

## MEMORANDUM

Date: August 14, 2007

To: Kevin Cannon

CC: Nazir Lalani, PE

From: Josh Peterman, PE

**Subject: *Santa Rosa Road Traffic Signal Improvements Project – Response to Community Input on 65% Plan Submittal***

WC06-2348

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This memorandum provides Fehr & Peers' input to comments made by the Santa Rosa Road community (on July 20, 2007) in response to our submittal of 65% plans for the Santa Rosa Road Traffic Signal Improvement Project. Original comments are posted below, with responses following each.

### GENERAL COMMENTS

1. With regard to the planned location of controller cabinets and service enclosures:
  - a. Prior community comments were specific to requesting that this hardware not be placed in close proximity to existing bus pull over locations where school children must wait. Bus stop location data was provided to both the PWA and design consultants. The community also requested that sufficient waiting areas must exist for multiple horses and/or pedestrians waiting to cross. The existing NW corner of Yucca and SR Road was pointed out to the design consultant in the field as a bad design example whereas the NW corner of E. Las Posas was indicated as the "good example".
  - b. In a recent phone conference it was explained to the Citizen Representative (CR) that the location of the cabinets must be positioned so that the PWA can maintain and make any timing adjustments in full view of the intersection. Locating them conveniently (e.g., all cabinets on the north side of the road) would provide benefit to maintenance staff when adjustments to all signals must be required in the field. Current design plans show 3 out of the 4 new signal intersections will have cabinets in locations where both school bus stops and equestrian waiting areas will exist.
  - c. For safety reasons the community once more requests that the cabinets not be placed in close proximity to existing bus pull over locations and that unobstructed corner waiting areas provide adequate space for multiple horses and/or pedestrians.

***We will re-examine all controller cabinet locations with the objective of maximizing safe waiting area for equestrians and school bus users (Please keep in mind that the choice of controller location also takes into account the convenience and safety of signal***

***maintenance technicians, and proximity to signal interconnect infrastructure). The next submittal will indicate our assumed waiting area for school bus users and equestrians. We also suggest that a walk through with the Community Representative (CR) might prove useful in determining the final sites for traffic signal elements.***

2. With regard to the right turn pockets that allow cars to make right turns from Santa Rosa road:
  - a. The most frequent concern the CR has received to date from individual residents (besides the question “When are the signals going to be finished?”) has been the worry of being rear ended when attempting to slow down enough to make a legal right turn off of SR road. For example it has been reported recently that the westbound right turn pocket for Duval does not currently provide adequate length and could be improved with a simple striping modification. It is also understood that these pockets were never intended to provide bona fide deceleration lanes, but we agree with the County that striping and chevrons have helped discouraged people from illegally passing on the right.
  - b. For safety reasons the community requests that adequate length be provided for right turn fog line striping at the new signal intersections. The striping design plans call for an intersection point of curvature from the right corner to the existing right hand fog line of varying distances (between 60 to 155 feet). For comparison purposes the curvatures at two existing streets are: westbound Yucca – ~125 ft and westbound Duval – ~190 ft.
  - c. With the increased number of signals there is always the hope that traffic will calm down somewhere below the current 55mph limit. Since Duval at 190 feet is currently inadequate, it’s conservative to say we need something greater than 200 feet for the new signal intersections (even if speeds were to slow down) and the current design lengths of 60 – 155 feet will prove inadequate.

***We will revise the striping plans to provide channelization for longer (our goal will be 250feet so long as 12’ wide lane can be maintained) right turns at all new intersection locations.***

- d. With regard to the rumble strips, the MAC is already down on record for requiring them along the straight fog line segments of the road. The biking community has requested they be removed all together. It’s a known fact that the sweeping action caused by cars traveling closer to bike travel actually helps bikers avoid debris in the shoulder. Therefore the request to lengthen the curvature of the fog line would seem to be compatible with the biking community’s desire to have more debris free travel space to maneuver in as they approach each signal intersection. An additional biker benefit would be that more of the rumble strip would need to be removed so right turning cars don’t hit it as they start steering into the right hand shoulder sooner.

