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408.842.2173

September 1, 2022

Robert Salisbury
County of Santa Clara
Department of Planning and Development
70 W Hedding St
San Jose, CA 95110-1705

Re: Response to Comments Dated October 26, 2021
File PLN20-139
Pacheco Pass Highway APN: 898-19-043, -005

To whom it may concern,

The following are responses to your comment letter dated October 26, 2021 for Pacheco Pass Highway

Planning Office

1. Submitted two plats showing the pre-1969 deed and current deed.
2. Site Plans
    a. Provided the three sets of contour lines.
    b. Pre-violation, existing, and proposed top of bank of all watercourses are shown on WLW Sheets R3, R5, R8, and R10.
    c. Setback shown on HCP plans
    d. All driveway surfaces are recycled AC base rock, all impervious surfaces shown on the plans
    e. Labeled the structures
    f. Site plan shows entire driveway
    g. Shown on plan sheets throughout the set
3. Updated cross sections to include three grades line where new grading is proposed and two when legalizing or restoring.
4. Revised quantity table to include area a and creek restoration, it is almost impossible to separate the tables as suggested since these areas overlap in some instances.
5. See letter from Sequoia
6. See letter from Sequoia
7. See letter from Sequoia
8. See letter from Sequoia
9. See letter from Sequoia
10. Archeology report for project submitted for review.
11. See letter from Sequoia
12. See letter from Sequoia
13. See letter from Sequoia
14. See letter from Sequoia
15. See letter from Sequoia
16. Williamson Act CUD approved by SCC
17. Revised the plans to show the rock limits in plan, profile and section views. The rock material is an engineered streambed material mimicking natural mixed size alluvial material used in creek restoration and habitat restoration projects. Diagrams summarizing our internal alternatives analysis are provided. Alternatives to this crossing are submitted as a separate document for review with this submittal.
18. Revised the grading plans to lay back the bank 2:1 at Cross Section H (formerly Cross Section F) on WLW Sheet R12. The plans show laying back the loose overlying soil layer to a 2:1 slope and seeding it per the Erosion Control Plan in Hanna-Brunetti's plans (Sheet 20).

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19. As discussed in Design Basis Report and in meetings with Agencies, and attached Alternatives Analysis diagram, the spillway channel will be stabilized and enhanced in place.
20. Added more detail on the culverts, some to be legalized and some to be upsized to accommodate the 10 year storm
21. The Hanna-Brunetti plans show the locations of the culverts to be replaced or legalized. The cross section of the bridge is shown on sheet 5 of the set. Complete bridge design will be done at the permitting stage.
22. The poured concrete is shown to be removed and replaced with rip rap on sheet 6.
23. See letter from Sequoia
24. See letter from Sequoia
25. See letter from Sequoia
26. Revised our plans to show reseeding all bare graded ground surfaces with agency-approved grass seed mix.
27. See letter from Sequoia
28. See letter from Sequoia
29. See letter from Sequoia
30. See letter from Sequoia
31. See letter from Sequoia
32. See attached schematic of the alternatives considered for the ford crossing.
33. See response to Valley Water Comments below.
34. Needs to be shown
35. Quantity table revised to include area A and creek restoration
36. Drainage System
    a. Existing drainage system further defined on revised plan set.
    b. The existing storm drain system is routed via pipe to the treatment facility which will detain the residential portion of the project (SF of residential impervious surface is less than 6,000 sf, no storm water treatment for residential portion needed)
    c. Added culvert and note to be removed
    d. Added existing culverts that are to remain on the plans. Three of the existing culverts are to be removed and replaced with larger culverts and/or extended to mee the new design.
    e. Added typical section of the private driveway. The driveway flows in board to a ditch that directs water to culverts along the roadway
    f. Added swale restoration to plan set on sheet 10 of set
    g. The uphill side of the uncovered arena has a 2-3 ft wall that extends a foot above the uphill slope. This allows the water to be captured and directed to the existing catch basin. The water of the new terrace will be sloped and a DI added to an existing pipe which outfalls to the proposed detention pond.
    h. The more detail of the existing storm drainage system added to Sheet 7 and 8 around the residential portion. The more commercial portion will be routed to the bioretention pond via overland sheet flow.
    i. The commercial component of the project drains to a bioretention facility as shown on the plans. The bioretention pond will overflow to the existing culvert. Added label and inverts of the existing culvert.
37. Preliminary Grading Plan
    a. Added cross section of berm
    b. Added typical section on sheet 17 which shows the approximate gravel added to the roads and adding grading quantities added to cover sheet.
    c. Contours shown, where the contours coincide is proof of the limits of the violation
    d. Cross sections updated to show conforms
    e. Added additional area on Sheet 6, the existing contours generally match pre-violation contours
    f. Added cross section and show outline area of grading work completed
    g. The modeled proposed 100-year floodplain and The FEMA Zone A boundary are shown in plan and section view, where appropriate. Note the FEMA Zone A boundary does not accurately follow topography in the Harper Canyon Creek area.
    h. Updated sections and cover sheet
    i. See letter from geologist, evidence shows that the erosion is rilling from rain not over toping
    j. Cross sections shown on sheet 9
    k. Please refer to Sequoia report for tree removal which is apart of this application for complete tree removal. Added trees to our plan set.

