Fire (**Figure 3**). The majority of the SR 27 scenic highway, known as Topanga Canyon, is in the VHFHSZ in the SRA, and a short reach of the highway is in the VHFHSZ in the LRA.

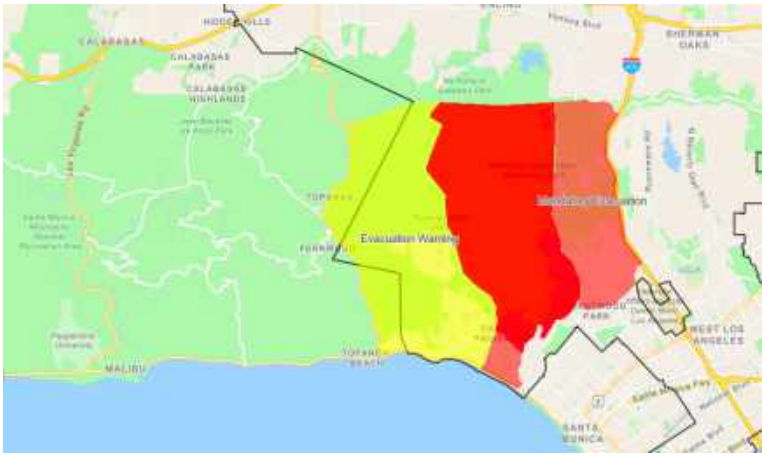

FIGURE 3 - TOPANGA-GETTY FIRE (OCTOBER 2019)

Topanga Canyon burned in 1993 leaving 359 structures in ruins, 18,000 acres charred, and three people dead. Driven by Santa Ana winds that gusted to 60 mph in the canyons, the fire raced from Mulholland Highway and Old Topanga Canyon across the Santa Monica Mountains to Pacific Coast Highway in a few hours.[16] It also <u>threatened Will Rogers State Historic Park and Topanga State Park</u>.[17] The <u>Will Rogers State Historic Park</u>[18] was created in 1944 and is the former home of the American humorist Will Rogers. To the degree that the proposed Project increases fire risk and encourages additional development, it may damage trees and scenic resources such as rock outcroppings on SR 27 and nearby historic buildings, bridges and resources.

<u>SR 154, Santa Barbara County</u> - SR 154 (San Marcos Pass Road) was officially designated a state scenic highway from US 101 near Los Olivos to US 101 in Santa Barbara on November 22, 1968. The <u>Whittier Fire in July 2017</u>[19] burned 18,430 acres, including both sides of SR 154. To the degree that the proposed Project increases fire risk and encourages additional development, the proposed Project has the potential to damage trees and scenic resources on SR 154 (**Figure 4**). The majority of the SR 154 scenic highway, from Santa Barbara to Cachuma

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[15] *See:* If You Move Out Here, You Make a Deal With Nature': Life in a Fire-Prone Canyon: https://www.nytimes.com/2021/06/19/us/topanga-canyon-wildfires.html?referringSource=articleShare

[16] *See:* 20 Years Later: The Old Topanga Fire: http://www.malibutimes.com/news/article_bff8ba0a-46b1-11e3-b60c-001a4bcf887a.html

[17] https://www.parks.ca.gov/NewsRelease/922

[18] https://en.wikipedia.org/wiki/Will_Rogers_State_Historic_Park

[19] https://wildfiretoday.com/tag/whittier-fire/

Village, is in the VHFHSZ in the SRA, and from Cachuma Village to Los Olivos, much of the SR 154 scenic highway is in the HFHSZ in the SRA.

FIGURE 4 - WHITTIER FIRE (JULY 2017)

<u>SR 180, Fresno County and Tulare County</u> - SR 180 was officially designated a state scenic highway for most of the 24 miles from Minkler to the entrance of Kings Canyon National Park on October 15, 2015. The Rough Fire[20] in autumn 2015 burned more than 151,000 acres, some along SR 180, and caused park vistors to evacuate. To the degree that the proposed Project increases fire risk and encourages additional development, the proposed Project has the potential to damage trees and scenic resources on SR 180 (**Figure 5**). The majority of the SR 180 scenic highway is in the HFHSZ and the VHFHSZ of the SRA.

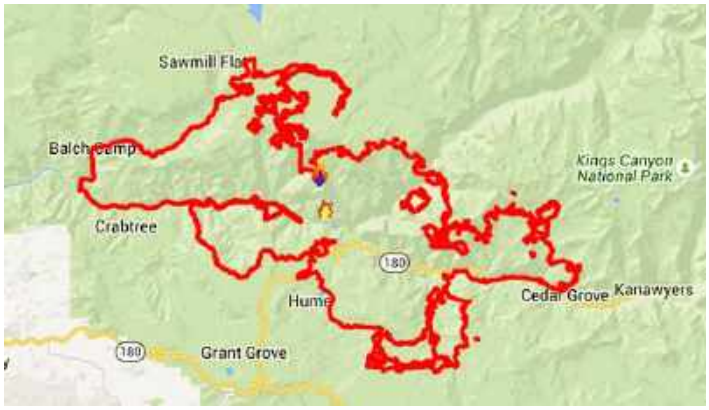

FIGURE 5 - ROUGH FIRE (AUTUMN 2015)

<u>SR 140, Mariposa County</u> - SR 140 was officially designated a state scenic highway from Mariposa through the Merced River Canyon to Yosemite National Park on August 30,

[20] See: https://www.nps.gov/seki/learn/nature/rough-fire-interactive-map.htm

1991. In August 2018 the Ferguson Fire[21] burned almost 97,000 acres in Stanislaus National Forest and Yosemite Park, some along SR 140 (*see* Figure 6). The majority of the SR 140 scenic highway is in the VHFHSZ.

The Rim Fire[22] in August 2013 burned 257,314 acres (**Figure 6**). The Rim Fire threatened Columbia State Historic Park,[23] an open-air museum of California Gold Rush structures, that is located 4 miles north of Sonora. To the degree that the proposed Project increases fire risk and encourages additional development, the proposed Project has the potential to damage trees and scenic resources on SR 140 and nearby historic buildings.

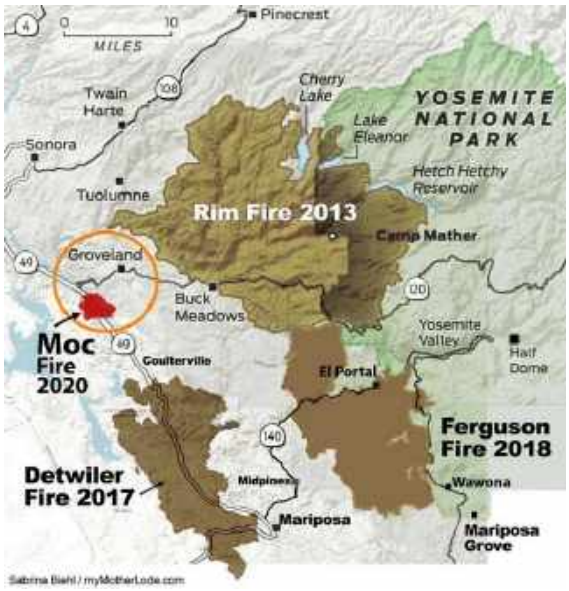

FIGURE 6 - FERGUSON FIRE (AUGUST 2018)

<u>SR 12, Sonoma County</u> - SR 12 was officially designated a state scenic highway in Sonoma Valley from Santa Rosa through Glen Ellen to Agua Caliente on December 17, 1974. The Nuns Fire[24] in October 2017 burned 56,000 acres, including some areas along SR 12. The Nuns fire threatened the Jack London State Historic Park[25] in Glen Ellen. The Glass Fire[26] in September 2020 burned over 67,000 acres, some along SR 12. The Glass fire also threatened the Bale Grist Mill State Historic Park,[27] an 1846 wooden grist mill[28] with a 36-foot water wheel in Napa County, by spraying it with fire retardant. To the degree that the proposed Project increases fire risk and encourages additional development, the proposed Project has the potential to damage trees and scenic resources on SR 12 as well as nearby historic parks (**Figure 7**). The majority of the SR 12 scenic highway is in both the SRA and LRA, and in both the VHFHSZ and HFHSZ.

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[21] https://www.yosemite.com/post-ferguson-fire/
[22] https://www.fs.usda.gov/detail/stanislaus/home/?cid=stelprdb5442963
[23] https://en.wikipedia.org/wiki/Columbia_State_Historic_Park
[24] https://wildfiretoday.com/tag/nuns-fire/
[25] https://en.wikipedia.org/wiki/Jack_London_State_Historic_Park
[26] https://en.wikipedia.org/wiki/Glass_Fire
[27] https://napavalleyregister.com/news/local/glass-fire-takes-a-toll-on-parks-in-the-upper-napa-valley/article_0eacf6b3-b8c7-5366-97b4-1a32ab1c3e88.html
[28] https://en.wikipedia.org/wiki/Bale_Grist_Mill_State_Historic_Park

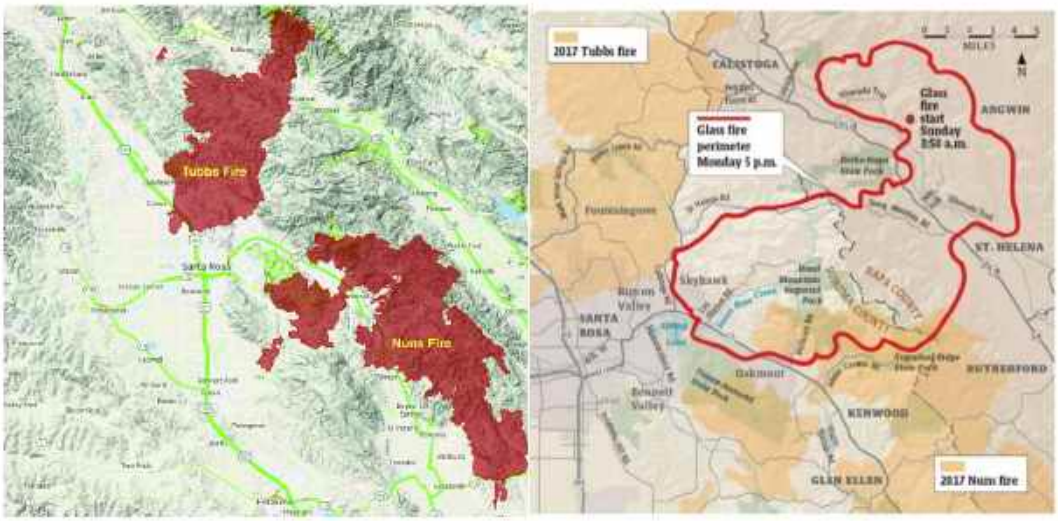


FIGURE 7 - NUNS FIRE (OCTOBER 2017) AND GLASS FIRE (SEPTEMBER 2020)

<u>SR 116, Sonoma County</u> - SR 116 was officially designated a state scenic highway from SR 1 near Jenner to Sebastopol on September 20, 1988. During the Walbridge Fire in August 2020, Rio Nido and Guerneville on SR 116 were evacuated. To the degree that the proposed Project increases fire risk and encourages additional development, the proposed Project has the potential to damage trees and scenic resources on SR 116 (**Figure 8**). The majority of the SR 116 scenic highway along the Russian River is in the SRA and the HFHSZ.

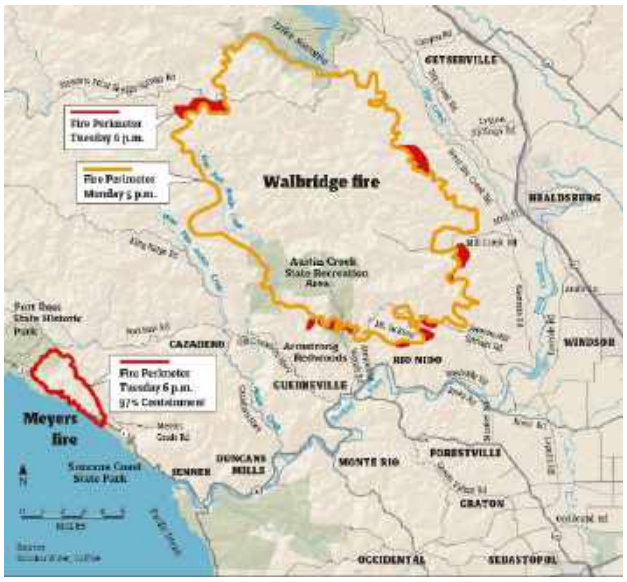


FIGURE 8 - WALBRIDGE FIRE (AUGUST 2020)

The Hearst State Historic Monument,[29] San Simeon, was designated a historic monument on October 28, 1958. The Chimney Fire[30] in the Santa Lucia Range in August 2016 burned almost 20,000 acres nearby, and threatened the Hearst Castle.[31] To the degree that the proposed Project increases fire risk and encourages additional development, the proposed Project has the potential of damaging this historic monument (**Figure 9**).

FIGURE 9 - CHIMNEY FIRE (2018)

b) **Potentially Significant**

Because the proposed Project has the potential to both encourage development on existing roads in the SRA and LRA VHFHSZ[32] and to increase fire risk, the proposed Project has the potential to degrade the existing visual character of the more natural SRA and LRA VHFHSZ.

c) **Potentially Significant**

Because the proposed Project has the potential to encourage development on existing roads in the SRA and LRA VHFHSZ it has the potential to indirectly create new sources of substantial light and glare in more natural areas and which could impact views in those areas.

[29] http://ohp.parks.ca.gov/ListedResources/Detail/640
[30] https://en.wikipedia.org/wiki/Chimney_Fire
[31] https://www.sacbee.com/news/california/fires/article96946707.html
[32] SRA and LRA VHFHSZ includes all of the SRA and only the VHFHSZ of the LRA.

II AGRICULTURE RESOURCES	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☑	☐	☐	☐

Explanation of Checklist Judgments

d) Potentially Significant

Because the proposed Project has the potential to both encourage development on existing roads in the SRA and LRA VHFHSZ and to increase fire risk, the proposed Project has the potential to impact forest land in these areas.

III AIR QUALITY	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relief upon to make the following determinations. Would the project:				
c) Expose sensitive receptors to substantial pollutant concentrations?	☑	☐	☐	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☑	☐	☐	☐

Explanation of Checklist Judgments

c) and
d) Potentially Significant

Because the proposed Project has the potential to both encourage development on existing roads in the SRA and LRA VHFHSZ and to increase fire risk the proposed Project has

the potential to expose sensitive receptors to substantial pollutant concentrations. As noted by the United State Environmental Protection Agency (USEPA):[33]

> Larger and more intense wildfires are creating the potential for greater smoke production and chronic exposures in the U.S., particularly in the West. Wildfires increase air pollution in surrounding areas and can affect regional air quality.
>
> The effects of smoke from wildfires can range from eye and respiratory tract irritation to more serious disorders, including reduced lung function, bronchitis, exacerbation of asthma and heart failure, and premature death. Children, pregnant women, and the elderly are especially vulnerable to smoke exposure. Emissions from wildfires are known to cause increased visits to hospitals and clinics by those exposed to smoke.

IV **BIOLOGICAL RESOURCES**	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☑	☐	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☑	☐	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☑	☐	☐	☐

Explanation of Checklist Judgments

a) And
b) And
c) Potentially Significant

Because the proposed Project has the potential to both encourage development on existing roads in the SRA and LRA VHFHSZ and to increase fire risk, the proposed Project has the potential to impact sensitive species and plant communities located in the dense natural

[33] Wildland Fire Research: Health Effects Research available at: https://www.epa.gov/air-research/wildland-fire-research-health-effects-research

vegetation that characterizes the VHFHSZ.[34] For example, much of the Santa Monica Mountains are located in a VHFHSZ.[35] Coastal portions of the Santa Monica Mountains have been found to be an Environmentally Sensitive Habitat area by the Coastal Commission.[36] The Coastal Act provides a definition of "environmentally sensitive area" as: "[a]ny area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments" (Section 30107.5). The Environmental Impact Statement for the General Management Plan for the Santa Monica Mountains National Recreation Area (SMMNRA) California (July 2002) indicates that: [37]

> The SMMNRA is home to significant archeological and cultural sites and provides a haven for more than 450 animal species. More than 20 federal or state-listed threatened or endangered plants and animals find protection here. Another 46 animal and 11 plant species are federal or state species of concern.

This is typical of what can be expected in VHFHSZ throughout the state which are defined, in part, by their dense natural vegetation. These also serve as important wildlife corridors and wildlife nursery site. (See also **Attachment E**). Because the proposed Project has the potential to both encourage development on existing roads in the SRA and LRA VHFHSZ and to increase fire risk, the proposed Project has the potential to impact biological resources in these areas.

V CULTURAL RESOURCES	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	☑	☐	☐	☐

Explanation of Checklist Judgments:

a) Potentially Significant

See discussion under I(a), Aesthetic – Scenic Resources, which provides examples of historical resources that could be impacted by the proposed Project. The proposed Project has the potential to increase wildfire risk and thus to damage historical resources located within and adjacent to the Project area.

[34] https://www.sccgov.org/sites/dpd/DocsForms/Documents/Fire_Hazard_Zone_Fact_Sheet.pdf
[35] https://www.arcgis.com/apps/webappviewer/index.html?id=c0fbb81a312049509a530d08de166df8
[36] https://www.coastal.ca.gov/ventura/smm-esha-memo.pdf
[37] See page 3: https://www.nps.gov/samo/learn/management/upload/samofgmp1a.pdf

VII GEOLOGY AND SOILS	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project:				
b) Result in substantial soil erosion or the loss of topsoil?	☑	☐	☐	☐

Explanation of Checklist Judgments

b) Potentially Significant

Because the proposed Project has the potential to both encourage development on existing roads in the SRA and LRA VHFHSZ and to increase fire risk, the proposed Project has the potential to result in a significant loss of topsoil and soil erosion following increased fire events associated with the proposed Project.

VIII GREENHOUSE GAS EMISSIONS	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☑	☐	☐	☐

Explanation of Checklist Judgments

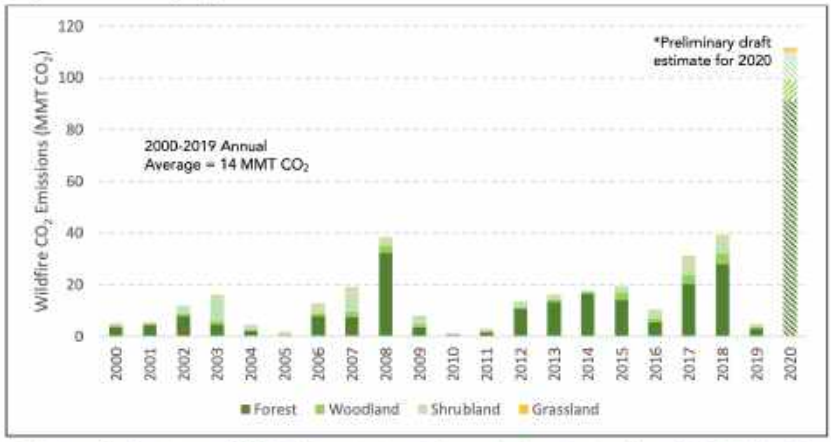
a) Potentially Significant

Wildfires in California generate a substantial amount of greenhouse gas (GHG) emissions. According to the California Air Resources Board (CARB), between 2000 and 2019, annual greenhouse gas emissions from wildfires varied from a low of 1.2 million metric tons (MMT) per year in 2010 when only 0.09 million acres burned, to 39 MMT per year in 2018 when 1.5 million acres burned.[38] As shown in **Figure E-1** from CARB's December 2020 report on Greenhouse Gas Emissions of Contemporary Wildfire, Prescribed Fire and Forest Management Activities,[39] it is estimated that wildfires in California generated more than 100 MMT of greenhouse gases in 2020. By way of comparison, according to CARB, in 2018 emissions from GHG emitting activities statewide were 425 MMT. The 2020 State limit on GHG emissions is 431 MMT;[40] high wildfire years thus have the potential to cause exceedance of the State's GHG reduction goals. The proposed Project has the potential to exacerbate wildfire-related greenhouse gas emissions in the future as a result of the increase fire risk resulting from

[38] https://ww3.arb.ca.gov/cc/inventory/pubs/ca_wildfire_co2_emissions_estimates.pdf
[39] Executive Summary and report available at: https://ww3.arb.ca.gov/cc/inventory/pubs/ca_ghg_wildfire_forestmanagement.pdf
[40] See: https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2018/ghg_inventory_trends_00-18.pdf

the relaxation of some of the existing State Minimum Fire Safe Regulations that would result from the proposed Project, resulting in a significant Project impact.

Figure E-1. Annual wildfire CO_2 emissions (million metric tons, MMT) by general vegetation category.



**Preliminary draft estimate of 2020 wildfire emissions will be updated and revised when CAL FIRE's final fire perimeters become available in mid-2021.*

IX **HAZARDS AND HAZARDOUSMATERIALS**	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project:				
g) 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?	☑	☐	☐	☐

Explanation of Checklist Judgments

g) Potentially Significant

Because the proposed Project has the potential to both encourage development on existing roads in the SRA and LRA VHFHSZ and to increase fire risk, the proposed Project has the potential to result in a significant additional risk of loss, injury or death involving wildland fires. For example, the reduced road standards for existing roads, including road width and no limit on length of dead-end roads, among others, will significantly reduce the likelihood of safe evacuation and safe fire apparatus access as detailed in Attachment B. See also **Section 3.3.2** of this letter.

XVI POPULATION AND HOUSING	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project:				
a) 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)?	☑	☐	☐	☐

Explanation of Checklist Judgments

a) Potentially Significant

The proposed Project has the potential to induce increased development and thus population growth along existing roadways in the SRA and LRA VHFHSZ as the result of relaxation of some of the existing State Minimum Fire Safe Regulations that would result from the proposed Project. See also **Section 3.3.2** of this letter.

XVII TRANSPORTATION/TRAFFIC	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project:				
d) Result in inadequate emergency access?	☑	☐	☐	☐

Explanation of Checklist Judgments

d) Potentially Significant

Some of the proposed changes to the existing Minimum Fire Safety regulations included in the proposed Project would affect emergency access, as detailed in **Attachments B and C** and could potentially result in inadequate emergency access during a major fire event in those areas affected by the relaxation of some of the existing State Minimum Fire Safe Regulations that would result from the proposed Project.

XIX UTILITIES AND SERVICE SYSTEMS	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project:				
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☑	☐	☐	☐

Explanation of Checklist Judgments

b) Potentially Significant

Because the proposed Project has the potential to both encourage development on existing roads in the SRA and LRA VHFHSZ and to increase fire risk, the proposed Project has the potential to result in a significant additional demand for water supplies during wildland fire events.

XX WILDFIRE	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project:				
a) 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?	☑	☐	☐	☐

Explanation of Checklist Judgments

a) Potentially Significant

Because the proposed Project has the potential to both encourage development on existing roads in SRA and LRA VHFHSZ areas and to increase fire risk, the proposed Project has the potential to expose sensitive receptors to substantial pollutant concentrations from wildfires as discussed in Section III – Air Quality.

XXI MANDATORY FINDINGS OF SIGNIFICANCE	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
Does the project:				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☑	☐	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☑	☐	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☑	☐	☐	☐

Explanation of Checklist Judgments

a) Potentially Significant

As identified above, the proposed Project has the potential to result in significant biological and cultural resource impacts.

b) Potentially Significant

As discussed more fully in **Section 3.3.1**, below, the proposed Project has the potential to result in impacts which are cumulatively considerable.

c) Potentially Significant

As detailed above the proposed Project has the potential to increase significant air quality and health impacts due to wildfires as well as wildfire-related hazards.

While the preceding discussion of potentially significant project impacts is illustrative and not exhaustive, it serves to document that the proposed Project will result in a number of potentially significant impacts. The proposed Project is therefore not eligible for a "common sense" exemption.

3.2 <u>The Project is Not Eligible for a Class 8 Exemption</u>

Based on a review of the current list of Categorical Exemptions, the only potentially applicable exemption is a Class 8 Exemption pursuant to CEQA Guidelines Section 15308:

> **15308. ACTIONS BY REGULATORY AGENCIES FOR PROTECTION OF THE ENVIRONMENT**
>
> Class 8 consists of actions taken by regulatory agencies, as authorized by state or local ordinance, to assure the maintenance, restoration, enhancement, or protection of the environment where the regulatory process involves procedures for protection of the environment. Construction activities and **relaxation of standards allowing environmental degradation are not included in this exemption.**
>
> Note: Authority cited: Section 21083, Public Resources Code; Reference: Section 21084, Public Resources Code; International Longshoremen's and Warehousemen's Union v. Board of Supervisors, (1981) 116 Cal. App. 3d 265.

The proposed Project will result in a relaxation of some of the existing standards, particularly those related to roadways and access and egress. As detailed in **Attachments B and C**, the proposed fire safe regulations severely relax road safety regulations for new development in fire-prone communities on existing roads, where much of the road infrastructure is

substandard. Changes to regulations related to existing roads are particularly problematic, as most development in the SRA and LRA VHFHSZ occurs on existing roads. Because the proposed Project will weaken or eliminate fire safety access standards that apply to new development it will exacerbate hazards and create additional development pressure along existing roads in the SRA and LRA VHFHSZ.

Even though the proposed Project may strengthen some environmental requirements, it is not entitled to an exemption, both because it includes a relaxation of some of the existing standards and because it would result in potentially significant effects. The proposed Project is not eligible for a Class 8 Exemption.

3.3 Exceptions Preclude Use of Any Other Exemption for the Proposed Project

Even if the proposed Project were consistent with the definition of an action eligible for a Class 8 Exemption, it is subject to some of the exceptions for use of Categorical Exemption specified in CEQA Guidelines Section 15300.2 which would preclude use of a Class 8 Exemption or any other Categorical Exemption for the proposed Project. CEQA Guidelines Section 15300.2 specifies that the following conditions preclude use of a Categorical Exemption:

> **15300.2. EXCEPTIONS**
>
> (a) Location. Classes 3, 4, 5, 6, and 11 are qualified by consideration of where the project is to be located – a project that is ordinarily insignificant in its impact on the environment may in a particularly sensitive environment be significant. Therefore, these classes are considered to apply all instances, except where the project may impact on an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies.
>
> (b) Cumulative Impact. All exemptions for these classes are inapplicable when the cumulative impact of successive projects of the same type in the same place, over time is significant.
>
> (c) Significant Effect. A categorical exemption shall not be used for an activity where there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances.
>
> (d) Scenic Highways. A categorical exemption shall not be used for a project which may result in damage to scenic resources, including but not limited to, trees, historic buildings, rock outcroppings, or similar resources, within a highway officially designated as a state scenic highway. This does not apply to improvements which are required as mitigation by an adopted negative declaration or certified EIR.

(e) Hazardous Waste Sites. A categorical exemption shall not be used for a project located on a site which is included on any list compiled pursuant to Section 65962.5 of the Government Code.

(f) Historical Resources. A categorical exemption shall not be used for a project which may cause a substantial adverse change in the significance of a historical resource.

Note: Authority cited: Section 21083, Public Resources Code; References: Sections 21084 and 21084.1, Public Resources Code; Wildlife Alive v. Chickering (1977) 18 Cal.3d 190; League for Protection of Oakland's Architectural and Historic Resources v. City of Oakland (1997) 52 Cal.App.4th 896; Citizens for Responsible Development in West Hollywood v. City of West Hollywood (1995) 39 Cal.App.4th 925; City of Pasadena v. State of California (1993) 14 Cal.App.4th 810; Association for the Protection etc. Values v. City of Ukiah (1991) 2 Cal.App.4th 720; and Baird v. County of Contra Costa (1995) 32 Cal.App.4th 1464.

3.3.1 Cumulative Impact

As detailed more fully in **Attachments B and C** and **Section 3.3.2** below, the proposed Project will result in the relaxation of some of the existing Minimum Fire Safe Regulations. This will result in additional development in portions of the SRA and LRA VHFHSZ, particularly those portions served by existing roads. This in turn will lead to an additional risk of wildfire in these areas. As a result, the proposed Project will contribute to significant cumulative fire-related impacts in these areas and the State. The proposed Project is therefore not eligible for a Categorical Exclusion pursuant to CEQA Guidelines Section 15300.2(b).

3.3.2 Significant Impacts Due to Unusual Circumstances

The following unusual circumstances are associated with the proposed Project and will result in the reasonable possibility that the proposed Project will result in the significant effects on the environment identified in **Section 3.1.2** of this letter:

- The proposed Project would weaken existing regulations regarding roadways and site access and egress, particularly those regulations affecting existing roadways, as detailed in **Attachments B and C** and **Section 1** of this letter.
- The location of the proposed Project is in the SRA and LRA VHFHSZ.
- The SRA and LRA VHFHSZ by their nature are likely to contain sensitive plant and animal species and natural communities and thus result in biological resource impacts as further detailed in **Attachment E** and **Section 3.1.2** of this letter
- Fire risk in California is severe and the SRA and LRA VHFHSZ are experiencing an increase in wildfire frequency and severity as detailed in **Attachment E.**
- The SRA and LRA VHFHSZ are subject to development pressure and the proposed Project would likely increase development pressure along existing roads in both SRA

and LRA VHFHSZ while weakening existing regulations in areas served by existing roads as detailed in **Attachments B, C and E**.

As noted by CALFIRE in the agency's fact sheet on California's Fire Hazard Severity Zones:[41]

> While all of California is subject to some degree of fire hazard, there are specific features that make some areas more hazardous. The California Department of Forestry and Fire Protection (CAL FIRE) is required by law[42] 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), influence how people construct buildings and protect property to reduce risk associated with wildland fires. The maps were last updated in the mid-1980s and early 1990s. They are currently being updated to incorporate improved fire science, data and mapping techniques.

As further explained by CALFIRE:

> **How are zones determined?**
>
> The Fire Hazard Severity Zone maps were developed using a science-based and field-tested computer model that assigns a hazard score based on the factors that influence fire likelihood and fire behavior. Many factors are considered such as fire history, existing and **potential fuel** (**natural vegetation**), flame length, blowing embers, terrain, and typical weather for the area. There are three hazard zones in state responsibility areas: moderate, high and very high.
>
> Urban and wildland areas are treated differently in the model, but the model does recognize the influence of burning embers traveling into urban areas, which is a major cause of fire spread. (**Emphasis added**).

Fire Hazard Severity Zone thus are predominately wildland areas containing substantial amounts of natural vegetation. These are areas likely to contain important biological resources.

Fire risk in California is severe and the SRA and LRA VHFHSZ are experiencing an increase in wildfire frequency and severity (see **Attachment E**).[43] The VHFHSZ and SRA have

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[41] https://www.sccgov.org/sites/dpd/DocsForms/Documents/Fire_Hazard_Zone_Fact_Sheet.pdf
[42] (PRC 4201-4204 and Govt. Code 51175-89)
[43] Material for this discussion was taken, in part, from Comment Letters by the Center for Biological Diversity on SB55 and the Guenoc Valley Center EIR and project.

been identified by Cal Fire as areas that are likely to burn within 30 to 50 years.[44] And hotter, drier and windier conditions due to climate change make the landscape more conducive to wildfire ignitions and spread. The year 2020 was the largest wildfire year recorded in California history, according to the California Department of Forestry and Fire Protection.[45] In the 2020 wildfire season, 9,639 fires burned: 4.39 million acres (more than 4% of the state), 10,488 structures and caused 31 deaths at an estimated cost of $12 billion in damages ($10 billion in property damage and $2 billion on wildfire suppression costs).

As noted by the State Attorney General:[46] Wildfire research shows that land use decisions, such as the proposed Project, are particularly impactful:

> [H]ousing arrangement and location strongly influence fire risk, particularly through housing density and spacing, location along the perimeter of development, slope, and fire history. Although high-density structure-to-structure loss can occur, structures in areas with low- to intermediate-housing density were most likely to burn, potentially due to intermingling with wildland vegetation or difficulty of firefighter access. Fire frequency also tends to be highest at low to intermediate housing density, at least in regions where humans are the primary cause of ignitions.[47]

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[44] https://www.sccgov.org/sites/dpd/DocsForms/Documents/Fire_Hazard_Zone_Fact_Sheet.pdf

[45] See: "Fire Statistics". CAL FIRE. January 2, 2021. Retrieved January 2, 2021: https://www.fire.ca.gov/incidents/2020/
https://en.wikipedia.org/wiki/California_Department_of_Forestry_and_Fire_Protection

National Large Incident Year to Date Report: https://web.archive.org/web/20201229021815/https:/gacc.nifc.gov/sacc/predictive/intelligence/NationalLargeIncidentYTDReport.pdf

Geographic Area Coordination Center (Report). National Interagency Fire Center: https://en.wikipedia.org/wiki/National_Interagency_Fire_Center December 21, 2020. Archived from the original (PDF) on December 29, 2020. Retrieved January 13, 2021.

Creek Fire in Fallbrook & Camp Pendelton – Evacuation Orders. CBS8. KFMB-TV. December 28, 2020. Retrieved January 13, 2021: https://www.cbs8.com/article/news/local/wildfire/brush-fire-in-fallbrook-spreads-into-camp-pendleton/509-a45199e6-2594-47b1-b5d4-51da5cb0b346

Damage from California Wildfires Estimated at $10 billion, Experts Say, abc7news.com. ABC, Inc. Retrieved January 14, 2021.): https://abc7news.com/california-wildfires-cost-of-cal-fire-stanford-wildfire-research/6897462/

[46] https://www.biologicaldiversity.org/programs/urban/pdfs/AG-Letters-to-Lake-County-re-Guenoc-Valley-Project-FEIR.pdf

[47] Citing: California Natural Resources Agency, Final Statement of Reasons for Regulatory Action: Amendments to the State CEQA Guidelines (Nov. 2018) at p. 87, https://resources.ca.gov/CNRALegacyFiles/ceqa/docs/2018_CEQA_Final_Statement_of%20Reasons_111218.pdf ("CNRA Final Statement"). (citing Syphard, A.D, Bar Massada A, Butsic V, Keeley, J.E, Land Use Planning and Wildfire: Development Policies Influence Future Probability of Housing Loss (Aug. 2013) PLOS ONE 8(8): e71708. https://doi.org/10.1371/journal.pone.0071708.)

> As development encroaches into exurban areas and the wildland-urban interface, large fire probability necessarily increases because humans are the leading cause of wildfires—and the degree of increased risk is determined by factors such as topographical and wind conditions, land use, structure arrangement, and density.[48] In short, land use planning . . . is an important determinant of wildfire ignition risk and the scale of wildfire spread.[49] Accordingly, it is critical to a wildfire analysis to analyze whether the Project itself—in its location . . . etc.—exacerbates the risk of wildfire ignition and spread.

The proposed Project through the relaxation of standards will encourage further development along existing roads in the SRA and LRA VHFHSZ (see **Attachments B and C**) and this in turn will increase wildfire risk. As explained by the Center for Biological Diversity:[50]

> According to a report from Governor Gavin Newsom's Office, construction of more homes in the wildland-urban interface is one of the main factors that "magnify the wildfire threat and place substantially more people and property at risk than ever before" (Governor Newsom's Strike Force 2019).[51] In a new scientific study, Syphard et al. (2019)[52] found that housing and human infrastructure in fire-prone wildlands are the main drivers of fire ignitions and structure loss. This is not new information; scientists have been reporting it for many years in scientific, peer-reviewed journals, and firefighters have observed it.
>
> As another recent peer-reviewed study from Stanford University researchers explained, "Changing demographic factors have undoubtedly played a substantial role in community exposure and vulnerability—including the expansion of urban and suburban

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[48] Ibid.; Syphard A.D, Keeley J.E, Nexus Between Wildfire, Climate Change, and Population Growth in California, FREMONTIA Vol. 47, No. 2 (March 2020) ("On [high-wind] landscapes, fire is more of a people problem than a fuel problem. More people translates into a greater probability of an ignition during a severe wind event."); Syphard, A.D., Rustigian-Romsos, H., The relative influence of climate and housing development on current and projected future fire patterns and structure loss across three California landscapes, GLOBAL ENVIRONMENTAL CHANGE 56 (March 2019) 41–55.

[49] Syphard A.D., Keeley J.E., Why Are So Many Structures Burning in California?, FREMONTIA Vol. 47, No. 2 (March 2020), p. 33 ("[T]he most effective strategy at reducing future structure loss would focus on reducing the extent of low-density housing via careful land planning decisions.").

[50] Center for Biological Diversity, comment letter on the Guenoc Valley Mixed-Use Planned Development Project Draft Environmental Impact Report, SCH No. 2019049134

[51] Governor Newsom's Strike Force. (2019). *Wildfires and Climate Change: California's Energy Future*. https://www.gov.ca.gov/wp-content/uploads/2019/04/Wildfires-and-Climate-Change-California%E2%80%99s-Energy-Future.pdf

[52] Syphard, A. D., Rustigian-romsos, H., Mann, M., Conlisk, E., Moritz, M. A., & Ackerly, D. (2019). The relative influence of climate and housing development on current and projected future fire patterns and structure loss across three California landscapes. *Global Environmental Change*, *56*, 41–55. https://consbio.org/products/publications/relative-influence-climate-and-housing-development-current-and-projected-future-fire-patterns-and-structure-loss-across-

developments into the 'wildland-urban interface.'" (Goss et al. 2020.)[53] In fact, development in the wildland-urban interface, . . ., is responsible for the most buildings burned in California, despite less fuel. (Kramer et al. 2019.)[54] Researchers have determined that growth in the wildland- urban interface "often results in more wildfire ignitions, putting more lives and houses at risk." (Radeloff et al. 2018.)[55]

Sprawl developments with low/intermediate densities extending into habitats that are prone to fire have led to more frequent wildfires caused by human ignitions, and these types of developments have the highest chances of burning (Keeley et al. 1999; Keeley and Fotheringham 2003; Syphard et al. 2007; Syphard et al. 2013; Balch et al. 2017; Radeloff et al. 2018; Syphard et al. 2019).[56] This can disrupt the natural fire regime and lead to a dangerous feedback loop of deadly fires and habitat destruction. Thus, developing housing in locations in California that currently have low or no density—such as the current Project site—dramatically *increases* the number of fires and the amount of area burned. *See* Keeley 2005; *see also* Syphard et al. 2013; Syphard et al. 2007 [stating that ninety-five percent of California's

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[53] Goss, M., et al. (2020). Climate change is increasing the risk of extreme autumn wildfire conditions across California. *Environ. Res. Lett*. in press https://iopscience.iop.org/article/10.1088/1748-9326/ab83a7

[54] Kramer, H.A., Mockrin, M.H., Alexandre, P.M., Radeloff, V.C. (2019). High wildfire damage in interface communities in California. *Int J Wildl Fire, 28*(9), 641–50. https://www.publish.csiro.au/WF/pdf/WF18108

[55] Radeloff, V.C., et al. (2019). Rapid growth of the US wildland-urban interface raises wildfire risk. *Proc Natl Acad Sci U S A, 115*(13), 3314–9. https://www.pnas.org/content/115/13/3314

[56] Keeley, J. E., Fotheringham, C. J., & Morais, M. (1999). Reexamining fire suppression impacts on brushland fire regimes. *Science*, *284*(5421), 1829–1832. https://pubmed.ncbi.nlm.nih.gov/10364554/ works
Keeley, J. E., & Fotheringham, C. J. (2003). Impact of Past Present and Future Fire Regimes on North American Mediterranean Shrublands. In *Fire and climatic change in temperate ecosystems of the Western Americas* (pp. 218–262). https://pubs.er.usgs.gov/publication/87379

Syphard, A. D., et al. (2007). Human Influence on California Fire Regimes. *Ecological Application, 17*(5)*,* 1388–1402. https://esajournals.onlinelibrary.wiley.com/doi/10.1890/06-1128.1

Syphard, A.D., Bar Massada, A., Butsic, V., Keeley, J.E. (2013). Land Use Planning and Wildfire: Development Policies Influence Future Probability of Housing Loss. *PLoS ONE, 8*(8), e71708. https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0071708

Balch, J. K., Bradley, B. A., Abatzoglou, J. T., Nagy, R. C., Fusco, E. J., & Mahood, A. L. (2017). Human-started wildfires expand the fire niche across the United States. *Proceedings of the National Academy of Sciences*, *114*(11), 2946–2951. https://www.pnas.org/content/114/11/2946

Syphard, A. D., Rustigian-romsos, H., Mann, M., Conlisk, E., Moritz, M. A., & Ackerly, D. (2019). The relative influence of climate and housing development on current and projected future fire patterns and structure loss across three California landscapes. *Global Environmental Change*, *56*, 41–55. https://consbio.org/products/publications/relative-influence-climate-and-housing-development-current-and-projected-future-fire-patterns-and-structure-loss-across-

> fires are caused by human activity].)[57] Common anthropogenic causes of fire include arson/incendiary, equipment use, debris burning, smoking, vehicles, fireworks, electricity, and outdoor cooking. Additionally, structure fires can spread and initiate wildland fires.
>
> In fact, the 2015 Valley Fire, which started in Lake County . . . was a human-caused ignition, caused by faulty hot-tub wiring at a house in Cobb that arced and ignited dry grass. (Karimi 2016.)[58] The fire cost 4 lives and $57 million to extinguish, with 76,067 acres burned and 1,955 structures destroyed. (*Id.*)

As detailed in **Attachments B and C**, the proposed Project will encourage development in the SRA and LRA VHFHSZ, through the relaxation of existing standards related to access and existing roads, exacerbating the existing wildfire situation resulting from development in the SRA and LRA VHFHSZ. This comes at a cost, which has not been addressed in the analysis conducted to date for the proposed Project. Development in high fire-prone wildlands is leading to more human-caused ignitions where people live (Radeloff et al. 2018).[59] Nearly all contemporary wildfires in California are caused by human sources such as power lines, car sparks, cigarettes, and electrical equipment (Syphard et al. 2007;[60] Balch et al. 2017).[61] Building new developments in high fire-risk areas increases unintentional ignitions and places more people in danger. Since 2015 almost 200 people in the state have been killed in wildfires, more than 50,000 structures have burned down, hundreds of thousands have had to evacuate their homes and endure power outages, and millions have been exposed to unhealthy levels of smoke and air pollution. Rampant sprawl development in fire-prone wildlands has also contributed to a dramatic increase in costs due to fire-suppression and damages. Costs in areas managed by Cal Fire were $23 billion during the 2015-2018 fire seasons, which is more than double the wildfire cost for the previous 26 years combined after adjusting for inflation. Fifteen of the 20 most destructive California wildfires have occurred in the past five years. If current sprawl-inducing land-use practices continue, instead of focusing on increasing affordable housing near city centers, between 640,000 to 1.2 million new homes will be built in the state's highest wildfire-risk areas by 2050 (Mann et al. 2014).[62]

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[57] Ibid, and: Keely, J. E. (2005). Fire history of the San Francisco East Bay region and implications for landscape patterns. *Int J Wildl Fire*, 14, 285–296. https://pubs.er.usgs.gov/publication/70027601

[58] Karimi, F. (August 11, 2016). Valley Fire: Faulty hot tub wiring sparked $57 million blaze. *CNN*. https://www.cnn.com/2016/08/11/us/california-valley-fire-faulty-hot-tub

[59] Radeloff, V. C., Helmers, D. P., Kramer, H. A., Mockrin, M. H., Alexandre, P. M., Bar-Massada, A., ... Stewart, S. I. (2018). Rapid growth of the US wildland-urban interface raises wildfire risk. *Proceedings of the National Academy of Sciences*, *115*(13), 3314–3319 3319 https://pubmed.ncbi.nlm.nih.gov/29531054/

[60] Syphard, A. D., et al. (2007). Human Influence on California Fire Regimes. *Ecological Application, 17*(5)*,* 1388–1402. https://esajournals.onlinelibrary.wiley.com/doi/10.1890/06-1128.1

[61] Balch, J. K., Bradley, B. A., Abatzoglou, J. T., Nagy, R. C., Fusco, E. J., & Mahood, A. L. (2017). Human-started wildfires expand the fire niche across the United States. *Proceedings of the National Academy of Sciences*, *114*(11), 2946–2951. https://www.pnas.org/content/114/11/2946

[62] Mann, M. L., Berck, P., Moritz, M. A., Batllori, E., Baldwin, J. G., Gately, C. K., & Cameron, D. R. (2014). Modeling residential development in California from 2000 to 2050: Integrating wildfire risk, wildland and agricultural encroachment. *Land Use Policy*, *41*, 438–452. https://www.sciencedirect.com/science/article/pii/S0264837714001409

These unusual circumstances associated with the project's location and the fact that the project will relax some of the existing regulations, particularly those associated with existing roadways, thus encouraging additional development, result in the potential for impacts identified in **Section 3.1.2**. The proposed Project, pursuant to CEQA Guidelines Section 15300.2(c), is therefore **not eligible for any Categorical Exemption**.

