MEMO

DATE:	July 1, 2021
TO:	Mr. James Flagg
CC:	Andy & Tim Meinhold, Alice Jo Meinhold Survivors Trust
FROM:	Katie Rollins, P.E. (Cannon)
SUBJECT:	Tract 3157 Review for preservation of trees
PROJECT NO.:	190306.02B

1. Background

This memo has been prepared under the direction of the Meinhold Family and the City of San Luis Obispo Community Development Department in response to the request from the Planning Commission at the Wednesday May 26, 2021 public hearing regarding item 2 on the agenda (The Project).

The Project is located at 500 Westmont Ave. It proposes Tentative Tract Map (Tract 3157) to create 23 residential lots on an existing 4.98ac site with the Low-Density Residential (R-1) zone. The project includes the extension of Stanford Drive, which will connect to an extension of Cuesta Drive.

On May 26th, the Planning Commission approved a motion on The Project to continue the matter to a future date certain for completion of environmental review, incorporating all comments received at the meeting, and giving the opportunity for additional public comment, and to direct staff to work with the applicant to look at alternative grading concepts to preserve as many trees as possible.

Additionally, on May 17, 2021 the Tree Committee approved a motion on the project to make an effort to preserve trees #91, #33, #34, and #114.

This memo explores the feasibility of preserving as many trees as possible onsite, as well preserving trees #91, #33, #34, and #114 as it relates to civil engineering scope of work (grading, drainage, site layout and utilities) for the 23-lot project.

2. City Ordinances and Standards Guiding Design

Below is a list of City standards & ordinances that have been incorporated into the design:

- Retaining walls greater than three feet in height, 2:1 slopes or other significant landform alterations are strongly discouraged (Municipal Code 16.18.020)
- Combined fence and retaining wall height shall not exceed nine feet from the lower side (Municipal codes 17.70.070.F.3)
- Natural contours shall be preserved in new subdivisions to the greatest extent possible. (Municipal Code 16.18.020)
- Driveway slopes shall not exceed 20% and shall include vertical curves (City Engineering Standard 2130)
- Longitudinal grade of streets must comply with the current edition of AASHTO manual “A Policy of Geometric Design of Highways and Streets” (Uniform Design Criteria 3.1.4)

- Runoff shall be managed to prevent any significant increase in downstream peak flows, including 2-year, 10-year, 50-year, and 100-year events. Significant generally means an increase of over 5 percent at and immediately downstream of the project site. (Waterways Management Plan, Drainage Design Manual 3.3)
- Retain 95% percentile storm event via infiltration in WMZ 1 (Post Construction Stormwater Management Requirements)
- Treat or retain 85% percentile storm event in WMZ 3 (Post Construction Stormwater Management Requirements)

3. Feasibility for Preservation of Trees along Perimeter and Side yards

The standards mentioned above limit the ability to save additional trees for the proposed development. Typically, to preserve trees no grading is allowed within the limits of the dripline unless specifically reviewed and approved by an arborist and special measures are implemented.

Preservation of additional trees along the south perimeter of the site were considered. This would be accomplished by matching existing grade at the limits of the existing driplines. Matching grades at the limits of the existing driplines would require walls greater than 3', and in some cases greater than 6' to meet pad elevations that meet maximum driveway slope standards. Walls greater than 6' in height, or walls greater than 3' in height with a 6' fence on it would require an exception to City standards. This grading concept is not feasible because it does not meet all City standards without variances. Additionally, the area along the south property line is being proposed for stormwater treatment and retention to meet the requirements of post-construction stormwater management.

Preservation of trees within proposed sideyard setbacks (#2, #8, #3, #6) and within proposed road parkway strip (#45, #35) were considered. All these trees either extend into the building footprint area, or grading is required at their location to accommodate the adjacent pad elevations and road grading. The road is graded to match existing contours as best as possible while maintaining appropriate longitudinal grades.

Efforts to preserve the trees discussed above cannot be met with alternative grading concepts due to the restrictions of the City codes and ordinances for max wall heights, maximum driveway slopes, post construction stormwater requirements, and road slopes and grading.

4. Feasibility for Preservations of trees #148 to #162

Trees #148 to #162 (3"-10" Acacias) are considered for preservation due to their proximity to the creek. Trees #148 to #162 lie adjacent to the creek bank on lot 3 and were recommended for removal per the "Westmont Subdivision Wildland Fire Protect Report" (Nuemann 2020) and the "Biological Resources Assessment" (Merk 2020).

From a civil engineering perspective, protecting these trees would reduce the buildable area of Lot 3 to an 87'x38' pad (assuming no setback to the trees). Because of other constraints and recommendations – such as native plant mitigation and fuel load reduction, these trees may be removed and replaced with natives. The buildable area for the lot may be maximized by relocating the stormwater treatment area to the sideyards of Lots 1 and 2 as shown in Attachment 1.

5. Feasibility for Preservation of tree #91

The tree committee specifically requested tree #91 (16", 8" coast live oak) be reviewed for feasibility of preservation. Tree #91 lies within the proposed underground detention basin system (Stanford Basin).

The Stanford Basin is designed to the minimum volume necessary to mitigate the 100-year flow to match pre-developed conditions to Twin Ridge Creek as required by the Drainage Design Manual. The basin was thoughtfully located near the low point of the site so that it could capture as much runoff as possible from the site but still be high enough to allow the outlet to drain to the existing creek.