***We will work with Ventura County to determine what modifications should be made to existing rumble strips.***

- e. Lastly, the community has asked if the striping plans can call out the detail of planned rumble strip modifications as well as installation of bottle dots on chevrons and other striping to match existing segments.

***Our plans will indicate details for pavement marker treatments, based on Caltrans and County Standard Plans and Details.***

3. With regard to general equestrian considerations:
  - a. The PWA has already requested that existing equestrian trails be added to all intersection design plans. The CR can assist if further clarifications are needed. Timing studies for 3 horses completely crossing E. Las Posas have occurred and it is understood that the data will be analyzed by the PWA to determine if it will be necessary to allowing wiring for separate crosswalk timings; one for horses when an equestrian push button (EPB) is activated and another timing for when a pedestrian push button (PPB) is activated.
  - b. In general, the planned EPB locations are acceptable as they are set back from the corners in locations that make sense for horses to wait. However, in a few cases the designer has indicated it will be necessary for the rider to activate the button and then maneuver their horse to a safer waiting area. Not a good design. This might work for one rider, but it does not work for multiple riders, i.e., “the herd”. Where one horse goes, they all want to go. We need to determine for each corner where the largest, safest waiting area is going exist for 3 or 4 horses, and then locate the EPB post at that location. This would be best done in the field, with design plans in hand.
  - c. Since the equestrian trails are now going to be added to the plans, we would also request that the designated waiting areas also be shown on the plans. This would be very helpful to increase everyone’s future planning awareness.

***We will accommodate this request in our next plan submittal.***

4. Do the plans show that the proper reflective shields will be installed on new traffic safety lighting to minimize light pollution?

***We will work with the County to address this request. We intend to specify luminaries with “full cut-off” optics, with flat lenses, such as the GE Lighting Systems luminaire at [http://www.ge-lightingsystems.com/gels01/productcentral/htmls/5\\_0\\_137\\_catalog\\_142.html](http://www.ge-lightingsystems.com/gels01/productcentral/htmls/5_0_137_catalog_142.html). We find these provide excellent roadway lighting with greatly reduced glare and no uplight.***

5. The consulting services contract states the “Consultant shall investigate, and recommend as appropriate, signage to encourage the 45 mph speed objective on the corridor.” There is no such signage indicated on the plans. What was the result of the investigation and final recommendation?

***Signage regulating speed limits is not a design decision but a legislative one. The issue of posting speed limit signage will be addressed by the Public Works Agency with the Board of Supervisors and appropriate signage will be considered at a later date once the Board has provided direction.***

6. The current plans submitted are titled “65% Submittal” although the project schedule shows we are in the time frame for County / Resident Review of the 30% design plans.

From a prior conversation with the PWA and design consultant the CR understands we will still have 2 more reviews of the plans before they go out to bid and are considered final. The approximate start dates for the second and third reviews are 9/10/2007 and 11/5/2007, respectively.

7. With regard to the modification to the signal heads at Moorpark and Santa Rosa Rd:
  - d. The final negotiated Scope of Work document that went out for design bids stated: Modify the existing traffic signal at Moorpark Road and Santa Rosa Road to remove the existing “No Right Turn on Red” restrictions and provide a southbound right-turn overlap that includes a red arrow. The red arrow interval must be variable during the overlap phase so that the amount of green arrow overlap time can be varied. Post “Right Turn on Green Arrow Only” signs. Restrict eastbound U-turns to avoid conflicts with the right-turn overlap.
  - e. This statement led many residents to believe that a programmable red arrow would be installed that would clearly indicate when right turns would not be allowed. The new signal heads specified in the design plans show a red arrow will not be displayed. And for some unknown reason, the design plans also call for the removal of the No Right On Red signs as well as the Time of Day restriction signs, and no indication yet that replacements, e.g., “Right Turn on Green Arrow Only” and “No-U Turn” signage will be installed.
  - f. There is now confusion as to which one of the four approved modes for controlling right-turning traffic is the PWA intending to apply at the intersection. The variable right-turn mode implemented with the current 3 head signal and NRTOR signage should remain in place until the Board of Supervisors says otherwise. We do not understand why this project should pay additional costs to replace the existing traffic signal heads and signage. The scope of this project must be controlled and the scope is defined as:
    - Improvements for installation of 4 new traffic signals, interconnection with 4 existing signals, and the synchronization and/or system-wide optimization of all 8 signals.
  - g. Please provide the technical reason why the existing signal heads at Moorpark Road must be replaced to meet this scope.

