

1-21-11

This Technical Report is an update to the previous Technical Report I submitted to the County dated 6-1-10. The reason for this revised report is as follows:

Due to the deferment of the improvement of Pala Mesa Drive until traffic volumes warrant the construction of such, and due to environmental constraints beyond the applicant's control, DPLU staff has recalculated the fire service travel time scenarios without Pala Mesa Drive. The calculated travel time would be 5.65 max; 0.65 minute or 39 seconds over the 5-minute travel time. The previously accepted FPP shows that the travel time with the immediate construction of Pala Mesa Drive would exceed the 5-minute travel time by 8 seconds or 5.13 minutes. The difference in travel time is approximately 31 seconds. This small temporary increase in travel time is insignificant in my opinion based on my experience.

Although this travel time is generally consistent with the County General Plan, Public Facilities Element, the mitigating factors that permit a total 39-second delay, over the required five minutes, are summarized below:

1. If a fire should occur, the first arriving NCFPD fire company will normally include five personnel; three in the engine and two in an ambulance. The second company to respond would arrive in approximately nine minutes. Resources will also respond from CALFIRE Red Mountain fire station and the Rainbow Volunteers via Automatic Aid. The Calfire Miller station will respond via Mutual Aid. These resources should arrive in about 10 minutes. Therefore, within 10 to 15 minutes travel time the full assignment of engine companies responding to a structure fire at Campus Park is projected to arrive. Ladder truck response time is about 20 minutes.
2. Within 10-15 minutes estimated travel time for a reported structural fire at Campus Park, the total personnel at the fire scene would be approximately 10 firefighters plus the Battalion Chief. For a vegetation fire, the total estimated personnel arriving, within 10-15 minutes travel time, would be four engine companies and a Battalion Chief, which totals 13 firefighters.
3. Fuel Modification Zones in various key locations will be between 125 and 200 feet in width, depending on the location, which is between 25 and 100 feet wider than required by the County Consolidated Fire Code and State law.
4. All structures will have internal fire sprinklers. A recent NFPA Sprinkler study shows that in sprinklered building fires, flames did not leave room of origin in 95% of the cases. It also shows that fire sprinkler systems are 96% effective in

controlling or extinguishing a fire. Two or less sprinkler heads operated in 89% of fire, which results in a very low water flow; probably in the range of 25-50 GPM. Therefore, the fire will be controlled by the fire sprinklers. At most, firefighters may need to operate one hand line to support the sprinkler system. This only requires one Engine Company and has a flow typically less than 180 GPM. Fire Sprinklers substantially mitigate the structural fire problem and have an excellent record.

5. Per the Fire Protection plan, all structures will meet or exceed the NCFPD, County and State Ignition Resistant Construction requirements for developments in the WUI. For one example, recommendations regarding vent protection exceeds the Codes. Ignition resistant construction has been proven to be highly effective in recent Wildland fires in San Diego County and elsewhere. Ignition resistant construction, in addition to extensive fuel modification, mitigate the potential for any fire involvement of multiple structures.
6. The features set forth in the approved Fire Protection Plan also include fire hydrant locations, which exceed Code requirements. Hydrants will be spaced no more than 500 feet apart in single family dwelling areas and 300 feet part in commercial and industrial areas.
7. The Fire Protection Plan also includes other upgraded features, which exceed code requirements and are included as tactical upgrades to assist firefighters, based on my firefighting experience. This may include, but is not limited to, wet standpipes, enclosed stairways, and other built in features when and as needed to assist firefighters in multi story commercial buildings. Refer to the Fire Protection Plan for details.
8. There will be no wood fences on the perimeter of the development.

It is my professional opinion, based on my experience, that the travel times are in substantial conformance with the General Plan criteria, and the features set forth in this report and in the Fire Protection Plan mitigate the 39-second issue. Many factors can affect travel time. These include time of day, weather, differences in drivers and the speeds they drive, apparatus differences, traffic based on time of day, etc.

Please let me know if more information is needed.

Sincerely



Jim Hunt

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