3.3.3 Scenic Highways[63]

See discussion of potential impacts to scenic highways in **Section 3.1.2** of this letter under I-Aesthetics. To the degree that the proposed Project reduces fire safety requirements and increases development pressure in areas containing scenic highways, the proposed Project has the potential to impact scenic highways. The proposed Project is therefore not eligible for a Categorical Exclusion pursuant to CEQA Guidelines Section 15300.2(d).

3.3.4 Historic Resources

See discussion of proposed Project's potential impact to historical resources in **Section 3.1.2** of this letter under **I-Aesthetics and Section 3.1.2** under **V-Cultural Resources**. The proposed Project is therefore not eligible for a Categorical Exclusion pursuant to CEQA Guidelines Section 15300.2(f).

4. FAILURE TO COMPLY WITH REQUIREMENTS TO ANALYZE ALTERNATIVES

The Board has failed to comply with both CEQA and GOV § 11346.5(a)(13) requirements to truly consider alternatives. As noted on page 479 California Regulatory Notice:

> In accordance with **GOV § 11346.5(a)(13)**, the Board must determine that no reasonable alternative it considers, or that has otherwise been identified and brought to the attention of the Board, would be more effective in carrying out the purpose for which the action is proposed, or would be as effective and less burdensome to affected private persons than the proposed action, or would be more cost–effective to affected private persons and equally effective in implementing the statutory policy or other provision of law.

In the absence of the preparation of an Environmental Impact Report (EIR) for the project, which evaluates the potential environmental impacts and effectiveness of a range of reasonable alternatives, this finding cannot be made. The Initial Statement of Reasons addresses two alternatives to the proposed Project in the most perfunctory of ways: Alternative 1 - No Action Alternative and Alternative 2 - Performance Based Standards. The discussion admits that in the case of the proposed Action (Alternative 3): "(w)here possible, the Board included

[63] A map of Scenic Highways is available at: https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways

performance-based measures instead of or in addition to prescriptive standards." However, most of these were limited to new roads. Nowhere is there a description of how Alternative 2 differs from the proposed Project (Alternative 3); neither of these alternatives is described in any detail. Furthermore, the alternatives addressed in the Initial Statement of Reasons are not adequately analyzed, conclusions are not supported by substantial evidence, and the analysis fails to address the potential environmental impacts of either the proposed Project or the two alternatives.[64]

An EIR should be prepared for the proposed Project that should analyze a reasonable range of feasible alternatives to the proposed Project. Those alternatives should include: (1) a No Project Alternative; (2) an Alternative where the applicability of the existing SRA fire safe regulations is expanded to include the LRA VHFHSZ; and (3) a hybrid version of the proposed Project where the existing SRA regulations related to Safe Access and Egress, Road Width, Dead-end Roads, Road Surface, Road Grade, Road Curve Radius, Turnarounds, Turnouts, One-way Roads, Bridges or Elevated Structures on Roads and Driveways, and Post Fire Rebuilds on all Existing Roads and Driveways remains unchanged, with tighter regulations included for Dead-end Road limitations as recommended by the Fire Chief's Working Group. This alternative would include expansion of these provisions to include LRA VHFHSZ, but other elements of the proposed Project would remain as proposed.

5. AN ENVIRONMENTAL IMPACT REPORT IS REQUIRED FOR THE PROPOSED PROJECT

In order to address both the need to analyze a reasonable range of project alternatives and to address the proposed Project's potential for impacts, an EIR is required. CEQA Guidelines Section 15070 clarifies when an EIR rather than a Mitigated Negative Declaration is required:[65]

> A public agency shall prepare or have prepared a proposed negative declaration or mitigated negative declaration for a project subject to CEQA when:
>
> (a) The initial study shows that there is **no substantial evidence, in light of the whole record** before the agency, that the project **may** have a significant effect on the environment, or
>
> (b) The initial study identifies potentially significant effects, but:
>
> (1) Revisions in the project plans or proposals **made by, or agreed to by the applicant** before a

[64] See pages 50-51 of the Initial Statement of Reasons available at: available at: https://bof.fire.ca.gov/media/gm3ghql0/2-state-minimum-fire-safe-regulations-initial-statement-of-reasons_revised-04152021_ada.pdf

[65] See also Section 21083, Public Resources Code; Reference: Sections 21064, 21064.5, 21080(c), and 21082.1, Public Resources Code; Friends of B Street v. City of Hayward (1980) 106 Cal.App.3d 988; Running Fence Corp. v. Superior Court (1975) 51 Cal.App.3d 400.

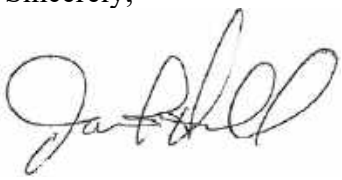
proposed mitigated negative declaration and initial study are released for public review would avoid the effects or mitigate the effects to a point where **clearly** no significant effects would occur, and

(2) There is **no substantial evidence**, in light of the whole record before the agency, that the project as revised **may** have a significant effect on the environment.[66]

In this letter we have provided substantial evidence of the proposed Project's potential to result in significant impacts. The proposed Action is a project subject to CEQA. The proposed Project is not eligible for a Categorical Exemption. Given the proposed Project's potential to result in a number of significant impacts, an EIR is required for the proposed Project.

I may be contacted at 310-982-1760 or at jamie.hall@channellawgroup.com if you have any questions, comments or concerns.

Sincerely,



Jamie T. Hall

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[66] This is further explained in CEQA Guidelines Section 15064(f)(1) specifically mandates that:

(1) If the lead agency determines there is substantial evidence in the record that the project **<u>may</u>** have a significant effect on the environment, the lead agency **<u>shall</u>** prepare an EIR (*Friends of B Street v. City of Hayward* (1980) 106 Cal.App.3d 988). Said another way, if a lead agency is presented with a fair argument that a project **<u>may</u>** have a significant effect on the environment, the lead agency **<u>shall</u>** prepare an EIR even though it may also be presented with other substantial evidence that the project will not have a significant effect (*No Oil, Inc. v. City of Los Angeles* (1974) 13 Cal.3d 68). (Emphasis added)

This is further clarified in CEQA Guidelines Section 15002(f)(1) which states:

(f) Environmental Impact Reports and Negative Declarations. An Environmental Impact Report (EIR) is the public document used by the governmental agency to analyze the significant environmental effects of a proposed project, to identify alternatives, and to disclose possible ways to reduce or avoid the possible environmental damage.

(1) An EIR is prepared when the public agency finds substantial evidence that the project **<u>may</u>** have a significant effect on the environment. (See: Section 15064(a)(1).)

(2) When the agency finds that there is **<u>no substantial evidence</u>** that a project may have a significant environmental effect, the agency will prepare a "Negative Declaration" instead of an EIR. (See: Section 15070.) (Emphasis added).

ATTACHMENTS

A. Comment Letter from Channel Law Group, LLP to the Board of Forestry and Fire Prevention dated March 21, 2021 re: State Minimum Fire Safe Standards, 2021, Agenda Item 3(a)
B. Comparison of Article 2 Road Specifications of Current 2020 Fire Safety Regulations vs. 2021 April 23 Proposed Regulations
C. Letter from Dr Thomas Covas re State Minimum Fire Safety Regulations - Safe Evacuation Considerations, June 19, 2021 and ASCE Technical Note: Toward Simulating Dire Wildfire Scenarios
D. Redline of Proposed Fire Safety Regulation Showing Changes from Existing Regulations
E. Additional Information Regarding Unusual Circumstances and Project's Potential for Significant Impacts
F. Maps of SRA and LRA Fire Severity Zones and Maps of Scenic Highways

Attachment A

Channel Law Group, LLP

8383 Wilshire Blvd.
Suite 750
Beverly Hills, CA 90211

Phone: (310) 347-0050
Fax: (323) 723-3960
www.channellawgroup.com

JULIAN K. QUATTLEBAUM, III
JAMIE T. HALL *
CHARLES J. McLURKIN

Writer's Direct Line: (310) 982-1760
jamie.hall@channellawgroup.com

*ALSO Admitted in Texas

March 21, 2021

VIA ELECTRONIC MAIL

Board of Forestry and Fire Protection
PO Box 944246
Sacramento, CA 94244-2460
publiccomments@bof.ca.gov

Re: State Minimum Fire Safe Standards, 2021, Agenda Item 3(a)

Dear Honorable Board Members:

This firm represents State Alliance for Firesafe Road Regulations ("SAFRR") with regard to the 2021 State Minimum Fire Safe Standards ("Standards" or "Project") proposed to be adopted by the Board of Forestry and Fire Protection ("Board"). This letter is intended to inform the Board that the Standards cannot be adopted without environmental analysis required by the California Environmental Quality Act ("CEQA"). Moreover, as explained below, the Project is not exempt from CEQA.

I. The California Environmental Quality Act

a. Purpose of California's Environmental Protection Statute

The California Environmental Quality Act (CEQA) is California's broadest environmental law. CEQA helps to guide public agencies such as the Board during issuance of permits and approval of projects. Courts have interpreted CEQA to afford the fullest protection of the environment within the reasonable scope of the statutes.

CEQA applies to all discretionary projects proposed to be conducted or approved by a public agency requiring discretionary government approval. *See* California Public Resources Code, §§1000 - 21178, and Title 14 Cal. Code Regs., § 753, and Chapter 3, §§ 15000 - 15387.

b. CEQA's Broad Definition of a "Project" Includes *All Phases* of a Development

A 'project' is '*the whole of an action,* which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment....'" *Tuolumne County Citizens for Responsible Growth, Inc. v. City of Sonora* (2007) 155 Cal.App.4th 1214, 1222. This includes all phases of a project that are reasonably foreseeable, and all related projects that are directly linked to the project. CEQA Guidelines § 15378.

c. CEQA Has a Strong Presumption in Favor of EIR Preparation

A strong presumption in favor of requiring preparation of an Environmental Impact Report ("EIR") is built into CEQA, which is reflected in what is known as the "fair argument" standard. Under this standard an agency must prepare an EIR whenever substantial evidence in the record supports a fair argument that a project may have a significant effect on the environment. *No Oil, Inc. v. City of Los Angeles* (1974) 13 Cal.3d 68, 75, 82; *Friends of "B" St. v. City of Haywood* (1980) 106 Cal.App.3d 988, 1002.

"The EIR is the primary means of achieving the Legislature's considered declaration that it is the policy of this state to 'take all action necessary to protect, rehabilitate, and enhance the environmental quality of the state.' [Citation.] The EIR is therefore 'the heart of CEQA.' [Citations.] An EIR is an environmental "alarm bell" whose purpose is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return.'" *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 392.

II. Background Information Regarding PRC § 4290 and the SRA Fire Safe Regulations

Concerned about development in fire-prone areas, the legislature enacted a statute in 1987 to require fire safety standards for development. Among other things, the Board of Forestry and Fire Protection "shall adopt regulations implementing minimum fire safety standards related to defensible space that are applicable to state responsibility area lands under the authority of the department." Public Resources Code § 4290(a). "These regulations apply to the perimeters and access to all residential, commercial, and industrial building construction within state responsibility areas approved after January 1, 1991." Emphasis added. Among other things, the "regulations shall include … [r]oad standards for fire equipment access." § 4290(a)(1).

The Board promulgated SRA Fire Safe Regulations (Cal. Code Regs., tit. 14, §§ 1270-1276) that became operative on May 30, 1991. The current version is dated July 2020. Questions initially arose as to whether the regulations applied to development on existing roads, or whether existing roads were grandfathered from regulation.

The county counsel of Amador County requested an opinion from the Office of the Attorney General in 1993 on the following question:

> Do the fire safety standards adopted by the Board of Forestry for development on state responsibility area lands apply to the perimeters and access to

> buildings constructed after January 1, 1991, on parcels created by parcel or tentative maps approved prior to January 1, 1991?

The attached Office of the Attorney General's opinion[1] concluded the regulations apply to existing roads, except for the two narrow exceptions in § 4290(a):[2]

> The fire safety standards adopted by the Board of Forestry for development on state responsibility area lands apply to the perimeters and access to buildings constructed after January 1, 1991, on parcels created by parcel or tentative maps approved prior to January 1, 1991, to the extent that conditions relating to the perimeters and access to the buildings were not imposed as part of the approval of the parcel or tentative maps.

This remained settled law for decades, although some jurisdictions may not have consistently applied the regulations to pre-1991 roads and enforcement was weak.

In 2019, the Office of the Attorney General confirmed the decades-old understanding of the SRA Fire Safe Regulations when it commented on the proposed Paraiso Springs Resort located in a fire-prone area in Monterey County. While the office was largely focused on CEQA, the SRA Fire Safe Regulations were an important aspect of the analysis. The Attorney General's Office wrote

> The Project does not comply with the state's dead-end road limitations and road width limitations applicable to the State Responsibility Area (SRA). . . . the County expresses its view that the dead end road limitation does not apply to the Project, because the road, having been built in the 19th century and maintained by the County, is not subject to the SRA regulations. Neither the regulations nor the statute setting forth the SRA requirements, however, include an exemption for historic roads or roads maintained by the county. In general, the SRA requirements apply to any application for new construction with only limited exceptions for certain parcel or tentative maps approved before 1991 and roads used solely for agriculture, mining or timber related purposes.[3]

When Monterey County contended that its local code exempts existing roads from the regulation for width and a ban on long, dead-end roads, the Attorney General's Office responded that whether a road "is a preexisting road is inconsequential," and "a County Code exemption for

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[1] Office of the Attorney General Opinion No. 92-907 (March 17, 1993) attached as **Exhibit A**

[2] § 4290(a) contains two exemptions: (1) the regulations do not apply where a building permit application was filed before January 1, 1991; and (2) the regulations do not apply to parcel and tentative subdivision maps approved before January 1, 1991 to the extent those maps depict and describe roads in accordance with the County's authority, under the Subdivision Map Act, to regulate the design and improvement of subdivisions.

[3] Letter from Deputy Attorney General Heather C. Leslie to Planning Commission of Monterey County, pp. 1-2 (July 9, 2019), attached as **Exhibit B.**

existing roads is inapposite."[4] Fundamentally, "exempting a Project from the SRA regulations simply because [it] is a pre-existing road would undermine the intent of the SRA regulations."[5]

The application of the SRA Fire Safe Regulations to existing roads was reconfirmed by the Board's Senior Board Counsel in October 2020 (attached). With regard to the failed attempt of Sonoma County to certify its ordinance as equal of exceeding the regulations, he wrote

> Throughout the certification process, Sonoma County has repeatedly maintained that Public Resources Code section 4290 and the Fire Safe Regulations do not apply to existing roads. Sonoma County's position is incompatible with the plain language of PRC § 4290.[5] the Fire Safe Regulations, and opinions and letters issued by the Attorney General of California. More importantly, the Fire Safe Regulations themselves – which constitute the basis for the certification determination – clearly provide no exemption for existing roads, and it is these regulations that the Sonoma County ordinance must equal or exceed. [citations omitted].[6]

The ongoing rulemaking purportedly is intended to implement SB 901, which extends the access regulations after July 1, 2021 beyond the SRA to also include

> lands classified and designated as very high fire hazard severity zones, as defined in subdivision (i) of Section 51177 of the Government Code" after July 1, 2021 …

PRC § 4290(a). The additional lands are local responsibility areas (LRA).

The rulemaking also must implement § 4290(b):

> The board shall, on and after July 1, 2021, periodically update regulations for fuel breaks and greenbelts near communities to provide greater fire safety for the perimeters to all residential, commercial, and industrial building construction within state responsibility areas and lands classified and designated as very high fire hazard severity zones, as defined in subdivision (i) of Section 51177 of the Government Code, after July 1, 2021. These regulations shall include measures to preserve undeveloped ridgelines to reduce fire risk and improve fire protection. The board shall, by regulation, define "ridgeline" for purposes of this subdivision.

There is no suggestion in SB 901 that extending the requirements of the SRA to the LRA was to drastically weaken the access requirements including those in Article 2 that had been in effect for three decades in the SRA, and to abandon the basic intent set forth in § 1273.00 that "[r]oads and driveways, whether public or private, unless exempted under 14 CCR § 1270.02(d),

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[4] Letter from Deputy Attorney General Nicole Rinke to Planning Commission of Monterey County, p. 2 (October 25, 2019), attached as **Exhibit C.**

[5] *Id*.

[6] Letter from Jeff Slaton, Senior Board Counsel, Board of Forestry and Fire Protection to Linda Schiltgen, Deputy County Counsel, County of Sonoma, p. 6 (October 23, 2020) attached as **Exhibit D.**

shall provide for safe access for emergency wildfire equipment and civilian evacuation concurrently, and shall provide unobstructed traffic circulation during a wildfire emergency consistent with 14 CCR §§ 1273.00 through 1273.09."

III. The Standards Are Not Eligible for the Class 8 Exemption Under CEQA

It is my understanding that Board staff may attempt to apply the Class 8 categorical exemption to forgo CEQA review of the Standards. This exemption includes actions by regulatory agencies, as authorized by state law or local ordinance, to ensure the maintenance, restoration, enhancement, or protection of the environment. 14 Cal Code Regs § 15308. However, the regulatory process must involve procedures for protection of the environment. This exemption does not apply to construction activities or to relaxation of standards allowing environmental degradation.

The Board should also note that CEQA exemptions are to be construed narrowly and are not to be expanded beyond the scope of their plain language. *See Save Our Carmel River v. Monterey Peninsula Water Mgmt. Dist.* (2006) 141 Cal.App.4th 677, 697; *Castaic Lake Water Agency v. City of Santa Clarita* (1995) 41 Cal.App.4th 1257; *Wildlife Alive v. Chickering* (1976) 18 Cal.3d 190, 205. They must also be construed in light of their statutory authorization, which limits such exemptions to classes of projects that have been determined not to have significant effects on the environment – ensuring categorical exemptions are interpreted in a manner affording the greatest environmental protection. *Azusa Land Reclamation Co. v. Main San Gabriel Basin Watermaster* (1997) 52 Cal.App.4th 1165, 1192; *see also Save our Sch. v. Barstow Unified Sch. Distr. Bd. Of Educ.* (2015) 240 Cal.App.4th 128, 140; *Cnty. of Amador v. El Dorado Cnty. Water Agency* (1999) 76 Cal.App.4th 931, 966. When determining if a project falls within a specific class of categorical exemption, courts generally look to the list of examples listed under the CEQA Guidelines, and reject the use of the exemption when the activity is not similar to the listed examples. *Cal. Farm v. Cal. Wildlife* (2006) 143 Cal.App.4th 173, 189–193 (rejecting Class 4, 13, and 25 categorical exemptions on basis of dissimilarity to listed examples); *Azusa Land Reclamation Co. v. Main San Gabriel Basin Watermaster*, *supra*, at pp. 1193–1195 (rejecting Class 1 or Class 4 categorical exemptions).

a. The Project Will Relax Existing Standards

In this case, the Project would relax standards already in effect, The Project does not fit within the scope of the plain language of the Class 8 exemption because the Standards do not "ensure the maintenance, restoration, enhancement, or protection of the environment." On the contrary the Project contemplates the relaxation of standards that will cause harm to the environment. The draft 2021 Regulations fundamentally undermine the stricter 2020 Regulations, unlocking thousands of existing parcels to new residential, commercial, and industrial development on existing subpar roads by excluding most of these parcels from most road standards. New development in fire-prone communities largely occurs on these existing substandard roads. The increased development and population intensity in high fire-prone communities and wildlands in the SRA and LRA will increase human caused ignitions and increase wildfire risks, resulting is significant impacts to public safety and the environment. The California Office of the Attorney General has noted that locating development in wildfire risk

areas "will itself increase the risk of fire" and increase the risk of exposing existing residents to an increased risk of fire, citing a plethora of reports.[7]

The 2021 Fire Safe Regulations will drastically undermine the strict 2020 Regulations and provide loopholes that will encourage development in fire-prone communities and wildlands on subpar roads. Almost all new development on existing subpar roads will not be subject to the prior strict road specifications, and could result in significant residential, commercial and industrial development without mitigation for environmental effects related to increased wildfire risks, biological resources, greenhouse gas emissions, transportation, inadequate emergency access, hazards, vulnerable populations, evacuation plans and cumulative effects. In Article 2 of the 2021 Regs, although §1273.00 still says "*shall provide for concurrent fire apparatus ingress and civilian evacuation, and shall provide unobstructed traffic circulation during a wildfire,"* this is now only applied to development on NEW roads. Even the word "safe" has been removed. The Intent requirement no longer applies to any existing roads. Further, the 2021 Regs removed words "legally constructed" from requirement to exempt post-fire rebuilds, which unlocks even more parcels to build structures that would not have been allowed under the 2020 Regs. Existing roads is where almost all new development occurs.

Despite the State Attorney General confirming that the fire safe regulations apply to all new and existing roads, the 2021 regulations exclude most existing roads for new residential, commercial and industrial development from the strict standards of Article 2, hence creating additional exclusions to the road standards. The 2021 Fire Safe Regulations will unlock thousands of parcels statewide for development on existing subpar roads, do not provide for safe concurrent access and egress, and ignore mitigation for potentially significant environmental effects.

The 2021 Regs exclude the strict standards from applying to existing parcels on all existing roads for development. All existing parcels and even newly created parcels under three, whether residential, commercial or industrial, escape the regulations and are unlocked for new residential, commercial and industrial development on subpar roads unless a change in zoning or change in use permits that increases intensity or density is needed. There is no definition for "increases in intensity or density," which could make this left to the discretion of local jurisdictions. The only requirement is a) that a road must be 14 ft. wide, with turnouts every 400 ft., with no more than half of the road be native surfaced, and b) grade can be up to 25% for 500 ft. There is no limit on length of dead-end roads, no requirement for turnarounds for fire apparatus, no requirements for curve radius to ensure fire apparatus can negotiate curves, no grade limitations under 25%, and no requirements for locked gates to have emergency means of operation. This unequivocally does not provide for safe concurrent access and egress. The stricter 2020 road standards are removed for these existing parcels, and even for existing roads for three or more new parcels that propose a change in zoning or use permits that will increase intensity or density they are significantly reduced by removing length limitation for dead-end or one-way roads. The removal of even those two standards will further unlock a substantial number of both existing and new parcels to development that proposes to cause an increase in intensity or density. Moreover, no new development is discouraged under this scenario. In fact,

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[7] Letter from Deputy Attorney General Nicole Rinke to Planning Commission of Monterey County, pp. 3-4 (March 20, 2019), attached as **Exhibit E.**

the opposite occurs, as new development can now occur on parcels that were locked for development since 1991 (e.g., previously locked include any parcel on dead-end roads over 1 mile long or on roads less than 18-20 ft. wide or with grades over 16%, up to 20% with mitigations.

The Board inserted a new statement under Purpose of the 2021 Regulations in Article 1:

> § 1270.02(d) By limiting Building construction in those areas where these minimum Wildfire protection standards are not satisfied, this reduces the risk of wildfires in these areas, which among other things protects the health, safety and welfare of residents, and protects natural resources and the environment.

The Board's Initial Statement of Reasons, p14, discussed why it added the above clause (emphasis added with underline):

> 1270.02(d). Adds a statement declaring that limiting Building construction in instances where the minimum Wildfire protection standards are not satisfied reduces the risk of wildfires, which protects the health, safety and welfare of residents, and protects natural resources and the environment. As minimum standards, the Fire Safe Regulations establish a floor for fire safe development in the SRA and LRA VHFHSZ. Implicit in these standards is that Building construction that does not meet the minimum standards will not provide sufficient minimum Wildfire protection for residents, property, or natural resources and the environment and, therefore, would be unsafe. Yet, experience indicates a significant problem of several local jurisdictions approving new development that fails to meet all of the Fire Safe Regulation standards. Similarly, objections raised by local jurisdictions during the informal scoping process preceding this rulemaking focus heavily on concerns that the standards impose unreasonable costs and impair development. The purpose of the added statement is the clarification to regulated parties that the benefits and purpose of the minimum wildfire protection standards cannot be realized through partial compliance with the regulations. Thus, the amendment is necessary to ensure a proper understanding of the scope and purpose of the Fire Safe Regulations that is consistent with PRC § 4290 and to identify and promote the benefits of proper implementation of the minimum Wildfire protection standards.

Taken together, the above statements by the Board acknowledge that the prior 2020 standards impaired development, and that adherence to the fire-safe standards is important to protect residents, property or natural resources or the environment. Yet by substantially reducing the standards for all existing roads, the Board achieves the opposite result.

The Initial Statement of Reasons (p5) states:

- The Fire Safe Regulations do not provide enough clarity regarding fire safety standards for existing roads.

That statement is contrary to prior statements by both the Board and the state Attorney General, both of whom confirmed that the regulations apply to existing roads (see above, footnotes 4-6), yet the Board now has without analysis of the impacts, chosen to substantially reduce its regulations for all existing roads.

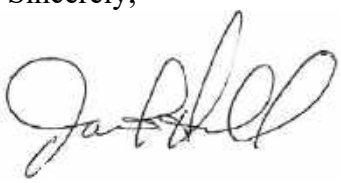
b. Specific Exceptions Prevent the Board from Deeming the Project Exempt from CEQA

Even if the Class 8 exemption applied, there are exceptions that prevent its usage. A project falling within a categorical exemption may nevertheless require environmental review if the project is subject to exceptions-to-the-exemptions listed under CEQA Guidelines § 15300.2, including projects involving: (a) locations involving environmental resources of hazardous or critical concern, (b) significant cumulative impact of successive projects of the same type in the same place, (c) reasonable possibility of significant environmental impacts due to unusual circumstances, (d) damage to scenic resources on State scenic highways, (e) locations listed as a hazardous waste site, or (f) substantial adverse changes to a historical resource. In this case, the Project may result in damage to scenic resources within official state designated scenic highways and may cause a substantial adverse change in the significant of historic resources. The Project may also impact on environmental resources of critical concern. Many such sites exist within the SRA and VHFHSZ within the LRA.

IV. Conclusion

In conclusion, the Project is not exempt from CEQA because it proposes the relaxation of existing standards which will cause a significant effect on the environment. The Board cannot approve the Standards until the required environmental review has been conducted. I may be contacted at 310-982-1760 or at jamie.hall@channellawgroup.com if you have any questions, comments or concerns.

Sincerely,



Jamie T. Hall

Exhibit A

TO BE PUBLISHED THE OFFICIAL REPORTS

OFFICE OF THE ATTORNEY GENERAL
State of California

DANIEL E. LUNGREN
Attorney General

OPINION	:	No. 92-807
of	:	
DANIEL E. LUNGREN Attorney General	:	MARCH 17, 1993
GREGORY L. GONOT Deputy Attorney General	:	

THE HONORABLE JOHN F. HAHN, COUNTY COUNSEL, COUNTY OF AMADOR, has requested an opinion on the following question:

Do the fire safety standards adopted by the Board of Forestry for development on state responsibility area lands apply to the perimeters and access to buildings constructed after January 1, 1991, on parcels created by parcel or tentative maps approved prior to January 1, 1991?

CONCLUSION

The fire safety standards adopted by the Board of Forestry for development on state responsibility area lands apply to the perimeters and access to buildings constructed after January 1, 1991, on parcels created by parcel or tentative maps approved prior to January 1, 1991, to the extent that conditions relating to the perimeters and access to the buildings were not imposed as part of the approval of the parcel or tentative maps.

ANALYSIS

By legislation enacted in 1987 (Stats. 1987, ch. 955, § 2), the State Board of Forestry ("Board") was directed to adopt minimum fire safety standards for state responsibility area lands[1/]

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1. On state responsibility area lands (see Pub. Resources Code, §§ 4126-4127; Cal. Code Regs., tit. 14, §§ 1220-1220.5), the financial responsibility of preventing and suppressing fires is primarily the responsibility of the state, as opposed to local or federal agencies. (Pub. Resources Code, § 4125.)

under the authority of the Department of Forestry and Fire Protection. Public Resources Code section 4290[2/] states:

> "(a) The board shall adopt regulations implementing minimum fire safety standards related to defensible space which are applicable to state responsibility area lands under the authority of the department. These regulations apply to the perimeters and access to all residential, commercial, and industrial building construction within state responsibility areas approved after January 1, 1991. The board may not adopt building standards, as defined in Section 18909 of the Health and Safety Code, under the authority of this section. As an integral part of fire safety standards, the State Fire Marshal has the authority to adopt regulations for roof coverings and openings into the attic areas of buildings specified in Section 13108.5 of the Health and Safety Code. The regulations apply to the placement of mobile homes as defined by National Fire Protection Association standards. *These regulations do not apply where an application for a building permit was filed prior to January 1, 1991, or to parcel or tentative maps or other developments approved prior to January 1, 1991, if the final map for the tentative map is approved within the time prescribed by the local ordinance.* The regulations shall include all of the following:
>
> "(1) Road standards for fire equipment access.
>
> "(2) Standards for signs identifying streets, roads, and buildings.
>
> "(3) Minimum private water supply reserves for emergency fire use.
>
> "(4) Fuel breaks and greenbelts.
>
> "(b) These regulations do not supersede local regulations which equal or exceed minimum regulations adopted by the state." (Emphasis added.)

As indicated in the statute, the Board's regulations are to help create "defensible space"[3/] for the protection of state responsibility areas against wildfires.

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2. All references hereafter to the Public Resources Code prior to footnote 8 are by section number only.

3. Defensible space is defined as:

> "The area within the perimeter of a parcel, development, neighborhood or community where basic wild land fire protection practices and measures are implemented, providing the key point of defense from an approaching wildfire or defense against encroaching wild fires or escaping structure fires. The perimeter as used in this regulation is the area encompassing the parcel or parcels proposed for construction and/or development, excluding the physical structure itself. The area is characterized by the establishment and maintenance of emergency vehicle access, emergency water reserves, street names and building identification, and fuel modification measures." (Cal. Code Regs., tit. 14, § 1271.00.)

Originally the regulations were to be applicable with respect to all building construction approved after July 1, 1989, but by subsequent legislation (Stats. 1989, ch. 60, § 1), the threshold date was changed to January 1, 1991. The regulations (Cal. Code Regs., tit. 14, §§ 1270-1276.03)[4] in fact became operative on May 30, 1991.

A "grandfather clause" in the underlying statute provides that "[t]hese regulations do not apply where an application for a building permit was filed prior to January 1, 1991, or to parcel or tentative maps or other developments approved prior to January 1, 1991, if the final map for the tentative map is approved within the time prescribed by the local ordinance." (§ 4290.) We are asked to determine whether the regulations apply to an application for a building permit filed *after* January 1, 1991, for a dwelling to be built on a parcel lawfully created by a parcel map or tentative map approved *prior* to January 1, 1991.

We begin by noting that the grandfather clause contains two ostensibly independent exceptions to the application of the regulations. One is directed at building permits and the other at subdivision maps.[5] These exceptions were apparently designed by the Legislature to exempt construction and development activity already in the "pipeline" as of January 1, 1991. According to Regulation 1270.01, it is the "*future* design and construction of structures, subdivisions and development" (emphasis added) which is to trigger application of the regulations.

Thus, although an application for a building permit is not made until after January 1, 1991, the proposed construction may garner an exemption if the parcel is covered by a parcel or tentative map approved prior to January 1, 1991 (provided that the final map for the tentative map is approved within the time prescribed by the local ordinance).[6] However, this raises the question of the purpose of the building permit exception since virtually any application for a building permit will be preceded by a parcel or tentative map approval for the parcel upon which the construction is proposed, even one which may have been obtained in the distant past.[7] A well-established rule of statutory construction holds that "`[w]henever possible, effect should be given to the statute as a whole, and to its every word and clause, so that no part or provision will be useless or meaningless. . . .'" (*Colombo Construction Co.* v. *Panama Union School Dist.* (1982) 136 Cal.App.3d 868, 876; see *Harris* v. *Capital Growth Investors XIV* (1991) 52 Cal.3d 1149, 1159 ["In analyzing statutory language, we seek to give meaning to every word and phrase in the statute to accomplish a result consistent with the legislative purpose, i.e., the object to be achieved and the evil to be prevented by the legislation"].)

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4. All references hereafter to title 14 of the California Code of Regulations are by regulation number only.

5. A parcel map is filed when creating subdivisions of four or fewer parcels, while a tentative map and final map are filed when creating subdivisions of five or more parcels. (Gov. Code, §§ 66426, 66428.)

6. The approval of a final map is a ministerial function once the tentative map has been approved and the conditions that were attached to the tentative map have been fulfilled. (Gov. Code, §§ 66458, 66473, 66474.1; *Santa Monica Pines, Ltd.* v. *Rent Control Board* (1984) 35 Cal.3d 858, 865; *Youngblood* v. *Board of Supervisors* (1978) 22 Cal.3d 644, 653.)

7. Statutory provisions for tentative maps and final maps first appeared in 1929 (Stats. 1929, ch. 838), while parcel maps were first required in 1971 (Stats. 1971, ch. 1446). (See Cal. Subdivision Map Act Practice (Cont.Ed.Bar 1987) §§ 1.2-1.3, pp. 3-5.)

Our task then is to search for an interpretation of section 4290 which is not only consistent with the legislative purpose but also furnishes independent significance to each of the two exceptions. We believe that the answer lies in the different manner in which each exception is phrased. The first is "where an application for a building permit was filed prior to January 1, 1991," and the second is "to parcel or tentative maps or other developments approved prior to January 1, 1991 . . . ." The "where" of the first exception implies a broad exemption encompassing all activity related to the building permit, whereas the "to" of the second exception implies an exemption which is limited to matters contained in the parcel or tentative map approval.

Under this reading of section 4290, only those perimeter and access conditions which were imposed during the parcel or tentative map approval process would be immune from the effect of the regulations. Typically, parcel and tentative map approvals include requirements for the improvement of the parcels within the subdivision. The Subdivision Map Act (Gov. Code, §§ 66410-66499.37; "Act")[8] establishes general criteria for land development planning in the creation of subdivisions throughout the state. Cities and counties are given authority under the legislation to regulate the design and improvement of divisions of land in their areas through a process of approving subdivision maps required to be filed by each subdivider. (§ 66411; *Santa Monica Pines, Ltd.* v. *Rent Control Board, supra*, 35 Cal.3d 858, 869; *South Central Coast Regional Com.* v. *Charles A. Pratt Construction Co.* (1982) 128 Cal.App.3d 830, 844-845.) A subdivider must obtain approval of the appropriate map before the subdivided parcels are offered for sale, or lease, or are financed. (§§ 66499.30, 66499.31; *Bright* v. *Board of Supervisors* (1977) 66 Cal.App.3d 191, 193-194.)

The Act sets forth procedures by which cities and counties may impose a variety of specific conditions when approving the subdivision maps. Such conditions typically cover streets, public access rights, drainage, public utility easements, and parks, among other improvements. (§§ 66475-66489; see *Associated Home Builders etc., Inc.* v. *City of Walnut Creek* (1971) 4 Cal.3d 633, 639-647; *Ayers* v. *City Council of Los Angeles* (1949) 34 Cal.2d 31, 37-43.)

The Act vests cities and counties with the power to regulate and control the "design and improvement of subdivisions" (§ 66411) independent of the power to impose the specified conditions enumerated above. "Design" is defined as:

> ". . . (1) street alignments, grades and widths; (2) drainage and sanitary facilities and utilities, including alignments and grades thereof; (3) location and size of all required easements and rights-of-way; (4) fire roads and firebreaks; (5) lot size and configuration; (6) traffic access; (7) grading; (8) land to be dedicated for park or recreational purposes; and (9) such other specific physical requirements in the plan and configuration of the entire subdivision as may be necessary to ensure consistency with, or implementation of, the general plan or any applicable specific plan." (§ 66418.)

"Improvement" is defined as:

> ". . . any street work and utilities to be installed, or agreed to be installed, by the subdivider on the land to be used for public or private streets, highways, ways, and easements, as are necessary for the general use of the lot owners in the

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8. All references hereafter to the Business and Professions Code are by section number only.

subdivision and local neighborhood traffic and drainage needs as a condition precedent to the approval and acceptance of the final map thereof.

". . . also . . . any other specific improvements or types of improvements, the installation of which, either by the subdivider, by public agencies, by private utilities, by any other entity approved by the local agency, or by a combination thereof, is necessary to ensure consistency with, or implementation of, the general plan or any applicable specific plan." (§ 66419.)

Accordingly, we believe that when a person applies for a building permit after January 1, 1991, the Board's fire safety regulations would be inapplicable as to any matters approved prior to January 1, 1991, as part of the parcel or tentative map process.[9] By contrast, a person who applied for a building permit prior to January 1, 1991, would not be subject to any of the access or perimeter requirements set forth in the regulations.

In addition to preserving independent significance for the building permit exception, the aforementioned reading of Public Resources Code section 4290 comports with another principle of statutory construction, namely that "`[e]xceptions to the general rule of a statute are to be strictly construed.'" (*Da Vinci Group* v. *San Francisco Residential Rent etc. Bd.* (1992) 5 Cal.App.4th 24, 28; see *Goins* v. *Board of Pension Commissioners* (1979) 96 Cal.App.3d 1005, 1009; see also *Board of Medical Quality Assurance* v. *Andrews* (1989) 211 Cal.App.3d 1346, 1355 [statutes conferring exemptions from regulatory schemes are narrowly construed].) More specifically, we have cited "the general rule that a grandfather clause, being contrary to the general rule expressed in a statute, must be narrowly construed. [Citations.]" (57 Ops.Cal.Atty.Gen. 284, 286 (1974).) A blanket exemption for all construction and development activity related to a parcel covered by an approved tentative or parcel map (provided the final map for the tentative map is approved within the time prescribed by the local ordinance) would violate these principles of statutory construction.

On the other hand, we decline to construe the grandfather clause here so narrowly that *all* of the Board's fire safety regulations become applicable when the owner of a parcel covered by a parcel or tentative map approved prior to January 1, 1991, applies for a permit to build on that parcel after January 1, 1991. To do so would mean that the exception for approved tentative or parcel maps would afford the landowner nothing at the construction and development stage. Again, we are guided by the principle that a statute should be interpreted in such a way that no part or provision will be rendered useless or meaningless. (*Colombo Construction Co.* v. *Panama Union School District*, *supra*, 136 Cal.App. 868, 876.)

Finally, we observe the rule that if more than one construction of a statute appears possible, we must adopt the one that leads to the most reasonable result. (*Industrial Indemnity Co.* v. *City and County of San Francisco* (1990) 218 Cal.App.3d 999, 1008.) An exemption from the regulations for those access and perimeter conditions which are included in the approval of a parcel or tentative map prior to January 1, 1991, serves to lock in reasonable entitlements while ensuring that other fire safety standards may be applied at the time a building permit is sought subsequent to January 1, 1991.

On the basis of the foregoing analysis and principles of statutory construction, we conclude that the fire safety standards adopted by the Board for development on state responsibility

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9. Regulation 1270.02, for example, exempts "[r]oads required as a condition of tentative [or] parcel maps prior to the effective date of these regulations . . . ."

area lands apply to the perimeters and access to buildings constructed after January 1, 1991, on parcels created by parcel or tentative maps approved prior to January 1, 1991, to the extent that conditions relating to the perimeters and access to the buildings were not imposed as part of the approval of the parcel or tentative maps.

* * * * *

Exhibit B

XAVIER BECERRA
Attorney General

State of California
DEPARTMENT OF JUSTICE

1300 I STREET, SUITE 125
P.O. BOX 944255
SACRAMENTO, CA 94244-2550

Public: (916) 445-9555
Telephone: (916) 210-7832
Facsimile: (916) 327-2319
E-Mail: Heather.Leslie@doj.ca.gov

July 9, 2019

Planning Commission of Monterey County
Monterey County Resource Management Agency
Attn: Mike Novo
1441 Schilling Place – South, 2nd Floor
Salinas, CA 93901
Sent via email: novom@co.monterey.ca.us

Re: Paraiso Springs Resort, Project No. PLN040183

Dear Mr. Novo and Commissioners,

We appreciate your preparation of a Recirculated Draft EIR [June 2019] ("RDEIR") responding to public comments on the previous Recirculated DEIR [February 3, 2018] and Final EIR [March 14, 2019] ("FEIR'), including the comments we submitted on March 20, 2019, regarding wildfire risks associated with the proposed Paraiso Springs Resort Development (the "Project"). We have reviewed the additional information presented and acknowledge and appreciate that you have provided more information regarding wildfire risks associated with the proposed Project than was included in the previous analyses. While we thank you for including that additional information, we remain concerned that the risks of wildfire have not been adequately addressed.[1] Specifically, the Project still does not comply with state requirements for development in State Responsibility Areas. Additionally, the RDEIR does not comply with CEQA's requirement to analyze and mitigate the Project's wildfire impacts.

The Project does not comply with the requirements for State Responsibility Areas.

The Project does not comply with the state's dead end road limitations and road width limitations applicable to State Responsibility Areas (SRA). (Cal. Code. Regs., tit. 14, § 1273.09 and 1273.01; adopted pursuant to Pub. Res. Code. § 4290.) In the RDEIR, the County expresses its view that the dead end road limitation does not apply to the Project because the road, having been built in the 19th century and maintained by the County, is not subject to the SRA regulations. (RDEIR, p. 62.) Neither the regulations nor the statute setting forth the SRA

[1] This letter is not intended, and should not be construed, as an exhaustive discussion of the RDEIR's compliance with the California Environmental Quality Act ("CEQA") or the Project's compliance with other applicable legal requirements.

requirements, however, include an exemption for historic roads or roads maintained by the County. In general, the SRA requirements apply to any application for new construction with only limited exceptions for certain parcel or tentative maps approved before 1991 and roads used solely for agriculture, mining, or timber related purposes. (See Cal. Code. Regs., tit. 14, § 1270.02.)

The RDEIR further states that the Project meets the intent of the dead end road limitation, but does not provide any support for its understanding of that intent, nor a justification for why compliance with the intent would excuse non-compliance with the clear regulatory requirement. (RDEIR, p. 62.) The RDEIR suggests that mitigation measure 3.7-6a (regarding the Fire Protection Plan to be developed) is being applied to the Proposed Project as if the SRA requirements did apply to the Project. (RDEIR, p. 62.) However, the Fire Protection Plan does not propose to modify the dead end nature of the road. CEQA requires mitigation that is triggered by the need to avoid significant environmental impacts; CEQA mitigation may not be used to excuse non-compliance with independent state regulatory requirements.

Likewise the RDEIR suggest that the Project complies with state law requiring two 10-foot travel lands because 98% of the road would comply—only a "small area of 150 feet" due to topographical constraints would be limited to an 18-foot wide road. (RDEIR, p.61.) However, substantial compliance is not the state standard. A small section of inadequate road width could create a bottleneck that would hamper evacuation, particularly where emergency response vehicles are trying access the site at the very same time others are seeking to exit the site. While the SRA regulations provide a process for requesting exceptions to the standards (Cal. Code. Regs., tit. 14, §§ 1270.07 and 1270.08), the RDEIR does not suggest that an exception through this process has been requested or approved.

The RDEIR does not comply with CEQA's requirement to analyze and mitigate the Project's wildfire impacts.

The RDEIR considered the questions identified in section XX of the Updated CEQA Guidelines regarding wildfire risk (RDEIR, pp. 59-72), which we appreciate. The RDEIR did not, however, address the related but separate question in Section IX(g) of Appendix G regarding whether the Project would "expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires." This issue should also be addressed. (See CEQA Guidelines § 15126.2, subd. (a) [requiring the evaluation of potentially significant environmental impacts of locating development in areas susceptible to hazardous conditions such as wildfire risk areas, especially as identified in hazard maps and risk assessments]; *California Building Industry Assn. v. Bay Area Air Quality Management Dist.* (2015) 62 Cal.4th 369, 388 [holding that while CEQA does not require consideration of the environment's effect on a project, it does require analysis of the project's impacts on the existing environment].)

In addition, for the wildfire associated risks that the RDEIR did analyze—those in Section XX of Appendix G—the RDEIR concludes that there are potentially significant effects, but that these effects are less than significant after mitigation. The RDEIR proposes additional mitigation measures, but these measures largely rely on development of future fire prevention plans. With respect to this project and the proposed future plans, CEQA prohibits the deferral of mitigation. (See CEQA Guidelines § 15126.4(a)(1)(B).) While the development of mitigation measures may sometimes be appropriate, there is no reason here for this failure to prepare the evacuation plan as part of the DEIR or FEIR, nor have any performance standards or potential mitigation measures been identified. (*Ibid*; see also, e.g., *San Joaquin Raptor Rescue Center v. County of Merced* (2007) 149 Cal.App.4th 645, 671 [mitigation measure that included development of post-FEIR management plan was found to be improperly deferred mitigation where no basis was provided for why development of mitigation measures needed to be deferred to future plans and, no specific criteria, performance standards, or potential mitigation measures were set forth in EIR].)