***We will discuss this issue with the County and present our recommendation in the next plan submittal.***

#### **PRELIMINARY COST ESTIMATE COMMENTS**

8. PWA has previously agreed not to include the costs for relocating the westbound advance signal warning sign from Yucca to north of Lexington Hills on Moorpark Road. It should be noted somehow on the preliminary cost estimate that the estimated lump sum to do this task (\$48K) is not part of the estimated total cost of the synchronized signal improvement project. It has been suggested that it may be less confusing altogether if this task could be shifted to the proposed new project to modify the Lexington Hills intersection instead.

***We will accommodate this request in our next submittal.***

9. The general note at the bottom of the preliminary cost estimate that reads “This cost pertains to Electrical Work only” is odd considering the fact that striping tasks are also listed.

***We will accommodate this request in our next submittal.***

10. Based on the outcome of comment #6 we may be able to lower the lump sum cost of \$34,641 for modifying the signal and lighting at Moorpark Road incurred by the District.
11. It's obvious now that the project costs are going to exceed the original budget. Both the County and the citizens are concerned of course. One thing that is not clear to us is the rules for competitive bidding that this project must follow. The numbers presented here were derived in part from recent Ventura County projects. One question I have is: Are there restrictions on how wide we can search for competitive construction bidders that may have performed similar projects for lower costs further a field than Ventura County? How many companies in reality will be allowed to bid?

***Information regarding project costs will be presented to the Board of Supervisors so that the Board can make an informed decision once actual costs are known***

***By law, there can be no restrictions on how many companies are allowed to bid the project. The project will be advertised in accordance with the County's normal procedures. Any qualified contractor will be allowed to submit a bid. A contractor is considered qualified if they have the appropriate state issued licenses to perform this type of work and have experience in constructing traffic signals. Typically, bids are received from only three or four contractors even though the project is advertised throughout the state. This because most contractors are already very busy and if they are based too far from Ventura County, their project costs increase and their bids are less competitive. By law the County must select the lowest bid received from a qualified contractor in good standing.***

**COMMENTS ON SHEET E1**

12. General note 5 states all EPB shall be located 7'-0" from ground level and have 2" diameter actuators. Community requests that the buttons be located 6'-6" from ground level instead.

***We will accommodate this request in our next plan submittal.***

13. General note 6 states all street lighting and other electrical systems must remain functional during construction which is great. I'm just wondering if we have the same consideration for the bus stops during construction. Is the County responsible for coordinating with the school districts if temporary stops have to be established?

***The County will work with the School District to provide alternate stop locations should the project impact any existing stop location. It is anticipated that most stop locations will not be impacted by the construction of the new traffic signals***

14. Equestrian Push Button Post detail shows the sign as 7" high. The sign at E. Las Posas is 8". Are we using the same kind of sign? FYI - The entire head mounted on the existing pole is 9" from the top of the pole.

***The County has confirmed that the height should be 6' 6".***

15. The 5 section stacked signal head is out of scope for this project (see comment #7) plus the arrows are pointing left instead of right. If it implemented, we would need a red right arrow per the original scope of work.

***See response to #7.***

#### **COMMENTS ON SHEET E2**

16. Question regarding video detection shown coming southbound on Yucca. Does this trip the signal to turn green even if the car turns right? If so, will this have a more negative impact on synchronized operations?

***Video detection zones can be placed on "delay" operation., County has confirmed that it routinely does this at other signalized intersections.***

17. General question on video. Is video for detection of traffic the same as the feed for the County's Bitrans Quicnet Computer Surveillance System for all 8 intersections? If so, not all intersections show video detection plans (e.g., Applewood Lane).
  - a. Also, is the computer surveillance mandatory for all signalized intersections in the county? This could be another cost saving area for us if not all are mandatory.