l. Added transverse sections
m. Area of cut shown in section K2 for the spill way
n. Pond to be removed and restored
o. Additional sections were added to the revised grading plans. Note channel alignment and stationing have changed slightly. Section C at Sheet R7 is at Station 20+40 (near former 20+25) and Section E at Sheet R7 is at Station 24+20 (near former 23+80).
p. Pond to be removed and restored
q. Revised plans to show max cut/fill and cover sheet
r. Revised to show that they conform to existing.
s. Checked sections and revised where needed as well as the cover sheet
t. Sheet 16 and 17 to show compliance with Fire standards for slope of the road
u. Will show the limits of work on the grading plans and disturbed area shown on the site plan. The plan and profile is to show fire conformance for width and slope only.
v. Areas of grading for the driveway, excluding baserock, are shown on the grading sheets plan and profile for compliance with fire standards for slope.
w. The asphalt grinds were placed without binders. The asphalt grindings are 6-10" thick as shown in the typical section.
x. Section C was added at Sheet R7 is at Station 20+40 (near 20+25).
y. Revised area of violations, added more detail on the culverts, some to be legalized and some to be upsized to accommodate the 10 year storm, all shown on HB plans
z. Added area on sheet 4

38. Separated the residential impervious surface from commercial impervious surfaces. The Residential are below the threshold for treatment, the more commercial components near the bridge drain to a bioretention pond.
39. Submitted
40. Grading Quantities
    a. The areas reference were not on the cover sheet. Quantities added
    b. Area A added to cover sheet
    c. Grading for the creek restoration added to the cover sheet
    d. Increased grading quantities to area #4
    e. Added a line for arena
    f. On Sheet R1 of WLW Plans
41. Added a match line so there is no gap
42. One parcel
43. The area in question is owned by the Bourdets See map 920 page 35, there is lands of USA for the water line that goes through the parcel. Per document 1027 OR 5547 which grants the land to USA, the property maintains the right to have a driveway over it.
44. Noted and project complies
45. Labeled each building to remain and if covered/uncovered
46. All buildings are for private use, added tanks and hydrant
47. Project assumes the buildings will need to be sprinklered
48. Added notes to sheet 5, the bridge is going to be new construction and will meet the loading requirements
49. Plans added tanks and wharf hydrants into the plans
50. Project complies with 200 ft.
51. Turn around dimensioned on sheet 5 and 7
52. The current driveway meets these standards
53. The bridge will demolished and reconstructed to meet the current standards
54. The project is zoning 20 ac or larger and the max of 5,280 ft intervals. The project complies with a turnaround at station 26+00 and 64+00
55. Will comply
56. See submitted report

Valley Water

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VW-1. Topography of the Site. The design plans show pre-violation (2006), existing (2020), and proposed top of bank and channel bottom (thalweg) lines. The 2006 thalweg is approximate due to lack of topographic data within the stream channel.

VW-2.1 Work map. Details of hydrologic and hydraulic modeling are provided in Appendices A-1 and A-3 of the Design Basis Report. The hydraulic modeling domain has also been added to WLW Sheet R2.

VW-2.2. Hydraulic Analysis of Pre-Violation Conditions. It is not feasible to evaluate pre-violation conditions because there the 2006 Santa Clara County LiDAR is does not have adequate topographic data within the stream channel for producing a meaningful hydraulic model. The coarse topographic data would produce results that are not meaningfully comparable to existing conditions or proposed conditions. While it may be possible to estimate from verbal history what the historical reservoir spillway elevations and dimensions were at different times (it was reconstructed and destroyed multiple times), modeling historical reservoir spillway geometry would not produce meaningful differences from the completed hydraulic modeling. The completed and documented hydraulic modeling assumed the reservoir was completely full during the peak flow conditions, so the reservoir was running "run-of-the-river" (i.e., inflow equals outflow, no storage effects on peak flow hydrograph). Therefore, changing the reservoir spillway configuration and/or the bathymetry, altered by unknown historical sedimentation rate, would not change the modeling results. The completed and documented hydraulic modeling is conservative – the maximum unattenuated 100-year peak flows were used, for example, to compute the 100-year peak water surface elevation at the replacement bridge section. Hydraulic modeling of pre-violation conditions, even if feasible, would not change the relevant hydraulic design parameters required to design the creek restoration, bridge replacement, floodplain restoration for ecological habitat restoration, culvert capacity evaluation, ford crossing improvements, and spillway channel bank stabilization measures.