In our previous comments, we also requested that the FEIR address evacuation in the event of fire. Specifically, we highlighted the need to consider: (i) the evacuation of employees and guests in the event of a fire, (ii) the increased challenges that existing users of the sole ingress and egress point will face in the event of an evacuation due to the added users on the road, and (iii) the increased challenges that firefighters and emergency responders would face accessing the site and preventing the spread of a wildfire due to the simultaneous evacuation of guests and employees from the Project and neighboring areas. (March 20, 2019 letter, pp. 4-5). Again, we appreciate that you have now included an evacuation plan in the RDEIR, but find that it and the supporting analysis it relies upon falls short of addressing the full scope of issues we believe are required for analysis under CEQA in order to provide full information to decision makers and the public about the wildfire risks associated with the Project.

In addition, the RDEIR does not seem to disclose or address the possibility of a fire starting down canyon and potentially blocking Paraiso Springs Road altogether. While the RDEIR describes that the site will be designed to serve as a temporary refuge area during fire, which could conceivably help to mitigate the risk of a down canyon fire occurring that blocks evacuation via Paraiso springs Road, this is not fleshed out in any detail. The RDEIR also does not address the ability of emergency vehicles to efficiently access the site while the sole ingress and egress road is also being utilized for evacuation.[2]

---

[2] The letter from Keith Higgins, which is indirectly referenced in the RDEIR, includes just a conclusory comment on this issue—"The one lane on the road going toward the project site would remain open almost exclusively to inbound emergency access. In summary, the road is capable of handling incoming and outgoing traffic in a mass evacuation with no significant conflicts with the surrounding neighbor or incoming emergency vehicles." (March 8, 2019 Letter from Keith Higgins, Traffic Engineer, referenced in Appendix 2 of the RDEIR, p. 140.)

We appreciate your consideration of our comments and respectfully request that you revise the RFEIR accordingly. If you have any questions or would like to discuss our comments, please feel free to contact us.

Sincerely,

HEATHER C. LESLIE
Deputy Attorney General
NICOLE U. RINKE
Deputy Attorney General

For XAVIER BECERRA
Attorney General

Exhibit C

XAVIER BECERRA
Attorney General

State of California
DEPARTMENT OF JUSTICE

1300 I STREET, SUITE 125
P.O. BOX 944255
SACRAMENTO, CA 94244-2550

Public: (916) 445-9555
Telephone: (916) 210-7797
Facsimile: (916) 327-2319
E-Mail: Nicole.Rinke@doj.ca.gov

October 25, 2019

Planning Commission of Monterey County
Monterey County Resource Management Agency
Attn: Mike Novo
1441 Schilling Place – South, 2nd Floor
Salinas, CA 93901
Sent via email: novom@co.monterey.ca.us

Re: Paraiso Springs Resort, Project No. PLN040183

Dear Mr. Novo and Commissioners,

We appreciate your preparation of a Final Environment Impact Report ("FEIR") responding to public comments on the previous two Recirculated Draft Environmental Impact Reports ("RDEIRs"), including the comments we submitted on March 20, 2019 and July 9, 2019 regarding wildfire risks associated with the proposed Paraiso Springs Resort Development (the "Project"). After reviewing the additional information presented, we acknowledge and appreciate that you have provided more information regarding wildfire risks associated with the proposed Project and have revised certain mitigation measures to address some of those wildfire risks. While the additional information improves the Project and the environmental documents, we remain concerned that the Project still does not comply with state evacuation and fire suppression access requirements for development in a State Responsibility Area ("SRA").[1] In addition, the FEIR's discussion of the wildfire risks associated with the Project, particularly related to evacuation in the event of a wildfire, remains inadequate.

The Project does not comply with the state's dead-end road limitations and road width limitations applicable to development within an SRA. (Cal. Code. Regs., tit. 14, §§ 1273.08 and 1273.01; adopted pursuant to Pub. Resources Code § 4290.) In response to our July 9, 2019 comments regarding the Project's failure to comply with SRA regulations, the FEIR claims that Paraiso Springs Road is an existing road and thus exempt from such regulations. (FEIR, p. 617.) In support of such an exemption, the FEIR cites to Monterey County Code section 18.56.020(B)(2)(a) which states "[r]egulations contained in this chapter do not apply to the following building, construction, or development activities… (a) Existing structures, roads,

[1] This letter is not intended, and should not be construed, as an exhaustive discussion of the FEIR's compliance with the California Environmental Quality Act ("CEQA") or the Project's compliance with other applicable legal requirements.

streets and private lanes or facilities." (FEIR, p. 23.) However, neither the Monterey County Code nor the SRA regulations support an exemption for this Project for several reasons.

First, whether Paraiso Springs Road is an existing road is inconsequential. Paraiso Springs Road will now be the *sole* access to new commercial construction within an SRA. (February 2018 RDEIR, p. 2-45.) SRA regulations explicitly "apply to: (1) the perimeters and *access to* all residential, commercial, and industrial building construction within the SRA approved after January 1, 1991…." (Cal. Code Regs., tit. 14, § 1270.02, emphasis added.) It is indisputable that the Project involves commercial building construction within the SRA approved after January 1, 1991. Thus, the Monterey County Code exemption for existing roads is inapposite – the Paraiso Springs Road is now "access" to a Project that falls within the scope of the SRA regulations. In addition, the SRA regulations do not expressly exempt all existing roads. (14 Cal. Code Regs., tit. 14, § 1270.02(d) [exempting "[r]oads used solely for agricultural, mining, or the management and harvesting of wood products"].) The Monterey County Code cannot be read to apply less stringent standards than the SRA regulations because counties that assume responsibility for fire prevention and suppression in SRAs must "provide[] the same or higher intensity of fire protection to these lands as is provided under existing levels of state protection in other comparable areas of the state." (Cal. Code Regs., tit. 14, § 1658.)

Second, contrary to the assertions in the FEIR (p. 22), the problems with the existing road cannot be cured through an exception pursuant to California Code of Regulations, title 14, section 1270.06 (outlining a process to apply for an exception to the applicability of the SRA regulations). An exception under that regulation still must provide "the same practical effect as" the SRA regulations. As the FEIR acknowledges, "the Fire Protection Plan cannot modify the dead-end nature of the road" (p. 618). Accordingly, the practical effect of prohibiting dead-end roads of certain lengths in an SRA, which are important to timely evacuation and fire suppression access, cannot be achieved through an exception. In addition, the Project applicant has not applied for an exception. (FEIR, p. 23.)

Third, annexation of Project land into the Mission-Soledad Rural Fire Protection District will not cure violations of the SRA regulations (see FEIR, p. 23 [describing annexation].) Annexation does not exempt a project from SRA regulations. Land can be both within a fire protection district and within the SRA. (Health & Saf. Code § 13811.)

Finally, we note that exempting the Project from the SRA regulations simply because Paraiso Springs Road is a pre-existing road would undermine the intent of the SRA regulations. SRA regulations are meant to ensure that "[t]he future design and construction of structures, subdivisions and developments in the SRA shall provide for basic emergency access…." (Cal. Code Regs., tit. 14, § 1270.01(b).) Constructing a new resort that includes a nearly 150,000 square foot hotel, an over 18,000 square foot "hamlet" with a spa and retail buildings, and over 75 timeshare units (February 2018 RDEIR, pp. 2-20, 2-27) at the end of a narrow road that exceeds the dead-end road regulations undermines emergency access in the SRA. While this road may have been exempt from SRA width and dead-end road limitations prior to development

of the Project, there is no basis for an interpretation that allows construction within the SRA of a large new resort that would depend upon the use of that road for the sole emergency access to and evacuation from the Project. It is the construction of a new project that triggers the application of the SRA regulations; the fact that the Project is being constructed at the end of an existing road does not negate the triggering effect of the new construction. A contrary interpretation would incentivize development without adequate evacuation routes and emergency access in the SRA rather than prevent it.

From a CEQA perspective, the concerns with SRA non-compliance are exacerbated by the gaps that remain in the disclosures the County is providing related to the wildfire risks associated with the Project and specifically the risks associated with evacuation. We will not reiterate our previous comments here, but at this time note the following continuing concerns related to evacuation: (1) the analysis related to evacuees trying to leave the site while emergency response personnel are trying to access the site remains inadequate and conclusory (FEIR, p. 623 [citing back to the Fire Protection Plan and the Wildland Fire Evacuation Plan, which identifies the issue (June 2019 RDEIR, p. 164), but does not describe how it will be addressed]); and (2) the reasonableness of the evacuation time – estimated to be a minimum of 17-18 minutes - has not been defined or compared to a standard of significance, nor is it supported by substantial evidence (June 2019 RDEIR, pp. 61, 140, 141-142).[2]

We appreciate your consideration of our comments and respectfully request that you refrain from certifying the FEIR until it is revised accordingly and refrain from approving the Project until it complies with the SRA. If you have any questions or would like to discuss our comments, please feel free to contact us.

Sincerely,

NICOLE U. RINKE
Deputy Attorney General
HEATHER LESLIE
Deputy Attorney General

For XAVIER BECERRA
Attorney General

[2] We also note that some of our previous comments have not been as fully addressed as would be desirable to fully inform decision-makers and the public. For example, the FEIR assumes that the Project will exacerbate wildfire risk, but does not describe the risk in any detail, making it more difficult to evaluate and address that risk and the associated issues related to evacuation. (See June 2019 RDEIR, p. 64.)

Exhibit D

BOARD OF FORESTRY AND FIRE PROTECTION
THE NATURAL RESOURCES AGENCY
STATE OF CALIFORNIA

KEITH GILLESS, CHAIR
Wade Crowfoot, *Secretary*
Gavin Newsom, *Governor*

P.O. Box 944246
SACRAMENTO, CA 94244-2460
(916) 653-8007
(916) 653-0989 FAX
BOF Website (www.bof.fire.ca.gov)

October 23, 2020

Linda Schiltgen
Deputy County Counsel
County of Sonoma
Linda.Schiltgen@sonoma-county.org

Re: BOF Certification Questions: Sonoma County Responses

Dear Ms. Schiltgen:

The Board is in receipt of your letter dated October 18, 2020, and addressed to Board of Forestry and Fire Protection (Board) Chair Keith Gilless and Vice Chair Darcy Wheeles. It has been distributed to the Board members for consideration. Because your letter provides responses to questions posed by Board staff, please accept this response by Board staff on their behalf.

Background

A brief summary is appropriate for context. For several months, the Board, its staff, and representatives from the County of Sonoma (Sonoma County) have been engaged in discussions relative to the potential certification of Sonoma County's local fire safe ordinance as equaling or exceeding the Board's Fire Safe Regulations (14 CCR § 1270 et seq.). Board members and staff have expressed concerns about portions of Sonoma County's ordinance that either omit standards included in the Fire Safe Regulations or set standards that, on their face, appear to be less stringent than the Fire Safe Standards. At the September 22, 2020, Joint Committee Meeting of the Board, Board staff were directed to provide Sonoma County with a list of specific questions posed by both Board members and staff, that, if answered, would allow Board staff to properly evaluate the local ordinance and enable staff to make a recommendation to the Board in favor of certification. By letter dated October 12, 2020, Board staff issued those questions to Sonoma County. By your letter dated October 18, 2020, Sonoma County provided its responses for Board staff consideration.

When being presented with the myriad of issues related to certification, it is important not to lose sight of the fundamental task before the Board. The Board is reviewing the Sonoma County ordinance pursuant to 14 CCR § 1270.04 to decide whether to exercise its discretion "to certify [the ordinance] as equaling or exceeding [the Board's regulations] when they provide

the same practical effect."[1] While it is generally not difficult to determine whether a particular provision of an ordinance equals or exceeds a corresponding provision in the Board's regulations, the same cannot be said for determining whether a local ordinance that fails to equal or exceed the Board's regulation nonetheless provides the *same practical effect*. To aid in this determination, the Board's regulations provide a detailed definition of the term *same practical effect*. With these tools, the Board must evaluate each provision of a local ordinance and compare it to the corresponding provision in the Board's regulations to determine whether the local ordinance provision equals or exceeds the Board's regulation or provides the same practical effect. Still, the task before the Board is challenging and requires careful and deliberate consideration, especially when applying the complex definition of *same practical effect*.

Summary of Staff Findings

At its core, the Board's task is fundamentally a very narrow inquiry: *For each substantive requirement in the Fire Safe Regulations, does the local ordinance have a provision that equals or exceeds or has the same practical effect as that Fire Safe Regulation standard?*

Board staff have completed their review of Sonoma County's responses and continue to have significant concerns that the ordinance does not satisfy the Board's standards for certification. Sonoma County's responses pertaining to standards for existing roads and for ingress/egress that allows concurrent civilian evacuation are of particular concern. Accordingly, Board staff lack an evidentiary basis to support a recommendation for certification. Board staff have enclosed an updated matrix, dated to reflect the upcoming November 3, 2020, Joint Committee Meeting of the Board, that provides more specific observations and staff recommendations.[2]

This is an appropriate point to address Sonoma County's position that if the Board does not certify its ordinance, then Sonoma County is prevented from enjoying the benefits of the portions of its ordinance that it believes clearly equal or exceed the Fire Safe Regulations. The Board would like to reiterate to Sonoma County that certification of its ordinance by the Board is not required for Sonoma County to apply its own standards that go above and beyond the state minimum standards. Board certification is a creature of regulation, the benefit of which is to publicly document a mutual understanding of the Board and the local jurisdiction that a local ordinance equals or exceeds the Fire Safe Regulations. Under Public Resources Code § 4290, subdivision (c), the Board's minimum standards do not supersede any Sonoma County

[1] References in this letter to the "equal or exceed" standard includes this "same practical effect" standard.

[2] The attached November 3, 2020, matrix represents Board staff's current evaluation and recommendations to the Board, and supersedes any prior matrix, whether final or draft, including the deliberative draft September 4th matrix, which apparently Sonoma County misunderstood to be something more than merely an informal tool to facilitate productive discussion in advance of the September Board meeting.

ordinance that equals or exceeds the minimum state standards.[3] Thus, if Sonoma County has stricter, greater, or enhanced requirements in its ordinance, the lack of certification by the Board does not preclude Sonoma County from deciding to apply these stricter requirements.

Turning now to Sonoma County's responses, it is worth mentioning that it is unnecessary for Board staff to address each individual response. The purpose of the exercise is to provide Board staff sufficient information so that it may complete its evaluation of Sonoma County's ordinance and issue a recommendation for the Board's consideration. As noted above, the certification determination is made in light of the language of the local ordinance and any documents incorporated by reference. Supplemental information, such as Sonoma County's responses, merely illuminates the local jurisdiction's interpretation of its ordinance and how it equals or exceeds the Fire Safe Regulations.

In any event, Sonoma County's responses reflect a number of recurring issues of concern to Board staff that can be summarized generally without focusing on the content of specific responses or specific sections of the ordinance. Board staff have consistently expressed concerns that the Sonoma County ordinance and Administrative Policy do not articulate specific minimum standards for each type of road referenced in the ordinance and Administrative Policy[4] nor does it articulate what standards govern the fire official's assessment that a road provides concurrent civilian evacuation. Board staff's questions were particularized and specific attempts to identify those standards so that Board staff could evaluate where they equal or exceed the Fire Safe Regulations.

Detailed Discussion

Board staff acknowledge that some of Sonoma County's responses on certain other issues resolved Board concerns or provided additional clarity. This letter focuses on major issues that preclude the Board staff from issuing a recommendation in favor of certification. Board staff refer interested parties to the staff-prepared final matrix for the November 3, 2020, Board meeting for a more comprehensive discussion of portions of the ordinance that equal or exceed the Fire Safe Regulations.

Sonoma County's ordinance and responses to staff questions on the following topics are inadequate. Sonoma County's responses do not provide the requested citations nor identify the specific standards that Sonoma County contends apply. Instead, the responses reiterate

[3] It is necessary to acknowledge that the statute does not include a "same practical effect" standard. A local ordinance applied pursuant to Public Resources Code § 4290(c), without obtaining Board certification, must "equal" or "exceed" the Fire Safe Regulations in the ordinarily understood sense of those words. Thus, a non-certified local ordinance applied by a local jurisdiction is potentially subject to a stricter legal standard than is required for certification under 14 CCR § 1270.04.

[4] The ordinance and Administrative Policy contemplate new roads, existing roads, existing public roads, existing private roads, and existing roads approved on a discretionary basis and a ministerial basis. Sonoma County is entitled to have as many subcategories as it chooses, but each must have an established standard that equals or exceeds the Fire Safe Regulations.

positions that, while not unimportant, are nonetheless irrelevant to the narrow certification inquiry before the Board.

We will first address the various arguments that are not relevant to and therefore do not inform staff's analysis.

Sonoma County Argument 1: Some portions of the ordinance equal or exceed the Fire Safe Regulations

Sonoma County's introductory paragraph includes a chart outlining several provisions showing how its ordinance equals or exceeds the Fire Safe Regulations. This general claim is reiterated in response to several questions.

The Board acknowledges that many elements of Sonoma County's standards clearly equal and exceed the minimum standards of the Fire Safe Regulations. This has been well established in documents provided for Board consideration, as well as testimony at several Board and Joint Committee Meetings this year. However, exceeding the Fire Safe Regulations in certain aspects does not excuse an ordinance's failure to equal or exceed other standards imposed by the Fire Safe Regulations.

Thus, the Board's determination that one provision of a local ordinance equals or exceeds the Fire Safe Regulations has no bearing on the Board's consideration of other unrelated provisions of the local ordinance. This argument is an unnecessary distraction and does not inform whether all provisions satisfy the certification standard. As such, the Board does not focus on these statements when applying the certification standard.

Sonoma County Argument 2: Takings / Inability to secure easements for expanding roads

Another argument advanced in Sonoma County's preliminary comments asserts that the Fire Safe Regulations effect an unconstitutional "taking" of private property for public use because they make a landowner individually responsible for upgrading existing roads that serve other parcels. Other variations of this argument suggest that the Fire Safe Regulations encourage Not-In-My-Backyard (NIMBY) opposition to prevent development or allow a landowner to extort a neighbor by refusing to sell an easement to facilitate road widening to comply with state standards. These arguments are also reiterated in response to several questions seeking clarity about Sonoma County's standards and how they equal or exceed the Fire Safe Regulation.

The Fire Safe Regulations have not been legally challenged, let alone invalidated, as being unconstitutional in any sense. They are binding as minimum standards on Sonoma County, notwithstanding speculative practical inconveniences at the local level. It is Sonoma County's prerogative to impose those burdens on individual landowners instead of exercising other options at its disposal, such as eminent domain. In any event, the issue of who bears financial responsibility for upgrading existing roads that serve as access to new building construction has no bearing on whether road standards in Sonoma County's ordinance – such as minimum road

widths – equal or exceed the corresponding standard in the Fire Safe Regulations. As such, the Board does not focus on this argument when evaluating the ordinance for compliance with its certification standard.

Sonoma County Argument 3: Fire Safe Regulation Exception Process

Another argument advanced in Sonoma County's preliminary comments asserts inadequacies in the Fire Safe Regulations' "exception process" (14 CCR § 1270.06), including a loophole authorizing local jurisdictions to waive any requirement in the Fire Safe Regulations. This argument is reiterated in response to several questions.

While the Board appreciates Sonoma County's comments and will certainly takes these into account to consider whether regulatory changes are warranted to address this point, Sonoma County's concerns regarding 14 CCR § 1270.06 do not have bearing on the present issues related to certification of Sonoma County's ordinance, for multiple reasons. First, Sonoma County adopted its own "exceptions to standards" provision, § 13-23, in its ordinance. Notwithstanding certain staff comments in the matrix, the Board may determine that these provisions equal or exceed the minimum standards in § 1270.06. Second, assuming for the sake of argument that 14 CCR § 1270.06 allows for "behind closed doors" determinations, or fails to provide a thorough open and public process, this is irrelevant as to whether *other* sections of Sonoma County's ordinance equal or exceed the Board's minimum standards. Finally, to the extent Sonoma County finds the minimum standards in 14 CCR § 1270.06 unsatisfactory, the regulation expressly states that local jurisdictions "may establish additional procedures or requirements for exception requests." Thus, to the extent Sonoma County believes that the Board's exception standards in § 1270.06 are deficient, Sonoma County may remedy these by imposing additional requirements. Consequently, the Board does not focus on this argument when evaluating the ordinance for compliance with its certification standard.

Sonoma Ordinance Issue 1: Existing Road Standards

We now turn to Sonoma County's discussion of the specific standards and citations in response to the Board staff's questions relating to existing road standards and the concurrent evacuation requirement. Sonoma County's responses continue to make conclusory statements about the quality of its ordinance and Administrative Policy. Board staff are repeatedly told that these documents have "clear standards" and a "strict set of requirements," but do not reference actual standards or citations. Board staff needs this information to properly evaluate the ordinance for certification. Without it, Board staff are compelled to conclude that no such standards exist and recommend to the Board that Sonoma County's ordinance does not satisfy the certification standard for existing roads.

Throughout the certification process, Sonoma County has repeatedly maintained that Public Resources Code section 4290 and the Fire Safe Regulations do not apply to existing roads. Sonoma County's position is incompatible with the plain language of PRC § 4290,[5] the Fire Safe Regulations,[6] and opinions and letters issued by the Attorney General of California.[7] More importantly, the Fire Safe Regulations themselves – which constitute the basis for the certification determination – clearly provide no exemption for existing roads, and it is these regulations that the Sonoma County ordinance must equal or exceed. This represents a fundamental and intractable disagreement between the Board and Sonoma County. Sonoma County's position on existing roads, standing alone, is a legitimate basis for determining that the ordinance does not equal or exceed the Fire Safe Regulations.

Moreover, Sonoma County's position has a discernible impact on it characterizes its ordinance, and the amount of effort necessary for Board staff to parse its assertions for accuracy and compliance with the certification standard. Specifically, any assertion Sonoma County makes about "roads" requires the Board to evaluate whether Sonoma County intends to apply that standard to existing roads.

Setting aside this fundamental disagreement as to the applicability of the Fire Safe Regulations, Sonoma County has argued that, in the alternative, even though it believes existing roads are exempt, Sonoma County's Administrative policy nonetheless applies to existing roads and equals or exceeds the Fire Safe Regulations.

Board staff have reviewed the ordinance and Administrative Policy in great detail. The only specific standard identified in the Administrative Policy is a 12-foot width requirement for existing private roads. On its face, this falls short of the minimum road standard in 14 CCR § 1273.01. That is a significant obstacle to Board certification. More concerning, however, is that the policy provides no standards for other types of existing roads. As noted before, the Administrative Policy contemplates a public/private distinction, as well as a discretionary/ministerial distinction. No standards for these types of existing roads exist in the ordinance or Administrative Policy. Until these deficiencies are remedied to the Board's satisfaction, Sonoma County's ordinance and Administrative Policy is conclusively ineligible for certification. As Sonoma County's responses fail to provide the requested information with sufficient detail, Board staff can only conclude that no such standards exist and recommend to the Board that the ordinance does not meet the certification standard.

Additionally, Sonoma County's reliance on the Administrative Policy as setting the exclusive standard for existing roads raises concerns beyond the road width issues. The Fire Safe

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[5] "These regulations apply to the perimeters and access to all residential, commercial, and industrial building construction within state responsibility areas… ." (Emphasis added.)

[6] See 14 CCR § 1270.02 which includes the same language in fn5 and includes an exemption for roads that is limited to agricultural, mining, and timber-related operations.

[7] See, e.g., AG Opinion No. 92-807 (1993); AG letter to Monterey County Planning Commission (Oct. 25, 2019).

Regulations set other standards for roads, such as grade, surface requirements, radius, turnouts, turnarounds, and dead end roads. However, the Administrative Policy is silent on those issues, and Sonoma County's responses do not identify what standard, if any, apply for those existing road requirements, and where they can be located in the ordinance or Administrative Policy.

In this respect, Sonoma County's response to Question 1.1.3.3 is emblematic. The Board staff posed a direct request seeking specific information: "For convenience and reference, please complete the following table by filling in the specific ordinance section or Administrative Policy section that addresses the specified SRA Fire Safe Regulation." One axis of the referenced table identified (with citations) all of the above-referenced road requirements in the Fire Safe Regulations that Sonoma County's ordinance must equal or exceed. Along the other axis, the table identified all of the categories of existing roads referenced in the Administrative Policy. Sonoma County's task was to provide an ordinance or Administrative Policy citation in each box.

Board staff believed the table provided the best and simplest opportunity for Sonoma County to provide the information necessary to support certification with respect to requirements for existing roads. Sonoma County's response does not provide any relevant or informative citations. For two columns, Sonoma County cross-referenced six of its other responses to unrelated questions. The County responses did not comply with the call of the question to provide a citation, nor could any relevant citations or standards be discerned from the referenced answers. In fact, some of the cited responses made no mention of the relevant terms. With respect to the remaining categories of existing road standards (public/private and ministerial/discretionary), Sonoma County referenced provisions of its ordinance that apply to *new* roads.[8] These citations are also unresponsive to the call of the question because §13-25(f) of the ordinance clearly states that existing road standards are governed by the Administrative Policy.

In the last couple of weeks, Sonoma County has advanced a new argument indicating that its adoption of an optional appendix from the California Fire Code satisfies the requirement for establishing road requirement standards that satisfy the Fire Safe Regulations. As Board staff made clear in a prefacing comment to Question 2.2 and subsequent follow up questions, compliance with the California Fire Code does not ensure compliance with the Fire Safe Regulations. Those standards are relevant only to the extent that they equal or exceed the Fire Safe Regulations. The Board staff's follow up questions on this point quoted a number of the appendix standards which Sonoma County revised so that the standard may also be satisfied by compliance "with the Sonoma County Fire Safe Standards or as approved by the fire code official." The reference to the Sonoma County standard is a circular reference to the very

[8] If Sonoma County intends the particular referenced ordinance provisions to apply both to new roads and existing roads, the ordinance and Administrative Policy will require substantial revision.

standard that Sonoma County has been unable to identify to Board staff. Additionally, it appears that the fire code official has unfettered discretion to impose any standard – including a lesser standard or no standard at all. Sonoma County's responses do not contradict this reasoning or clarify the requirements. Board staff stand by the position that Sonoma County's adoption of the California Fire Code Appendix is meaningless in connection with establishing that the Sonoma County ordinance and Administrative Policy provide minimum standards that equal or exceed the Fire Safe Regulations' road requirement standards.

Again, Sonoma County has had repeated opportunities to identify and provide citations for these standards. Sonoma County repeatedly declines to do so. Until Sonoma County can provide direct and adequate responses to the Board's important questions, the Board has no evidentiary basis to support a decision to certify the Sonoma County ordinance.

Sonoma County Ordinance Issue 2: Concurrent civilian evacuation

A distinct component of the Fire Safe Regulations that is somewhat related to the road conditions issue is that emergency access requirements must accommodate ingress and egress for emergency vehicles *and concurrent civilian evacuation*. Board members and staff have asked Sonoma County on prior occasions to clarify how Sonoma County's ordinance and Administrative Policy satisfy this requirement.

The Administrative Policy states, in an introductory paragraph, that a Fire Inspector will perform an evaluation to "confirm that the proposed development equals or exceeds the below requirements, and the proposed development shall be safely accessed and served in the case of a wildfire, with adequate ingress, egress and the capacity for concurrent evacuation and emergency response."

We acknowledge and appreciate that Sonoma County confirms in its responses that the concurrent evacuation standard is an additional standard to equaling or exceeding "the below requirements." However, Sonoma County does not articulate what standards guide the Fire Official in making that determination.

The first requirement following that statement in the Administrative Policy highlights the importance of that query. The requirement sets a road width standard for existing private roads at 12-ft plus 1-foot of vegetation clearance on both sides. This leads Board staff to question how a 12-foot road, which falls short of the Fire Safe Regulation road width requirement, could be certified as ensuring concurrent civilian evacuation during a wildfire. Nor does this section of the Administrative Policy provide guidance as to what standards guide the Fire Official in making a subjective determination. Absent clarification – which did not occur in response to the Board staff's questions – the Board is appropriately reluctant in determining that the ordinance and Administrative Policy equal or exceed the Fire Safe Regulations.

In addition, Sonoma County routinely refers Board staff to §§ 13-62 and 13-63, in response to Board staff's concerns about the lack of specific articulable standards in the ordinance and Administrative Policy. Sonoma County's reliance is misplaced, however, as those sections merely confer discretionary authority to require compliance with additional fire safety measures. Critically, permissive authority provides no assurances to the Board that additional requirements will be imposed at the level contemplated by the Fire Safe Regulations.

Conclusion

In conclusion, Sonoma County's responses to questions issued by Board staff fail to resolve a number of significant concerns expressed by Board members and staff over the preceding months. The question before the Board at the November 3, 2020, Board meeting is whether the Sonoma County ordinance equals or exceeds the substantive requirements in the Fire Safe Regulations. At this time, the Sonoma County ordinance and Administrative Policy include requirements that fall short of the Fire Safe Regulations and omit standards that are required as a counterpart to other provisions of the Fire Safe Regulations. Until Sonoma County addresses these infirmities, Board staff lack a basis to recommend, and the Board lacks a legal basis to certify, the ordinance as equaling or exceeding the Fire Safe Regulations.

Consistent with our prior communications and correspondence, this letter reflects only the position of Board staff. We wish to be transparent with Sonoma County regarding our ongoing concerns and how we intend to advise the Board in advance of the November Board meeting. Ultimately, the Board will be responsible for making its own assessment on the question of whether the Sonoma County ordinance should be certified as equaling or exceeding the Fire Safe Regulations. Similarly, we respect the right of Sonoma County to disagree with Board staff positions expressed in this letter or the enclosed matrix when the matter is considered by the Board's Joint Committee on November 3, 2020.

Respectfully,

Jeff Slaton
Senior Board Counsel
Board of Forestry and Fire Protection
Jeffrey.Slaton@bof.ca.gov

Exhibit E

XAVIER BECERRA
Attorney General

State of California
DEPARTMENT OF JUSTICE

1300 I STREET, SUITE 125
P.O. BOX 944255
SACRAMENTO, CA 94244-2550

Public: (916) 445-9555
Telephone: (916) 210-7797
Facsimile: (916) 327-2319
E-Mail: Nicole.Rinke@doj.ca.gov

March 20, 2019

Planning Commission of Monterey County
Monterey County Resource Management Agency
Attn: Mike Novo
1441 Schilling Place – South, 2nd Floor
Salinas, CA 93901
Sent via email: novom@co.monterey.ca.us

Re: Paraiso Springs Resort, Project No. PLN040183

Dear Mr. Novo and Commissioners,

Our office has reviewed the Final Environmental Impact Report ("FEIR") and the Recirculated Draft Environmental Impact Report ("DEIR") for the proposed Paraiso Springs Resort Development ("Project") and respectfully submits the following comments. We request that you consider our comments prior to certifying the FEIR. We spoke with County Counsel and staff on March 20, 2019 and alerted them we would be submitting comments prior to your consideration of the FEIR at your March 27, 2019 Planning Commission meeting.

The Attorney General's Office submits these comments pursuant to the Attorney General's independent power and duty to protect the environment and natural resources of the State from pollution, impairment, or destruction, and in furtherance of the public interest. (See Cal. Const., art. V, § 13; Gov. Code, §§ 12511, 12600-12612; *D'Amico v. Bd. of Medical Examiners* (1974) 11 Cal.3d 1, 14-15.)[1] In the wake of the State's deadliest wildfires this past year and the increased occurrence of fires anticipated throughout the State in coming years, it is particularly important that local jurisdictions carefully review and consider new developments in fire prone areas. This is particularly important for new developments proposed in the wildland urban interface or in other relatively undeveloped and remote areas, like the area where the Project is proposed.

Paraiso Springs Resort, LLC, proposes to develop a spa resort along the floor of a canyon in the foothills at the end of rural Paraiso Springs Road in a "very high fire sensitivity

[1] This letter is not intended, and should not be construed, as an exhaustive discussion of the FEIR's and DEIR's compliance with the California Environmental Quality Act ("CEQA") or the Project's compliance with other applicable legal requirements.

zone." The Project site is bordered to the east by grazing and farm land, and to the north, south and west by the Santa Lucia Mountains. (DEIR 2-1.) The Project site was previously operated as a commercial hot springs resort beginning in 1874. (DEIR 3-137.) The site has seen several fires over the years that have destroyed various structures on the Property, including a fire in 1891 that destroyed one of the more substantial buildings on the property, a fire in 1928 that destroyed the hotel, the bathhouse, a garage, the dance hall, and some other smaller buildings, and another major fire in 1954 that destroyed the rebuilt hotel and annex. (DEIR 2-15, 3-137-3-138.)

Paraiso Springs Road, the sole ingress and egress to the site,[2] is a narrow, two-lane road varying in width from 16 to 22 feet that dead ends at the Project site. (DEIR 2-45.) The road currently serves approximately 90 vehicles per day associated with single-family residences and local vineyards. (DEIR 3-329.) The Project would include the development of 103 hotel rooms, 77 multi-bedroom timeshare units, three restaurants, entertainment facilities, and various spa amenities at the end of this narrow two-lane rural road. (DEIR 2-17 – 2-18.) It is anticipated that there would be several hundred people at the resort on peak days. With the Project at 100% occupancy, there would be over 400 additional vehicle trips per day on the road. (DEIR 3-336.)[3] Additionally, because of parking limitations at the proposed Project site and limitations with the capacity of the rural access road, the Project proposes to shuttle in many of the guests and 90% of all employees from a parking lot nearly two miles away. (DEIR 3-335 – 3-336.)

Monterey County, as the lead agency, has prepared a FEIR for the proposed Project. Despite the acknowledgment that the Project is located in a "very high fire sensitivity zone," the FEIR fails to adequately address the risk of fire in several important respects.[4]

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[2] In response to CalFire's comments on the DEIR, the FEIR suggests that there is a service road for ingress and egress at the rear of the development. (FEIR, Response to comment letter No. 18, 2-12.) The response cites to maps within the DEIR. (*Ibid.*) These maps show service roads *within* the development, but these roads do not appear to provide ingress and egress *to the Project site.*

[3] We note that several commenters questioned whether the traffic analysis for the Project underestimated the trips that will be associated with the Project. (See, e.g., FEIR, Comment Letter 10 (p 20-23).) While we have not evaluated the adequacy of the traffic analysis, we are concerned that the number of visitors accessing the site may be even higher than anticipated in the FEIR, which would exacerbate our concerns regarding the risks associated with wildfires and the FEIR's inadequate analysis of those risks.

[4] We understand that LandWatch submitted comments to the County on January 15, 2019 raising many of these same issues. The FEIR does not include a response to these comments.

I. THE FEIR MUST ANALYZE THE INCREASED RISK OF WILDFIRE THAT WILL RESULT FROM THE PROJECT.

The FEIR does not, but should, analyze the increased risk of wildfire that will result from siting the proposed development within a high fire sensitivity zone. The DEIR discussed emergency access to the site in the event of fire and onsite measures to provide fire protection.[5] However, the DEIR did not disclose that locating new development in a high fire sensitivity zone will itself increase the risk of fire and, as a result, increase the risk of exposing existing residents in the area as well as guests and employees of the resort to an increased risk of fire. (See CEQA Guidelines Section 15126.2, subd. (a) [requiring the evaluation of potentially significant environmental impacts of locating development in areas susceptible to hazardous conditions such as wildfire risk areas, especially as identified in hazard maps and risk assessments].)[6] It is well-accepted that building in wildland areas increases the risk and severity of fires.[7] The California

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[5] A preliminary fire protection plan was prepared for the Project. (DEIR 2-55.) Fire protection elements include hydrants, sprinkler systems, and the use of fire-resistant building materials. (DEIR 2-55 – 2-56.) The Project also includes vegetation management for defensible space. (See e.g., DEIR 3-81 – 3-80.) Cal Fire's Department of Forestry and Fire Protection commented on, among other issues, the adequacy of the vegetation management discussed in the DEIR. (FEIR Comment Letter 18.) In response to these comments, the FEIR simply refers back to the DEIR and does not provide any additional commitments or project modifications. (FEIR, Responses to Comment Letter 18, 2-12.)

[6] Our comments are based on the CEQA Guidelines in effect prior to the recent 2019 update, but it is worth noting that the update confirms and clarifies the need to consider wildfire risks as part of the environmental review for new developments subject to CEQA.

[7] See, e.g., Rapid Growth of the U.S. Wildland-Urban Interface Raises Wildfire Risk (February 6, 2018) (https://www.pnas.org/content/pnas/115/13/3314.full.pdf); *New York Times*, Climate Change is Fueling Wildfires Nationwide, New Report Warns (November, 2018) (https://www.nytimes.com/interactive/2018/11/27/climate/wildfire-global-warming.html); *Scientific American*, Living on the Edge: Wildfires Pose a Growing Risk to Homes Built Near Wilderness Areas (https://www.scientificamerican.com/article/living-on-the-edge-wildfires-pose-a-growing-risk-to-homes-built-near-wilderness-areas/); *USDA*, Wildfire, Wildlands, and People: Understanding and Preparing for Wildfire in the Wildland-Urban Interface (January 2013) (https://www.fs.fed.us/rm/pubs/rmrs_gtr299.pdf). While these articles and reports largely focus on the risks of locating housing within fire-prone areas, the same risks would appear to apply for commercial establishments offering overnight lodging. The issue with locating development in these areas is that most fires are human induced, so bringing people into wildland areas creates an increased risk that fire will occur. (*Ibid.*) In addition, the risks of fire are exacerbated because development in wildland areas alters the natural environment (e.g., it fragments native vegetation, introduces nonnatives species, and disturbs soils). (See Rapid Growth of the U.S. Wildland-Urban Interface Raises Wildfire Risk (February 6, 2018) (https://www.pnas.org/content/pnas/115/13/3314.full.pdf).) Further, fire management in developed wildland areas is more challenging because it is more difficult to fight fires in these

Supreme Court has confirmed that this kind of risk must be considered as part of the CEQA analysis for a proposed project. (*California Building Industry Assn. v. Bay Area Air Quality Management Dist.* (2015) 62 Cal.4th 369, 388 [holding that while CEQA does not require consideration of the environment's effect on a project, it does require analysis of the project's impacts on the existing environment].)

Concerns regarding the Project's impact on the occurrence of widlfires were raised in public comments on the DEIR. For example, Lois Panziera noted that "[w]hen more people are added to a high severity fire area, the potential for fires will occur." (FEIR, Letter 7, Comment 75.) In response, the FEIR simply refers back to the DEIR. (FEIR 2-58 – 2-59.) However, as explained above, the DEIR did not address the increased risk of fires that will result from locating new development within a high fire sensitivity zone. The County should address these issues prior to certifying the FEIR.

II. THE FEIR SHOULD ADDRESS EVACUATION IN THE EVENT OF FIRE.

Based upon the onsite fire fighting infrastructure (sprinkler systems, etc.) and the Project proponent's commitment to develop a fire protection plan, the DEIR concludes that the "occupants would be protected to the extent possible in the case of fire" such that the potential impacts associated with wildfire hazards would be less than significant. (DEIR 3-215 – 3-216.) The DEIR describes emergency access *to* the site, but does *not* address: (i) the evacuation of employees and guests in the event of a fire, (ii) the increased challenges that existing users of the sole ingress and egress road will face in the event of an evacuation due to the added users on the road, or (iii) the increased challenges that firefighters and emergency responders would face accessing the site and preventing the spread of a wildfire due to the simultaneous evacuation of guests and employees from the Project and neighboring areas. The EIR should include a more robust discussion of the fire hazards and describe the evacuation plan for guests and employees, as well as neighboring residents and existing users of Paraiso Springs Road. (See *Clews Land & Livestock, LLC v. City of San Diego* (2017) 19 Cal.App.5th 161, 194 [discussing whether or not the EIR adequately considered the risk of fire to future users of the project site, including acceptable evacuation plans]; *California Clean Energy Committee v. County of Placer* (Cal. Ct. App., Dec. 22, 2015, No. C072680) 2015 WL 9412772 [concluding that the EIR failed to adequately evaluate evacuation issues associated with the project].)

In response to public comments, including from CalFire's Department of Forestry and Fire Protection, asking about evacuation plans (see Comment Letter 18 starting on FEIR 2-11), the FEIR promises that a final Fire Protection Plan that includes evacuation procedures will be developed. (FEIR 2-12.) Meaningful analysis of the risk of fire and evacuation plans should not be deferred until after the FEIR is certified and the Project is approved. (See CEQA Guidelines

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landscapes and fire management strategies that allow natural fires to burn are not an option. (*Ibid.*; see also *USDA*, Wildfire, Wildlands, and People: Understanding and Preparing for Wildfire in the Wildland-Urban Interface (January 2013) (https://www.fs.fed.us/rm/pubs/rmrs_gtr299.pdf).)

Section 15126.4(a)(1)(B).) While the deferment of mitigation measures may sometimes be appropriate, here no basis has been provided for why the evacuation plan was not already prepared as part of the DEIR or FEIR, nor have any performance standards or potential mitigation measures been identified. (*Ibid*; see also, e.g., *San Joaquin Raptor Rescue Center v. County of Merced* (2007) 149 Cal.App.4th 645, 671 [mitigation measure that included development of a post-FEIR management plan was found to be improperly deferred mitigation where no basis was provided for why the development of mitigation measures needed to be deferred to future plans and, no specific criteria, performance standards, or potential mitigation measures were set forth in the EIR].) In addition, based on the discussion in the DEIR, we are concerned that the Fire Protection Plan, when it is developed, may not adequately address the totality of issues related to evacuation (see above).

III. THE PROJECT MUST COMPLY WITH THE REQUIREMENTS FOR STATE RESPONSIBILITY AREAS.

The Project is located in a State Responsibility Area, which is an area for which the Board of Forestry and Fire Protection has designated the State to be financially responsible for preventing and suppressing fires. (Pub. Resources Code, § 4102.) Local jurisdictions may adopt standards for wildfire protections in State Responsibility Areas, but those standards must be at least as stringent as the State's minimum standards and be certified by the State. (Pub. Resources Code, § 4117.) Monterey County has adopted standards for this purpose. (Monterey County Code, §§ 18.56.010 – 18.56.100.) The proposed Project does not appear to comply with these standards.

First, Paraiso Springs Road is a dead end road that terminates at the proposed Project location. Both the County and State standards limit dead end roads to a cumulative length not to exceed 5,280 feet. (Monterey County Code § 18.56.060(11); Cal. Code. Regs., tit. 14, § 1273.09.) The Paraiso Springs Road that would serve as the sole ingress and egress for the Project is 1.9 miles long or 10,032 feet according to Google maps, nearly double the allowable limit. The FEIR and DEIR do not address the Project's failure to comply with the length limitation for dead end roads in State Responsibility Areas.

Second, the width of Paraiso Springs Road will not comply with the local or State standards. State standards generally require a minimum of two 10-foot traffic lanes. (Cal. Code Regs., tit. 14, § 1273.01.)[8] The Project proposes to widen "*the majority of* Paraiso Springs Road to either 18 or 20 feet wide." (DEIR 3-340.) However, the FEIR explains that the road will only be widened "where feasible". (FEIR 2-10). The Project proponent should commit to widening not just a majority of the road, but the entirety of the road, to a distance that complies with the applicable standards.

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[8] The County requires that all roads have a minimum of two 9-foot traffic lanes. (Monterey County Code, § 18.56.060(3).) Therefore, the State's more stringent requirement would control.

IV. THE PROJECT SHOULD PROVIDE PROXIMAL ACCESS TO A FIRE STATION.

Despite a request from the local fire district, the Project proponent has declined to construct a small fire station onsite, concluding that it would be "incompatible with resort operations." (DEIR 3-307.) The closest fire station is nine miles away, which the program Google Maps reports is an 18-minute drive. The DEIR claims the fire station is within the 15 minutes recommended by the applicable Monterey County General Plan. (DEIR 3-307.) Public comments on the DEIR noted the Project site is not within a 15-minute response time from the Soledad fire station. (See, e.g., Letter 7, Comment 74 starting on FEIR 2-33 and Letter 8, Comment 5 starting on FEIR 2-61). Rather than provide factual support for the DEIR's claim that the fire station is within 15 minutes from the Project site or revise the Project so that it complies with the Monterey County General Plan recommendation, the FEIR simply restates the DEIR's conclusion that "the project would not warrant construction of new or expanded facilities in order to maintain … response times…." (FEIR 2-11). The FEIR should be revised to accurately reflect the distance of the nearest fire station to the Project site and should require compliance with the policy prescribed by the General Plan—preferably with construction of a fire station onsite as requested by the local fire district.

We appreciate your consideration of our comments and respectfully request that you defer certification of the FEIR and approval of the Project until you more fully address the risks of wildfire associated with the Project. If you have any questions or would like to discuss our comments, please feel free to contact us.