Alternative grading concepts for the drainage basin include an above ground basin, which would require a larger footprint, likely not fitting on the site, and provide less future usable space as it would need to be fenced off. An above ground basin would not provide preservation of Tree #91.

Any relocation of the current Stanford Basin storage volume is not feasible without negatively impacting the building areas of adjacent lots.

6. Feasibility for Preservation of tree #33, #34

The tree committee specifically requested trees #33 (33" eucalyptus), and #34 (54", 41" eucalyptus) be reviewed for feasibility of preservation. Trees #33 and #34 have trunks in the pad area for lot 23, and their dripline extends over the detention basin.

Preserving trees #33 & #34 would render Lot 23 unbuildable because their driplines extend into the building area such that only a 10'x30' buildable pad (not including required fire setbacks from fuel loads) would remain. Additionally, the driplines for trees #33 & #34 extend over the proposed underground detention system.

Retaining trees #33 and #34 on Lot 23 is therefore infeasible because of required storage volume of the detention basin.

7. Feasibility for Preservation of tree #114

The tree committee specifically requested tree #114 (42" eucalyptus) be reviewed for feasibility of preservation. Tree #114 is adjacent to the creek and is located on Lot 2.

Preserving tree #114 would require an arborist's approval of an approximately 12 LF encroachment into the dripline of the tree and an adjustment to the buildable area of Lot 2 as shown on Attachment 1. The grading concept shown in Attachment 1 provides space for the LID stormwater basin and reduces the buildable area of Lot 2 to reduce ground disturbance under the tree.

We recommend a condition be added to obtain the arborist's evaluation of the feasibility of protecting tree #114 at the time of subdivision improvements (pad grading) and/or at building permit submittal. Alternatively, tree #114 could be removed and replaced with a native oak tree as deemed appropriate by biologist and staff.

8. Recommendations

The plan as proposed meets the requirements set forth by the City of San Luis Obispo. As described above, it is infeasible to maintain reasonable buildable areas for all the project's lots and retain trees #91, #33 and #34.

We recommend that the following condition be added to the project in order to maximize the preservation of trees onsite:

- Obtain the arborist's evaluation of the feasibility of protecting tree #114 at the time of subdivision improvements and/or at building permit submittal. Alternatively, tree #114 could be replaced with a native oak tree as deemed appropriate by the biologist and staff.

The decisions of the Planning Commission regarding the removal, preservation or replacement of the trees mentioned above adjacent to the creek could ultimately affect the final limits of the riparian area, and the 20' building setbacks. At the time of building permit submittal builders may consider a setback modification request.

Attachments:
Attachment 1 –Alternative Grading Concept

WESTMONT AVE.

JEFFERY DR.

LOT 1
24,451 SF
3404 SF
BUILDABLE AREA
PAD 288.4

LOT 2
11,283 SF
1921 SF
BUILDABLE AREA
PAD 292.0

LOT 3
9,750 SF
3180 SF
BUILDABLE AREA
PAD 292.0

LOT 5
9,115 SF
1776 SF
BUILDABLE AREA
PAD 291.0

20' CREEK SETBACK

CREEK BANK, TYP.

CREEK SETBACK, TYP.

LIMIT OF RIPARIAN EDGE

TWIN RIDGE CREEK

CREEK FLOWLINE

GRADING AS SHOWN, TYP.

11.05' SIDE SETBACK, TYP.

STANFORD DR.

STANFORD DR.

STREET TREE PLACED ON CENTER, PER THE CITY'S APPROVED MASTER TREE LIST

SEE SHEET C5

LEGEND

- UNDERGROUND STORMWATER TREATMENT/RETENTION AREA PER STORMWATER CONTROL PLAN
- STORMWATER TREATMENT/RETENTION AREA PER STORMWATER CONTROL PLAN. IRRIGATION PER ADJACENT PROPERTY OWNER.
- MORNING GLORY MITIGATION AREA
- EXISTING CREEK CORRIDOR (GREATER OF CREEK BANK OR RIPARIAN EDGE, INCLUDING NON-NATIVE ACACIA'S AND EUCALYPTUS)
- AREA OF ACACIA TREE REMOVAL. NATIVE REVEGETATION LIMITS IN THIS AREA TBD WITHIN CREEK BANK.
- APPROXIMATE DRIP LINE OF TREE #114 (42" EUCALYPTUS).
- APPROXIMATE 20' CREEK SETBACK LINE TO BE DETERMINED AT TIME OF BUILDING PERMIT SUBMITTAL
- CREEK BANK
- ESTIMATED BIOLOGICAL EASEMENT. LIMITS TO BE FINALIZED AT TIME OF FINAL MAP RECORDATION, AFTER NATIVE PLAN MITIGATION

0 20 40
1 INCH = 20 FEET
SHEET SIZE: 24" x 36"

2021-06-28
DRAFT FOR
REVIEW ONLY

REV. NO	DATE	REVISED	DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRD BY

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DRAWN BY	DATE
JTR	6/28/2021
CHECKED BY	SCALE
KCR	AS SHOWN
	CA JOB NO. 190306.02

TRACT 3157
TENTATIVE TRACT MAP
LOT 2 & 3 RIPARIAN EDGE ANALYSIS
CITY OF SAN LUIS OBISPO, CALIFORNIA

SHEET
FIGURE 1
OF 9

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