***The Quicnet Computer Surveillance System only collects data and monitors operational aspects of the signal; it does not differentiate between video detection and other (e.g. inductive loop) detection methods. The system is used to maintain signal timing at the intersections, so yes, it is mandatory for all intersections in this project.***

#### **COMMENTS ON SHEETS E4 / S1**

18. Proposed location for controller and service cabinets on NW corner eliminates valuable safe real estate for school children and horseback riders (see comment #1). Existing bus pullover opportunities are limited to begin with per Ron Riley and Dave Padilla due to the raised curbing that sticks out at a weird angle in the middle of the shoulder. Clarification is needed on exact trail location as it could well be on the west side of the drainage ditch which would run the horses straight into the cabinets. Also, the cement pad looks like it may interfere with the operation of a chain link access gate to the drainage ditch. Suggest moving the cabinets to somewhere on the NE side of the intersection, away from school children and horse trails.

***We will investigate this and address in our next plan submittal***

19. Project note 4 states "Remove existing utility pole, overhead line and luminaire, by others." Who are "others" in this instance?

***Typically the power company (i.e. S. CA Edison), we will confirm***

20. The location of the EPB pole on the NE corner appears to be on the wrong side of an existing cement ditch. When used, horses would be traveling westbound on Santa Rosa road and would be required to transverse the ditch in order to reach the EPB and then

again to reach the crosswalk. Suggest putting on the south side of the ditch, but away from the road as far as possible.

***We will address this in our next plan submittal***

21. We need clarification for what the new County condition is going to be for the housing development that is proposed on the south side of the road. Based on where that traffic will enter/exit, we may need to rethink the horse waiting areas. Trail location and conditioning clarifications are also needed as the trail that is currently in use east of the canal may be switching to the west side of the canal. This is a great example of why an accurate official trail map is sorely needed for planning purposes. NOTE – This is one of our most heavily used and well traveled equestrian trail intersections. And it will get even more use once the new County Equestrian park is completed.
22. The striping plan (S1) provides a great example of what a nightmare the existing NW corner asphalt curbing is. The way the crosswalk striping is currently depicted, it would be possible for a motorcyclist to make a right turn from Blanchard and not cross either crosswalk stripe. A car cutting the corner sharply would have only one set of wheels crossing. This is a bus stop corner. Both Ron Riley and Dave Padilla have registered complaints that this corner is one of the most challenging pull-outs for their busses. There just isn't enough room due to the raised asphalt curbing which is currently designed for the benefit of providing a pull thru driveway for Verizon thru County easement land.
  - a. Establishing a new signal at this intersection warrants rethinking the whole NW corner. The community has natural expectations that when signals are installed at a given unsignalized intersection, the new signalized intersection should be designed properly in order for it to be a safe and effective. Modifying the asphalt curbing to provide more right turn area would fix at least 3 problems. More room for bus parking and safer pull-out, a normal safer crosswalk situation, and safer ingress on to SR Road for cars making right turns out of Blanchard.

***We will work with the County to investigate this and address in our next plan submittal.***

23. The intersection point for the right turn curvature of the fog line on the NE corner needs to be extended (see comment #2).

***We will address this in our next plan submittal.***

**COMMENTS ON SHEET E6 / S2**

24. The community has expressed some interest in installing EPB buttons for the north/south crosswalk now. We're not sure we can condition them later for the inevitable development that will occur north of the intersection.

***We will address this in our next plan submittal.***

25. Proposed location for controller and service cabinets on SE corner eliminates valuable safe real estate for school children and horseback riders (see comment #1). Suggest moving the cabinets to somewhere on the NE side of the intersection, away from school children and waiting horses.

***We will investigate and address this in our next plan submittal.***

26. The intersection point for the right turn curvature of the fog line on the SW corner needs to be extended (see comment #2).

***We will address this in our next plan submittal.***

**COMMENTS ON SHEET E8 / S3**

27. Need to double check NW and SW corner EPB pole locations. SW pole appears to be too far west but it may be ok. And I'm not sure how difficult it will be for horses to navigate existing curbing to access NW corner EPB. Also, for horses traveling eastbound, it will be necessary to activate EPB well north of the NW corner, and then double back to enter east/west crosswalk (see comment #3).