Sincerely,

NICOLE U. RINKE
Deputy Attorney General
HEATHER C. LESLIE
Deputy Attorney General

For XAVIER BECERRA
Attorney General

SA2019300293

Attachment B

Comparison of Article 2 Road Specifications of
Current 2020 Fire Safe Regulations vs. 2021 April 23 Proposed Regulations
6-1-21

Background.
SB901 became law in 2018, and amended PRC 4290 to require the Board of Forestry (BOF) to include all Very High Fire Hazard Severity Zones (VHFHSZ) in addition to the SRA in its fire safe regulations, and to establish standards for fuel breaks and greenbelts near communities, and to preserve undeveloped ridgelines. The BOF published revised regulations on April 23, 2021. In its Initial Statement of Reasons (ISOR, p. 5), it stated that a problem was that the same set of regulations may not be appropriate for both the SRA, which is typically in rural environments with low to moderate housing densities, and the VHFHSZ which (when in the LRA) are often more suburban or urban with higher housing densities. It also stated that a problem was that the current regulations do not provide enough clarity regarding minimum fire safety standards for existing roads, despite the state Attorney General's office issuing an Opinion (1993) confirming that existing roads were covered under PRC 4290, which was confirmed by BOF in an October 23, 2020 letter to Sonoma County. Yet the revisions by BOF in the proposed regulations do not contain differing standards for the SRA and the VHFHSZ of the LRA, yet do contain vastly differing standards for development on existing vs new roads, resulting in a substantial weakening of the regulations for most new development as this occurs on existing roads.

This document summarizes the changes in road specifications for Emergency Access and Egress (Article 2) from the current 2020 July 28 SRA Fire Safe Regulations and the proposed April 23, 2021 State Fire Safe Regulations.

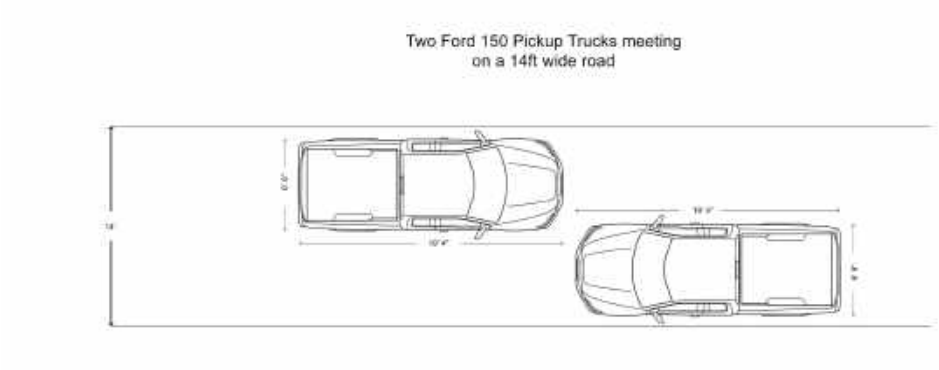
1. Emergency Access and Egress
Baseline: 2020 Jan 1 SRA Fire Safe Regulations. Apply to new development in the SRA, and have been in effect since January 1, 1991.
Article 2 Emergency Access and Egress. § **1273.00 Intent**
Access is for all roads to access the perimeter and to access the structure, and is not limited to being from Collector Roads to structure. Board of Forestry initially proposed confirming the accepted definition of Access as from a fire station to the structure as Fire Apparatus Access Road is defined in the California Fire Code (December 1 2020).

- Applies equally on existing or new roads, to all new Building construction and new Development.
- Exemptions under Article 1, § 1270.02 for roads used exclusively for agriculture, mining, or timber, or for building permits prior to 1991 (p2).
- Requires safe concurrent civilian evacuation and wildfire apparatus ingress and unobstructed traffic circulation during a wildfire, for all existing and new roads (§ 1273.00, p5).

Project: 2021 April 23 Proposed Regulations (for new development in the SRA and in VHFHSZ in the LRA)
Article 2 Access and Egress. § 1273.00 Safe Access and Egress (p22)["Intent" was eliminated]

- Access is restricted to being from Collector Roads to structure, not from a fire station to structure (§ 1270.01(a) p1). For existing roads, most road regulations for Access only apply to a small subset of new development.

- Exemptions under Article 1, § 1270.03 (p11-14) are the similar except that post-fire rebuilds are no longer limited to "legally constructed" structures, as this language was removed (§ 1270.03(c) p13).
- Regulations were significantly limited for existing roads to only:
  - Within the Perimeter of the parcel (e.g., driveways) for both new and existing roads (same as in 2020).
  - Access using newly built roads from Collector Roads to the Building applies to all new roads, similar as in 2020 except that access was not limited to being from Collector Roads to structure.
  - Access using existing roads Above the Threshold is limited to a subset of the Article 2 road specifications, removing length limitations on dead-end roads and one-way roads.
  - Access using existing roads Below the Threshold is substantially further limited by not requiring the Article 2 specifications at all and instead providing significantly reduced specifications (detailed below).
  - The requirement for 'shall provide' for safe concurrent civilian evacuation and wildfire apparatus ingress and unobstructed traffic circulation during a wildfire was limited to newly built roads only, and this does not apply to existing roads. (§ 1270.00(a) p22).



Existing Roads Above the Threshold (Significant Change in Use Intensity): applies to all development involving permitting or approval of 3 or more new parcels; application for change in zoning or use permit that increases density or intensity respectively (§ 1273.00(c) p22-23.) However, there is no definition of what constitutes increased intensity or density, leaving that decision completely up to the local jurisdiction. Thus a local jurisdiction could still apply the much lesser road regulations for Below the Threshold discussed below, even when a change in zoning or use permit occurred that increased use.

Existing Roads Below the Threshold, when Development Does Not Change Zoning Density or Use Intensity (Insignificant Change in Use Intensity): applies to development on all existing parcels, and approval or permitting of up to 2 new parcels. As there is no definition of what constitutes increased intensity or density, that decision is completely left up to the local jurisdiction. Thus the local jurisdiction could apply the 'Below the Threshold' regulations to most new development on existing roads.

Potential Significance from Reducing Fire Safe Regulations: Almost all new development occurs on existing roads. By reducing the requirements for all existing roads, the 2021 regulations will allow substantially more development in fire prone areas than under the 2020 regulations. Development in high fire-prone wildlands is leading to more human-caused ignitions where people live (Radeloff et al. 2018, Syphard et al. 2007; Balch et al. 2017). The 2021 regulations substantially increase hazards and expose the public and structures to significant risk both for safe evacuation from wildfires as well as ability for firefighting apparatus to concurrently enter or even to enter at all; that requirement was removed from the 2021 regulations for all existing roads (§ 1273.00(a) p22).

The fact that the Article 2 full road specifications of 2021 regulations only apply to existing roads <u>within the parcel (e.g. driveways)</u>(§ 1273.00(b) p22) and not for outside access to the parcel perimeter, versus applying ubiquitously in 2020 regulations, risks public harm from wildfires. This includes (i) jeopardizing safe evacuation of civilians on subpar roads and (ii) significantly hindering ability of firefighting apparatus to reach the structure. The 2020 regulations required 20 ft. access roads, length limitations on dead-end roads and one-way roads as well as many other specifications as discussed below, whereas the 2021 regulations removed most regulations or substantially reduced requirements for all existing roads for all new residential, commercial, and industrial development. Most development in the SRA and LRA VHFHSZ occurs on existing roads.

The Initial Statement of Reason (ISOR) published by BOF on April 23, 2021, erroneously states (p. 4) that the proposed changes 'will increase the safety of people and property by providing minimum fire safety standards related to defensible space that may allow them to escape an oncoming wildfire; allow firefighters to find, defend, and protect their property from a wildfire…'., In reality, the proposed changes, which exempt all existing roads from full regulations and remove requirements for concurrent ingress and evacuation, provide much less safety than the current regulations. BOF states (ISOR, p. 5) that one of the purposes of the proposed changes is to 'establish standards for existing roads', yet the state Attorney general's office has affirmed on multiple occasions, as well as has the BOF, that the current standards apply equally to existing roads as well as new roads. The 2021 regulations establish significantly reduced standards for existing roads compared to the current 2020 regulations.

2. Road Width

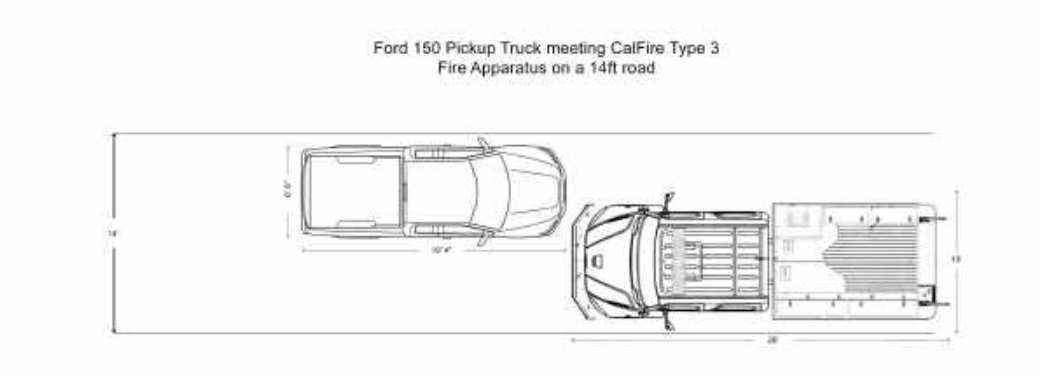
Baseline: 2020 Jan 1 SRA Fire Safe Regulations. 20 ft. minimum width (two 10 ft. wide traffic lanes) for <u>all roads (new and existing)</u> for all new development (§ 1273.01, p6).

Project: 2021 April 23 Proposed Regulations have similar standards for <u>newly built roads. (§ 1273.05, p33-35)</u>.

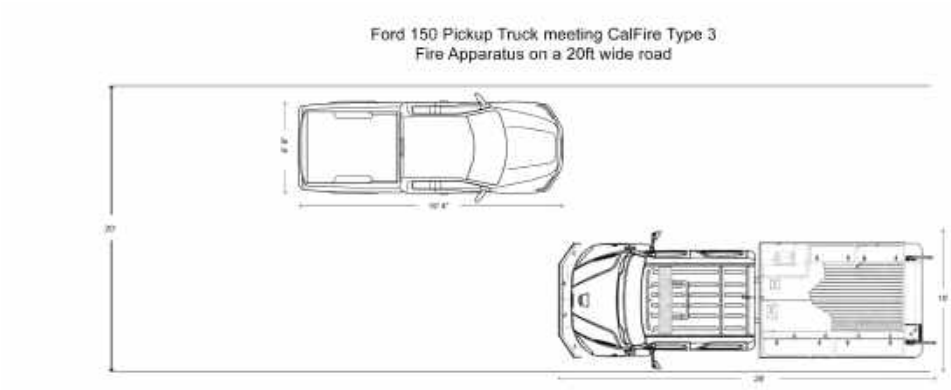
For <u>existing roads</u>, there are now two sets of standards (for insignificant and significant changes in use/intensity described under (1) Emergency Access and Egress above), both sets of standards are much weaker than in the 2020 regulations. Almost all new development in the SRA and LRA VHFHSZ uses existing roads and thus would have far weaker standards than in the 2020 regulations. Most existing parcels will fall into the category of insignificant changes in use intensity, unless the parcel is being further subdivided into 3 or more parcels, or a change

in zoning that increases density, or a change in use permit that increases intensity is required, in which case they would be significant change in use intensity (§ 1270.00(c) p22). Moreover, as there is no definition of what constitutes increased intensity or density, that decision is completely left up to the local jurisdiction. Thus the local jurisdiction could apply the 'Below the Threshold' regulations to most new development on existing roads. Thus, as almost all development under the 2021 regulations on existing parcels would be deemed an insignificant increase in use intensity, it would be exempt from the regulations existing in 2020. It would not require the prior safety measure of concurrent evacuation and firefighting apparatus ingress.

1) For development on existing roads, for an insignificant change in use intensity (as defined solely by the local jurisdiction, thus likely most development): the only requirement is a 14 ft. wide road, with standard turnouts every 400 ft., and that the grade only cannot exceed 25% for more than 500 ft. (§ 1273.12, p47-48); see discussion below under point 5 on grade. Not only is concurrent evacuation and firefighting apparatus ingress impossible, two normal-sized vehicles cannot even pass on the road except at the turnouts. If a single vehicle met any other vehicle or a fire engine, one vehicle would need to back up 200 ft. or more, which could be very difficult if pulling a trailer, or in thick smoke, or with steep grades or tight curves given these substandard dangerous conditions are no longer regulated. See Ford 150 Pickup Truck meeting CalFire Type 3 Fire Apparatus on 14-foot-wide road.



2) For development on existing roads with a significant increase in use intensity, the road width specifications are the same as in the 2020 regulations, except that there is no limit on the number of residential units that a one-way road could serve (§ 1273.07, p36). A Ford 150 Pickup Truck could meet and safely pass a CalFire Type 3 Fire Apparatus on 20-foot-wide road.



Potential Significance from Reducing Fire Safe Regulations: The 2021 regulations expose the public and structures to significant wildfire risk by significantly reducing road width requirements and eliminating requirements for concurrent ingress and evacuation for existing roads for development with an insignificant change in use intensity, which encompasses all existing parcels as well as up to 2 new parcels. The regulations allow local jurisdictions to make 'exceptions' to the already reduced 14 ft. minimum road width. For example, a local jurisdiction could allow road width to be reduced to 10 ft., and reduce frequency of turnouts. Since the regulations no longer require safe concurrent civilian evacuation and fire apparatus access, they could claim that 10 ft. wide was equivalent to 14 ft. wide as it provided "Substantial Compliance", defined as "nearly complete satisfaction of the material requirements consistent with the purpose of the applicable State Minimum Fire Safe Regulations even though the formal requirements are not satisfied." Moreover, as there is no definition of what constitutes increased intensity or density, that decision is completely left up to the local jurisdiction. Thus the local jurisdiction could apply the 'Below the Threshold' regulations to most new development on existing roads. These existing substandard roads in the SRA and LRA VHFHSZ are where most new development occurs. This includes residential, commercial or industrial development, as long as a change in zoning or use permit that increases intensity or density is not required (which is subject to interpretation by the local jurisdiction). This significant reduction in regulations will both lead to increased development with the associated increased wildfire risk (both from construction activities as well as by increased use) as well as will prevent concurrent civilian evacuation and firefighting apparatus ingress on existing roads as was required in the 2020 regulations. Increased development and associated increased traffic will also increase greenhouse gas emissions, and bring more people to fire prone areas, significantly exacerbating wildfire risk as people are a major cause of wildfires including fire risk from vehicles. This will also exacerbate safe evacuation risk due to increased traffic on substandard roads, and inhibit safe ingress of fire fighting apparatus or unobstructed traffic circulation during a wildfire emergency on existing roads; that wording has been stricken from the proposed regulations,. All this will cause significant harm to the public and structures.

3. Dead-end Roads

Baseline: 2020 Jan 1 SRA Fire Safe Regulations limit dead-end road length ranging from 800 ft. for any parcel less than 1 acre, to 1320 ft if all parcels are 1-4.99 acres, to 2640 ft if all parcels are 5 – 19.99 acres, to 1 mile if all parcels are at least 20 acres. There are no exceptions

(§1273.08 p8), and the state Attorney General's office has stated that the dead-end nature of a road cannot be changed.

Project: 2021 April 23 Proposed Regulations have dead-end road limitation of 800 ft. (for parcels 1 acre or less) to a maximum of 2640 ft mile if all parcels are at least 5 acres, but this only applies to development on newly built roads (§ 1273.08 p37-38). All existing roads are exempt from the dead-end road length standard, with or without a significant change in use.
Potential Significance from Reducing Fire Safe Regulations: Dead-end roads can become a death trap in wildfires. If falling trees block the road, if fire envelops the road or if people are stuck in gridlock there is no route for people to escape. As most development occurs on existing roads and there are many existing dead-end roads longer than 1 mile, removing the limitation on dead-end road length is a tremendously significant reduction in safety of the public. The BOF even stated in its Initial Statement of Reasons (April 23, 2021) that the Fire Chiefs Working Group had concerns on the current 1-mile maximum length. In searching throughout the country they found most agencies' maximum allowable length was less than 0.5 mile, and suggested that 'shortening the maximum allowable length for Dead-end Roads would provide for greater fire safety than the current standards'. However, the April 23 Proposed Regulations instead removed all dead-end road length limitations for all development on all existing roads where most development occurs, only providing a 0.5 length limitation for newly constructed dead-end roads. Removing the dead-end road limitation will open up many new parcels to development that had been previously locked to development unless they built a new, 20 ft. wide secondary access road which often is not practical or even possible in mountain terrain, further increasing fire risk as people are a major cause of wildfires.

4. Road Surface

Baseline: 2020 Jan 1 SRA Fire Safe Regulations required road surface for new development to support fire apparatus at least 75,000 pounds and to have an aggregate base. Driveways and road and driveway structures must support at least 40,000 pounds. This applies to all existing and newly built roads for new development, both within the parcel perimeter (e.g. driveways) and for access from all roads to the perimeter and access to the structure (§ 1273.02 p6).

Project: 2021 April 23 Proposed Regulations have similar numerical specifications, except that the road structure weight is lowered from 75,000 to 36,000 pounds. These requirements only apply within a parcel perimeter (e.g., driveways) for all existing and newly built roads, and for access to the parcel for new roads and existing roads if the development has significant change in use intensity. Moreover, as there is no definition of what constitutes increased intensity or density, that decision is completely left up to the local jurisdiction, that can thus apply the significantly reduced 'Below the Threshold' regulations to most new development on existing roads. For parcels on these existing roads without a significant change in use intensity, the standards are substantially reduced for access to the parcel. This is where most development occurs. The only road surface requirement is that no more than half of the road can be native surfaced (§ 1273.12 p47)

Potential Significance from Reducing Fire Safe Regulations: Most development occurs on existing, not newly built roads. The 2021 regulations have much weaker requirements for existing road surfaces for access to development on parcels without a significant change in use intensity, which as discussed is left to the local jurisdictions to decide and could include most

new development. The 2021 regulations will expose the public and structures to significant wildfire risk by removing road surface requirement on half of those roads, including on grades now allowed to be over 25%, such that civilian evacuation may be hindered due to poor road surface, potholes, etc. and firefighting apparatus ingress may not even be possible on poor roads or due to the far steeper and unpaved grades that are allowed. By reducing the requirements for existing roads without a significant change in use intensity, the 2021 regulations will also allow more development in fire prone areas than under the 2020 regulations, which increases wildfire risk and exacerbates evacuation dangers as discussed above.

The Board of Forestry initially proposed draft (December 1 2020) had stricter definitions of what surface treatment was required for steeper grades, with Minimum 2" HMA (hot mix asphalt) over 5" of Class 2 AB for grades 16.01-18%, and Minimum 3" HMA over 5" of Class 2 AB or approved equal designed by licensed engineer for grades 18.01-20%. This was removed from March 2021 draft, rather stating that for grades of 16-20% the road must be treated to prevent slippage.

5. Road Grade

Baseline: 2020 Jan 1 SRA Fire Safe Regulations limit grade to 16%, but it may increase to 20% with approval from local authority and with mitigations to provide same practical effect as a 16% grade. This applies to all new development both on existing and new roads. (§ 1273.03 p6)

Project: 2021 April 23 Proposed Regulations. Although the same 16% limitation is stated and grade is also allowed to increase to 20% with mitigation of the surface to prevent slippage (§ 1273.04 p32-33), this regulation only applies i) to all roads within the parcel (e.g. driveways)., and ii) for access to the parcel, it only applies to newly-built roads and existing roads with a significant change in use intensity, as determined solely by the local jurisdiction. For existing roads with an insignificant change in use intensity as determined by the local jurisdiction, the grade can increase to over 25% for 500 ft on an unpaved road, without any mitigation (§ 1273.12 p48). There is no upper limit on maximum grade and no requirement that the road be paved; the only requirement is that if over 25% grade it may not exceed 500 ft. Grades can be up to 25% on unpaved roads, with no limitation of length, whereas in 2020 grade was limited to 16%, and could only go up to 20% with mitigations.

Potential Significance from Reducing Fire Safe Regulations: As almost all new development occurs on existing roads with an insignificant change in use intensity, the 2021 regulations allow for much higher grades than in the 2020 regulations. This allows development to occur on parcels and roads with steep grades previously locked from development unless the substandard roads are brought into compliance with fire safe standards. This exposes the public and structures to significant wildfire risk by allowing much steeper grades and no requirements to prevent slippage, firefighting apparatus ingress may not be possible on steep roads; and stalled firefighting apparatus could block the roads, preventing civilian evacuation. By reducing the requirements for existing road with an insignificant change in use intensity, which determination is left to the local jurisdiction, the 2021 regulations will also allow more development in fire prone areas than under the 2020 regulations, which increase wildfire risk

and exacerbates evacuation dangers as discussed above.

The Board of Forestry initially proposed (December 1 2020) stricter definitions of what road surface was required for grades between 16.01-20%, as well as a 100 ft. transition zone with a grade <10%, before and after grades of 18.01-20% and limited sustained grades of 18% to 300 ft. This was removed from March 2021 draft, and the grade transition was increased to 12% with no 100 ft. transition zone specified.

6. Road Curve Radius

Baseline: 2020 Jan 1 SRA Fire Safe Regulations. Inside radius of curvature must be at least 50 ft., with an additional 4 ft. for curves or 50-100 ft., and an additional 2 ft. to curves of 100-200 ft. This applies to all roads, existing and new (§ 1273.04 p6). This standard is necessary to ensure that fire apparatus can negotiate curves on roads.

Project: 2021 April 23 Proposed Regulations retain the 50 ft. minimum, but reduce the requirement for curves of 100-200 ft. from 2 ft. to 1 ft. (§ 1273.01 p23-24). This applies to all existing and new roads within the parcel (mainly driveways), and for access to the parcel for new roads and existing roads with a significant change in use intensity. It is left up to local jurisdictions to determine what constitutes an increase in use intensity. <u>There are no radius requirements for existing roads</u> with an insignificant change in use intensity. This affects all existing parcels as well as up to 2 new parcels, where most of the new development occurs.

Potential Significance from Reducing Fire Safe Regulations: Almost all new development occurs on existing roads on existing parcels, and the 2021 regulations do not require any radius specifications for access to the parcel on existing roads with an insignificant change in use intensity, as determined by the local jurisdiction. This significantly exposes the public and structures to increased wildfire and evacuation risk as by allowing very sharp curves, firefighting apparatus ingress may be substantially slowed or even not possible on roads with sharp switchbacks; stopped firefighting apparatus could block the roads, preventing civilian evacuation, and preventing firefighter access to the fire. By reducing the requirements for existing roads with an insignificant change in use intensity, the 2021 regulations will allow more development in fire prone areas than under the 2020 regulations. Moreover, as the local jurisdictions determine what constitutes an increase in use intensity, this removal of any requirement on curve radius could apply to most new development in both the SRA and VHFHSZ of LRA.

7. Turnarounds

Baseline: 2020 Jan 1 SRA Fire Safe Regulations. Turnarounds are required for all new development on driveways and dead-end roads. If parcels are 5 or more acres, the turnaround must be every 1,320 ft. For driveways over 300 ft. long, the turnaround must be within 50 ft. of the building (§ 1273.05 p6). Turnarounds are designed for fire apparatus to safely egress.

Project: 2021 April 23 Proposed Regulations. Similar turnaround specifications as in the 2020 regulations for driveways, but for access to the parcel from the Collector Road they only apply to newly built roads and existing roads with a significant change in use intensity, as determined by the local jurisdiction. Even for such existing roads with increased use intensity for parcels of

5 or more acres, however, there is no longer any dead-end road length limitation, and the turnaround spacing is just at the halfway point, i.e. no longer required every 1320 ft. The December 1 2020 draft had a maximum dead-end road length of 2640 ft. (1/2 mile) for all existing and new roads; thus the requirement for the additional turnaround at the half-way point would never be longer than 1320 ft. However, as the April 23 2021 draft remove all dead-end road length limitations for existing roads, the turnaround at the midpoint could be much longer than 1320 ft.; e.g. for a 6 mile dead-end road, the midpoint turnaround would be spaced at 3 miles, not 1320 ft. There are no intermediate turnaround requirements if such 'above the threshold' dead-end road serves parcels less than 5 acres. Furthermore, although the December 1 2020 draft required turnarounds at the end of on all dead-end roads, this requirement, as well as all turnaround requirements on dead-end roads, were completely removed from the April 23 2021 draft regulations for existing roads that did not have increased intensity or density of use (under the threshold). Inside the parcel perimeter (e.g., driveways), the turnaround requirements apply to all existing and new roads.

Potential Significance from Reducing Fire Safe Regulations: Most development occurs on existing roads. Not requiring turnarounds in conjunction with unlimited dead-end road length and only a 14 ft. width for existing roads with an insignificant change in use intensity (as determined by the local jurisdiction) creates a significant safety hazard to firefighters. The fire engines may become trapped on the dead-end road with no way to turnaround to escape a rapidly advancing fire. This weakened requirement also allows more development on roads and parcels previously locked from new development, unless roads are bought into compliance with fire safe standards now onlyu specified for new roads, further increasing wildfire risk and hazard to people and structures. Moreover, as the local jurisdictions determine what constitutes an increase in use intensity, this removal of requirement for turnarounds could apply to most new development in both the SRA and VHFHSZ of LRA.

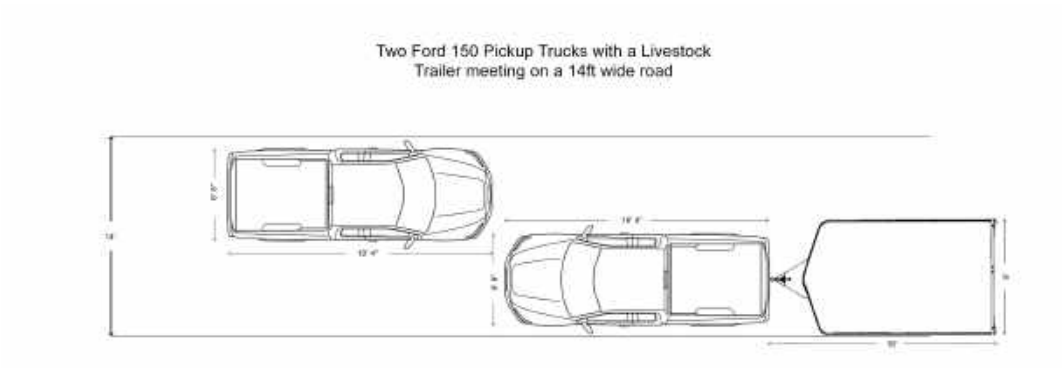
8. Turnouts

Baseline: 2020 Jan 1 SRA Fire Safe Regulations. Turnouts 12 ft. wide (excluding the traffic lane) and 30 ft. long, with 25 ft. taper at each end. Must be in middle of one-way road (i.e., max length of one-way road is 2,640 ft., so max spacing is 1,320 ft. to a turnout). Apply to all existing and new roads (§ 1273.06 p7).

Project: 2021 April 23 Proposed Regulations. Reduced length of turnout to 22 ft. (§ 1273.09 p38), but must be spaced every 400 ft. on one-way roads and roads that are under the width requirements (§ 1273.12 p47). Apply to new and existing roads, but there are no turnout requirements on one-way roads for development on existing roads with insignificant increase in use intensity, as determined by local jurisdiction.

Potential Significance from Reducing Fire Safe Regulations: Reducing the turnout length from 30 ft. to 22 ft. increases risk for long vehicles, fire engines or a vehicle with a trailer needing to use the turnout due to meeting another vehicle. This increases risk of safe evacuation for residents and safe ingress for firefighting apparatus, including fire engines and bulldozers. Furthermore, even with turnouts every 400 ft., 14 ft. wide roads cannot provide for concurrent evacuation and fire apparatus ingress, further jeopardizing safety of residents and firefighters. Further, the regulations allow local jurisdictions to make 'exceptions' to the already reduced 14 ft. minimum road width, and no longer require safe concurrent civilian evacuation

and fire apparatus access. For example, a local jurisdiction could allow road width to be reduced to 10 ft., and reduce frequency of turnouts, claiming it was substantially equivalent to a 14 ft. wide road, since a fire apparatus and a passenger vehicle cannot pass on either a 14 ft. wide or a 10 ft. wide road, and there is no longer a requirement for concurrent evacuation and ingress.



9. One-Way Roads

Baseline: 2020 Jan 1 SRA Fire Safe Regulations. 12 ft. wide, maximum length ½ mile, turnout in middle. Must not serve more than 10 residential units. Applies to all existing and new roads (§ 1273.01 p6).

Project: 2021 April 23 Proposed Regulations. Same road specifications as in 2020, but must maintain clear width of 20 ft. which may include shoulders and bike lanes (§ 1273.05(b) and (c) p33-34). No limit on number of residential units served. However, this ½ mile length limitation only applies to newly-built roads (§ 1273.07 p34); there is no length limitation and no limit on number of residential units served for all existing one-way roads with or without a significant change in use intensity. For existing one-way roads with a significant change in use intensity as determined by the local jurisdiction, there must be a turnout every 400 ft.; there are no turnout requirements for existing one-way roads where there is no significant change in use intensity.

Potential Significance from Reducing Fire Safe Regulations: This will create significant harm to people and structures for development on all existing substandard roads, both with or without a significant change in use intensity, hindering or even preventing safe evacuation on long narrow one-way roads, and hindering or preventing firefighting apparatus ingress. By reducing the length limitation and number of residential unit requirements for all existing one-way roads, this lesser requirement also allows more development on roads and parcels previously locked to new development, unless brought into compliance with fire safe road standards, further increasing wildfire risk and hazard to people and structures. Moreover, as the local jurisdictions determine what constitutes an increase in use intensity, this removal of requirement for turnouts on one-way roads could apply to most new development in both the SRA and VHFHSZ of LRA.

10. Bridges or Elevated Structures on Roads and Driveways

Baseline: 2020 Jan 1 SRA Fire Safe Regulations. Refers to AASHTO HB-17 standards, to carry a live load sufficient for fire apparatus (§ 1273.07 p7). A bridge may have only a single traffic lane (12 ft. wide if a Road, 10 ft. wide if driveway) with unobstructed visibility and turnouts at each end.

Project: 2021 April 23 Proposed Regulations. Road and driveway structures must support at least 36,000 pounds if local authority approves; otherwise, its 75,000 pounds (§ 1273.03 p30-31). The width requirements are identical as in 2020, i.e. 12 ft. wide if a road and 10 ft. wide if a driveway, with unobstructed visibility and turnouts at each end. However, there are no requirements for existing roads for an insignificant change in use intensity outside the parcel perimeter. As local jurisdictions determine what constitutes an increase in use intensity, there may be no requirement for road and driveway structures on most existing roads.

Potential Significance from Reducing Fire Safe Regulations: By eliminating all requirements for existing roads for insignificant change in use intensity, bridges may not be able to hold the weight of firefighting apparatus. This increases risk to people and structures from wildfires if fire engines cannot access their parcels. This weaker requirement in the 2021 regulations also allows more development on roads and parcels previously locked to new development unless brought into compliance with fire safe road standards, further increasing wildfire risk and hazard to people and structures. Moreover, as the local jurisdictions determine what constitutes an increase in use intensity, this removal of requirement for road and driveway structures could apply to most new development in both the SRA and VHFHSZ of LRA.

11. Post Fire Rebuilds and ADUs

Baseline: 2020 Jan 1 SRA Fire Safe Regulations (prior to the temporary inclusion of Emergency Regulations on July 28, 2020, as those expire Dec 2021). The baseline regulations allowed for post-fire rebuilds to occur without needing to upgrade roads to the fire safe regulation standards. As part of the Emergency Regulations incorporated in the SRA Fire Safe Regulations on July 28, 2020, language was included to confirm the prior practice of excluding post-fire rebuilds from needing to upgrade roads to meet the fire safe regulations, and also newly excluded Accessory Dwelling Units (ADUs) and Junior ADUs. The Emergency Regulations specified that reconstruction or repair of a legally-constructed residential, commercial or industrial building that did not increase square footage or change in use, or construction of an ADU or Junior ADU were exempted from the fire safe regulations (§ 1270.02(c)(1). However, the Emergency Regulations are not permanent and will expire in Dec 2021.

Project: 2021 April 23 Proposed Regulations. Post-fire repair or reconstruction is exempted from the regulations, even if not previously legally-constructed. The use of the building must not change, but there is no limit on size of the reconstructed structure or the number of people it serves. A 30 ft. setback is required but that can be reduced (with no minimum specified) for practical reasons such as parcel size or dimensions, topography sensitive habitats, or other site constraints (§ 1270.03(c)). The roads providing access to the parcel perimeter have no requirements other than providing a short 22 ft long segment of 14 ft. total width (i.e., including traffic lane), every 400 ft. (a 'Blip') This standard is meaningless; it provides no safety benefit as

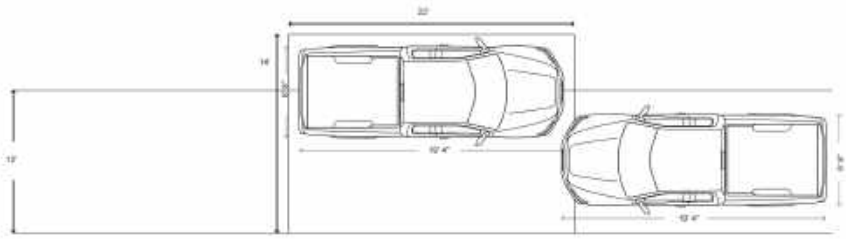
it does not enable two vehicles let alone a fire engine to pass. It does not come close to meeting the proposed turnout standard, which includes an additional 12 ft. width of turnout plus the width of the traffic lane, and 25 ft. taper at each end of a 22 ft. long turnout (totals 72 ft. length).

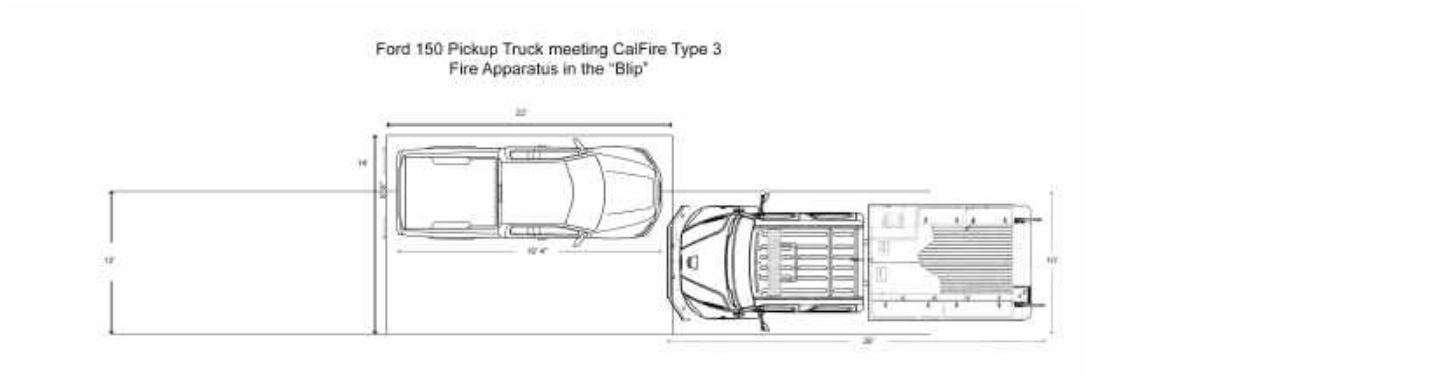
ADUs and Junior ADUs are exempted from all regulations.

Potential Significance from Reducing Fire Safe Regulations. The 2021 regulations allow structures destroyed by fire to be reconstructed without meeting the fire safe regulations, but now with no requirement that they were legally constructed, with no size limit nor limit on number of persons served by the reconstructed structures. Even the temporary Emergency Regulations only allowed legally-constructed structures to be rebuilt and with no increase in size without meeting the fire safe regulations. The one requirement in the 2021 draft regulations for the 'Blip' on the road is absolutely meaningless as it does nothing to enable two vehicles to pass each other (see diagrams below). The requirement for a 30 ft. setback is also meaningless as it can be reduced with no minimum setback specified due to numerous reasons such as topography or parcel size, at the discretion of the local authority. Allowing illegally-constructed structures to be reconstructed, with no size limitation and no limit on number of person served, to be exempt from the fire safe regulations, or allowing even legally-constructed structures to be reconstructed with no limitation on size or increased intensity of use (e.g., a 6 person tasting room could be enlarged to accommodate multitudes of people), substantially increases risk to the people on subpar roads in high fire risk areas.

Exempting ADUs and Junior ADUs from the fire safe regulations allows for doubling of the number of residences on a subpar road, with no requirement for safe evacuation or ability for fire engine ingress. This causes substantial increased risk both to the existing residents as well as the new residents in the ADUs, as well as increases wildfire risk due to presence of twice as many people. Furthermore, many ADUs are used as vacation rentals; the guests are not familiar with the roads or evacuation routes, further jeopardizing their safety.

Two Ford 150 Pickup Trucks meeting in the "Blip"





12. Loopholes: Exceptions; Change in Intensity or Density of Use; and Existing Roads

Baseline: 2021 Jan 1 SRA Fire Safe Regulations. § 1270.06, p3. Local jurisdictions can make exceptions to a specific regulation if they provide the same practical effect as the regulations including fire apparatus access, safe civilian evacuation, signing to avoid delays and accessible water for fire fighting. Thus if a 20 ft. wide road had a pinchpoint necessitating a short reduction in width, the exception process could be applied but safe civilian evacuation and fire apparatus access would still be required. The 2020 regulations apply to all roads, both existing and new, with no criteria for change in intensity or density of use.

Project: 2021 April 23 Proposed Regulations. § 1270.06 p19-21.

- As there is no definition of what constitutes increased intensity or density of use to determine if an existing road needs to follow the stricter set of regulations, and that decision is completely left up to the local jurisdiction. Thus the local jurisdiction could apply the 'Below the Threshold' minimal regulations to most new development on existing roads.
- Although exceptions involve a similar procedure as in 2020 regulations, they now can be applied to reducing the width of a 14 ft. wide road as there is no longer a requirement for safe concurrent civilian evacuation and fire apparatus access. For example, a local jurisdiction could allow road width to be reduced to 10 ft., and reduce frequency of turnouts, further jeopardizing safety during a wildfire.
- The definition of what constitutes a 'New Road' (§ 1270.00(aa), p 5), which is defined as "a theoretical Road proposed in a Development application" allows even newly constructed roads to meet the definition of an 'Existing Road,' which is defined as "a physical Road constructed and used by vehicles prior to a Development proposal," and hence have reduced regulations if the roads were constructed separate from a specific Development application. For example, if a local jurisdiction or a private landowner constructed a 14 ft. wide road to provide secondary access for safer evacuation, that road would not need to be constructed to the higher 20 ft. wide specifications for "New Roads" in the 2021 regulations. If the following year a developer (or even the same private landowner) wanted to build a subdivision using such road, it would fall under the definition of an Existing Road as even thought it was newly constructed, as it was "constructed and used by vehicles prior to a Development proposal," and was not a

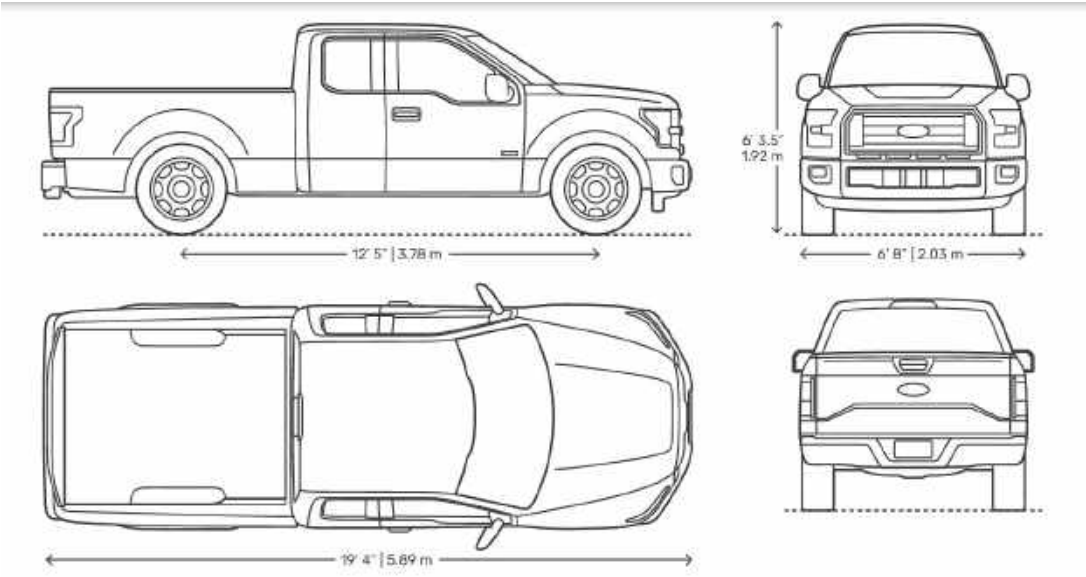
'theoretical road proposed in a Development application." Thus a Development application could use this 14 ft. wide road for a new subdivision.

Potential Significance from Reducing Fire Safe Regulations:

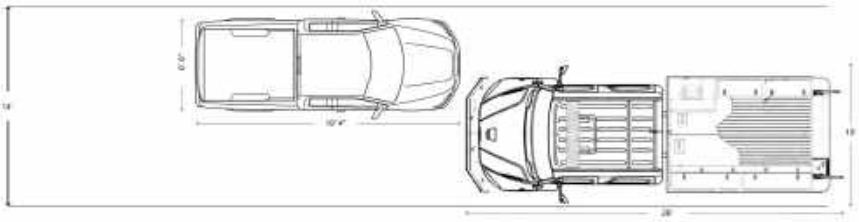
- By allowing local jurisdictions to make the determination of what constitutes "increased intensity or density of use," a greater amount of new residential, commercial and industrial development can be allowed on 14 ft. wide roads.
- By removing the requirement of safe civilian evacuation and fire apparatus access, exceptions to the already reduced 14 ft. minimum road width can be made that even further weaken the regulations and further jeopardize safety of civilian evacuation and safety and ability of firefighters to fight a wildfire. It thus allows roads that don't even meet the minimum 14 ft. width requirement to now be open for new development.
- By allowing even many 'new roads' to be classified as 'existing roads' further weakens the regulations as the weaker specifications for existing roads then apply to new development.

These weakened requirements allow more development on roads and parcels previously locked from new development, including some accessed by newly built roads, further reducing the fire safe standards and further increasing wildfire risk and hazard to people and structures.

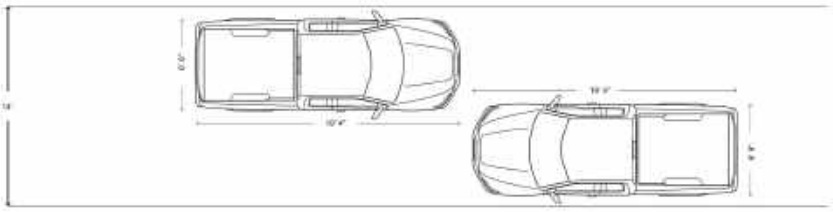
Appendix. Dimensions of Ford 150 Pickup Truck



Ford 150 Pickup Truck meeting CalFire Type 3
Fire Apparatus on a 14ft road

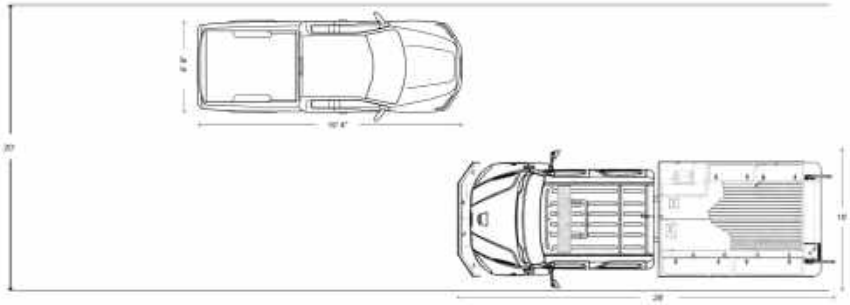


Two Ford 150 Pickup Trucks meeting
on a 14ft wide road

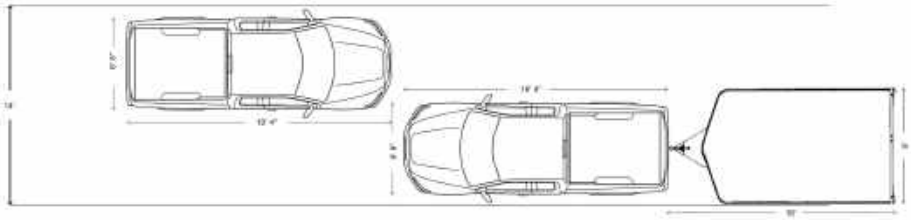


Comparison of Article 2 Road Specifications of
Current 2020 Fire Safe Regulations vs. 2021 April 23 Proposed Regulations
6-1-21

Ford 150 Pickup Truck meeting CalFire Type 3
Fire Apparatus on a 20ft wide road



Two Ford 150 Pickup Trucks with a Livestock
Trailer meeting on a 14ft wide road



Attachment C

COVA Consulting
1906 Westminster Ave.
Salt Lake City, UT 84108

Prepared by Thomas J. Cova
June 19, 2021

State Alliance for Firesafe Road Regulations (SAFRR)
c/o Jamie Hall
Channel Law Group. LLP
8383 Wilshire Blvd. Suite 750
Beverley Hills, CA 90211

Re: State Minimum Fire Safe Regulations – Safe Evacuation Considerations

Introduction

As communities continue to expand into wildfire-prone regions and housing densities exceed the capacity of infrastructure to support timely evacuation, we should enact safety regulations to protect the public. One example is evacuation standards designed to relate development patterns and population densities to the available means of egress. Although this topic has not been at the forefront in developing fire-prone wildlands, it is becoming increasingly important as communities in the western U.S. experience larger, faster-moving fires that offer less time for residents to evacuate. Many communities in the highest fire severity zones were never designed to safely support their current housing, commercial, and industrial density, let alone the proposed development that may be added. This raises the public safety question, "How much is too much?" when it comes to housing, commercial and industrial development in low-egress fire-prone communities. Fire safe road regulations should be established to limit development such that safe evacuation in urgent wildfires is feasible.