VW-2.3. Hydrologic Analysis of Pre-Violation Conditions. The grading violations did not and would not, theoretically, change the results of hydrologic analysis, including computation of 2-year, 5-year, ... 100-year peak flows at any of the locations along Harper Canyon Creek where reliable design peak flows are needed, because the grading violations did not change the watershed boundaries of Harper Canyon mainstem and tributary creeks for which individual peak flows were computed and routed by the model. Reservoir and pond storage attenuation was neglected because run-of-the-river conditions are expected to occur during the duration of the peak flow hydrograph. Hydrologic modeling of pre-violation conditions would produce the same results as hydrologic modeling of existing conditions.

VW-3.1 Existing well shown on sheet 2 and 3

VW4.1 Existing and proposed septic system shown on sheet 7

VW-5.1. Geomorphic Analysis of Pre-Violation Conditions. A historical geomorphic analysis of Harper Canyon Creek was completed in the Design Basis Report (WLW, 2021). Historic aerial and satellite photos were analyzed, but the analysis explains that there is not sufficiently detailed pre-violation topographic information from which to perform a geomorphic analysis of pre-violation creek stability. The comments imply that the stability of Harper Canyon Creek is the same as the absence of natural channel bank erosion. The historical presence/absence of natural channel bank erosion is likely most strongly predicted by the presence/absence of erosion-resistant bank materials. There are no maps showing where the pre-violation channel banks were composed of erosion resistant materials and where they were composed of softer, erosion-susceptible materials. By inspection of existing natural channel banks in areas not affected by the grading violation conditions – primarily in the canyon reach upstream from the creek restoration area – the natural "pre-violation" channel banks are primarily cut in erosion-resistant older cemented alluvium, bedrock, and coarse colluvial lag deposits. As the canyon reach opens up to the wider reach where the grading violations occurred, where the natural channel banks remain intact in their pre-violation condition, the lower channel banks are cut in older cemented alluvium and the upper banks are composed of softer, younger overbank alluvial deposits. Geomorphic reasoning suggests that the pre-violation active channel increased in width and decreased in depth as the steeper canyon reach gave way downstream to the wider, lower-gradient reach. The pre-violation active channel would have carved out a wider swath between the erosion resistant cemented alluvium limits and the channel was more dynamic, with active channel migration cutting through remnants of multiple young alluvial bar deposits, so that the main channel would have been cut in looser, younger bank materials along much of its length. Also, as explained in the Design Basis Report, construction of the dam in the 1970s disrupted sediment supply from a majority of the watershed,

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which may have led to incision of the thalweg, decreased dynamism, etc. We are confused why Valley Water comments imply that the pre-violation channel must have been stable (i.e., without natural bank erosion, and dynamic channel migration as described above). A dynamic channel with frequent floodplain inundation promotes the recruitment and establishment of sycamore alluvial woodland habitat. We do not think that is a correct geomorphic interpretation of the creek restoration reach at the site. Therefore, we cannot see merit or objective of a "geomorphic analysis of pre-violation channel stability."

VW-5.2. Creek Crossings. Plans show all of the creek crossings subject to the violation including roadway culverts, the bridge crossing over the main Harper Canyon Creek and the ford crossing over the main Harper Canyon Creek. The roadway culverts were all evaluated for hydraulic capacity per Santa Clara County standards, and two of the culvert not meeting standards are shown in the plans as to be replaced with new upgraded size culverts (Design Basis Report, Appendix A-2). Hydraulic analysis was performed for determining the design water surface elevations, shown on plans, for replacement bridge design. Hydraulic analysis was performed to evaluate alternatives for legalizing and permitting the ford crossing, including replacement with a clear-span bridge. However, a clear-span bridge is not the preferred project alternative.

VW-5.3. USBR ROW shown of sheet 2 and 3, location of the pipe unknown.

VW-5.4 We added topographic maps to the design plans for responding to this comment. Sheet R5 shows the 2006 vs. 2020 elevation contours for the Creek Restoration Area site plan, and Sheet R8 shows the 2006 vs. 2020 elevation contours for the Ford Crossing Area site plan, and Sheet R10 shows the 2006 vs. 2020 elevation contours for the Reservoir Spillway Channel Area site plan. Existing (2020) and Proposed contours are shown on the sheets following the pre and post violation contours for clarity.

Please contact us at 408.842.2173 if you have and questions or concerns.

Sincerely,

Amanda Musy-Verdel