***We will investigate and address this in our next plan submittal.***

28. The striping plan (S3) does not show the crosswalk striping on the NW corner extending all the way to the existing curbing. It appears to only extend to the fog line, much like the case of NW Blanchard. Is there a technical reason why it can not be extended all the way to the curbing somehow?

***We will investigate and address this in our next plan submittal.***

29. The striping plan (S3) has mislabeled Penelope Place. It says Penelope Drive instead.

***We will address this in our next plan submittal.***

**COMMENTS ON SHEET E10**

30. East Las Posas Road designation is missing the word "East".

***We will address this in our next plan submittal.***

31. The three existing EPB buttons are the small, tiny variety. Can we get 2" diameter actuators replacements for these ones to provide a consistent ease of use?

***The County has confirmed that these EPBs will be changed as part of this project.***

**COMMENTS ON SHEET E12 / S4**

32. The intersection point for the right turn curvature of the fog line on the SW corner needs to be extended (see comment #2).

***We will address this in our next plan submittal.***

33. The intersection point for the right turn curvature of the fog line on the NE corner needs to be extended (see comment #2).

***We will address this in our next plan submittal.***



34. Need to add a note to remove existing Andalusia Drive West street sign on the SW corner. It's alignment is right in the middle of the proposed crosswalk where horses will have to wait.
35. IISNS signage for Andalusia should read "Andalusia Dr West" if there is enough space on an 8' sign. The street is commonly called "Andalusia West" which would be ok if there's not enough room for the former.

***We will address this in our next plan submittal.***

36. The decomposed granite horse trail modification shown on the E12 / S4 plans has been approved by the Bridlewood HOA board. They feel the additional trail segments for the signalized intersection are designed properly in order for it to be safe and effective. The existing trail segments connecting to Vista Arroyo should remain and would be useful for riders heading southbound on Vista Arroyo itself.
  - a. Because the HOA only maintains the landscaping (the County actually owns the land) the HOA feels the District would be financially responsible for installing the two new corner segments. It is assumed that the reference to "by others" under Project Notes on sheet E12 refers to the Bridlewood HOA. They are prepared to arrange for and manage their regular trail contractor to implement the plan when the time comes. After installation, they would continue to maintain all trail segments and landscaping.

***We will confirm the proposed trail modifications with the County. The County will follow up on financial obligations.***

37. The striping plan (S4) has mislabeled Andalusia Drive West. It's missing the word "West".

***We will address this in our next plan submittal.***

**COMMENTS ON SHEET E16**

38. See comment #7.

***See response to #7.***

**COMMENTS ON SHEET E18**

39. If relocating the westbound advance signal warning sign from Yucca to north of Lexington Hills on Moorpark Road remains within the scope of this project (see comment #8), then the exact placement location needs to be coordinated with the intersection's redesign effort currently in progress.

***The proposed location was selected based on field observations and by driving the Moorpark approach to Santa Rosa Road. We will work with the County to coordinate this work with the Lexington Hills project.***

- a. As an aside, it would seem the sign might provide a better warning if it was moved further northbound up Moorpark Road than where it's depicted on E18. The County might want to also consider purchasing a more modern version of the sign as well.

*The sign is will be new (the old one is being salvaged).*

#### **COMMENTS ON SHEET E25**

40. This sheet depicts the existing unsignalized left turn pocket into Santa Rosa School (near project note #1). The current back-up during peak hours at the southbound Moorpark Road intersection will be shifted to become an even larger back-up at the Vista Grande signal at Santa Rosa school. The resulting larger back-up occurring directly on SR Road at Vista Arroyo might be alleviated somewhat for morning westbound commuters with a little re-striping that would extend the left turn pocket as much as possible.

*.The County has confirmed that this striping change will be included as part of this project.*

- a. This would be similar to the re-striping which alleviated eastbound commuter traffic at the Moorpark Road intersection when that signal was installed. More drivers attempting to egress from SR Road into Santa Rosa School for morning drop-offs would be allowed to get out of the thru traffic sooner thus decreasing the back up and slow down on SR Road.

41. The E25 sheet has mislabeled Vista Grande. It's missing the word "Grande".

*We will address this in our next plan submittal.*