Almost 500,000 California homes are in high, or very high, fire risk zones (Sacramento Bee 2019). If current sprawl-inducing development practices in California continue, as many as 1.2 million new homes will be built in California's highest wildfire-risk areas by 2050 rather than directing affordable housing near to lower-risk areas in or near city centers (Mann et al. 2014). Scientific evidence clearly shows that when development occurs in high and very high fire-hazard severity zones, the probability of large conflagrations dramatically increases. Human sources such as power lines, car sparks, cigarettes, and electrical equipment caused nearly all contemporary wildfires in California (Radeloff et al. 2018; Syphard et al. 2007; Balch et al. 2017). Allowing new development in high fire-risk areas increases ignitions and endangers more people.

The BOF should strengthen its regulations in wildfire-prone areas rather than deregulate to facilitate development on thousands of parcels for new residential,

commercial, and industrial development in areas with substandard roads and poor egress.

Comparing the 2020 and 2021 Road Regulations

The Board of Forestry and Fire Protection's (BOF) proposed 2021 fire safe regulations ease road safety regulations for new development in fire-prone communities on existing roads. In many of these areas, the road infrastructure is substandard, yet new development continues. Dire evacuation scenarios are becoming more common as drought leads to larger, faster-moving wildfires (Thompson 2020), and adding more housing will exacerbate these scenarios, especially in areas with substandard roads and poor egress in very high fire hazard areas. This puts the public and firefighters in greater jeopardy, as evacuations will take longer as wildfires burn larger and faster.

The 2020 regulations require all roads for new development to be at least 20 feet wide, have adequate surfaces, and avoid steep grades (whether new or existing). The length of dead-end roads is limited to one mile. The sole exemptions from these standards have been granted for post-fire rebuilds and roads used exclusively for agriculture, timber harvesting, or mining, with a temporary emergency exemption for Accessory Dwelling Units (ADUs). Since 1993, the BOF and Office of the Attorney General have repeatedly confirmed that the regulations apply to roads built before 1991, where most new development occurs.

Below is a brief list of significant proposed changes. In all cases, the new regulations will lead to much denser communities in high fire-hazard areas.

> <u>Exempting Accessory Dwelling Units (ADUs).</u> ADUs were exempted from the fire safe regulations as part of the SRA Fire Safe Regulations in 2020 but they will expire in December 2021. Exempting ADUs could double residential densities in high fire hazard areas and greatly increase the vehicle demand in evacuations on substandard roads.
>
> <u>Dead-end roads and road widths.</u> The December 2020 draft of the proposed revisions reduced the maximum length of all dead-end roads to one-half mile with a 20-foot minimum width. The BOF recently disregarded these recommended safety standards (Fire Chiefs Working Group) and propose to allow unlimited dead-end road lengths with no set minimum width.
>
> <u>Road width minimums</u>. The proposed regulations allow local authorities to determine zoning density thresholds (or use intensity) for areas with road widths that are only required to be 14 feet wide, instead of 20 feet as in the 2020 regulations. These changes would free thousands of parcels for residential, commercial, and industrial development on existing roads, without requiring safe concurrent fire-fighter ingress and resident egress. Fire apparatus that is 8-9 feet wide cannot pass 6-foot-wide passenger

vehicles evacuating on a 14-foot-wide road, and local jurisdictions can be granted exceptions to approve only 8-12 foot wide roadways as well as reduce the frequency of turnouts. This could lead to disaster for both residents and firefighters in a dire wildfire.

Road grades and curve radius. The proposed regulations do not include adequate roadway standards to ensure the safe operation of fire equipment, including turnarounds, curves, and grades that fire apparatus can negotiate. Although the 2020 road standards avoid steep grades over 16% and permit grades up to 20% for short distances only, the proposed regulations allow: 1) half a roadway to be unpaved, 2) up to 25 percent grades with no distance limitation on unpaved roads, and 3) grades to exceed 25% with no upper limit for 500 ft. on unpaved roads. The proposed regulations for most existing roads also eliminate regulations for road curves that impede firefighting equipment's ability to negotiate those roads.

Turnarounds. The 2020 regulations require safe turnarounds designed to support fire apparatus egress for all new development on driveways and dead-end roads. If parcels are 5 or more acres, the turnaround on a dead-end road must be every 1,320 ft. For driveways over 300 ft. long, the turnaround must be within 50 ft. of the building. Turnaround specifications for dead-end roads in the proposed regulations for access to the parcel from the Collector Road only apply to newly built roads and to existing roads with a significant change in "zoning density" or "use intensity", as determined by the local jurisdiction. Even for such existing roads with increased "zoning density or use intensity" however, there is no longer any dead-end road length limitation, and the turnaround spacing is just at the halfway point and then only for parcels 5 or more acres, i.e., no longer every 1320 ft. Hence, for a 5-mile dead-end road, the midpoint turnaround would be spaced at 2.5 miles, not 1320 ft. There are no intermediate turnaround requirements if the dead-end road serves parcels less than 5 acres and no terminus turnaround requirements if the dead-end road is below the density threshold.

Turnouts. The 2020 regulations require turnout specifications 12 ft. wide (excluding the traffic lane) and 30 ft. long, with a 25 ft. taper at each end (total 80 ft.). Turnouts must be in the middle of a one-way road (i.e., the maximum length of one-way road is 2,640 ft., so the maximum spacing is 1,320 ft. to a turnout). Turnout specifications in the proposed regulations reduce the length of a turnout to 22 ft., but they must be spaced every 400 ft. The proposed regulations do not include turnout requirements on one-way roads, which is to-be-determined by the local jurisdiction. For example, a local jurisdiction could allow road width to be reduced to 10 ft., and reduce frequency of turnouts, e.g. from 400 ft. to 1000 ft., claiming it was "substantially equivalent" to a 14 ft. wide road with turnouts every 400 ft.

One-way roads. The 2020 regulations require a 12 ft. wide road, maximum length one-half mile, and a turnout must not serve more than 10 residential units. One-way road specifications in the proposed regulations: 1) maintain a clear width of 20 ft. (which may include shoulders, pedestrian and bike lanes), 2) have no limit on the number of residential units served, 3) apply the ½ mile length limitation only to newly-built roads, 4) have no length limitation, and 5) have no limit on the number of residential units served for all existing one-way roads, with or without a significant change in zoning density or use intensity. For existing one-way roads with a significant change in use intensity as determined by the local jurisdiction, there must be a turnout every 400 ft. There are no turnout requirements for existing one-way roads where there is no significant change in use intensity.

Additional loopholes. One loophole in the proposed regulations allows new roads to be considered existing roads to avoid regulations applicable to newly built roads. For example, if a private landowner or a local jurisdiction constructed a road to provide secondary access to a community for safer evacuation, that road could be declared an existing road and constructed as 14 ft. wide (rather than the 20 ft. required for new roads). The 2020 regulations allow for exceptions to a specific regulation if they provide the same practical effect as the regulations including: fire apparatus access, safe civilian evacuation, and signing to avoid delays and accessible water for firefighting. Without regulations mandating standards for safe concurrent access and egress, local jurisdictions will be empowered to take advantage of loopholes to approve unsafe development, even in locations already known to be unsafe and fire-prone.

In summary, the proposed regulations allow increased development, increased use intensity and increased population density in high fire-prone communities and wildlands, which could adversely impact public safety.

Developing community-scale evacuation regulations in wildfire areas

Recent large, fast-moving wildfires raise questions about whether introducing people and vehicles to a community can continue unabated without evaluating and disclosing the risks prior to approval. As a bare minimum, the local jurisdiction should be required to prepare a project-specific evacuation plan that addresses the:

1. Possible range of evacuation times for residents, workers and visitors,
2. Possible range of lead (available) times to act in an urgent wildfire,
3. Pattern of evacuation road traffic on primary access roads from the site to major evacuation routes in the region-wide evacuation plan, and
4. Alternative plans for protecting residents, workers and visitors when roads become impassible or the time required to evacuate is greater than the time available.

There are four principal dimensions that help promote public safety as it pertains to community-scale design in fire-prone areas: 1) vehicle load, 2) number of exits, 3) exit capacity, and 4) exit arrangement. The next sections briefly address these dimensions and propose a means to quantify each one.

Vehicle load

The **vehicle load** for a given area includes all vehicles that will be used by evacuees from residential, commercial and industrial structures or land uses. This can be represented as:

*vehicle_load = (households * vehicles_per_household) + vehicles_Commercial + vehicles_Industrial*

While vehicle density can be measured as the number of vehicles per unit area (e.g. vehicles per acre), a more useful density measure for evacuation purposes is the number of vehicles per unit of road length (e.g., vehicles per mile). To use this concept in the context of a regulation, it can be restated as the required minimum average length per vehicle (e.g., 10 feet per vehicle) or the maximum number of vehicles per mile. A minimum of 10 feet per vehicle in a high severity fire zone means that at most 528 vehicles could be present per mile of roadway (i.e. 5280 feet / 10 feet per vehicle = 528 vehicles per mile). While the length of the threshold can be debated, without a defined threshold it would be possible to have an unlimited number of vehicles, which would place residents at risk in a wildfire-prone region.

Using the equation above and a maximum of 528 vehicles per mile, a community with 3 miles of roads (in any configuration) and no commercial or industrial development, and assuming 2 vehicles per household, could have up to 792 households (based solely on vehicle load limitations):

*3 miles of roadway * 528 vehicles_per_mile = 1584 vehicles*
(1584 vehicles / 2 vehicles_per_household) + 0 + 0 = 792 households

Adding commercial and industrial vehicles to this community would reduce the number of households that could be constructed or added, if the vehicle density is to remain below 528 vehicles per mile. The maximum vehicle density threshold can also be varied depending on land use and fire severity. For example, a look-up table could be developed to set it higher in areas that are predominantly industrial or those with less wildfire risk.

Number of exits

The second consideration is the minimum **number of exits.** An *exit* in this context is a road segment that a resident in the community or evacuation zone must traverse to leave it. A community with one road connecting it to the rest of the network has one exit, and one with a choice between two roads to leave it has two exits. In the case of a defined evacuation zone, an exit is any road that allows people within the zone to travel to areas outside the zone (i.e. roads that cross the evacuation zone

boundary). Each exiting road provides a *means of egress* for anyone inside the community or zone to leave it.

A required minimum number of exits can be represented with a table that links the estimated vehicle load in an area to the required minimum number of exit roads. Consider the following example table:

Vehicles	Minimum exit roads
1 – 600	1
601 – 900	2
901 – 1200	3
>1200	4

While the thresholds can be debated, the concept of requiring a minimum number of exit roads avoids the possibility of developing a "one-way-in-one-way-out" community with an unlimited number of vehicles (due to households, commercial, industrial activities) where residents have little to no chance of evacuating quickly in a dire wildfire scenario. Using the equation for vehicle load above, a community with 400 household vehicles (200 households assuming 2 vehicles per household), 150 from commercial activities, and 100 from industrial activities would require 2 exits (i.e. 400 + 150 + 100 = 650 => 2 exits).

<u>Exit capacity</u>

The third consideration is **exit capacity**. This regulation relies on the sum of the exit road capacities to determine the maximum vehicle load allowed in an area. Consider that all roads have a maximum number of vehicles that can be served in a given unit of time (e.g. 600 vehicles per hour or vph). To translate this into something useful for evacuation egress regulations, we can set a minimum capacity for the combined exits such that the minimum evacuation time does not exceed 1 hour (Note: an evacuation could take much longer). This is to avoid building a community where the least time it would take to evacuation would be 2, 3 or 4+ hours.

With a defined upper bound on the **minimum evacuation time**, we can calculate the maximum vehicle load in a given area based on the capacity of the exits. For example, if a community has one exit that can serve 600 vph (assume it ends with a stop sign at a major road), then 600 vehicles would be the maximum vehicle load (600 vehicles / 600 vph = 1 hour). A community with two exits that can each serve 600 vph could have a vehicle load of 1200. As in the prior cases, the thresholds can be adjusted, but without a regulation that connects the vehicles load in an area to the exit capacity, it becomes possible to develop communities in fire-prone areas with thousands of homes and commercial/industrial activities that could not safely be evacuated in a dire wildfire.

<u>Exit arrangement</u>

The last consideration is **exit arrangement.** This can be viewed as the minimum distance between any two exits in a community, assuming the community has more than one. Simply put, the exits should not be closer than one-half the furthest distance between any two households (or facilities) that rely on the exits. So, if the furthest distance between two households in a community is 1 mile and the community has two exits, the exits should not be closer than 0.5 miles (between any two points along either exit road). If the exits are too close, then they will not offer evacuees independent means of egress and more than one may quickly be blocked by the same wildfire.

Wildfire Evacuation Analysis for Existing Communities and Infrastructure

In addition to development along new road infrastructure, wildfire-safe regulations are especially needed when adding development accessed by existing road infrastructure. The configuration of rural communities with substandard roads presents an immediate concern due to the limited evacuation egress for residents, visitors and workers trying to reach collector roads or highways. Given this concern and the history of wildfires in fire-prone communities, it is critical that the local jurisdiction require a community-specific wildfire evacuation analysis that includes likely lead times and evacuation times. The evacuation analyses can be conducted on existing communities to evaluate existing wildfire evacuation conditions, and to determine if increases in the population associated with a new development should be approved. An evacuation analysis can identify significant bottlenecks and alternative evacuation routes that could become impassable under a variety of scenarios. Furthermore, infrastructure mitigation measures can be evaluated to determine if the most significant risks can be reduced to an acceptable level of impact.

<u>Evacuation time and lead time</u>
There are two key variables that determine the success of an evacuation in getting residents to safety: the time available to protect people **(lead time)** and the time it takes to protect them **(evacuation time**). If lead time falls below evacuation time, a scenario can become dire. Some variables (e.g., ignition location, winds, fuel moisture, terrain, fire behavior) are important inputs for estimating the lead time that might be available to protect residents. A fire that ignites near a community and spreads rapidly towards it (due to winds, behavior, terrain, direction) may offer little time for emergency managers to conduct an orderly evacuation. This can be exacerbated by the day-of-week and time-of-day variations in the vehicle load. For example, the number of vehicles (evacuating residents, workers and visitors) that might be in a community at any one time can vary dramatically depending on land use, which affects the evacuation time (e.g., industry, commercial activity, sporting events, concerts, weddings, holidays).

Wildfire safety hazards arise when the lead time falls below the evacuation time, and the difference between the two is a principal cause of fatalities in evacuations. For example, in the 2018 Camp Fire in Paradise, the city evacuation plan called for 2

to 3 hours to safely evacuate the town (evacuation time), but the fire only offered 1.5 hours from its ignition to its impact on structures on the northeast side of Paradise (lead time). This led to a community burnover, where many residents were evacuating through the fire, often on roads too narrow to allow safe concurrent access for emergency wildfire equipment and civilian evacuation where bottlenecks can occur. If the estimated evacuation and lead times are known to be of unacceptable risk in a community subject to fast-moving wildfires, it is critical to evaluate them under a range of likely scenarios and if needed add new roads to reach an acceptable evacuation plan prior to adding development for more residents, workers, and tourists (vehicle load). If acceptable evacuation cannot occur without adding new roads, then no new development should occur.

Warning time, response time, vehicle loading, and road capacity

Gross estimates for evacuation time can be calculated using simple assumptions about warning time, response time, vehicle loading, and road capacity. Assuming that two-lane roads built to 2020 fire safe standards have one traffic lane for egress and one lane for emergency vehicle ingress, and assuming that an egress lane to a collector road can serve a range of 600 to 1200 vehicles per hour (vph) depending on many factors (e.g., merging, intersection control, car-following behavior, back-round traffic from surrounding communities), the egress capacity could range from 600 to 1200 vph. Likewise, if two similar roads are available to evacuate, the egress capacity could range from 1200 to 2400 vph. In supply-demand terms, this would be an estimate of the "supply" available to serve the evacuees as they leave a community. The egress "demand" is estimated by the vehicle load, which depends on the time of day, day of week, or special events. Dividing the vehicle demand by the egress road supply provides an estimate of the minimum evacuation time. While this is a very blunt measure of the actual time to evacuate a community (which could be much longer), it has significant value in establishing egress regulations (i.e., the minimum should not be too great).

However, if there is a single evacuation road that is only 14 ft. wide with periodic turnouts as proposed in the 2021 regulations, the evacuation times would be significantly increased as vehicles would need to pull into turnouts to allow oncoming fire fighting apparatus to pass. Moreover, if the single evacuation route was at or exceeded capacity with bumper-to-bumper vehicles, the fire fighting apparatus would not be able to enter the area at all.

The following examples are assuming two-lane (20 ft. wide) roads. For example, assuming a community with 1000 households and 2 cars per household (or 2000 vehicles) exits along one road, the minimum evacuation time could range from an ideal high-capacity case of (2000 vehicles / 1200 vph = 1.7 hours), to a lower-capacity case (2000 vehicles / 600 vph = 3.3 hours). If there are two roads available for safe egress to the collector road, the minimum evacuation time is halved to (2000 vehicles / 2400 vph = 0.83 hours) for the high-capacity case or (2000 vehicles / 1200 vph = 1.6 hours) for the lower-capacity case. However, if workers or visitors increase the evacuee vehicle load, a much worse case of higher demand, such as

3000 vehicles and lower capacity exits could lead to a greater minimum evacuation time (3000 vehicles / 600 vph = 5 hours). This would not be acceptable, as any wildfire that offered less than 5 hours of lead time could result in a community burnover with many evacuees in transit. This presents an extremely high safety threat, as visibility conditions may become so poor that the vehicles drive off the road or impact other vehicles and/or flames and heat overcome the occupants. Evacuee fatalities occurred in California in the 2003 Cedar Fire, 2017 Tubbs Fire, 2018 Camp Fire, 2020 North Complex Fire, 2020 LNU Lightning Complex Fire, and 2020 Zogg Fire.

Additionally, the evacuation time could be much longer if warning time is prolonged, roads are narrow, and/or have many curves, or key exits and intersections are not controlled by law enforcement. When narrow or one-lane roads are involved that do not allow for safe concurrent access for emergency wildfire equipment and civilian evacuation, dangerous bottlenecks can be created that greatly prolong evacuation times. If traffic flow problems occur at intersections or along collector roads due to adverse events (e.g., wildfire blocking an exit, abandoned vehicles, or gridlock), this could also lead to fatalities. As the 2018 Camp Fire in Paradise and 2017 Tubbs Fire in Sonoma County recently demonstrated, vehicles overtaken by fire in an evacuation is an especially dangerous scenario.

Studying and modeling dire scenarios are important because they are challenging and increasing in frequency (Schoennagel et al. 2017). Although dire wildfire scenarios have not been a focus of study or modeling, they hold potential to help emergency planners and communities cooperate and consider novel protective actions. Understanding potential evacuation scenarios should inform state fire safe road regulations and decisions made by local jurisdictions. The technology to identify the existing hazardous conditions, and evaluate potential impacts to public safety from proposed development exists, is verified and is well-established. Even in the absence of modeling, there is a plethora of evidence that wildfire-prone communities took several hours to evacuate a distance that typically took them 20 - 30 minutes to drive in normal circumstances.

Should California counties, cities and communities plan for wildfire?

California currently does not mandate evacuation analysis and planning for proposed development. However, CEQA requires disclosure and analysis of potential impacts if a project *"would impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan."* Hence one can see the incentive to oppose an evacuation planning mandate because CEQA requires lead agencies to disclose potential detrimental impacts to emergency response or evacuation plans. Furthermore, the evacuation analysis would document the baseline conditions, which would unequivocally identify unsafe evacuation scenarios on existing infrastructure, i.e. the current population exceeds the infrastructure capacity for safe evacuation. We know this to be true by the numerous wildfires where residents took 3-4 hours to flee a distance that normally

took 30 minutes to drive.

According to a report from Governor Gavin Newsom's Office, construction of more homes in the wildland-urban interface is one of the main factors that *"magnify the wildfire threat and place substantially more people and property at risk than ever before"* (Governor Newsom's Strike Force 2019). The BOF has not been mandated to require evacuation plans either by the original legislation that created the 1991 fire safe regulations nor by SB901 (2018) that requires the SRA fire safe regulations to include the LRA VHFHSZ (Local Responsibility Area Very High Fire Hazard Severity Zone). However, significant legislation regarding wildfire preparedness protection and prevention has been enacted, and the legislature has asked for more protection for public safety. Additionally, the original fire safe regulations included an explicit "*Intent: requires safe concurrent civilian evacuation and wildfire apparatus ingress and unobstructed traffic circulation during a wildfire, for all existing and new roads*" (Article 2 Emergency Access and Egress. § 1273.00, 2020 fire safe regulations). The proposed 2021 regulations remove the words *safe, intent, and concurrent civilian evacuation* for new roads, along with requirements for safe concurrent ingress and evacuation for all existing roads.

The BOF should identify baseline evacuation conditions in fire prone communities to compare the infrastructure capacity with the current populations to evaluate whether current populations exceed the infrastructure capacity to safely evacuate. Further, the BOF should analyze potential impacts of the weakened regulations (including the use of exemptions, exceptions and loopholes) by increasing populations and intensity. Impacts should include adverse effects relating to adopted wildfire emergency response or evacuation plans, and adversely impacting emergency vehicle access. Although home-hardening has been proposed as a means to reduce wildfire losses, this is only true for property losses. Home-hardening is not a means for reducing casualties because citizens are not ordered to shelter-in-place (SIP) in private residences in California. Although SIP can serve as a last-resort protective action when there is no means to evacuate, evacuation is the primary protective action that must be taken to protect the public.

The December 2018 Update to the CEQA Guidelines added provisions addressing wildfire impacts to implement Public Resources Code section 21083.01. The updated CEQA Guidelines (Cal. Code Regs., tit. 14, §§ 15000 et seq.) direct lead agencies to analyze the impact of a project on wildfire risk. Specifically, wildfire-related impact thresholds include: (1) whether a project would "expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires" and (2) whether it would, "due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from wildfire or the uncontrolled spread of wildfire." (CEQA Guidelines, App. G, subds. IX(g), XX(b).)

In short, the BOF did not conduct a baseline and impact analysis under CEQA to justify weakening the fire safe regulations and should do so.

Conclusion

Under the current regulations, development could not be approved that is accessed by substandard existing roads in high and very high fire severity zones. The BOF's proposed regulations severely relax road safety standards on such roads, encouraging development and creating hazardous conditions where traffic exceeds the capacity of the infrastructure to enable safe evacuation. By weakening regulations statewide and failing to analyze the environmental effects as required by CEQA, they fail to implement the intent of SB901. The exception provision, allows local jurisdictions without oversight to bypass the legislature's direction in Public Resources Code § 4290 to "adopt regulations implementing minimum fire safety standards ...."

The regulations should retain the requirement since 1991 for safe concurrent access for emergency wildfire equipment and civilian evacuation. They should retain the current requirements for existing roads to be at least 20 feet wide, and ban development on existing dead-end roads longer than one mile. In addition, loopholes should be closed to the exception process, which should be limited to apply to defined short stretches of a road, not an entire road. The relaxation of standards undermines public safety, and puts firefighters and fleeing civilians at risk when the infrastructure does not allow residents a realistic opportunity of evacuating safely during a dire wildfire scenario.

CREDENTIALS

I received a Doctor of Philosophy (Ph.D.) degree from the University of California Santa Barbara in 1999 in the field of Geography; a Masters of Science (M.S.) degree from the same university in 1995; and a Bachelor's of Science (B.S.) degree in Computer and Information Science from the University of Oregon in 1986. I am currently a Professor of Geography at the University of Utah. My expertise is in environmental hazards, transportation, and geographic information systems with a particular focus on wildfire evacuation planning, analysis, and modeling. I proposed a set of standards for transportation egress (exit capability) in wildfire areas that was adopted by the National Fire Protection Agency in 2008 in their Standards for the Protection of Life and Property in Wildfires. I received research grants from the National Science Foundation to study: 1) the 2003 Southern California Wildfires, 2) Protective Action Decision Making in regards to evacuation versus shelter-in-place, and 3) Protective Action Triggers (decision points regarding when to order an evacuation). In 2005 I published an article questioning whether fire-prone communities would someday have a maximum occupancy and proposed possible standards (Cova 2005). In 2017 I published an article with my collaborators on warning triggers in environmental hazards that described the issues that arise in deciding when to order an evacuation or other protective action (Cova et al. 2017). In 2013, along with my collaborators, I analyzed community egress in fire-prone areas of the western U.S. to identify those that might face difficulty evacuating due

to traffic congestion (Cova et al. 2013). In 2011, I developed a decision model with my collaborators to aid in deciding whether evacuation or shelter-in-place is the best decision in a wildfire (Cova and Drews 2011). My work has been cited in fire evacuation plans prepared in conjunction with Environmental Impact Reports in California.

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Technical Note

Toward Simulating Dire Wildfire Scenarios

Thomas J. Cova[1]; Dapeng Li[2]; Laura K. Siebeneck[3]; and Frank A. Drews[4]

Abstract: Recent extreme wildfires are motivating unprecedented evacuation planning. A critical need is to consider *dire scenarios* that allow less time to clear an area than required. Although these scenarios often begin with an ignition near a community, any scenario can become dire due to weather conditions, human response, technology, cascading events, and community design. Although research has widely addressed scenarios with ample time and favorable conditions, protecting people in dire scenarios is much more challenging. We provide a framework for generating dire scenarios that includes difficult starting conditions, delayed decision-making, variable fire spread rates, limited warning technology, and random adverse events. The goal is to move beyond favorable scenarios and generate challenging ones that inspire novel protective planning. A key finding is that minimizing losses in dire scenarios may involve disaster response elements not represented in current simulation models, including improvisation and altruism. **DOI: 10.1061/(ASCE)NH.1527-6996.0000474.** *© 2021 American Society of Civil Engineers.*

Introduction

The 2018 Camp Fire in Paradise, California, began as a scenario that most residents would consider common based on previous experience. The town had experienced 13 near miss fires in the last two decades, some that resulted in stressful evacuations, but none that resulted in any major losses. However, as the Camp Fire advanced toward Paradise at an unprecedented rate, officials planning for a 2–3 h evacuation were unaware that homes on the north edge of town would ignite in less than 90 min (Mooallem 2019). The result was a dire scenario that garnered worldwide attention and motivated a new era in wildfire evacuation planning, which has historically been very scarce (Kano et al. 2011).

Dire scenarios have not been a focus of previous study. Researchers and planners prefer favorable ones with ample time and positive outcomes to highlight model and plan efficacy. The accepted approach is to set ignition points far enough from a community to allow sufficient time for the residents to clear a study area. However, favorable scenarios do not challenge emergency managers to identify novel protective plans for the most difficult cases that arise in real wildfires. Furthermore, these dire cases are becoming more common as drought leads to larger, faster-moving wildfires (Thompson 2020). The goal of this paper is to propose a framework for generating dire scenarios, highlight their value in evacuation planning, and identify research challenges and opportunities.

[1]Professor, Center for Natural and Technological Hazards, Dept. of Geography, Univ. of Utah, Salt Lake City, UT 84108 (corresponding author). Email: cova@geog.utah.edu

[2]Assistant Professor, Dept. of Geography, South Dakota State Univ., Brookings, SD 57007.

[3]Associate Professor, Emergency Management and Disaster Science, Univ. of North Texas, Denton, TX 76203.

[4]Professor, Dept. of Psychology, Univ. of Utah, Salt Lake City, UT 84108.

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Dire Scenarios

We define a scenario as "dire" if the required time to clear an area is greater than the time available (i.e., lead time). Dire scenarios fall into the class of extreme events where important variables are located at the tail of their distribution (Tedim et al. 2018; Sanders 2005). *Evacuation time* and *lead time* are common metrics, where the former is the estimated time to clear an area of its population and the latter is the estimated time available to do so before hazard impact (Lindell et al. 2019). Here, we adopt a dynamic perspective and assume that both variables can be estimated at every point in time during a scenario. The estimate at time t represents the *remaining* lead time and evacuation time to move residents to safety. For example, if the estimated evacuation time is 1 h, and 20 min has transpired since it commenced, the remaining evacuation time is 40 min. We define a direness index that yields a score at time t across a scenario as

$$d_{ijt} = e_{ijt}/l_{ijt} - 1 \quad t = 0..T \tag{1}$$

where d_{ijt} = score for community i threatened by wildfire j at time t; e_{ijt} = time required to evacuate the remaining residents in community i from wildfire j at time t; and l_{ijt} = lead time at t before wildfire j impacts community i. This is a socioecological metric that integrates a human system variable (evacuation time) with a natural system one (lead time) (Moritz et al. 2017). Fig. 1 depicts a means to translate a score into a direness category ranging from "routine" to "extremely dire."

For example, assume that at 3:15 p.m. ($t = 0$), a community has 1 h to evacuate before a fire arrives at 4:15 p.m. ($l_{ijt} = 1.0$), and it will take 1.25 h to evacuate the residents ($e_{ijt} = 1.25$). Thus, the initial state of the scenario at time t is "dire" using Fig. 1 because evacuation time is 25% greater than lead time [$(1.25/1.0) - 1 = 0.25$]. Because this score is dynamic, a scenario can enter or exit a given dire category as events alter l_{ijt} and e_{ijt} (e.g., a blocked egress point at time t_1 that increases e_{ijt} or a change in wind direction at t_2 that increases or decreases l_{ijt}). In real wildfires, these variables are uncertain and so are a direness score and associated category. This means that a scenario that appears routine may turn out to be dire.

To provide an example, Fig. 2 depicts the anatomy of a routine scenario that turns dire due to a dramatic increase in a fire's

Dire Evacuation Scenario Categories			
Routine (<= 0.0) Evacuation time is less than or equal to lead time.	**Dire** (> 0.0) Evacuation time is greater than lead time.	**Very Dire** (> 0.5) Evacuation time is 50% greater than lead time.	**Extremely Dire** (> 1.0) Evacuation time is at least twice as long as lead time.

Fig. 1. (Color) Dire evacuation scenario categories based on a score.

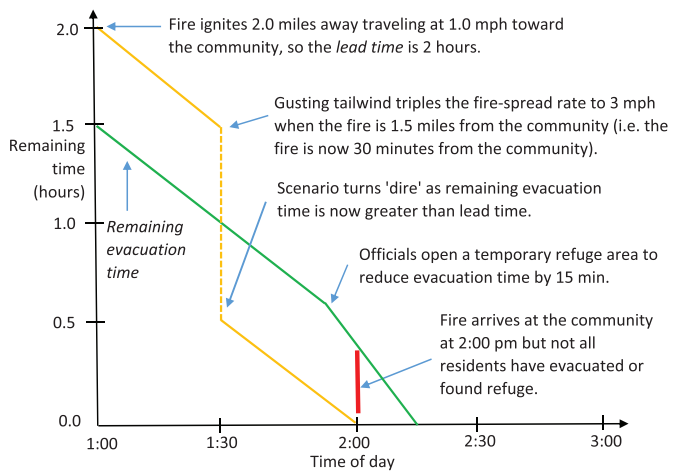

Fig. 2. (Color) Anatomy of a dire scenario due to a sudden increase in fire spread rate.

spread rate. At 1:00 p.m., a deputy reports a fire 2 mi from a community traveling 1 mph toward it, and officials estimate the initial lead time at 2 h. Evacuation time is estimated at 1.5 h, so the scenario is not initially dire ($1.5/2.0 - 1 = -0.25$). Officials warn the residents, and the plan is to have the area cleared by 2:30 p.m. At 1:30 p.m., a gusting tailwind triples the fire spread rate to 3 mph, and the lead time drops from 1.5 h to 0.5 h. Because the remaining evacuation time is 1 h, the scenario turns "very dire" ($1.0/0.5 - 1 = 1.0$). At 1:45 p.m., officials designate a temporary refuge area (TRA) to reduce the required time to protect the remaining residents by 15 min. Despite their best efforts, the fire enters the community at 2:00 p.m., but some residents have yet to clear the area or secure shelter, which could lead to casualties.

Dire Scenario Sources

Dire scenarios arise from a variety of sources. Foremost is a wildfire ignition point close to a community because this condition offers less time to respond than one further away. A second factor is detection time, which is usually brief because citizens rapidly report smoke plumes, but nighttime wildfires can go undetected longer when people are asleep. A third factor is official decision-making because emergency managers may delay the decision to alert or warn residents to avoid unnecessarily disrupting a community based on their threat assessment (Drews et al. 2014). This can lead to a dire scenario if officials subsequently issue a warning at the last minute (Cova et al. 2017). Notification systems can also affect a scenario if many residents do not receive an alert or warning in time (Lindell 2018; Doermann et al. 2021). Public response rates can affect scenario direness due to low-mobility households (e.g., age, disability, resources), a low warning compliance rate, or a tendency to adopt a wait-and-see approach (Dash and Gladwin 2007; McCaffrey et al. 2018; Edgeley and Paveglio 2019). Traffic factors can affect a scenario, as in the case where residents have difficulty finding a safe exit route (Brachman et al. 2019) or when many households depart at once and induce gridlock (Chen and Zhan 2008). Community design can affect a scenario if a road network cannot support rapid residential evacuation (e.g., many homes and few egress points).

There are many recent examples of dire wildfire scenarios. The 2018 Camp Fire is an iconic example because it includes many interacting factors. This case included a fast-moving fire that ignited near a low-egress community with many low-mobility residents. Furthermore, officials accustomed to prior near misses waited to assess the fire's direction and spread rate before ordering the first phased warning, and many residents did not receive a warning due to a low reverse-911 subscription rate (Todd et al. 2019). On the favorable side of the scenario, officials and residents were highly prepared and experienced with a state-of-the-art plan, and officials successfully reversed a lane on the main exit to increase the capacity of a key traffic bottleneck. Other examples of recent dire wildfire scenarios include the 2020 Almeda and Holiday Farm fires in Oregon, which both ignited close to a community and offered very little time to act. The 2017 Tubbs Fire in California was also dire given that it moved 12 mi in its first 3 h through populated areas on a Sunday night, and many residents reported not receiving a warning.

Modeling Dire Scenarios

To generate a dire scenario, a modeler can start with lead time less than evacuation time or design a scenario where the former falls below the latter at any point. Fig. 3 shows a scenario dashboard with factor categories (columns) to generate a dire scenario ranging from no impediment (green) to a minor impediment (yellow) to a major impediment (red). For example, Scenario 1 (row 1) includes minor impediments in the ignition location, fire spread rate, public response, and mobility. This scenario could be a proximal fire moving moderately fast toward households, some of whom voluntarily delay their decision to leave and others with low mobility. Scenario 3 has major impediments, including official decision-making, notification and warning, public response, and traffic congestion. In this scenario, the fire started far from the community, but delays and difficulties in warning residents ultimately led to a dire scenario with traffic congestion. Scenario 4 is the most challenging, with major impediments in all of the factor categories. Although Fig. 3 lists impedance categories in the columns, an analyst must provide the details for each category to create a realistic scenario.

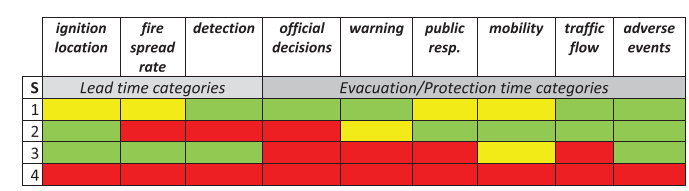

Fig. 3. (Color) Dire scenario dashboard where scenarios (rows) progress from routine to extremely dire (1–4) due to varying factor impediment levels (green, yellow, red).

In addition to combining factors to create a dire scenario, we need new metrics to compare outcomes that may not be successful. Wolshon and Marchive (2007) provide one example: the number of vehicles that do not clear a community in time when the lead time is short. This does not mean that the fire will trap the remaining residents because recent events reveal that many evacuees safely navigate burning corridors. Beloglazov et al. (2016) also developed a valuable dynamic metric to estimate the population threatened throughout a wildfire scenario called the *exposure count*, which may rise or fall as scenario direness changes.

Reducing Scenario Direness

Dire scenarios can become less so due to natural and human factors that increase lead time, decrease evacuation time, or both. Factors that may increase lead time by reducing a fire's spread rate include weather (natural), as well as fuel management and fire suppression (human). Although fuel management and fire suppression refer to an array of techniques, modelers do not generally include their effects in coupled fire-evacuation model scenarios because of a lack of data on local fuel management actions. There are also limits on including structural fuels in fire models, which reduces the predictive accuracy of fire spread rate estimates through communities (Kaufman and Roston 2020).

Many factors can decrease evacuation time before and during a scenario. Examples include phased warnings (Li et al. 2015), lane reversal (Xie et al. 2010), and traffic signal optimization (Ren et al. 2013). To broaden the purview, *protection time* is preferable because there are other options. Fire shelters and safety zones are alternatives that have multiple benefits (Amideo et al. 2019). First, they can protect people who cannot leave in time due to low mobility or egress issues, and second, they can reduce traffic delays for residents who decide to leave (i.e., shorter travel times). Households and communities can construct or assign areas of refuge, which can be public or private and permanent or temporary. In the 2018 Camp Fire, parking lots and community buildings were designated as temporary refuge areas (i.e., improvised fire shelter and safety zones), and designating and constructing places of refuge is a growing need. Steer et al. (2017) and Shahparvari et al. (2016) provide representative examples of optimal plans that combine evacuation and refuge shelters to protect people.

Many facets of human response in an actual wildfire can be challenging to model. One example not represented in current models is improvised protective actions. However, improvisation and flexible decision-making is often required in responding to dire disaster scenarios (Webb and Chevreau 2006). One recent example is the use of military transport helicopters to rescue campers trapped by the 2020 Creek Fire in California (Fuller and Mervosh 2020). Altruism is another neglected factor, particularly for many individuals caught in uniquely dire circumstances. Altruism refers to self-selected individuals who demonstrate a willingness to help others address a problem (Batson and Powell 2003). Altruistic examples in wildfires include (1) citizens providing rides for others, (2) citizens providing temporary refuge shelter, (3) citizens providing information via social media, (4) individuals clearing blocked traffic, and (5) citizens aiding in relocating vulnerable populations (e.g., medical facilities, retirement homes, childcare centers). Altruism relates to social capital because communities with greater social cohesion are more likely to have residents help one another (Aldrich and Meyer 2014). One example in the 2018 Camp Fire was Joe Kennedy, who single-handedly cleared abandoned cars that blocked traffic with a bulldozer (Mooallem 2019). Modelers may not have considered altruistic behavior because the need only arises in very dire scenarios, and it is difficult to predict how much might be displayed or where. However, altruistic acts can also lead to losses if people take excessive risks in helping others. Thus, it represents a challenging research frontier in creating more realistic agent-based wildfire evacuation simulations (i.e., agents helping or cooperating with other agents).

Conclusion

Although dire wildfire scenarios have not been a focus of study or modeling, they hold potential to help emergency planners and communities cooperate and consider novel protective actions. Key questions for further research include:

1. What can we learn from studying and modeling dire scenarios over favorable ones?
2. How does the direness of a scenario vary geographically across a threat area?
3. What factors serve to make a scenario more or less dire at different scales?
4. How can we incorporate protective behavior found in real wildfires into simulation models (e.g., improvisation, altruism)?
5. How many places of refuge do we need, where should they be located, and what capacity should they have to reduce likely scenarios from dire to routine?
6. What advanced technologies can help reduce the likelihood of dire scenarios before one occurs (e.g., artificial intelligence, wireless emergency alerts, automated fire detection, real-time decision support) (Zhao et al. 2021)?
7. What technology can aid in responding to a dire scenario (e.g., rescue robots, protective fire suits, temporary fire shelter)?
8. How can we visualize the dynamics of dire scenarios, as well as the beneficial and adverse events that affect lead and evacuation time, to improve situational awareness and decision-making?

Studying and modeling dire scenarios are important because they are challenging and increasing in frequency (Schoennagel et al. 2017). The benefit of simulating them is that it may lead to better planning and outcomes in cases where more things go wrong than right. Modeling wildfire evacuation as a coupled natural-human system is challenging (Ronchi et al 2019; Li et al. 2019), and there are limitations to the framework presented herein due to human behavior and uncertainty. Although the science of simulation continues to advance, we still have a long way to go toward incorporating many events that occur in real wildfires.

Data Availability Statement

No data, models, or code were generated or used during the study.

Notation

The following symbols are used in this paper:

d_{ijt} = direness score for community i threatened by wildfire j at time t;
e_{ijt} = time required to evacuate remaining residents in community i from wildfire j at time t;
i = index of communities;
j = index wildfires;
l_{ijt} = lead time at t before wildfire j impacts community i; and
t = index of time.

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Attachment D

Title 14 of the California Code of Regulations (14 CCR),

Division 1.5, Chapter 7

Subchapter 2, Articles 1-5

"DRAFT State Minimum Fire Safe Regulations, 2021"

Subchapter 2. ~~SRA/VHFHSZ~~ State Minimum Fire Safe Regulations

Article 1. Administration

§ 1270.00. Title.

These regulations shall be known as the "~~SRA/VHFHSZ~~ State Minimum Fire Safe Regulations," and shall constitute the ~~basic~~ minimum ~~w~~Wildfire protection standards of the California Board of Forestry and Fire Protection.

Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4102, 4126, 4127 and 4290, Public Resources Code.

§ 1270.01. Definitions ~~Purpose~~

The following definitions are applicable to this Subchapter.

(a) Access: The Roads on a route from a Building to the nearest Collector Road.

(b) Agriculture: Land used for agricultural purposes as defined in a Local Jurisdiction's zoning ordinances.

(c) Board: California Board of Forestry and Fire Protection.

(d) Building: Any Structure used or intended for supporting or sheltering any use or Occupancy, except those classified as

Utility and Miscellaneous Group U.

(e) CAL FIRE: California Department of Forestry and Fire Protection.

(f) Clear Width: A horizontal area free of vegetation, debris, fences, or other materials that may impede traffic flow; this area may include flexible posts or barriers.

(g) Collector Road: Roads identified by a Local Jurisdiction as a major or minor, or general, collector road pursuant to Title 23, Code of Federal Regulations, § 470.105 and in conformance with the procedures in the US Federal Highway Administration "Highway Functional Classification Concepts, Criteria, and Procedures," 2013 Edition, hereby incorporated by reference.

(h) Dead-end Road: A Road that has only one point of vehicular ingress/egress, including cul-de-sacs and looped Roads.

(i) Defensible Space: As defined in California Code of Regulations, Title 14, § 1299.02(a).

(j) Development: As defined in section 66418.1 of the California Government Code.

(k) Director: Director of the Department of Forestry and Fire Protection or their designee.

(l) Driveway: A vehicular pathway that serves up to two (2) parcels with no more than two (2) Residential Units and any number of non-commercial or non-industrial Utility or Miscellaneous Group U Buildings on each parcel. A Driveway shall not serve commercial or industrial uses at any size or scale.

(m) Exception: An alternative means or method to achieve a

specified standard requested by the applicant subject to § 1270.06 (Exceptions to Standards).

(n) Existing Road: A physical Road constructed and used by vehicles prior to a Development proposal.

(o) Fire Apparatus: A vehicle designed to be used under emergency conditions to transport personnel and equipment or to support emergency response, including but not limited to the suppression of fires.

(p) Fire Authority: A fire department, agency, division, district, or other governmental body responsible for regulating and/or enforcing minimum fire safety standards.

(q) Fire Hydrant: A valved connection on a water supply or storage system for the purpose of providing water for fire protection and suppression operations.

(r) Fuel Break: A strategically located area where the volume and arrangement of vegetation has been managed to limit fire intensity, fire severity, rate of spread, crown fire potential, and/or ember production.

(s) Greenbelts: Agricultural lands, open space, parks, wildlands, or a combination thereof, as designated by Local Jurisdictions, which surround or are adjacent to a city or urbanized area, and restrict or prohibit Development.

(t) Greenways: Linear open spaces or corridors that link parks and neighborhoods within a community through natural or manmade trails and paths.

(u) Hammerhead/T: A Rroad or Driveway that provides a "T"

shaped, three-point Turnaround space for Fire Apparatus, being no narrower than the Road or Driveway that serves it.

(v) Hazardous Land Use: A land use that presents a significantly elevated potential for the ignition, prolonged duration, or increased intensity of a Wildfire due to the presence of flammable materials, liquids, or gasses, or other features that initiate or sustain combustion. Such uses are determined by the Local Jurisdiction and may include, but are not limited to, power-generation and distribution facilities; wood processing or storage sites; flammable gas or liquids processing or storage sites; or shooting ranges.

(w) Local Jurisdiction: Any county, city/county agency or department, or any locally authorized district that approves or has the authority to regulate Development.

(x) Local Responsibility Area (LRA): Those areas of land not classified by the Board where the financial responsibility of preventing and suppressing Wildfires is that of the state or federal government, pursuant to Public Resources Code (PRC) section 4125.

(y) Local Road: Roads identified by a Local Jurisdiction as a local road pursuant to Title 23, Code of Federal Regulations, § 470.105 and in conformance with the procedures in the US Federal Highway Administration "Highway Functional Classification Concepts, Criteria, and Procedures," 2013 Edition, hereby incorporated by reference.

(z) Municipal-Type Water System: A system having water pipes

servicing Fire Hydrants and designed to furnish, over and above domestic consumption, a minimum of 250 gpm (950 L/min) at 20 psi (138 kPa) residual pressure for a two (2) hour duration.

(aa) New Road: A theoretical Road proposed in a Development application.

(bb) Occupancy: The purpose for which a Building, or part thereof, is used or intended to be used.

(cc) One-way Road: A minimum of one Traffic Lane width designed for traffic flow in one direction only.

(dd) Perimeter: The boundary of an individual parcel and/or the boundary of a tentative and final or parcel map, pursuant to Government Code § 66411, within which lies any Building construction.

(ee) Residential Unit: Any Building or portion thereof which contains living facilities, including provisions for sleeping, eating, cooking and/or sanitation for one or more persons. Manufactured homes, mobile homes, and factory-built housing are considered residential units, unless being sited or installed as an accessory or junior accessory dwelling unit in accordance with § 1270.03(d) (Scope – Exemptions – ADUs).

(ff) Ridgeline: The line of intersection of two opposing slope aspects running parallel to the long axis of the highest elevation of land.

(gg) Road: A public or private vehicular pathway to more than two (2) parcels, more than four (4) Residential Units, or to any industrial or commercial Occupancy.

(hh) Road or Driveway Structures: Bridges, culverts, and other appurtenant structures which supplement the Traffic Lane or Shoulders.

(ii) Shoulder: A vehicular pathway adjacent to the Traffic Lane.

(jj) State Responsibility Area (SRA): As defined in Public Resources Code sections 4126-4127; and the California Code of Regulations, title 14, division 1.5, chapter 7, article 1, sections 1220-1220.5.

(kk) Structure: That which is built or constructed, a Building of any kind, or any piece of work artificially built up or composed of parts joined together in some definite manner.

(ll) Substantial Compliance: Nearly complete satisfaction of all material requirements consistent with the purpose of the applicable State Minimum Fire Safe Regulations even though the formal requirements are not satisfied.

(mm) Substantial Evidence: Enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, in light of the whole record of evidence, even though other conclusions might also be reached. Argument, speculation, unsubstantiated opinion or narrative, or evidence which is clearly erroneous or inaccurate does not constitute substantial evidence. Substantial evidence shall include facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts.

(nn) Traffic Lane: The portion of a Road or Driveway that provides a single line of vehicle travel.

(oo) Turnaround: A portion of a Road or Driveway, unobstructed by parking, which allows for a safe opposite change of direction for Fire Apparatus. Design of such area may be a hammerhead/T or terminus bulb.

(pp) Turnout: A widening in a Road or Driveway to allow vehicles to pass.

(qq) Undeveloped Ridgeline: A Ridgeline with no Buildings.

(rr) Utility and Miscellaneous Group U: A Structure of an accessory character or a miscellaneous Structure not classified in any specific Occupancy permitted, constructed, equipped, and maintained to conform to the requirements of Title 24, California Building Standards Code.

(ss) Vertical Clearance: The minimum specified height of a bridge, overhead projection, or vegetation clearance above the Road or Driveway.

(tt) Very High Fire Hazard Severity Zone (VHFHSZ): As defined in Government Code section 51177(i).

(uu) Wildfire: As defined in Public Resources Code Section 4103 and 4104.

~~(a) These regulations have been prepared and adopted for the purpose of establishing minimum wildfire protection standards in conjunction with building, construction and development in the State Responsibility Area (SRA) and, after July 1, 2021, the Very High Fire Hazard Severity Zones as defined in Government Code § 51177(i) (VHFHSZ).~~

~~(b) The future design and construction of structures,~~

~~subdivisions and developments in the SRA and, after July 1, 2021, the VHFHSZ shall provide for basic emergency access and perimeter wildfire protection measures as specified in the following articles.~~

~~(c) These measures shall provide for emergency access; signing and building numbering; private water supply reserves for emergency fire use; and vegetation modification. The fire protection standards which follow shall specify the minimums for such measures.~~

Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4290 and 4291, Public Resources Code.

§ 1270.02. Purpose. ~~Scope~~

(a) These regulations have been prepared and adopted for the purpose of establishing state minimum Wildfire protection standards in conjunction with Building construction and Development in the State Responsibility Area (SRA) and, after July 1, 2021, the Very High Fire Hazard Severity Zones, as defined in Government Code § 51177(i) (VHFHSZ).

(b) Building construction in the SRA and, after July 1, 2021, the VHFHSZ shall provide for minimum Wildfire protection standards as specified in the following articles.

(c) These standards shall provide for emergency ingress and egress; signing and Building numbering; private water supply reserves for emergency fire use; vegetation modification, Fuel Breaks, Greenbelts, and measures to preserve Undeveloped

Ridgelines. The regulations which follow shall specify the minimums for such standards.

(d) By limiting Building construction in those areas where these minimum Wildfire protection standards are not satisfied, this reduces the risk of Wildfires in these areas, which among other things protects the health, safety and welfare of residents, and protects natural resources and the environment.

~~(a) These regulations shall apply to:~~

~~(1) the perimeters and access to all residential, commercial, and industrial building construction within the SRA approved after January 1, 1991 , and those approved after July 1, 2021 within the VHFHSZ, except as set forth below in subsections (b) through (d), inclusive, and (f);~~

~~(2) the siting of newly installed commercial modulars, manufactured homes, mobilehomes, and factory-built housing, as defined in Health and Safety Code sections 18001.8, 18007, 18008, and 19971, except where being sited or installed as an accessory or junior accessory dwelling unit as set forth in subsection (d) below;~~

~~(3) all tentative and parcel maps or other developments approved after January 1, 1991; and~~

~~(4) applications for Building permits on a parcel approved in a pre-1991 parcel or tentative map to the extent that conditions relating to the perimeters and access to the Buildings were not imposed as part of the approval of the parcel or tentative map.~~

~~(b) These regulations do not apply where an application for a~~

~~Building permit is filed after January 1, 1991 for Building construction on a parcel that was formed from a parcel map or tentative map (if the final map for the tentative map is approved within the time prescribed by the local ordinance) approved prior to January 1, 1991, to the extent that conditions relating to the perimeters and access to the Buildings were imposed by the parcel map or final tentative map approved prior to January 1, 1991.~~

~~(c) (1) At the discretion of the Local Jurisdiction, and subject to any requirements imposed by the Local Jurisdiction to ensure reasonable ingress, egress, and capacity for evacuation and emergency response during a Wildfire, these regulations shall not apply to the reconstruction or repair of legally constructed residential, commercial, or industrial Buildings due to a Wildfire, to the extent that the reconstruction or repair does not:~~

~~(A) increase the square footage of the residential, commercial, or industrial Building or Buildings that previously existed; or~~

~~(B) change the use of the Building or Buildings that had existed previously; or~~

~~(C) construct a new Building or Buildings that did not previously exist on the site.~~

~~(2) Nothing in this subsection shall be construed to alter the extent to which these regulations apply to the reconstruction or repair of a legally constructed residential, commercial, or industrial Building for reasons unrelated to a Wildfire.~~

~~(d) These regulations do not apply to the creation of accessory or junior accessory dwelling units that comply with Government Code sections 65852.2 or 65852.22, or any local ordinances enacted thereunder, as applicable, including any local ordinances requiring provisions for fire and life safety.~~

~~(e) Unless otherwise exempt pursuant to this Subchapter, affected activities include, but are not limited to:~~

~~(1) permitting or approval of new parcels, excluding lot line adjustments as specified in Government Code (GC) section 66412(d);~~

~~(2) application for a Building permit for new Building construction;~~

~~(3) application for a use permit; and~~

~~(4) road construction.~~

~~(f) EXEMPTION: Roads used solely for agricultural, mining, or the management and harvesting of wood products.~~

Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4290 and 4291, Public Resources Code.

§ 1270.03. Scope. ~~Provisions for Application of The Regulations~~

(a) These regulations shall apply to:

(1) the Perimeters and Access to all residential, commercial, and industrial Building construction within the SRA approved after January 1, 1991 and those approved after July 1, 2021 within the VHFHSZ, except as set forth below in subsections (b), (c), (d), and (e) below.

(2) the siting of newly installed commercial modulars, manufactured homes, mobilehomes, and factory-built housing, as defined in Health and Safety Code sections 18001.8, 18007, 18008, and 19971, except where being sited or installed as an accessory or junior accessory dwelling unit as set forth in subsection (d) below;

(3) all tentative and parcel maps or other Developments approved after January 1, 1991; and

(4) applications for Building permits on a parcel approved in a pre-1991 parcel or tentative map to the extent that conditions relating to the Perimeters and Access to the Buildings were not imposed as part of the approval of the parcel or tentative map.

(b) These regulations do not apply where an application for a Building permit in the SRA is filed after January 1, 1991 for Building construction on a parcel that was formed from a parcel map or tentative map (if the final map for the tentative map is approved within the time prescribed by the local ordinance) approved prior to January 1, 1991, to the extent that conditions relating to the Perimeters and Access to the Buildings were imposed by the parcel map or final tentative map approved prior to January 1, 1991.

(1) For this exemption to apply, the parcel map or tentative map that was approved prior to January 1, 1991, shall have imposed conditions relating to the Perimeters and Access to the Building construction that is the subject of the Building

permit application filed after January 1, 1991.

(2) These regulations shall apply to the Building construction to the extent that conditions relating to the Perimeters and Access to the Buildings were not imposed as part of the approval of the parcel map or tentative map.

(c) At the discretion of the Local Jurisdiction, and subject to any requirements imposed by the Local Jurisdiction to ensure reasonable ingress, egress, and capacity for evacuation and emergency response during a Wildfire, these regulations shall not apply to the reconstruction or repair of a Building due to a Wildfire, subject to the following:

(1) this exemption shall not apply if the reconstruction or repair encroaches on the minimum setback requirements in § 1276.01 Building and Parcel Siting and Setbacks;

(2) this exemption shall not apply if the reconstruction or repair changes the use of the Building or Buildings that had existed previously;

(3) nothing in this subsection shall be construed to alter the extent to which these regulations apply to the reconstruction or repair of a Building for reasons unrelated to a Wildfire; and

(4) nothing in this subsection shall be construed to alter the legal character of a Building reconstructed or repaired pursuant to this exemption.

(d) These regulations do not apply to the creation of accessory or junior accessory dwelling units that comply with Government

Code sections 65852.2 or 65852.22, or any local ordinances enacted thereunder, as applicable, including any local ordinances requiring provisions for fire and life safety.

(e) These regulations shall not apply to Roads used solely for Agriculture, mining, or the management of timberland and harvesting of forest products.

~~This Subchapter shall be applied as follows:~~

~~(a) the Local Jurisdictions shall provide the Director of the California Department of Forestry and Fire Protection (CAL FIRE) or their designee with notice of applications for Building permits, tentative parcel maps, tentative maps, and installation or use permits for construction or development within the SRA.~~

~~(b) the Director or their designee may review and make fire protection recommendations on applicable construction or development permits or maps provided by the Local Jurisdiction.~~

~~(c) the Local Jurisdiction shall ensure that the applicable sections of this Subchapter become a condition of approval of any applicable construction or development permit or map.~~

Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4290 and 4291, Public Resources Code.

§ 1270.04. Local Regulations ~~Ordinances~~.

(a) These regulations shall serve as the minimum Wildfire protection standards applied in SRA and VHFHSZ. However, these regulations do not supersede local regulations which equal or exceed the standards of this Subchapter. ~~Nothing contained in~~

~~these regulations shall be considered as abrogating the provisions of any ordinance, rule or regulation of any state or Local Jurisdiction provided that such ordinance, rule, or regulation is equal to or exceeds these minimum standards.~~

(b) A local regulation equals or exceeds a minimum standard of this Subchapter only if, at a minimum, the local regulation also fully complies with the corresponding minimum standard in this Subchapter. ~~Counties may submit their local ordinances for certification via email to the Board, and the Board may certify them as equaling or exceeding these regulations when they provide the same practical effect. If the Board determines that the local requirements do not equal or exceed these regulations, it shall not certify the local ordinance.~~

(c) A Local Jurisdiction shall not apply exemptions that are not enumerated in this Subchapter. Exceptions requested and approved in conformance with § 1270.06 (Exceptions to Standards) may be granted on a case-by-case basis. ~~When the Board grants certification, the local ordinances, in lieu of these regulations, shall be applied as described in 14 CCR § 1270.02 and used as the basis for inspections performed under 14 CCR § 1270.05.~~

(d) A Local Jurisdiction or Fire Authority may notify the Board upon commencement of any revisions to relevant local regulations. The Board may provide technical assistance to the agency during the revision drafting process. ~~The Board's certification of local ordinances pursuant to this section is~~

~~rendered invalid when previously certified ordinances are subsequently amended by Local Jurisdictions, or the regulations are amended by the Board, without Board re-certification of the amended ordinances. The Board's regulations supersede the amended local ordinance(s) when the amended local ordinance(s) are not re-certified by the Board. Amendments made by Local Jurisdictions to previously certified ordinances shall be submitted for re-certification.~~

(e) The Local Jurisdiction or Fire Authority may submit their draft regulation to the Board at least 90 days before the first meeting of the Local Jurisdiction or Fire Authority at which the proposed draft will be presented to the public.

(f) The Board may provide recommendations on the draft within 60 days.

(g) Notwithstanding a local regulation that equals or exceeds the State Minimum Fire Safe Regulations, Building construction shall comply with the State Minimum Fire Safe Regulations.

Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4290 and 4291, Public Resources Code.

§ 1270.05. Inspections.

Inspections shall conform to the following requirements:

(a) Inspections in the SRA shall be made by:

(1) the Director, or

(2) Local Jurisdictions that have assumed state fire protection responsibility on SRA lands, or

(3) Local Jurisdictions where the inspection duties have been formally delegated by ~~CAL FIRE~~ the Director to the Local Jurisdiction, pursuant to subsection (b).

(b) The Director may delegate inspection authority to a Local Jurisdiction subject to all of the following criteria:

(1) The Local Jurisdiction represents that they have appropriate resources to perform the delegated inspection authority.

(2) The Local Jurisdiction acknowledges that CAL FIRE's authority under subsection (d) shall not be waived or restricted.

(3) The Local Jurisdiction consents to the delegation of inspection authority.

(4) The Director may revoke the delegation at any time.

(5) The delegation of inspection authority, and any subsequent revocation of the delegation, shall be documented in writing, and retained on file at the CAL FIRE Unit headquarters that administers SRA fire protection in the Local Jurisdiction.

~~Nothing in this section abrogates CAL FIRE's authority to inspect and enforce state forest and fire laws even when the inspection duties have been delegated pursuant to this section.~~

(c) Inspections in the VHFHSZ shall be made by the Local Jurisdiction or Fire Authority.~~Reports of violations shall be provided to the CAL FIRE Unit headquarters that administers SRA fire protection in the Local Jurisdiction.~~

(d) Nothing in this section abrogates CAL FIRE's authority to

inspect and enforce state forest and fire laws in the SRA even when the inspection duties have been delegated pursuant to this section. ~~When inspections are conducted, they shall occur prior to: the issuance of the use permit or certificate of occupancy; the recordation of the parcel map or final map; the filing of a notice of completion; or the final inspection of any project or Building permit.~~

(e) Reports of violations within the SRA shall be provided to the CAL FIRE Unit headquarters that administers SRA fire protection in the Local Jurisdiction.

(f) Inspections conducted by the Director shall be limited to confirming compliance with the State Minimum Fire Safe Regulations. Inspections conducted by the Local Jurisdiction or Fire Authority shall confirm compliance with the State Minimum Fire Safe Regulations. A Local Jurisdiction may, in its discretion, conduct additional inspections with respect to a local regulation that equals or exceeds the State Minimum Fire Safe Regulations.

(g) The Local Jurisdiction shall ensure that any applicable Building construction complies with the applicable sections of this Subchapter.

Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4102, 4119, 4125, 4290 and 4291, Public Resources Code.

§ 1270.06. Exceptions to Standards.

(a) The requirements in this section apply to requests for Exceptions from the standards in the State Minimum Fire Safe Regulations.

(b~~a~~) Upon request by the applicant, an ~~e~~Exception~~s~~ to a standard~~s~~ within this ~~s~~Subchapter ~~or to Local Jurisdiction certified ordinances~~ may be granted ~~allowed~~ by the inspection entity in accordance with ~~listed in~~ § 1270.05 (Inspections). ~~where the exceptions provide the same practical effect as these regulations towards providing defensible space.~~

(1) Exceptions shall only be granted where the Exception provides for Substantial Compliance with the minimum standards provided in this Subchapter.

(2) Exceptions granted by the inspection entity ~~listed in 14 CCR § 1270.05~~ shall be made on a case-by-case basis only, shall be in writing, and shall be supported by Substantial Evidence. Exceptions granted by the inspection entity ~~listed in 14 CCR § 1270.05~~ shall be forwarded to the Board and the appropriate CAL FIRE unit headquarters ~~Unit Office~~ that administers SRA fire protection in that Local Jurisdiction, or the county in which the Local Jurisdiction is located~~county~~. Exceptions shall be retained on file at both offices for a period of no less than five (5) years. ~~and shall be retained on file at the Unit Office.~~

(~~b~~c) Requests for an ~~e~~Exception shall be made in writing to the inspection entity ~~listed in 14 CCR § 1270.05~~ by the applicant or

the applicant's authorized representative.

(1) ~~At a minimum, the~~ Exception requests shall state

(i)the specific section(s) for which an ~~e~~Exception is requested~~,~~;

(ii) material facts supporting the necessity for an Exception ~~contention of the applicant,~~;

(iii) material facts demonstrating the proposed alternative mean(s) Substantially Complies with the State Minimum Fire Safe Regulation for which the Exception is requested; ~~the details of the exception proposed,~~ and

(iv) a map showing the proposed location and siting of the ~~e~~Exception, including address or parcel number, as applicable.

(2) Local Jurisdictions acting as inspection entities pursuant to ~~listed in~~ § 1270.05 (Inspections) may establish additional procedures or requirements for ~~e~~Exception requests.

(~~c~~d) ~~Where an exception is not granted by the inspection entity, the applicant may appeal such denial to the Local Jurisdiction.~~ Exception decisions may be appealed. The Local Jurisdiction may establish or utilize an appeal process consistent with existing local Building or planning department appeal processes.

(1) In addition to local requirements, the Local Jurisdiction shall consult with the inspection entity prior to making a determination on an appeal.

(2) The inspection entity shall provide documentation

demonstrating how the requested Exception does or does not substantially comply with the standards in this Subchapter. ~~Before the Local Jurisdiction makes a determination on an appeal, the inspection authority shall be consulted and shall provide to that Local Jurisdiction documentation outlining the effects of the requested exception on Wildfire protection.~~

(e) If an appeal is granted, the Local Jurisdiction shall make written findings of the Exception's Substantial Compliance, as defined § 1270.01 (Definitions), with the minimum standards in this Subchapter, supported by Substantial Evidence. ~~that the decision meets the intent of providing defensible space consistent with these regulations.~~ Such findings shall include a written statement of reasons for overriding the decision of the inspection entity, if necessary. A written copy of these findings shall be provided to the Board and the CAL FIRE ~~U~~unit headquarters that administers SRA fire protection in that Local Jurisdiction, or in the county in which the Local Jurisdiction is located.

Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4290 and 4291, Public Resources Code.

§ 1270.07. Distance Measurements.

All specified or referenced distances are measured along the ground, unless otherwise stated.

Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4290 and 4291, Public Resources Code.

Article 2. ~~Emergency Access~~ Ingress and Egress

§ 1273.00. Purpose and Application~~ Intent~~.

(a) New Roads,~~ and d~~Driveways, and Road or Driveway Structures, whether public or private, unless exempted under § 1270.03(b)-(e) (Scope - Exemptions) ~~14 CCR 1270.02(c)~~, shall provide for concurrent Fire Apparatus ingress and ~~safe access for emergency wildfire equipment and~~ civilian evacuation ~~concurrently~~, and shall provide unobstructed traffic circulation during a W~~w~~ildfire ~~emergency consistent with 14 CCR §§ 1273.00 through 1273.09,~~ as set forth in this Article.

(b) The provisions of this Article and Article 3 (Signing and Building Numbering) shall apply to all New Roads, Driveways, or Road or Driveway Structures. The provisions of this Article and Article 3 (Signing and Building Numbering) shall further apply to all Existing Roads, Driveways, or Road or Driveway Structures within a Perimeter.

(c) The provisions of this Article and Article 3 (Signing and Building Numbering) shall further apply to any Existing Road, Driveway, or Road or Driveway Structure that provides Access to Building construction which includes

(1) the permitting or approval of three (3) or more new parcels, excluding lot line adjustments as specified in Government Code (GC) section 66412(d); or

(2) an application for a change of zoning which proposes to increase zoning intensity or density; or

(3) an application for a change in use permit which proposes to increase use intensity or density.

(d) Notwithstanding any other provision in this Subchapter, Building construction is prohibited where Access is provided by a Road that does not meet the minimum requirements in § 1273.12 (Standards for Existing Roads).

Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4290 and 4291, Public Resources Code.

§ 1273.01. Horizontal and Vertical Curves / Curb Radii ~~Width.~~

(a) No Road or Road Structure shall have a horizontal inside radius of curvature (measured from the centerline of the inside lane) of less than fifty (50) feet, except as provided for in subsections (b), (c), and (d).

(1) An additional four (4) feet of surface width shall be added to the required widths in § 1273.05 (Road and Driveway Traffic Lane Width and Clear Width) to curves of 50-100 feet radius.

(2) One (1) foot of additional Road width shall be added to curves of 100-200 feet, as illustrated on Figure 1 and Figure 2.

(3) Flexible posts may be placed within the required radius.

(b) Where the operating speed of a Road is 15 miles per hour (mph) or less, an alternative standard to subsection (a) based on modeling performed by a Professional Engineer, as described within the Professional Engineers Act (Chapter 7 of Division 3

of the Business and Professions Code), that demonstrates Fire Apparatus can negotiate the proposed horizontal inside radius satisfies the requirement of this section.

(c) At intersections where on-street parking and bike lanes may be present or where width allows, smaller curb radii or curb extensions to minimize pedestrian exposure and collision severity are present, the effective turning radius shall not be less than fifty (50) feet as illustrated in Figure 3 below.

(d) At intersections in areas without on-street parking and/or bike lanes where speeds approaching the intersection are less than 15 mph; and traffic volumes on the receiving road are less than 120 vehicles per hour during either an evacuation event or during the peak commute hour, whichever is a higher volume, curb radii of twenty (20) feet based on modeling performed by a Professional Engineer, as described within the Professional Engineers Act (Chapter 7 of Division 3 of the Business and Professions Code), that demonstrates Fire Apparatus can negotiate the proposed horizontal inside radius as illustrated in Figure 4, satisfies the requirement of this section.

(e) The length of vertical curves of roads, exclusive of gutters, ditches, and drainage structures designed to hold or divert water, shall be not less than one hundred (100) feet.

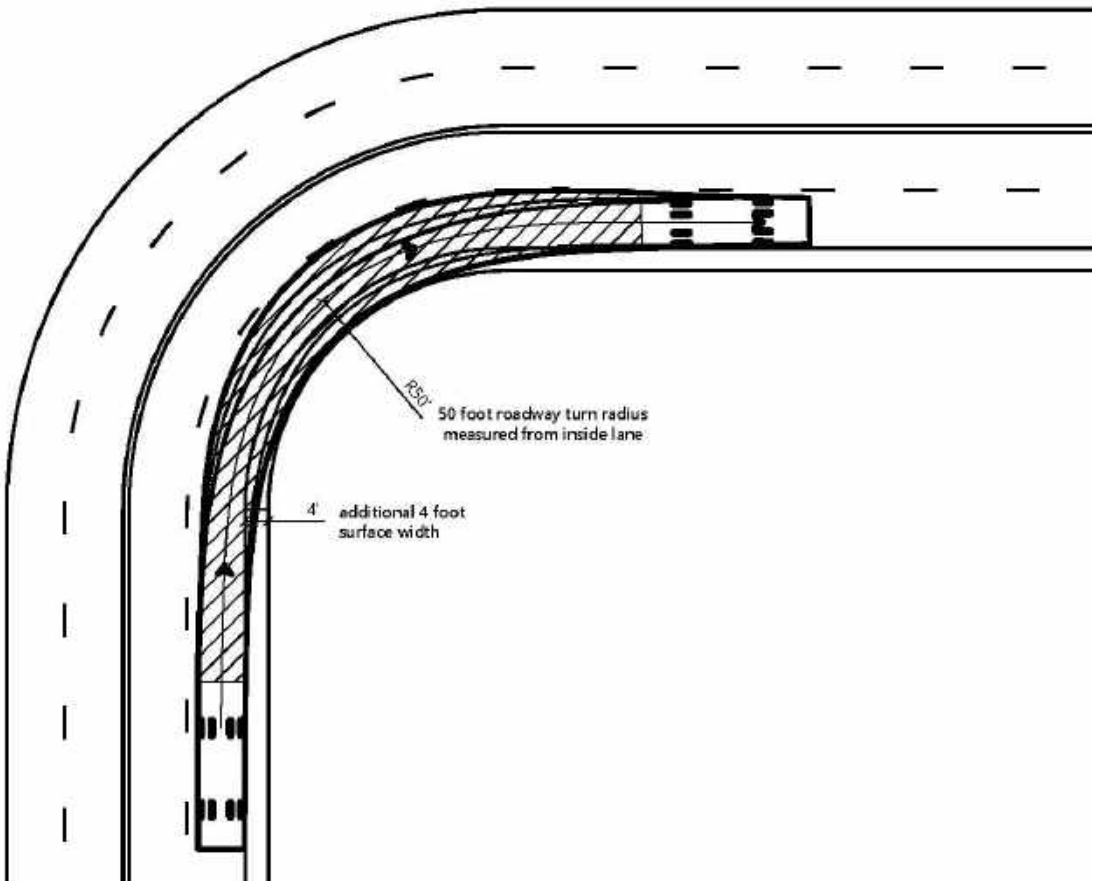


Figure 1
Effective Turning Radius for Horizontal Curvature with 50 Foot Radius

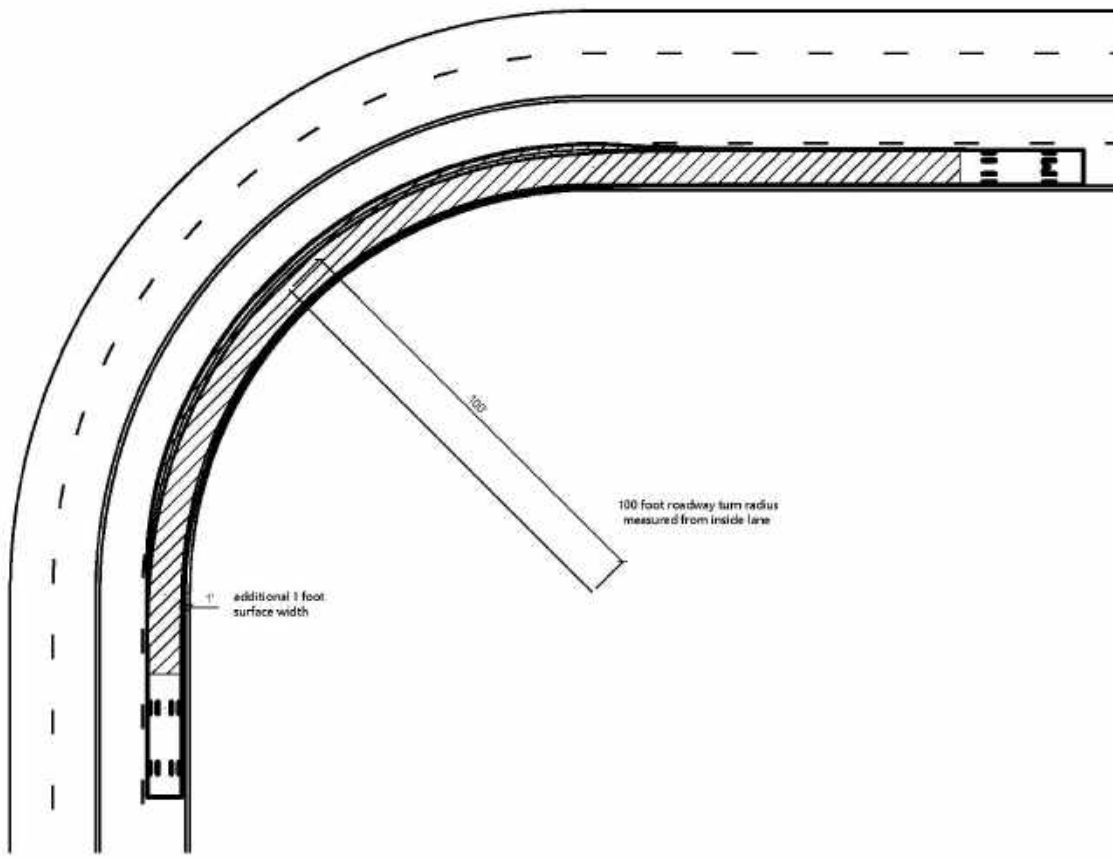


Figure 2
Effective Turning Radius for Horizontal Curvature with 100 Foot Radius

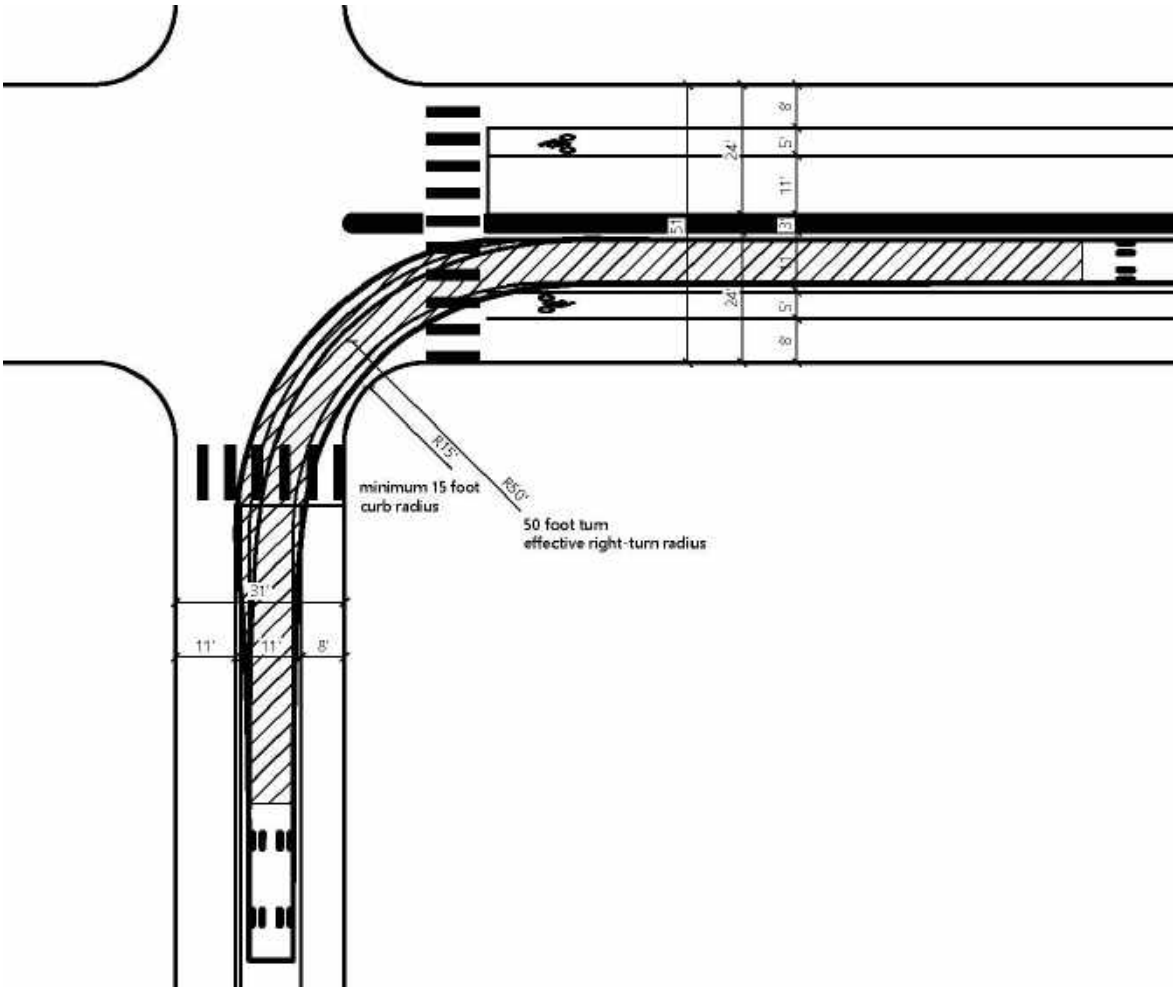


Figure 3
Effective Turning Radius for Intersections with Bike Lanes or Parking

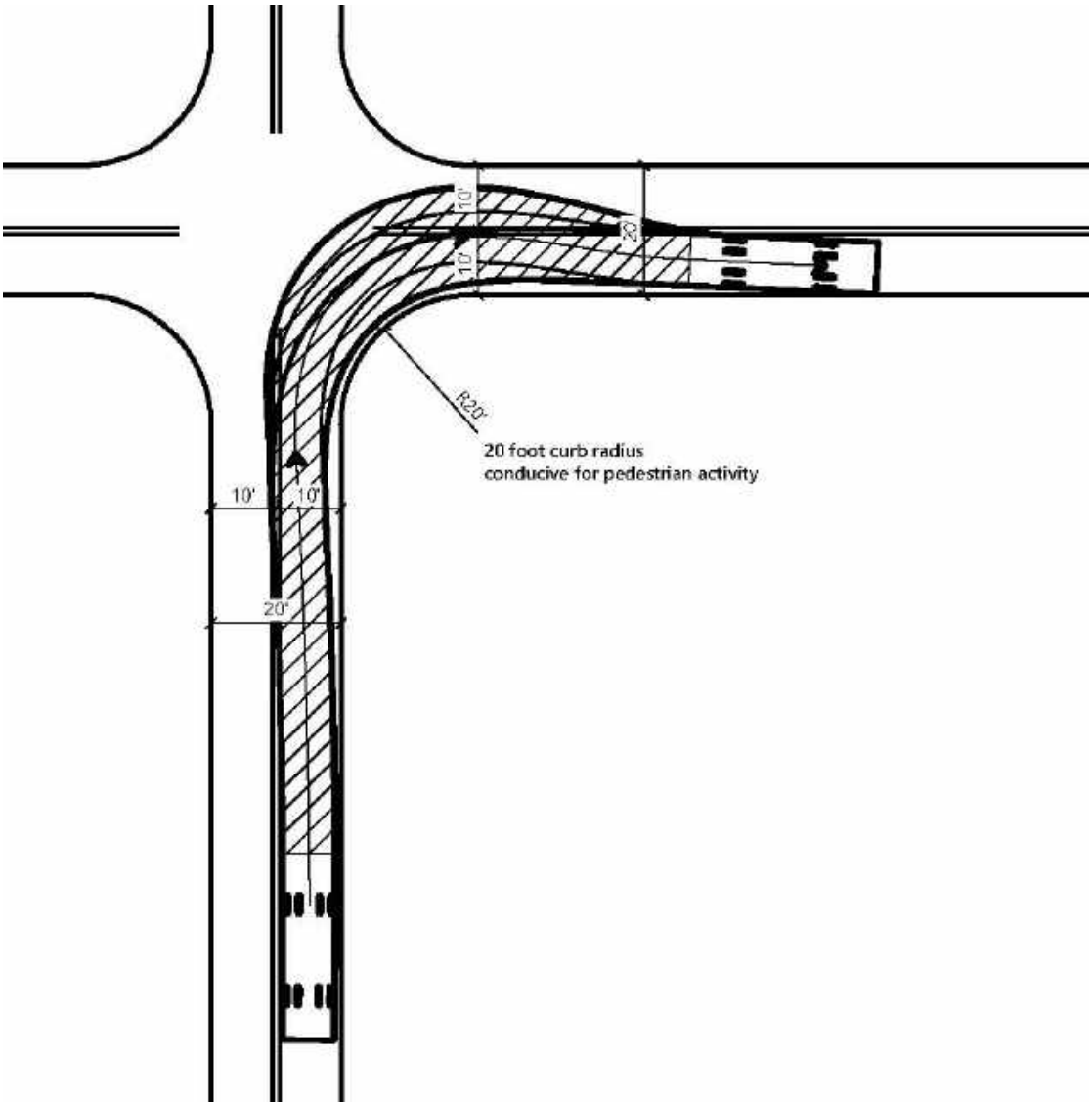


Figure 4
Effective Turning Radius for 20 Foot Wide Road Intersection

~~(a) All roads shall be constructed to provide a minimum of two ten (10) foot traffic lanes, not including shoulder and striping. These traffic lanes shall provide for two-way traffic flow to support emergency vehicle and civilian egress, unless other standards are provided in this article or additional requirements are mandated by Local Jurisdictions or local subdivision requirements. Vertical clearances shall conform to the requirements in California Vehicle Code section 35250.~~

~~(b) All one-way roads shall be constructed to provide a minimum of one twelve (12) foot traffic lane, not including shoulders. The Local Jurisdiction may approve one-way roads.~~

~~(1) All one-way roads shall, at both ends, connect to a road with two traffic lanes providing for travel in different directions, and shall provide access to an area currently zoned for no more than ten (10) residential units.~~

~~(2) In no case shall a one-way road exceed 2,640 feet in length. A turnout shall be placed and constructed at approximately the midpoint of each one-way road.~~

~~(c) All driveways shall be constructed to provide a minimum of one (1) ten (10) foot traffic lane, fourteen (14) feet unobstructed horizontal clearance, and unobstructed vertical clearance of thirteen feet, six inches (13' 6”).~~

Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4290 and 4291, Public Resources Code.

§ 1273.02. Road and Driveway Surfaces.

(a) Roads shall ~~be designed and maintained to~~ support the imposed load of ~~f~~Fire ~~a~~Apparatus weighing ~~at least~~ 75,000 pounds.~~, and provide an aggregate base.~~ The surface material of the Road shall be non-erodible (including, but not limited to, a binding agent, gravel, lime slurry, or pavement) and designed to support the required weight at all times, including during saturated soil conditions.

(b) Driveways and road and driveway structures shall ~~be designed and maintained to~~ support at least 36,0000 ~~40,000~~ pounds.

(c) The ~~P~~project proponent shall provide certified engineered ~~engineering~~ specifications to support the Road design, if requested by the ~~l~~Local ~~authority having~~ ~~j~~Jurisdiction.

Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4290 and 4291, Public Resources Code.

§ 1273.03. Bridge or Elevated Structures on Roads and Driveways. ~~Grades.~~

(a) Signing in conformance with the requirements in Article 3 (Signing and Building Numbering), shall reflect the capability of each bridge or elevated structure, including but not limited to weight or vertical clearance limitations, one-way road or single Traffic Lane conditions, or bridge weight rating limits.

(b) Bridges and elevated structures shall be designed and constructed to accommodate a gross vehicle weight rating of 75,000 pounds. Vehicle load limits shall be posted at both

entrances to bridges.

(1) Bridges or elevated structures may support a maximum weight of less than 75,000 pounds if the Fire Authority verifies that the Fire Apparatus most likely to be used will be under the maximum load weight of the bridge.

(2) If the bridge or elevated structure is designed for a lower weight, then it shall be identified through signing as required in Article 3 (Signing and Building Numbering). In no case shall the bridge or elevated structure be designed to support a weight below 36,000 pounds.

(3) American Association of State Highway and Transportation Officials (AASHTO) Standard Specifications for Highway Bridges, 17th Edition, published 2002 (known as AASHTO HB-17), hereby incorporated by reference, may be used in lieu of total vehicle weight if bridges and elevated structures are designed and certified by a Professional Engineer, as described within the Professional Engineers Act (Chapter 7 of Division 3 of the Business and Professions Code).

(c) Where elevated surfaces designed for Fire Apparatus use are adjacent to surfaces which are not designed for such use, barriers, signs, and/or other distinguishing features, as approved by the Local Jurisdiction, shall be installed and maintained.

(d) Notwithstanding the above requirements, a bridge or elevated structure with only one Traffic Lane satisfies the requirements of this section so long as it provides for

unobstructed visibility from one end to the other and Turnouts at both ends. Bridges or elevated structures with only one Traffic Lane shall be implemented consistent with requirements outlined in § 1273.05 (Road and Driveway Traffic Lane Width and Clear Width).

(e) Bridges and elevated structures shall be constructed of non-combustible materials.

~~(a) At no point shall the grade for all roads and driveways exceed 16 percent.~~

~~(b) The grade may exceed 16%, not to exceed 20%, with approval from the local authority having jurisdiction and with mitigations to provide for same practical effect.~~

Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4290 and 4291, Public Resources Code.

§ 1273.04. Road and Driveway Grades. ~~Radius.~~

(a) The grades for all Roads and Driveways shall not exceed sixteen (16) percent.

(b) Notwithstanding subsection (a), Road or Driveway grades of 16 to 20 percent satisfy the requirements of this section if the Road has been treated to prevent slippage (including, but not limited to, aggregate treatments, binding agents, and/or paving) and scraping.

(c) Grade transitions shall be constructed and designed to accommodate maximum approach and departure angles of twelve (12)

degrees.

~~(a) No road or road structure shall have a horizontal inside radius of curvature of less than fifty (50) feet. An additional surface width of four (4) feet shall be added to curves of 50-100 feet radius; two (2) feet to those from 100-200 feet.~~

~~(b) The length of vertical curves in roadways, exclusive of gutters, ditches, and drainage structures designed to hold or divert water, shall be not less than one hundred (100) feet.~~

Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4290 and 4291, Public Resources Code.

§ 1273.05. Road and Driveway Traffic Lane Width and Clear Width ~~Turnarounds.~~

(a) All bidirectional Roads shall provide a minimum of two ten (10) foot Traffic Lanes, not including Shoulders or striping. Where topographic or other limitations require the two Traffic Lanes to be constructed non-adjacently, each Traffic Lane shall provide a minimum of twelve (12) feet.

(b) All One-way Roads shall provide a minimum of one twelve (12) foot Traffic Lane.

(c) One-way Roads shall maintain a Clear Width of 20 feet. Bidirectional Roads with a center median shall maintain a Clear Width of 20 feet on either side of the median. This Clear Width may include bike lanes, Shoulders, or flexible barriers used as traffic calming devices or to delineate a bicycle facility, or

for other uses.

(d) All Driveways shall be constructed to provide a minimum of one (1) ten (10) foot Traffic Lane, fourteen (14) feet Clear Width, and unobstructed Vertical Clearance of thirteen feet, six inches (13' 6”).

~~(a) Turnarounds are required on driveways and dead-end roads.~~

~~(b) The minimum turning radius for a turnaround shall be forty (40) feet, not including parking, in accordance with the figures in 14 CCR §§ 1273.05(e) and 1273.05(f). If a hammerhead/T is used instead, the top of the “T” shall be a minimum of sixty (60) feet in length.~~

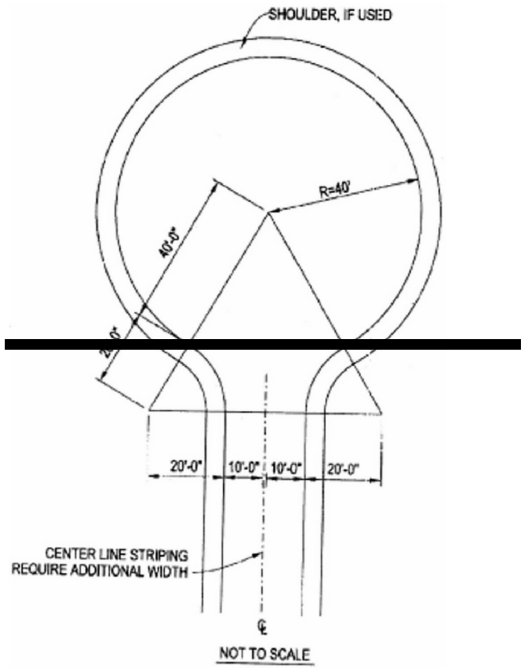
~~(c) Driveways exceeding 150 feet in length, but less than 800 feet in length, shall provide a turnout near the midpoint of the driveway. Where the driveway exceeds 800 feet, turnouts shall be provided no more than 400 feet apart.~~

~~(d) A turnaround shall be provided on driveways over 300 feet in length and shall be within fifty (50) feet of the Building.~~

~~(d) Each dead-end road shall have a turnaround constructed at its terminus. Where parcels are zoned five (5) acres or larger, turnarounds shall be provided at a maximum of 1,320 foot intervals.~~

~~(e) Figure A. Turnarounds on roads with two ten-foot traffic lanes.~~

~~Figure A/Image 1 is a visual representation of paragraph (b).~~



Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4290 and 4291, Public Resources Code.

§ 1273.06 Road and Driveway Vertical Clearances ~~Turnouts~~

Roads and Driveways shall provide for a minimum of thirteen feet and six inches (13′ 6″) of unobstructed Vertical Clearance.

~~Turnouts shall be a minimum of twelve (12) feet wide and thirty (30) feet long with a minimum twenty-five (25) foot taper on each end.~~

Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4290 and 4291, Public Resources Code.

§ 1273.07 Maximum Lengths of New One-Way Roads ~~Road and Driveway Structures~~

(a) In no case shall a New One-Way Road exceed 2,640 feet in length.

~~(a) Appropriate signing, including but not limited to weight or vertical clearance limitations, one-way road or single traffic lane conditions, shall reflect the capability of each bridge.~~

~~(b) Where a bridge or an elevated surface is part of a fire apparatus access road, the bridge shall be constructed and maintained in accordance with the American Association of State and Highway Transportation Officials Standard Specifications for Highway Bridges, 17th Edition, published 2002 (known as AASHTO HB-17), hereby incorporated by reference. Bridges and elevated surfaces shall be designed for a live load sufficient to carry the imposed loads of fire apparatus. Vehicle load limits shall be posted at both entrances to bridges when required by the local authority having jurisdiction.~~

~~(c) Where elevated surfaces designed for emergency vehicle use are adjacent to surfaces which are not designed for such use, barriers, or signs, or both, as approved by the local authority having jurisdiction, shall be installed and maintained.~~

~~(d) A bridge with only one traffic lane may be authorized by the local jurisdiction; however, it shall provide for unobstructed visibility from one end to the other and turnouts at both ends.~~

Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.

§ 1273.08 Maximum Lengths of New Dead-end Roads

(a) The maximum length of a New D~~d~~ead-end R~~r~~oad~~,~~ ~~including all dead-end roads accessed from that dead-end road,~~ shall not exceed the following cumulative lengths~~, regardless of the number of parcels served~~:

(1) for Roads with parcels zoned ~~for less than~~ not to exceed one (1) acre - 800 feet;

(2) for Roads with parcels zoned ~~for 1 acre~~ up to 4.99 acres - 1,320 feet;

(3) for Roads with parcels zoned for 5 acres ~~to 19.99~~ or larger - 2,640 feet.

~~parcels zoned for 20 acres or larger - 5,280 feet~~

~~All lengths shall be measured from the edge of the road surface at the intersection that begins the road to the end of the road surface at its farthest point. Where a dead-end road crosses areas of differing zoned parcel sizes requiring different length limits, the shortest allowable length shall apply.~~

(b) All New Dead-end Roads shall meet the Turnaround requirements in § 1273.10 (Road and Driveway Turnarounds). ~~See 14 CCR § 1273.05 for dead-end road turnaround requirements.~~

(c) All New Dead-end Roads shall meet the width requirements in § 1273.05 (Road and Driveway Traffic Lane Width and Clear Width).

(d) Each New Dead-end Road shall be connected directly to a through Road (a Road that is connected to other Roads at both ends).

(e) The length of New Dead-end Roads shall be measured from the center line of the through Road it connects to, to the terminus of the Dead-end Road at its farthest point.

(f) Where a New Dead-end Road provides access to differing zoned parcel sizes requiring different length limits, the shortest allowable length shall apply.

Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4290 and 4291, Public Resources Code.

§ 1273.09 Road and Driveway Turnouts ~~Gate Entrances~~

(a) Turnouts shall be a minimum of twelve (12) feet wide from the shoulder stripe, twenty-two (22) feet long with a minimum twenty-five (25) foot taper on each end and be facilitated outside of the Traffic Lane to accommodate one passenger vehicle as illustrated on Figure 5.

(b) On One-way Roads and Dead-end Roads over 400 feet in length, a Turnout shall be located at approximately the midpoint of the Road, in addition to any other Turnouts Required.

(c) Turnouts shall be provided no more than 400 feet apart on One-way Roads or on Roads that do not meet the width requirements.

(d) Driveways that are less than 20 feet wide and exceed 150

feet in length shall require a Turnout.

(e) Driveways greater than 150 feet in length and less than 800 feet in length shall provide a Turnout near the midpoint of the Driveway.

(f) Where the Driveway exceeds 800 feet, Turnouts shall be provided no more than 400 feet apart.

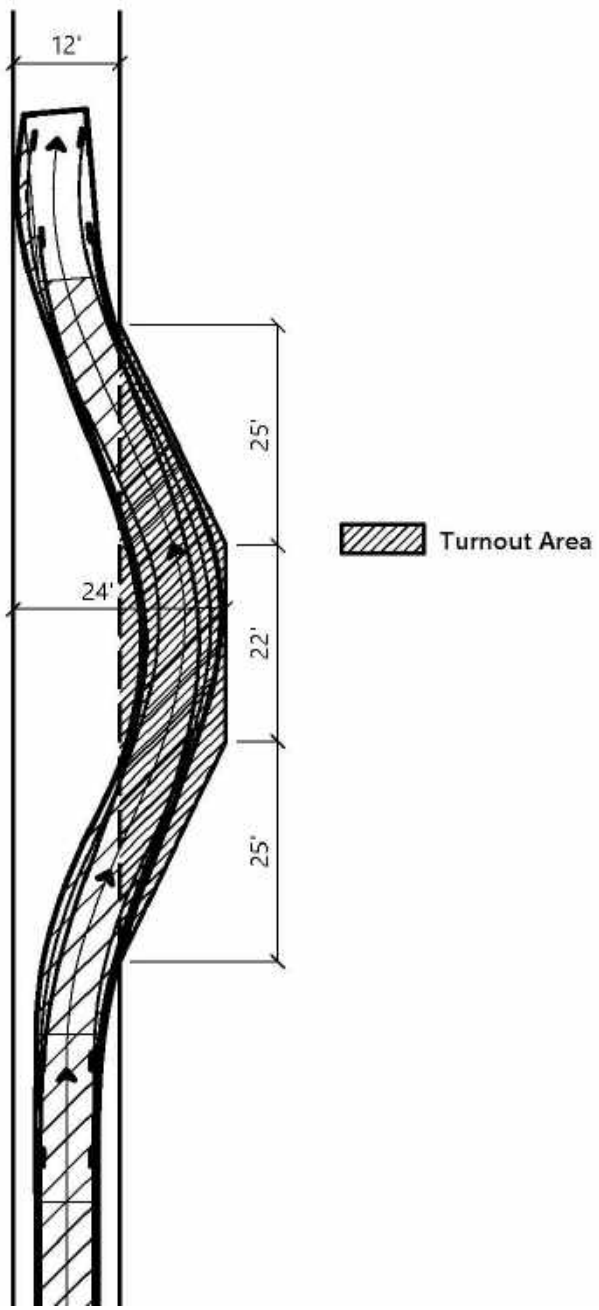


Figure 5
Turnout Dimensions

~~(a) Gate entrances shall be at least two (2) feet wider than the width of the traffic lane(s) serving that gate and a minimum width of fourteen (14) feet unobstructed horizontal clearance and unobstructed vertical clearance of thirteen feet, six inches (13' 6").~~

~~(b) All gates providing access from a road to a driveway shall be located at least thirty (30) feet from the roadway and shall open to allow a vehicle to stop without obstructing traffic on that road.~~

~~(c) Where a one-way road with a single traffic lane provides access to a gated entrance, a forty (40) foot turning radius shall be used.~~

~~(d) Security gates shall not be installed without approval. Where security gates are installed, they shall have an approved means of emergency operation. Approval shall be by the local authority having jurisdiction. The security gates and the emergency operation shall be maintained operational at all times.~~

Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4290 and 4291, Public Resources Code.

§ 1273.10 Road and Driveway Turnarounds

(a) Each Dead-end Road shall have a Turnaround constructed at its terminus. Where a Dead-end Road crosses parcels zoned for five (5) acres or larger, a Turnaround shall also be provided

halfway along the Dead-end Road.

(b) A Turnaround shall be provided on Driveways over 300 feet in length and shall be within fifty (50) feet of the Building.

(c) A Turnaround shall meet one of the following requirements in accordance with Figures 6.1, 6.2, or 6.3.

(d) Turnarounds with a radius smaller than 40 feet, shown in Figures 6.2 and 6.3 below, may be approved by the Local Jurisdiction when physical constraints prohibit the ability to install a 40-foot Turnaround.

(e) The center of the Turnaround shall remain clear of vegetation or decorative elements.

(f) If a hammerhead/T is used instead, the top of the "T" shall be a minimum of sixty (60) feet in length.

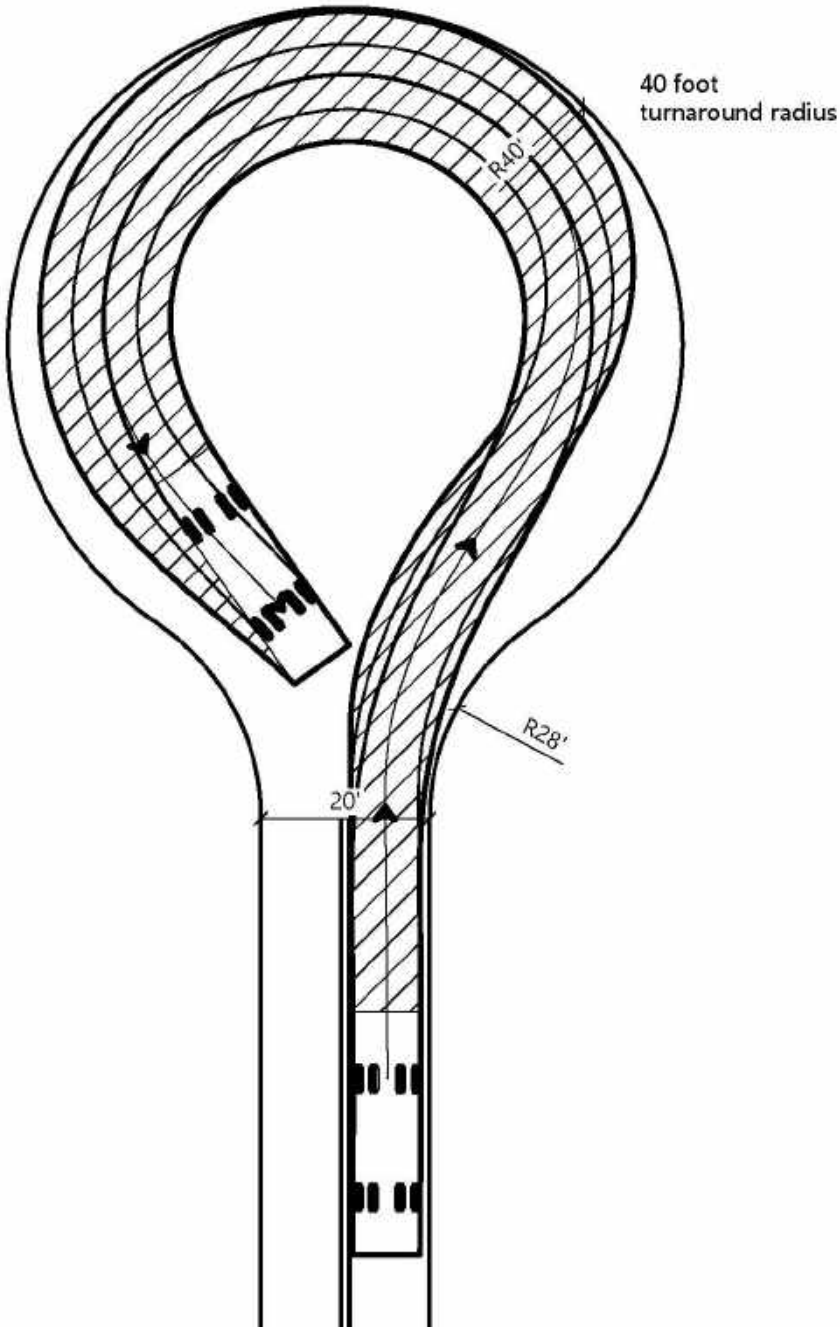


Figure 6.1
Turnarounds with 40-foot radius

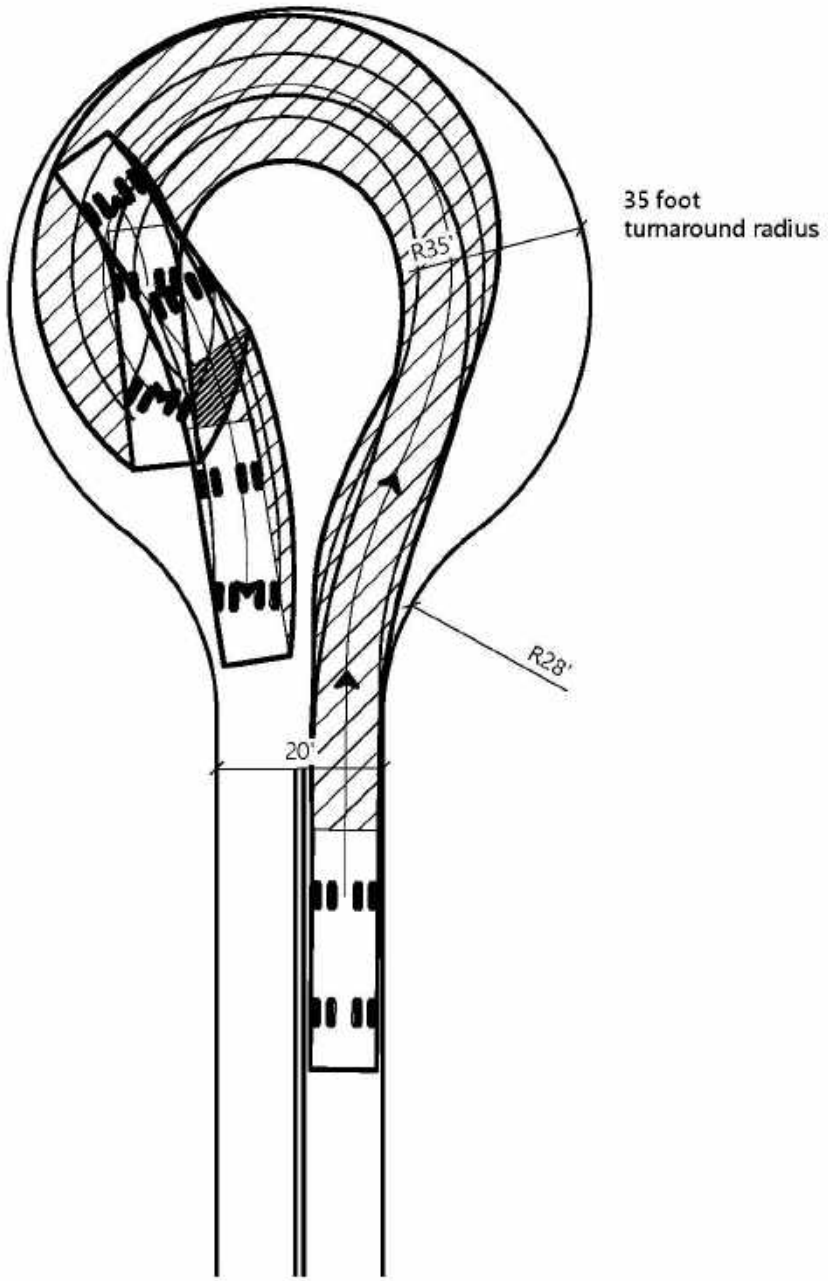


Figure 6.2
Turnarounds with 35-foot radius

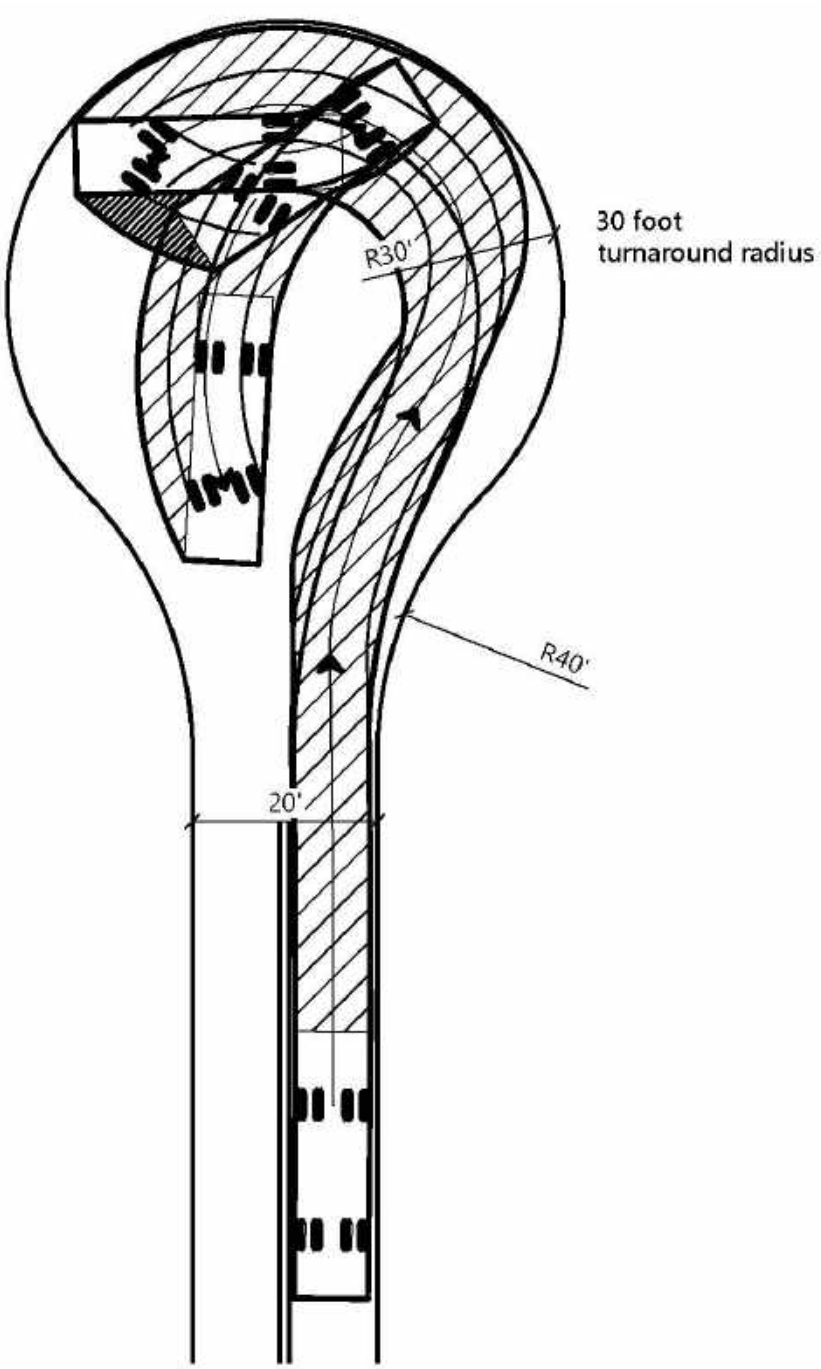


Figure 6.3
Turnarounds with 30-foot radius

Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4290 and 4291, Public Resources Code.

§ 1273.11 Gates

(a) Gates shall have an approved means of emergency operation. Electronic gates shall have a manual method of opening in case of electronic failure. The manual method shall be maintained operational at all times.

(b) Gate entrances shall be at least two (2) feet wider than the width of the Road or Driveway, as shown in Figure 7 below. Where a gate is installed across an existing Road or Driveway, the gate shall be no less than ten (10) feet wide, with a minimum Clear Width of fourteen (14) feet and unobstructed Vertical Clearance of thirteen feet, six inches (13' 6”). Clearance shall be maintained at all times.

(c) Where a One-way Road with a single Traffic Lane leads to a gated entrance, a forty (40) foot turning radius shall be used as illustrated on Figure 7.

(d) All gates on a Driveway shall be located at least thirty (30) feet from the Road and shall open in direction of travel, in accordance with Figure 7.

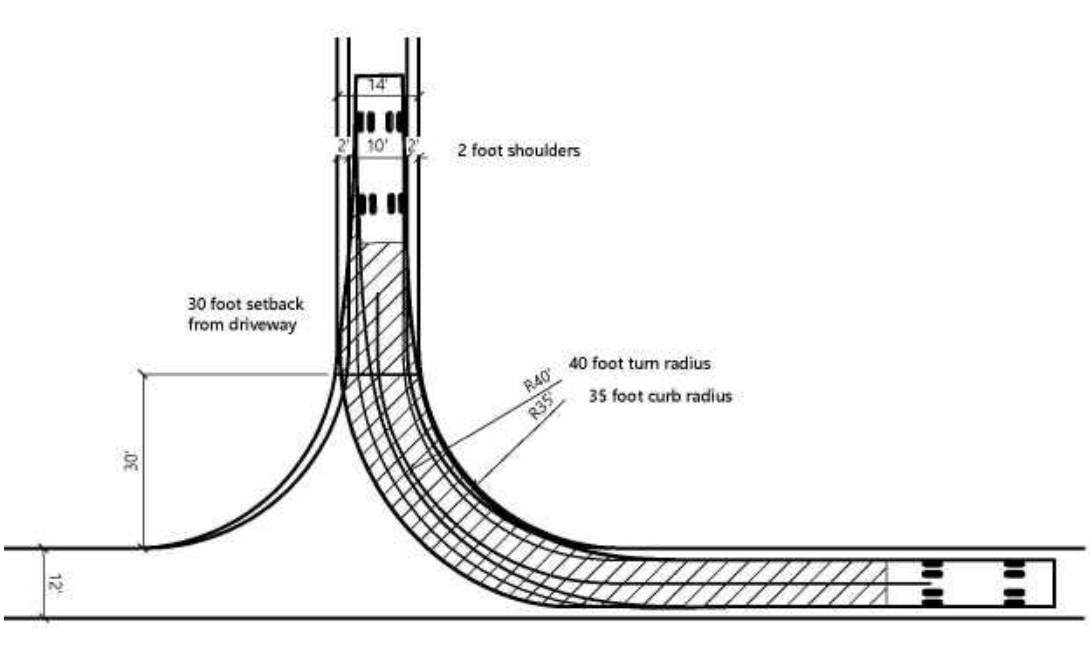


Figure 7
Effective Turn Radius for Gated Entrances/Driveways with Twelve Foot One-Way Main Road

Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4290 and 4291, Public Resources Code.

§ 1273.12 Standards for Existing Roads

(a) Except as provided in subsections (b) and (d), Existing Roads shall meet the following minimum requirements:

(1) One (1) fourteen (14) foot Traffic Lane;

(2) Native-surfacing for no more than 50% of the Road's length; and

(3) Turnouts in compliance with § 1273.09 (Road and Driveway Turnouts), or maintains a twenty (20) foot Clear Width suitable to serve as a Traffic Lane for the length of the Road.

(b) Access to Buildings after a Wildfire shall provide for at least one (1) fourteen (14) foot Traffic Lane for a distance of at least twenty-two (22) feet at an interval of at least every 400 feet; provided, however, where such Traffic Lanes are not possible due to physical site limitations such as localized topography, slope stability or soil conditions, Access shall provide for locations for vehicles to pass each other at reasonable intervals.

(c) Existing Roads providing Access to Buildings shall not exceed a grade of 25% over a distance of 500 linear feet.

(d) An Existing Road with a secondary route in conformance with § 1273.13 (Secondary Routes for Existing Roads) need not comply with subsection (a).

Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4290 and 4291, Public Resources Code, Section 51178 Government Code.

§ 1273.13 Secondary Routes for Existing Roads

(a) Secondary routes shall meet the standards for New Roads in this Subchapter and shall provide for legal and deeded Access that serves as a typical travel way to and from the Building construction. A secured secondary route shall meet the requirements in § 1273.11 (Gates).

(b) Secondary routes shall connect a user to an alternative route that would not be affected by a closure to the primary route, to the extent practicable.

Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4290 and 4291, Public Resources Code.

Article 3. Signing and Building Numbering

§ 1274.00. Road Name Signs. ~~Intent~~

(a) All Road signs shall conform to the requirements of the California Manual of Uniform Traffic Control Devices (CA MUTCD), hereby incorporated by reference.

(b) New Roads shall be identified by a name or number through a consistent system that provides for sequenced or patterned numbering and non-duplicative naming within each Local Jurisdiction. This section does not require any entity to rename or renumber existing roads.

(c) The size of letters, numbers, and symbols for road signs shall be a minimum four (4) inch letter height, half inch (.5) inch stroke, reflectorized, contrasting with the background color of the sign.

~~To facilitate locating a fire and to avoid delays in response, all newly constructed or approved roads and Buildings shall be designated by names or numbers posted on signs clearly visible and legible from the road. This section shall not restrict the size of letters or numbers appearing on road signs for other purposes.~~

Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4290 and 4291, Public Resources Code.

§ 1274.01. Road Sign~~s~~ Installation, Location, and Visibility.

(a) Signs required by this article identifying intersecting roads shall be placed at the intersection of those roads.

(b) A sign identifying traffic limitations, including but not limited to weight or Vertical Clearance limitations, Dead-end Roads, One-way Roads, or single lane Roads and bridges, shall be placed:

(1) at the intersection preceding the traffic limitation, and

(2) no more than one hundred (100) feet before such traffic limitation.

(c) Road signs required by this article shall be posted at the beginning of construction and shall be maintained thereafter.

(d) Road signs shall meet the minimum sign retroreflectivity requirements in the CA MUTCD. Signs that are not required to meet the retroreflectivity requirements (e.g., blue or brown backgrounds) shall be retroreflective or illuminated to show the same shape and color by both day and night.

~~(a) Newly constructed or approved roads must be identified by a name or number through a consistent system that provides for sequenced or patterned numbering and/or non-duplicative naming within each local jurisdiction. This section does not require any entity to rename or renumber existing roads, nor shall a road providing access only to a single commercial or industrial~~

~~occupancy require naming or numbering.~~

~~(b) The size of letters, numbers, and symbols for road signs shall be a minimum four (4) inch letter height, half inch (.5) inch stroke, reflectorized, contrasting with the background color of the sign.~~

Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4290 and 4291, Public Resources Code.

§ 1274.02. Addresses for Buildings.

(a) All Buildings shall be issued an address by the Local Jurisdiction consistent with the standards in the California Fire Code, California Code of Regulations title 24, part 9.

(b) Addresses for residential Buildings shall be reflectorized.

~~(a) Road signs shall be visible and legible from both directions of vehicle travel for a distance of at least one hundred (100) feet.~~

~~(b) Signs required by this article identifying intersecting roads shall be placed at the intersection of those roads.~~

~~(c) A sign identifying traffic access or flow limitations, including but not limited to weight or vertical clearance limitations, dead-end roads, one-way roads, or single lane conditions, shall be placed:~~

~~(i) at the intersection preceding the traffic access limitation, and~~

~~(ii) no more than one hundred (100) feet before such traffic~~

~~access limitation.~~

~~(d) Road signs required by this article shall be posted at the beginning of construction and shall be maintained thereafter.~~

Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4290 and 4291, Public Resources Code.

~~§ 1274.03. Addresses for Buildings.~~

~~(a) All buildings shall be issued an address by the local jurisdiction which conforms to that jurisdiction's overall address system. Utility and miscellaneous Group U buildings are not required to have a separate address; however, each residential unit within a building shall be separately identified.~~

~~(b) The size of letters, numbers, and symbols for addresses shall conform to the standards in the California Fire Code, California Code of Regulations title 24, part 9.~~

~~(c) Addresses for residential buildings shall be reflectorized.~~

~~Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4290 and 4291, Public Resources Code.~~

~~§ 1274.04. Address Installation, Location, and Visibility.~~

~~(a) All Buildings shall have a permanently posted address which shall be plainly legible and visible from the road fronting the property.~~

~~(b) Where access is by means of a private road and the address~~

~~identification cannot be viewed from the public way, an unobstructed sign or other means shall be used so that the address is visible from the public way.~~

~~(c) Address signs along one-way roads shall be visible from both directions.~~

~~(d) Where multiple addresses are required at a single driveway, they shall be mounted on a single sign or post.~~

~~(e) Where a road provides access solely to a single commercial or industrial business, the address sign shall be placed at the nearest road intersection providing access to that site, or otherwise posted to provide for unobstructed visibility from that intersection.~~

~~(f) In all cases, the address shall be posted at the beginning of construction and shall be maintained thereafter.~~

~~Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4290 and 4291, Public Resources Code.~~

Article 4. Water Supply. ~~Emergency Water Standards~~

§ 1275.00. Application. ~~Intent~~

(a) The provisions of this Article shall apply in the tentative and parcel map process when new parcels are approved by the Local Jurisdiction having authority, or when new Building construction is not already served by an existing water supply.

(b) These regulations shall not apply to existing water or wastewater facilities that are not newly constructed, or to

existing water or wastewater facilities that are repaired, reconstructed, or upgraded. For purposes of this subsection, "water and wastewater facilities" includes, but is not limited to, water storage tanks and reservoirs, pump stations, treatment facilities, regulator stations, Fire Hydrants, and similar water and wastewater system devices.

(c) Where a specific code standard from the California Fire Code or National Fire Protection Association (NFPA) is referenced in this Article, any sections of the California Fire Code or NFPA standards regarding alternative methods of compliance, equivalencies, or modifications to the specified standards shall also apply.

~~Emergency water for Wildfire protection shall be available, accessible, and maintained in quantities and locations specified in the statute and these regulations in order to attack a Wildfire or defend property from a Wildfire.~~

Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4290 and 4291, Public Resources Code.

§ 1275.01. Approved Water Supply. ~~Application~~

(a) Water supply shall meet or exceed the California Fire Code, California Code of Regulations Title 24, Part 9.

(b) Where a Municipal-Type Water Supply is not available, the Local Jurisdiction shall utilize the National Fire Protection Association (NFPA) 1142, "Standard on Water Supplies for

Suburban and Rural Fire Fighting," 2017 Edition, hereby incorporated by reference, as referenced in the California Fire Code, California Code of Regulations Title 24, Part 9, Appendix B and Appendix BB.

(c) All Building construction shall include a water supply for structure defense. Such protection shall be serviceable prior to and during the time of construction, except when alternative methods of protection are provided and approved by the Local Jurisdiction.

(d) Nothing in this article prohibits the combined storage of Wildfire and structural firefighting water supplies unless so prohibited by local ordinance or specified by the Local Fire Authority. Water supplies required under the California Fire Code, California Code of Regulations Title 24, Part 9, or other law or regulation may also be used to satisfy the requirements of this Article, so long as the full amount of water supply required by this article is provided.

(e) Where freeze or crash protection is required by the Local Jurisdictions, such protection measures shall be provided.

~~The provisions of this article shall apply in the tentative and parcel map process when new parcels are approved by the local jurisdiction having authority.~~

Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4290 and 4291, Public Resources Code.

§ 1275.02. Identification of Water Sources. ~~Water Supply.~~

(a) Fire Hydrants or water access located along a Driveway shall be identified by at least (1) reflectorized blue marker, with a minimum dimension of three (3) inches. This marker shall be mounted on a fire retardant sign post. The sign post shall be located and mounted as specified by the Fire Authority.

(b) Fire Hydrants or water access located along a Road shall be identified by a reflectorized blue marker, with a minimum dimension of three (3) inches. This marker shall be mounted on a fire-retardant sign post. The sign post shall be within three (3) feet of the Fire Hydrant or water access. The sign shall be no fewer than three (3) nor greater than five (5) feet above ground, in a horizontal position, and visible from the Road, or as specified by the Fire Authority.

~~(a) When a water supply for structure defense is required to be installed, such protection shall be installed and made serviceable prior to and during the time of construction except when alternative methods of protection are provided and approved by the local authority having jurisdiction.~~

~~(b) Water systems equaling or exceeding the California Fire Code, California Code of Regulations title 24, part 9, or, where a municipal-type water supply is unavailable, National Fire Protection Association (NFPA) 1142, "Standard on Water Supplies for Suburban and Rural Fire Fighting," 2017 Edition, hereby incorporated by reference, shall be accepted as meeting the~~

~~requirements of this article.~~

~~(c) Such emergency water may be provided in a fire agency mobile water tender, or naturally occurring or man made containment structure, as long as the specified quantity is immediately available.~~

~~(d) Nothing in this article prohibits the combined storage of emergency Wildfire and structural firefighting water supplies unless so prohibited by local ordinance or specified by the local fire agency.~~

~~(e) Where freeze or crash protection is required by Local Jurisdictions having authority, such protection measures shall be provided.~~

Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4290 and 4291, Public Resources Code.

§ 1275.03. Secured Water Sources. ~~Hydrants and Fire Valves.~~

Break away locks or similar systems approved by the Local Jurisdiction shall provide fire fighters with access to any water connections, valves, or controls that are normally secured by gates, doors, or other locking systems.

~~(a) The hydrant or fire valve shall be eighteen (18) inches above the finished surface. Its location in relation to the road or driveway and to the Building(s) or structure(s) it serves shall comply with California Fire Code, California Code of Regulations title 24, part 9, Chapter 5, and Appendix C.~~

~~(b) The hydrant head shall be a two and half (2 1/2) inch National Hose male thread with cap for pressure and gravity flow systems and four and a half (4 1/2) inch for draft systems.~~

~~(c) Hydrants shall be wet or dry barrel and have suitable freeze or crash protection as required by the Local Jurisdiction.~~

Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4290 and 4291, Public Resources Code.

§ 1275.04. Municipal-Type Water System Hydrants. ~~Signing of Water Sources~~

(a) The Municipal-Type Fire Hydrant shall be eighteen (18) inches above the finished surface. Its location in relation to the Road or Driveway and to the Building(s) or structure(s) it serves shall comply with California Fire Code, California Code of Regulations Title 24, Part 9, Chapter 5, and Appendix C.

(b) The Municipal-Type Fire Hydrant shall be sizes designated by the Local Jurisdiction, in consultation with the Fire Authority, and shall have male American National Fire Hose Screw Threads (NH).

(c) Where Municipal-Type water supply Fire Hydrant systems are not practical due to the absence of a Municipal-Type Water System, or other limiting factors, a performance-based water supply alternative approved by the Local Jurisdiction, in consultation with the Fire Authority, shall be designed and installed to meet the minimum fire flow water supply

requirements of 250 gallons per minute (gpm) for two (2) hours.

~~(a) Each hydrant, fire valve, or access to water shall be identified as follows:~~

~~(1) if located along a driveway, a reflectorized blue marker, with a minimum dimension of three (3) inches shall be located on the driveway address sign and mounted on a fire retardant post, or~~

~~(2) if located along a road,~~

~~(i) a reflectorized blue marker, with a minimum dimension of three (3) inches, shall be mounted on a fire retardant post. The sign post shall be within three (3) feet of said hydrant or fire valve, with the sign no less than three (3) feet nor greater than five (5) feet above ground, in a horizontal position and visible from the driveway, or~~

~~(ii) as specified in the State Fire Marshal's Guidelines for Fire Hydrant Markings Along State Highways and Freeways, May 1988.~~

Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4290 and 4291, Public Resources Code.

§ 1275.05. Dry Hydrants

When dry hydrants have been approved by the Local Jurisdiction, the requirements of NFPA 1142 (2017) Chapter 8 (8.3, 8.4, 8.5, 8.6, 8.7 and 8.8), hereby incorporated by reference, shall be met.

Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4290 and 4291, Public Resources Code.

§ 1275.06. Mobile Water Supply (Water Tenders)

(a) Fire water delivery systems that rely on mobile water supply (water tenders) shall only be permitted under the following conditions:

(1) During the construction phase of a new Development, prior to the permanent fire water delivery system installation; or,

(2) When the Local Jurisdiction determines that all other means of water supply is not practical.

(b) The mobile water supply shall, within five (5) minutes of the arrival of the first Fire Apparatus on-scene, be capable of providing the Fire Apparatus with a minimum 250 gpm for a 2-hour duration.

(c) Mobile water supplies may use NFPA 1142 (2017) Annex C, hereby incorporated by reference, to achieve minimum fire flow requirements.

Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4290 and 4291, Public Resources Code.

§ 1275.07. Protection of Water Supply Infrastructure from Wildfire.

(a) All water supply infrastructure shall be protected from

Wildfire radiant heat, convective heat, and embers by at least one of the following:

(1) underground burial; or

(2) construction of non-combustible materials, fittings and valves, such as concrete or metal; or

(3) maintenance of a 100-foot, slope-adjusted defensible space immediately surrounding the infrastructure; or

(4) placement within a Building constructed to the requirements of the California Building Code (California Code of Regulations Title 24, Part 2) Chapter 7A.

Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4290 and 4291, Public Resources Code.

Article 5. Building Siting, Setbacks, and Fuel Modification ~~Fuel Modification Standards~~

§ 1276.00. Applicability ~~Intent~~

(a) All Building construction shall comply with the following provisions of this Article: § 1276.01 (Building and Parcel Siting and Setbacks); § 1276.02(c) (Ridgelines); and § 1276.06 (Disposal of Flammable Vegetation and Fuels).

(b) The following provisions of this article shall further apply in the tentative and parcel map process for new parcels: § 1276.01 (Building and Parcel Siting and Setbacks); § 1276.02(c) (Ridgelines); § 1276.03 (Fuel Breaks); § 1276.04 (Greenbelts, Greenways, Open Spaces and Parks); § 1276.05 (Maintenance of

Fuel Breaks); and § 1276.06 (Disposal of Flammable Vegetation and Fuels).

~~To reduce the intensity of a Wildfire by reducing the volume and density of flammable vegetation, the strategic siting of fuel modification and greenbelts shall provide for increased safety for emergency fire equipment and evacuating civilians by its utilization around structures and roads, including driveways, and a point of attack or defense from a Wildfire.~~

Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4290 and 4291, Public Resources Code.

§ 1276.01. Building and Parcel Siting and Setbacks. ~~Setback for Structure Defensible Space~~

(a) All parcels shall provide a minimum thirty (30) foot setback for all B~~b~~uildings from all property lines and/or the center of a R~~r~~oad, except as provided for in subsection (b).

(b) A reduction in the minimum setback shall be based upon ~~When a thirty (30) foot setback is not possible for~~ practical reasons, which may include but are not limited to, parcel dimensions or size; topographic limitations; development density requirements or other development patterns that promote low-carbon emission outcomes; sensitive habitat; or other site constraints ~~easements~~, and shall reduce Structure-to-Structure ignition by incorporating features such as, but not limited to: ~~Same practical effect options may include, but are not limited~~

~~to:~~ (1) non-combustible block walls or fences; or

(2) five (5) feet of non-combustible material extending five (5) feet horizontally from the furthest extent of the Building; or

(3) installing hardscape landscaping or reducing exposed windows on the side of the ~~s~~Structure with a less than thirty (30) foot setback; or

(4) additional structure hardening that exceeds the requirements in the California Building Code, California Code of Regulations Title 24, Part 2, Chapter 7A.

Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4290 and 4291, Public Resources Code.

§ 1276.02. Ridgelines. ~~Maintenance of Defensible Space Measures.~~

(a) The Local Jurisdiction shall identify strategic Ridgelines, if any, in consultation with the Fire Authority. Strategic Ridgelines shall be identified through an assessment of the following factors:

(1) Topography;

(2) Vegetation;

(3) Proximity to any existing or proposed residential, commercial, or industrial land uses;

(4) Ability to support effective fire suppression; and

(5) Other factors, if any, deemed relevant by the Local Jurisdiction and Fire Authority.

(b) Preservation of Undeveloped Ridgelines identified as strategically important shall be required.

(c) New Buildings on Undeveloped Ridgelines identified as strategically important are prohibited. Nothing in this subsection shall be construed to alter the extent to which Structures or Development other than Buildings, such as but not limited to Utility and Miscellaneous Group U Structures, may be constructed on Undeveloped Ridgelines.

(d) The Local Jurisdiction may implement further specific requirements to preserve Undeveloped Ridgelines.

~~To ensure continued maintenance of commonly owned properties in conformance with these standards and to assure continued availability, access, and utilization of the defensible space provided by these standards during a wildfire, provisions for annual maintenance shall be provided in emergency access covenants or similar binding agreements.~~

Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4290 and 4291, Public Resources Code.

§ 1276.03. Fuel Breaks ~~Disposal of Flammable Vegetation and Fuels.~~

(a) When Building construction meets the following criteria, the Local Jurisdiction shall determine the need and location for Fuel Breaks in consultation with the Fire Authority:

(1) the permitting or approval of three (3) or more new

parcels, excluding lot line adjustments as specified in Government Code (GC) section 66412(d); or

(2) an application for a change of zoning increasing zoning intensity or density; or

(3) an application for a change in use permit increasing use intensity or density.

(b) Fuel Breaks required by the Local Jurisdiction shall be located, designed, and maintained in a condition that reduces the potential of damaging radiant and convective heat or ember exposure to Access routes, Buildings, or infrastructure within the Development.

(c) Fuel Breaks may be required at locations such as, but not limited to:

(1) Directly adjacent to Defensible Space to reduce radiant and convective heat exposure, ember impacts, or support fire suppression tactics;

(2) Directly adjacent to Roads to manage radiant and convective heat exposure or ember impacts, increase evacuation safety, or support fire suppression tactics;

(3) Directly adjacent to a Hazardous Land Use to limit the spread of fire from such uses, reduce radiant and convective heat exposure, or support fire suppression tactics;

(4) Strategically located along Ridgelines, in Greenbelts, or other locations to reduce radiant and convective heat exposure, ember impacts, or support community level fire

suppression tactics.

(d) Fuel Breaks shall be completed prior to the commencement of any permitted construction.

(e) Fuel Breaks shall be constructed using the most ecologically and site appropriate treatment option, such as, but not limited to, prescribed burning, manual treatment, mechanical treatment, prescribed herbivory, and targeted ground application of herbicides.

(f) Fuel Breaks shall have, at a minimum, one point of entry for fire fighters and any Fire Apparatus. The specific number of entry points and entry requirements shall be determined by the Local Jurisdiction in consultation with the Fire Authority.

~~Disposal, including chipping, burying, burning or removal to a site approved by the local jurisdiction, of flammable vegetation and fuels caused by site development and construction, road and driveway construction, and fuel modification shall be completed prior to completion of road construction or final inspection of a building permit.~~

Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4290 and 4291, Public Resources Code.

§ 1276.04. Greenbelts, Greenways, Open Spaces and Parks ~~Greenbelts~~

(a) Where a Greenbelt, Greenway, open space, park, landscaped or natural area, or portions thereof, is intended to serve as a

Fuel Break, the space or relevant portion thereof shall conform with the requirements in § 1276.03 (Fuel Breaks).

(b) Local Jurisdictions may require Greenbelts or Greenways or other open areas for the purpose of providing potential areas of refuge for the public or firefighters or other values as a last resort, if safe evacuation is not practicable.

~~Subdivision and other developments, which propose greenbelts as a part of the development plan, shall locate said greenbelts strategically as a separation between wildland fuels and structures. The locations shall be approved by the local authority having jurisdiction and may be consistent with the CAL FIRE Unit Fire Management Plan or Contract County Fire Plan.~~

Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4290 and 4291, Public Resources Code.

§ 1276.05. Maintenance of Fuel Breaks

(a) Where a Local Jurisdiction requires Fuel Breaks pursuant to § 1276.03 (Fuel Breaks), maintenance mechanisms shall be established to ensure the fire behavior objectives and thresholds are maintained over time.

(b) The mechanisms required shall be binding upon the property for which the Fuel Break is established, shall ensure adequate maintenance levels, and may include written legal agreements; permanent fees, taxes, or assessments; assessments through a homeowners' association; or other funding mechanisms.

Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4290 and 4291, Public Resources Code.

§ 1276.06 Disposal of Flammable Vegetation and Fuels

The disposal, including burning or removal to a site approved by the Local Jurisdiction, of flammable vegetation and fuels caused by site development and construction, road and driveway construction shall be in accordance with all applicable laws and regulations.

Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4290 and 4291, Public Resources Code.

Attachment E

ATTACHMENT E

ADDITIONAL INFORMATION REGARDING UNUSUAL CIRCUMSTANCES AND PROJECT'S POTENTIAL FOR SIGNIFICANT IMPACTS[1]

The Proposed Project Will Increase Population Density, Intensity of Use, Zoning Intensity and Increases Wildfire Risk

Development in high fire-prone wildlands is leading to more human-caused ignitions where people live (Radeloff et al. 2018).[2] Nearly all contemporary wildfires in California are caused by human sources such as power lines, car sparks, cigarettes, and electrical equipment (Syphard et al. 2007; Balch et al. 2017).[3] Building new developments in high fire-risk areas increases unintentional ignitions and places more people in danger. Since 2015 almost 200 people in the state have been killed in wildfires, more than 50,000 structures have burned down, hundreds of thousands have had to evacuate their homes and endure power outages, and millions have been exposed to unhealthy levels of smoke and air pollution.

The year 2020 was the largest wildfire year recorded in California history, according to the California Department of Forestry and Fire Protection.[4] In the 2020 wildfire season, 9,639 fires burned: 4.39 million acres (more than 4% of the state), 10,488 structures and caused 31

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[1] **Some of the material in this discussion is quoted and abstracted from Comment Letters by the Center for Biological Diversity on SB55 and the Guenoc Valley Center EIR and project.**

SAFFR would like to thank the Center for Biological Diversity for permission to reuse and quote their material.

https://www.biologicaldiversity.org/programs/urban/pdfs/AG-Letters-to-Lake-County-re-Guenoc-Valley-Project-FEIR.pdf
https://www.biologicaldiversity.org/programs/urban/pdfs/2020-07-06-Center-comments_-Guenoc-Valley-Mixed-Use-Development-FEIR.pdf
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[3] Syphard, A. D., Radeloff, V. C., Keeley, J. E., Hawbaker, T. J., Clayton, M. K., Stewart, S. I., ... Hammer, R. B. (2007). Human influence on California fire regimes. *Ecological Society of America*, *17*(5), 1388–1402. https://pubs.er.usgs.gov/publication/70029709

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https://en.wikipedia.org/wiki/California_Department_of_Forestry_and_Fire_Protection
https://web.archive.org/web/20201229021815/https:/gacc.nifc.gov/sacc/predictive/intelligence/NationalLargeIncidentYTDReport.pdf
https://en.wikipedia.org/wiki/National_Interagency_Fire_Center
https://gacc.nifc.gov/sacc/predictive/intelligence/NationalLargeIncidentYTDReport.pdf
https://www.cbs8.com/article/news/local/wildfire/brush-fire-in-fallbrook-spreads-into-camp-pendleton/509-a45199e6-2594-47b1-b5d4-51da5cb0b346
https://abc7news.com/california-wildfires-cost-of-cal-fire-stanford-wildfire-research/6897462/

deaths at an estimated cost of $12 billion in damages ($10 billion in property damage and $2 billion on wildfire suppression costs).

Rampant sprawl development in fire-prone wildlands has also contributed to a dramatic increase in costs due to fire-suppression and damages. Costs in areas managed by Cal Fire were $23 billion during the 2015-2018 fire seasons, which is more than double the wildfire cost for the previous 26 years combined after adjusting for inflation. Fifteen of the 20 most destructive California wildfires have occurred in the past five years.

Very High Fire Hazard Severity Zones and State Responsibility Areas have been identified by Cal Fire as areas that are likely to burn within 30 to 50 years. Hotter, drier and windier conditions due to climate change make the landscape more conducive to wildfire ignitions and spread. However, local officials continue to greenlight massive new developments for mostly mid- to high-income homes in high fire-prone areas that have repeatedly burned in wildfires. For example, multiple wildfires have occurred on the site for the 3,150-home Northlake development approved by L.A. County in 2019, and several wildfires have burned the site for the 3,000-home Otay Village developments approved by San Diego County in 2019 and 2020. Less than two months after Lake County approved a 16,000-acre luxury residential and resort project in Guenoc Valley, the 2020 LNU Complex Fire burned through the project area.

In a recent peer-reviewed study from Stanford University researchers explained, "Changing demographic factors have undoubtedly played a substantial role in community exposure and vulnerability, including the expansion of urban and suburban developments into the 'wildland-urban interface.'" (Goss et al. 2020.)[5] In fact, development in the wildland-urban interface, is responsible for the most buildings burned in California, despite less fuel. (Kramer et al. 2019.)[6] Researchers have determined that growth in the wildland-urban interface "often results in more wildfire ignitions, putting more lives and houses at risk." (Radeloff et al. 2019.)[7]

Sprawl developments with low/intermediate densities extending into habitats that are prone to fire have led to more frequent wildfires caused by human ignitions, and these types of developments have the highest chances of burning (Keeley et al. 1999;[8] Keeley and Fotheringham 2003;[9] Syphard et al. 2007;[10] Syphard et al. 2013; Balch et al. 2017;[11] Radeloff et

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[5] Goss, M., et al. (2020). Climate change is increasing the risk of extreme autumn wildfire conditions across California. *Environ. Res. Lett*. in press https://iopscience.iop.org/article/10.1088/1748-9326/ab83a7

[6] Kramer, H.A., Mockrin, M.H., Alexandre, P.M., Radeloff, V.C. (2019). High wildfire damage in interface communities in California. *Int J Wildl Fire, 28*(9), 641–50. https://www.publish.csiro.au/WF/pdf/WF18108

[7] Radeloff, V.C., et al. (2019). Rapid growth of the US wildland-urban interface raises wildfire risk. *Proc Natl Acad Sci U S A, 115*(13), 3314–9. https://www.pnas.org/content/115/13/3314

[8] Radeloff, V.C., et al. (2019). Rapid growth of the US wildland-urban interface raises wildfire risk. *Proc Natl Acad Sci U S A, 115*(13), 3314–9. https://www.pnas.org/content/115/13/3314

[9] Keeley, J. E., Fotheringham, C. J., & Morais, M. (1999). Reexamining fire suppression impacts on brushland fire regimes. *Science*, *284*(5421), 1829–1832. https://pubmed.ncbi.nlm.nih.gov/10364554/

[10] Syphard, A. D., et al. (2007). Human Influence on California Fire Regimes. *Ecological Application, 17*(5)*,* 1388–1402. https://esajournals.onlinelibrary.wiley.com/doi/10.1890/06-1128.1

[11] Syphard, A.D., Bar Massada, A., Butsic, V., Keeley, J.E. (2013). Land Use Planning and Wildfire: Development Policies Influence Future Probability of Housing Loss. *PLoS ONE, 8*(8), e71708. https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0071708

al. 2019; Syphard et al. 2019).[12] This can disrupt the natural fire regime and lead to a dangerous feedback loop of deadly fires and habitat destruction. Thus, developing housing in locations in California that currently have low or no density, dramatically increases the number of fires and the amount of area burned. See Keeley 2005;[13] Syphard et al. 2013; Syphard et al. 2007 [stating that ninety-five percent of California's fires are caused by human activity].

Common anthropogenic causes of fire include arson/incendiary, equipment use, debris burning, smoking, vehicles, fireworks, electricity, and outdoor cooking. Additionally, structure fires can spread and initiate wildland fires. In fact, the 2015 Valley Fire, which started in Lake County was a human-caused ignition, caused by faulty hot-tub wiring at a house in Cobb that arced and ignited dry grass. (Karimi 2016.)[14] The nearby 2017 Tubbs Fire, which killed 22 people and destroyed more than 5,600 structures, was similarly found to have been caused by failed electrical equipment on private property (McGough et al. 2019). [15]The fire cost four lives and $57 million to extinguish, with 76,067 acres burned and 1,955 structures destroyed. (*Id.*)

In short, developments built in a location known to have very high or high wildfire risk cannot compensate for this hazard simply through a fire-resistant design. The only way to protect human life and structures is to not build in these locations in the first place. Wildfires and the devastation they inflict will only worsen if California continues to allow unplanned growth in high fire hazard zones.

According to the California Attorney General,[16] the December 2018 Update to the CEQA Guidelines added provisions addressing wildfire impacts to implement Public Resources Code

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[12] Syphard, A. D., Rustigian-romsos, H., Mann, M., Conlisk, E., Moritz, M. A., & Ackerly, D. (2019). The relative influence of climate and housing development on current and projected future fire patterns and structure loss across three California landscapes. *Global Environmental Change*, *56*, 41–55. https://consbio.org/products/publications/relative-influence-climate-and-housing-development-current-and-projected-future-fire-patterns-and-structure-loss-across-

[13] Keely, J. E. (2005). Fire history of the San Francisco East Bay region and implications for landscape patterns. *Int J Wildl Fire*, 14, 285–296. https://pubs.er.usgs.gov/publication/70027601

[14] Karimi, F. (August 11, 2016). Valley Fire: Faulty hot tub wiring sparked $57 million blaze. *CNN*. https://www.cnn.com/2016/08/11/us/california-valley-fire-faulty-hot-tub

[15] McGough, M., Bizjak, T., Kasler, D., Sabalow, R., & Bollag, S. (2019, January 24). Tubbs Fire in Santa Rosa caused by private electrical system, not PG&E, Cal Fire says. *The Sacramento Bee*. https://www.sacbee.com/news/california/article225032230.html

[16] California Natural Resources Agency, Final Statement of Reasons for Regulatory Action: Amendments to the State CEQA Guidelines (Nov. 2018) at p. 87, https://resources.ca.gov/CNRALegacyFiles/ceqa/docs/2018_CEQA_Final_Statement_of%20Reasons_111218.pdf ("CNRA Final Statement"). Citing:

Syphard, A.D, Bar Massada A, Butsic V, Keeley, J.E, Land Use Planning and Wildfire: Development Policies Influence Future Probability of Housing Loss (Aug. 2013) PLOS ONE 8(8): e71708. https://doi.org/10.1371/journal.pone.0071708.)

Syphard A.D, Keeley J.E, Nexus Between Wildfire, Climate Change, and Population Growth in California, FREMONTIA Vol. 47, No. 2 (March 2020) https://pubs.er.usgs.gov/publication/70215984

Syphard, A.D., Rustigian-Romsos, H., The relative influence of climate and housing development on current and projected future fire patterns and structure loss across three California landscapes, GLOBAL ENVIRONMENTAL

section 21083.01. The updated CEQA Guidelines (Cal. Code Regs., tit. 14, §§ 15000 et seq.) direct lead agencies to analyze the impact of a project on wildfire risk. Specifically, wildfire-related impact thresholds include: (1) whether a project would "expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires" and (2) whether it would, "due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from wildfire or the uncontrolled spread of wildfire." (CEQA Guidelines, App. G, subds. IX(g), XX(b).) The scope of analysis on wildfire risk was codified and clarified in the CEQA Guidelines, but it is not a new requirement.[17]

The Natural Resources Agency "drafted the questions in the new wildfire section to focus on the effects of new projects in creating or exacerbating wildfire risks."[18] The analysis must start at this core question of a Project's potential to create or increase the risk of wildfires, and may need to then address the impacts of any new or exacerbated wildfire risks on the proposed project. But the first question about increased risk is critical to the wildfire analysis because "it is clear that development may exacerbate wildfire risks."[19] Wildfire research shows that land use decisions are particularly impactful:

> [H]ousing arrangement and location strongly influence fire risk, particularly through housing density and spacing, location along the perimeter of development, slope, and fire history. Although high-density structure-to-structure loss can occur, structures in areas with low- to intermediate- housing density were most likely to burn, potentially due to intermingling with wildland vegetation or difficulty of firefighter access. Fire frequency also tends to be highest at low to intermediate housing density, at least in regions where humans are the primary cause of ignitions.[20]

As development encroaches into exurban areas and the wildland-urban interface, large fire probability necessarily increases because humans are the leading cause of wildfires—and the

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CHANGE 56 (March 2019) 41–55.

Syphard A.D., Keeley J.E., Why Are So Many Structures Burning in California?, FREMONTIA Vol. 47, No. 2 (March 2020), p. 33 https://pubs.er.usgs.gov/publication/70215982

[17] (See S. Orange Cnty. Wastewater Auth. v. City of Dana Point (2011) 196 Cal.App.4th 1604, 1616 ["A true example [of an impact associated with bringing development to a hazard] with respect to, say, wildfires would be increasing the risk in a fire- prone area by people using their fireplaces or their backyard barbeques or by children playing with matches."])

[18] California Natural Resources Agency, Final Statement of Reasons for Regulatory Action: Amendments to the State CEQA Guidelines (Nov. 2018) at p. 87, https://resources.ca.gov/CNRALegacyFiles/ceqa/docs/2018_CEQA_Final_Statement_of%20Reasons_111218.pdf ("CNRA Final Statement").

[19] (Ibid.)

[20] Ibid. (citing Syphard, A.D, Bar Massada A, Butsic V, Keeley, J.E, Land Use Planning and Wildfire: Development Policies Influence Future Probability of Housing Loss (Aug. 2013) PLOS ONE 8(8): e71708. https://doi.org/10.1371/journal.pone.0071708.)

degree of increased risk is determined by factors such as topographical and wind conditions, land use, structure arrangement, and density.[21] More people translates into a greater probability of an ignition during a severe wind event."[22] The relative influence of climate and housing development on current and projected future fire patterns and structure loss across three California landscapes,[23] in short, land use planning and project design is an important determinant of wildfire ignition risk and the scale of wildfire spread "[T]he most effective strategy at reducing future structure loss would focus on reducing the extent of low-density housing via careful land planning decisions."[24] Accordingly, it is critical to a wildfire analysis to analyze whether the proposed Project exacerbates the risk of wildfire ignition and spread.

If current sprawl-inducing land-use practices continue, instead of focusing on increasing affordable housing near city centers, between 640,000 to 1.2 million new homes will be built in the state's highest wildfire-risk areas by 2050 (Mann et al. 2014).[25]

According to a report from Governor Gavin Newsom's Office, construction of more homes in the wildland-urban interface is one of the main factors that "magnify the wildfire threat and place substantially more people and property at risk than ever before" (Governor Newsom's Strike Force 2019).[26] In a new scientific study, Syphard et al. (2019)[27] found that housing and human infrastructure in fire-prone wildlands are the main drivers of fire ignitions and structure loss. This is not new information; scientists have been reporting it for many years in scientific, peer-reviewed journals, and firefighters have observed it. Yet the Board of Forestry and Fire Protection (BOF) has not taken action to assess the proposed Project's impacts, and has failed to assess risk using the best available science.

The Proposed Project Increase the Chance of Wildfires while Simultaneously Impairing Evacuation Routes.

The BOF has failed to fully consider the likelihood that the Project would increase the chance of wildfires, while simultaneously impairing evacuation routes and times, which can in turn can slow emergency response and exacerbate the spread of wildfire, or expose people or

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[21] . Ibid.; Syphard A.D, Keeley J.E, Nexus Between Wildfire, Climate Change, and Population Growth in California, FREMONTIA Vol. 47, No. 2 (March 2020) ("On [high-wind] landscapes, fire is more of a people problem than a fuel problem.

[22] Syphard, A.D., Rustigian-Romsos, H.,

[23] GLOBAL ENVIRONMENTAL CHANGE 56 (March 2019) 41–55. In

[24] . (Syphard A.D., Keeley J.E., Why Are So Many Structures Burning in California?, FREMONTIA Vol. 47, No. 2 (March 2020), p. 33

[25] Mann, M. L., Berck, P., Moritz, M. A., Batllori, E., Baldwin, J. G., Gately, C. K., & Cameron, D. R. (2014). Modeling residential development in California from 2000 to 2050: Integrating wildfire risk, wildland and agricultural encroachment. *Land Use Policy*, *41*, 438–452. https://www.sciencedirect.com/science/article/pii/S0264837714001409

[26] Governor Newsom's Strike Force. (2019). *Wildfires and Climate Change: California's Energy Future*. https://www.gov.ca.gov/wp-content/uploads/2019/04/Wildfires-and-Climate-Change-California%E2%80%99s-Energy-Future.pdf

[27] Syphard, A. D., Rustigian-romsos, H., Mann, M., Conlisk, E., Moritz, M. A., & Ackerly, D. (2019). The relative influence of climate and housing development on current and projected future fire patterns and structure loss across three California landscapes. *Global Environmental Change*, *56*, 41–55. https://consbio.org/products/publications/relative-influence-climate-and-housing-development-current-and-projected-future-fire-patterns-and-structure-loss-across-

structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. No adequate analysis of the Project's impacts relating to adopted wildfire emergency response, evacuation plans, and emergency vehicle access has been conducted.

Data exists to analyze the effect of the proposed Project on existing substandard roads, un-built parcels and parcels that will be unlocked for development under the proposed 2021 regulations. Further, data exists to analyze the parcels affected by the stricter 2020 regulations, which would serve as a baseline. Hence, the analysis could determine the direct, indirect and growth-inducing effect of the proposed Project and the significant environmental impacts that would result from the proposed Project, including impacts to evacuation planning and evacuation times.

The BOF has not prepared any environmental analysis of the proposed Project. As a result, the BOF does not disclose the wide-ranging impacts on evacuation times and outcomes from increasing the population and intensity of use from new residential, commercial and industrial development in and near fire-prone communities in the SRA and LRA VHFHSZ. Data exists to address critical questions, including, but not limited to:

1) What are the pre-Project (baseline) and post-Project expected evacuation times and outcomes for civilians fleeing wildfire?
2) What will the Level of Service be on emergency egress routes, in the event a wildfire-driven evacuation becomes necessary, when populations are increased?
3) What will be the impact to existing development and residents and visitors on substandard roads, given parcels that will be unlocked for development?
4) What effect will the Project have on the ability of emergency responders to address wildfires and the timing of emergency response to wildfires?

As wildfire evacuation expert, Dr. Thomas Cova explained in **Attachment C to SAFFRs comment letter**, as communities continue to expand into wildfire-prone regions, safety regulations need to be enhanced to protect the public. Development patterns and densities needs to be limited to match the available means of egress. Many communities in the highest fire severity zones were never designed to safely support their current housing, commercial, and industrial density, let alone development that may be added. This raises the public safety question: how much is too much when it comes to housing, commercial and industrial development in low-egress fire-prone communities? Dr. Cova presents geographic concepts that may help in formulating new regulations in fire-prone regions in his letter included as Attachment C. These concepts should be incorporated into the State Minimum Fire Safe Regulations in order to analyze and reduce the potential for impacts.

In summary, while there are many ways to develop standards that limit development in fire-prone areas to match the number, capacity, and arrangement of the exits relied upon in a wildfire, it is important that development not proceed unchecked to the point that public safety is severely compromised and visitors and residents have no realistic chance of safely evacuating in a dire wildfire scenario. The 2018 Camp Fire in Paradise, California offers the best example of a town with an evacuation plan requiring 2 to 3 hours for evacuation when only about 90 minutes was available.

An Environmental Impact Report Is Required to Evaluate the Potential Impacts of the Proposed Project

The public, including future residents of the areas affected by the proposed Project, and existing residents nearby who will be relying on existing road infrastructure for evacuation, have a right to know the full extent of the proposed Project's impacts on wildfire evacuation. "Omission of material necessary to informed decision- making and informed public participation is prejudicial." (*Sierra Club v. County of Fresno*, (2018) 6 Cal.5th 502, 515.) An EIR is required to accomplish the necessary evaluation.

Courts have readily found EIRs invalid under CEQA due to the failure to describe and analyze the wildfire evacuation risk and to evaluate these questions. *California Clean Energy Commission v. County of Placer* (Dec. 22, 2015, No. C072680) Cal.App.5th [2015 Cal. App. Unpub. LEXIS 9360, at *1][28] In *California Clean Energy Commission*, the court found an EIR for a resort expansion plan deficient because it said "nothing about the impact of the increased population density created by the Project on emergency evacuations in the event a wildfire does occur, nothing about the effect of such evacuations on access for emergency responders and suggested no mitigation measures to address any such concerns." (*Id.* at *78.)

There are qualified and experienced wildfire consultants that can create evacuation simulations and scenarios for a variety of incident types across cities and counties, and presumably the state. These sophisticated map-based simulations go beyond what Dr. Cova described in **Attachment C**, and further demonstrate that the data and the technology are available to analyze the evacuation impacts of the proposed Project, the No Project Alternative, and any other alternatives added in the Environmental Impact Report for the proposed Project. As an example, the company Zonehaven has an Evacuation Management Platform that provides a comprehensive set of evacuation tools that makes it feasible for fire, law, and Office of Emergency Services to build and maintain evacuation plans using accurate evacuation simulations and scenarios.

Significant Disproportionate Effects on Vulnerable Populations

The BOF lacks an adequate analysis of the Project's impacts relating to disproportionate effects of the proposed project on vulnerable populations. Impacts of wildfire disproportionately affect vulnerable communities with less adaptive capacity to respond to and recover from hazards like wildfire. Low-income and minority communities, especially Native American, Black, Latinx and Southeast Asian communities, are the most marginalized groups when wildfires occur, in part, because they have fewer resources to have cars to evacuate, buy fire insurance, implement defensible space around their homes, or rebuild, and they have less access to disaster relief

[28] *California Clean Energy Commission v. County of Placer (Dec. 22, 2015, No. C072680) Cal. App. Unpub. LEXIS 9360 [Cal. Clean Energy Comm. v. Cty. of Placer]*

during recovery (Fothergill and Peak 2004;[29] Morris 2018;[30] Harnett 2018;[31] Davies 2018;[32] Richards 2019).[33] Health impacts from wildfires, particularly increased air pollution from fine particulates (PM2.5) in smoke, also disproportionately affect vulnerable populations, including low-income communities, people of color, children, the elderly and people with pre-existing medical conditions (Künzli et al. 2006;[34] Delfino et al. 2009;[35] Reid et al. 2016;[36] Hutchinson et al. 2018;[37] Jones et al. 2020).[38] Before any action is taken on the proposed project, the BOF needs to analyze the potential to disproportionately impact vulnerable populations as well as the health impacts of the proposed project.

Biological Significant Effects to Habitat Loss and Fragmentation

The 2021 proposed regulations undermine the stricter 2020 regulations and unlock parcels for new residential, commercial and industrial development. The BOF has failed to analyze the proposed Project's potentially significant detrimental effects and adequately describe, assess, and mitigate impacts to wildlife movement and habitat connectivity. Moreover, the BOF has failed to analyze the detrimental effects to special-status species, and sensitive habitats.

In addition to the economic damage, public health impacts and human loss of life, altered wildfire regimes are degrading native habitats relied on by many endangered and threatened

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[29] Fothergill, A., & Peak, L. A. (2004). Poverty and disasters in the United States: A review of recent sociological findings. *Natural Hazards*, *34*, 89–110. https://econpapers.repec.org/article/sprnathaz/v_3a32_3ay_3a2004_3ai_3a1_3ap_3a89-110.htm

[30] Morris, B. (2018, April 23). How the Ultra-Wealthy are Making Themselves Immune to Natural Disasters. https://www.lamag.com/citythinkblog/how-the-ultra-wealthy-are-making-themselves-immune-to-natural-disasters/

[31] Harnett, S. (2018, September 19). Low-Income Communities Struggle to Recover After a Wildfire. *KQED*. https://www.npr.org/2018/09/19/647606049/low-income-communities-struggle-to-recover-after-a-wildfire

[32] Davies, I. P., Haugo, R. D., Robertson, J. C., & Levin, P. S. (2018). The unequal vulnerability of communities of color to wildfire. *PLoS ONE*, *13*(11), 1–15. https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0205825

[33] Richards, R. (2019, July 25). After the Fire: Vulnerable Communities Respond and Rebuild. *Center for American Progress*. https://www.americanprogress.org/issues/green/reports/2019/07/25/472738/fire-vulnerable-communities-respond-rebuild/

[34] Künzli, N., Avol, E., Wu, J., Gauderman, W. J., Rappaport, E., Millstein, J., ... Peters, J. M. (2006). Health effects of the 2003 Southern California wildfires on children. *American Journal of Respiratory and Critical Care Medicine*, *174*, 1221–1228. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2648104/

[35] Delfino, R. et al. (2009). The relationship of respiratory and cardiovascular hospital admissions to the southern California wildfires of 2003. *Occup Environ Med. 2009 Mar; 66(3): 189–197.* https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4176821/

[36] Reid, C. E., Jerrett, M., Tager, I. B., Petersen, M. L., Mann, J. K., & Balmes, J. R. (2016). Differential respiratory health effects from the 2008 northern California wildfires: A spatiotemporal approach. *Environmental Research*, *150*, 227–235. https://pubmed.ncbi.nlm.nih.gov/27318255/

[37] Hutchinson, J. A., Vargo, J., Milet, M., French, N. H. F., Billmire, M., Johnson, J., & Hoshiko, S. (2018). The San Diego 2007 wildfires and Medi-Cal emergency department presentations, inpatient hospitalizations, and outpatient visits: An observational study of smoke exposure periods and a bidirectional case-crossover analysis. *PLoS Medicine*, *15*(7), e1002601. https://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1002601

[38] Jones, C. G., Rappold, A. G., Vargo, J., Cascio, W. E., Kharrazi, M., McNally, B., & Hoshiko, S. (2020). Out-of-Hospital Cardiac Arrests and Wildfire-Related Particulate Matter During 2015-2017 California Wildfires. *Journal of the American Heart Association*, *9*(8), e014125. https://www.ahajournals.org/doi/10.1161/JAHA.119.014125

plants and animals. In California chaparral and sage scrub ecosystems, increasing fire frequency due to development, is converting these shrublands into non-native grasses that burn more easily, leading to a dangerous "feedback loop" of increasing fire and degraded ecosystems (Keeley 2005;[39] Syphard et al. 2018).[40]

Unnaturally frequent wildfires in native shrublands can harm vulnerable native species already reeling from the impacts of habitat loss and fragmentation. Several Southern California mountain lions in the genetically compromised Santa Monica and Santa Ana populations have died in recent wildfires because they were unable to escape to safety due to surrounding roads and development.

Roads and development create barriers that lead to habitat loss and fragmentation, which harms native wildlife, plants, and people. As barriers to wildlife movement, poorly-planned development and roads can affect an animal's behavior, movement patterns, reproductive success, and physiological state, which can lead to significant impacts on individual wildlife, populations, communities, landscapes, and ecosystem function (Mitsch and Wilson 1996;[41] Trombulak and Frissell 2000;[42] van der Ree et al. 2011;[43] Haddad et al. 2015;[44] Marsh and Jaeger 2015;[45] Ceia-Hasse et al. 2018).[46] For example, habitat fragmentation from roads and development has been shown to cause mortalities and harmful genetic isolation in mountain lions in southern California (Ernest et al. 2014;[47] Riley et al. 2014;[48] Vickers et al. 2015)[49], increase

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[39] Keeley, J. E. (2005). *Fire as a threat to biodiversity in fire-type shrublands*. *Planning for biodiversity: bringing research and management together. USDA Forest Service General Technical Report PSW-GTR-195*. https://www.fs.fed.us/psw/publications/documents/psw_gtr195/psw_gtr195.pdf

[40] Syphard, A. D., Brennan, T. J., & Keeley, J. E. (2018). Chaparral Landscape Conversion in Southern California. In *Valuing Chaparral* (pp. 323–346). https://consbio.org/products/publications/chaparral-landscape-conversion-southern-california

[41] Mitsch, W. J., & Wilson, R. F. (1996). Improving the success of wetland creation and restoration with know-how, time, and self-design. *Ecological Applications*, *6*(1), 16–17. https://esajournals.onlinelibrary.wiley.com/doi/abs/10.2307/2269554

[42] Trombulak, S. C., & Frissell, C. A. (2000). Review of ecological effects of roads on terrestrial and aquatic communities. *Conservation Biology*, *14*(1), 18–30. https://conbio.onlinelibrary.wiley.com/doi/full/10.1046/j.1523-1739.2000.99084.x

[43] van der Ree, R., Jaeger, J. A. G., van der Grift, E. A., & Clevenger, A. P. (2011). Effects of roads and traffic on wildlife populations and landscape function: Road ecology is moving toward larger scales. *Ecology and Society*, *16*(1), 48. http://www.ecologyandsociety.org/vol16/iss1/art48/

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[45] Marsh, D. M., & Jaeger, J. A. G. (2015). Direct effects of roads on small animal populations. In *Roads and ecological infrastructure: Concepts and applications for small animals* (pp. 42– 56). https://jhupbooks.press.jhu.edu/title/roads-and-ecological-infrastructure

[46] Ceia-Hasse, A., Navarro, L. M., Borda-de-Água, L., & Pereira, H. M. (2018). Population persistence in landscapes fragmented by roads: Disentangling isolation, mortality, and the effect of dispersal. *Ecological Modeling*, *375*, 45–53. https://www.sciencedirect.com/science/article/pii/S0304380016307505

[47] Ernest, H. B., Vickers, T. W., Morrison, S. A., Buchalski, M. R., & Boyce, W. M. (2014). Fractured genetic connectivity threatens a Southern California puma (Puma concolor) population. *PLoS ONE*, *9*(10). https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0107985

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local extinction risk in amphibians and reptiles (Cushman 2006;[50] Brehme et al. 2018)[51], cause high levels of avoidance behavior and mortality in birds and insects (Benítez-López et al. 2010;[52] Loss et al. 2014;[53] Kantola et al. 2019)[54], and alter pollinator behavior and degrade habitats (Trombulak and Frissell 2000;[55] Goverde et al. 2002;[56] Aguilar et al. 2008).[57] Habitat fragmentation also severely impacts plant communities. An 18-year study found that reconnected landscapes had nearly 14% more plant species compared to fragmented habitats, and that number is likely to continue to rise as time passes (Damschen et al. 2019).[58] The authors conclude that efforts to preserve and enhance connectivity will pay off over the long-term (Damschen et al. 2019). In addition, connectivity between high quality habitat areas in heterogeneous landscapes is important to allow for range shifts and species migrations as climate changes (Heller and Zavaleta 2009;[59] Cushman et al. 2013;[60] Krosby et al. 2018) [61]. Loss of wildlife connectivity decreases biodiversity and degrades ecosystems.

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Impact to Biological Resources from Increased Fire Risk

The BOF has failed to conduct any analysis of the proposed Project on biological resources from increased fire risk resulting from the relaxation of standards included in the proposed Project. Fires, especially the hotter and longer-burning variety that have overtaken California in recent decades, can be disastrous for plant and animal life. If native habitat fire regimes are disrupted, the habitats they provide can become degraded (Keeley 2005; Keeley 2006).[62] When fires occur too frequently, type conversion occurs and the native shrublands are replaced by non-native grasses and forms that burn more frequently and more easily, ultimately eliminating native habitats and biodiversity while increasing fire threat over time (Keeley 2005; Keeley 2006; Syphard et al. 2009.)[63]

Wildfires can have a long-lasting negative effect on habitat, and can impair animals' movement (Jennings 2018),[64] mating ability, foraging, and reproductive success. "With more fires occurring in close proximity to human infrastructure, there may also be devastating ecological impacts if development continues to grow farther into wildland vegetation" (*See* Syphard et al. 2007). This could have serious consequences for special-status species in California that rely on these habitats for survival, including state and federally listed special-status species. In addition, large-scale landscape changes due to vegetation-type conversion from shifts in natural fire regimes could impact wide-ranging species like mountain lions. Thus, the BOF has failed analyze or to adequately disclose, assess, and mitigate potential wildfire impacts of the proposed Project on special-status species.

Failure to Evaluate the Project's Cumulative Wildfire Impacts

BOF has failed to provide any standard to address cumulative impacts. The concept of a cumulative impacts standard was raised by Fire Prevention officer Larry Williams from the Ventura County Fire Department and discussed in BOF workshops, however the BOF decided to not include a standard for cumulative impacts in the Proposed State Minimum Fire Safe Regulations. The proposed regulations lack this important standard or a way to address cumulative impacts across regions.

In addition, the BOF has failed to provide any analysis of the Project's cumulative wildfire-related impacts. The purpose of analyzing cumulative environmental impacts is to assess adverse environmental change "as a whole greater than the sum of its parts." (*Environmental Protection Information Center v. Johnso*n (1985) 170 Cal.App.3d 604, 625).[65] Absent meaningful

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[65] *Environmental Protection Information Center v. Johnso*n (1985) 170 Cal.App.3d 604, 625.) https://law.justia.com/cases/california/court-of-appeal/3d/170/604.html

cumulative analysis there would is no comprehensive assessment of environmental impacts within a region and "piecemeal development would inevitably cause havoc in virtually every aspect of the [] environment." (*Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 721).[66] By their nature, the impacts of one individual project may not appear to have a significant impact, but the combined impacts of many sources can drastically affect the region's environment. The CEQA Guidelines specifically identify wildfire risk as a likely cumulative impact, stating that EIRs "should evaluate any potentially significant direct, indirect, or cumulative environmental impacts of locating development in areas susceptible to hazardous conditions (e.g. . . .wildfire risk areas)." (CEQA Guidelines § 15126.2(a).) Given that the proposed Project reduces standards which will encourage additional development in fire-prone areas, the BOF needs to analyze the proposed Project's potential to contribute to cumulative impacts.

Unlocking countless parcels for new development, including site intensive commercial and industrial projects, along with the cumulative projects in the fire-prone wildlands would not only create a significant impact, but would be a catastrophe in the making. In light of the devastation from wildfires throughout California, it is inconceivable that the BOF would consider putting civilians, emergency responders and firefighters at even greater risk by creating the potential for the dramatic expansion of urban development in the SRA and VHFHSZ LRA. The BOF should conduct a data-supported analysis of existing road and infrastructure capacity to assess potential impacts to wildfire emergency response and evacuation plans, and the increase in ignition sources that will occur by providing both exemptions and exceptions to thousands of parcels. A robust analysis should include measuring the potential increase in population density, intensity of use, and zoning intensity in the SRA and VHFHSZ LRA as a result of the proposed exemptions and the exception process that will open up parcels to new development. The BOF should analyze and disclose the potential for increased ignitions from the cumulative projects and evaluate the increased risk to lives and property from these wildfires. Only when this analysis is undertaken will the public and decision makers be apprised of the real-world implications of adding development in the urban wildland interface.

[66] *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 721. https://law.justia.com/cases/california/court-of-appeal/3d/221/692.html

Attachment F

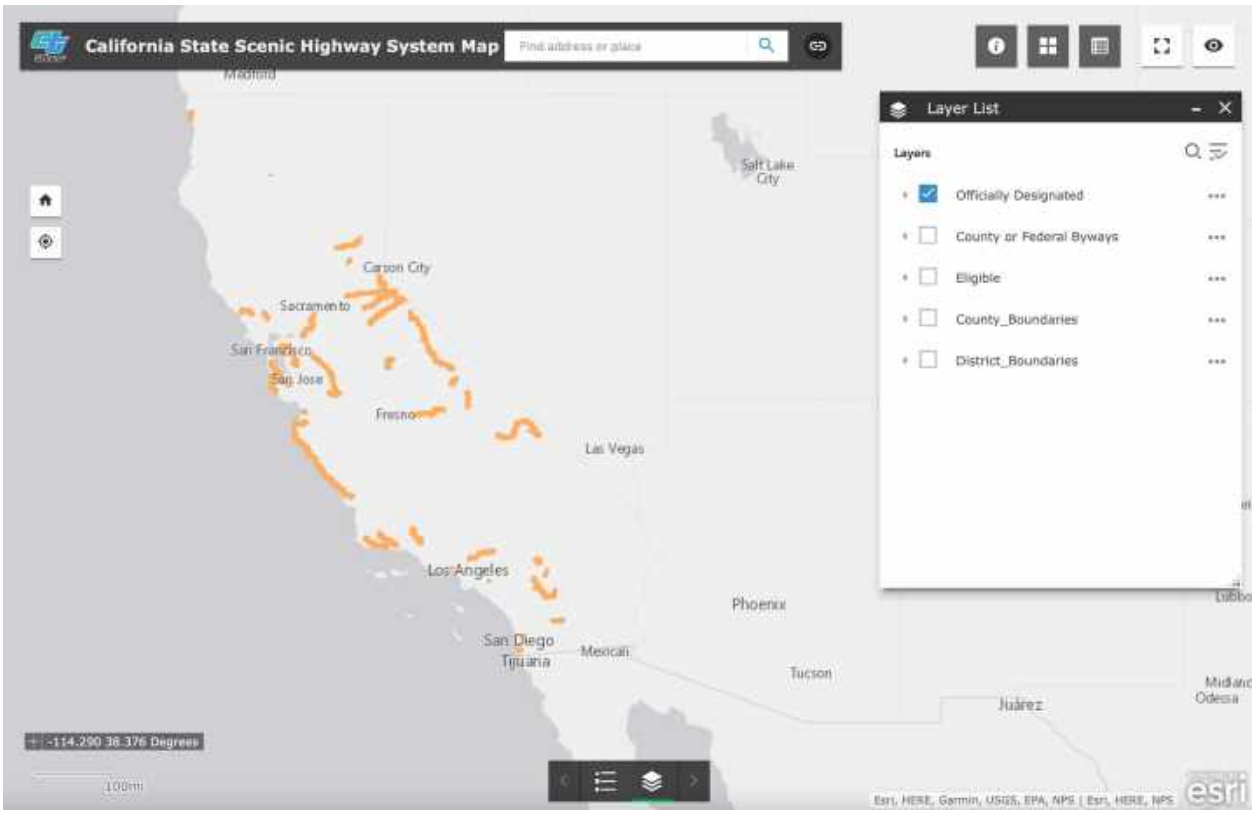
Attachment D - Location of SRA and LRA Fire Severity Areas and Scenic Highways and BLM Areas of Critical Environmental Concern

Source: https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/

Attachment D - Location of SRA and LRA Fire Severity Areas and Scenic Highways and BLM Areas of Critical Environmental Concern

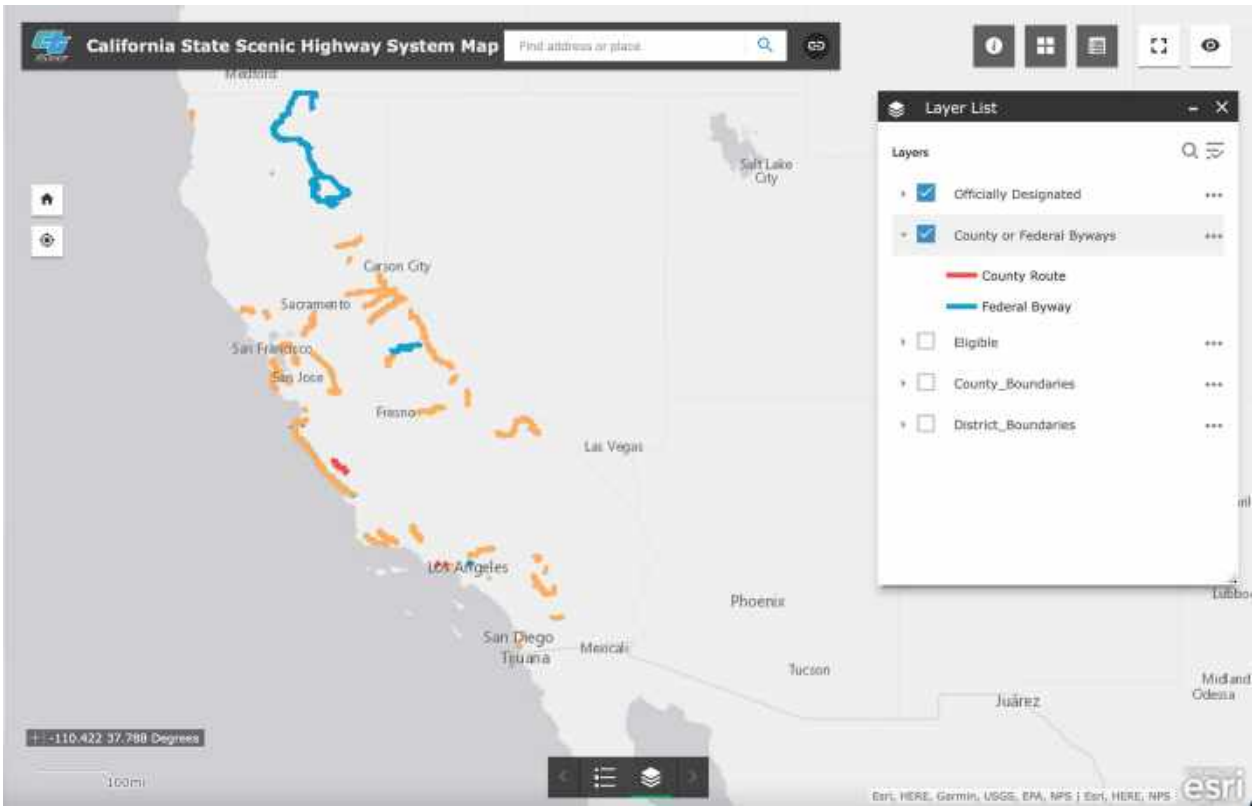
Source: https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/

Attachment D - Location of SRA and LRA Fire Severity Areas and Scenic Highways and BLM Areas of Critical Environmental Concern



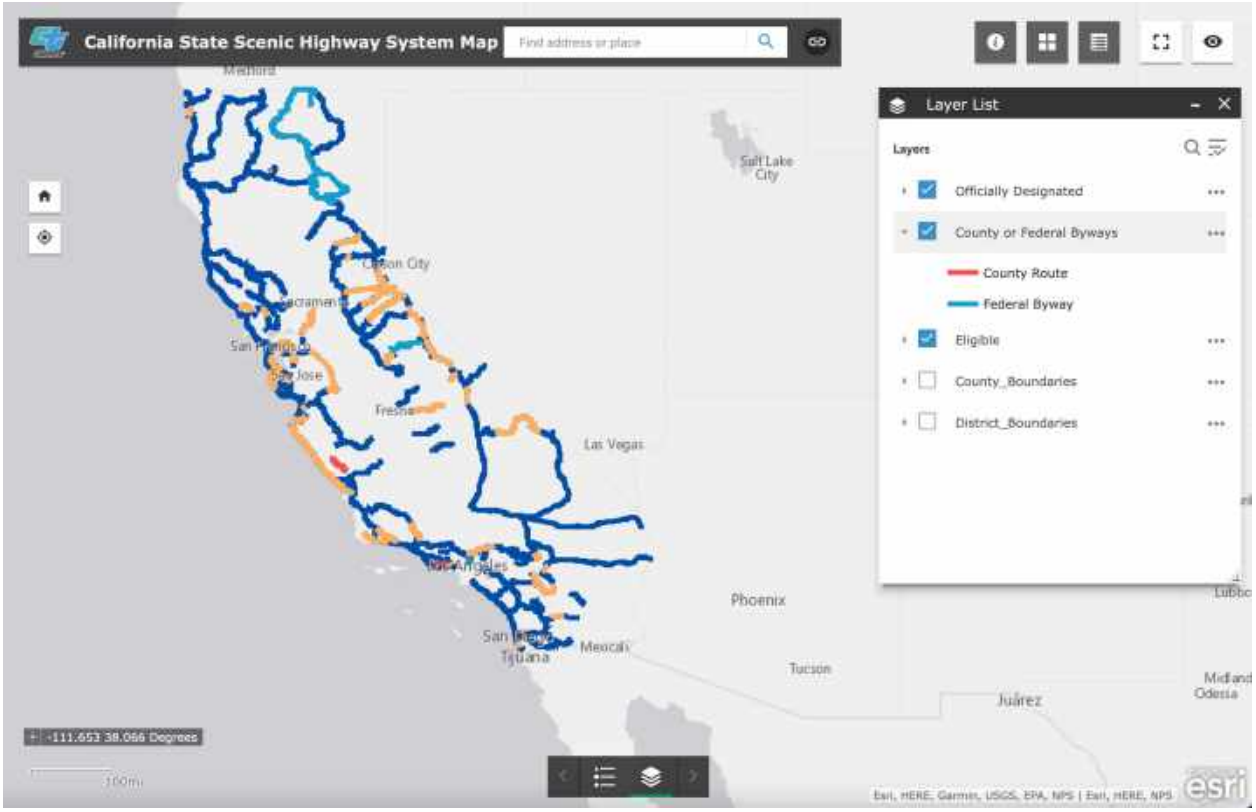
Source: A map of Scenic Highways is available at: https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways

Attachment D - Location of SRA and LRA Fire Severity Areas and Scenic Highways and BLM Areas of Critical Environmental Concern



Source: A map of Scenic Highways is available at: https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways

Attachment D - Location of SRA and LRA Fire Severity Areas and Scenic Highways and BLM Areas of Critical Environmental Concern



Source: A map of Scenic Highways is available at: https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways