

WESTERN HERITAGE CONSULTING & ENGINEERING

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April 25, 2024

Attn: Jeff Barnes
City of Scottsdale – Planning and Development Services
7447 E. Indian School Road, Suite 105
Scottsdale, AZ 85251

RE: **21-DR-2002#2, Drainage Report Comments**

Vargo Quarter Horses (VQHS)
3474C (Key Code)

The following letter includes the response to the review comments by the Planning & Development Services for the above referenced Drainage Report and the comments on the Grading and Drainage Plans dated 9/28/2023.

Drainage Report Comments:

Introduction:

1. Flood Hazard Classification data including Flood Insurance Rate Map (FIRM) information was updated per comments.

Existing Conditions:

1. There was a sentence in the existing conditions which caused some confusion whether the site was as originated or part of a land split. The portion of the sentence which was misleading was removed. It is noted that this lot is as originated and is not part of any land split or subdivision.
2. Portions of the existing condition were moved to the Hydrology section as requested in the review comments.

Hydrology:

1. The south wash peak design flows were clarified for the wash property entry and exit points.
2. The drainage easements portion of the report was revised for the separate conditions for the North and South Wash. Existing encroachments into the South Wash were discussed with proposed mitigation.
3. The Erosion Hazard Setback portion of the report was revised to clarify the hazard setback limits and design limits.
4. First Flush requirements were clarified with the site zoning and the proposed grading disturbance area.

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Proposed Conditions:

1. Per correspondence with the City of Scottsdale Planning Department, a Wash Modification is not required with the proposed improvements to the site.

Hydraulics:

1. The hydraulic modeling of the existing and proposed site was defined using HEC-RAS modeling based on the design flows developed in the Hydrology section. HEC-RAS modeling was used to determine the water surface elevations for the 100-year peak flood, culvert design and driveway flood depths for both existing and proposed conditions.
2. Additional HEC-RAS result output was presented with figures from the modeling design output and comparisons for both the existing and proposed conditions.

Conclusion

1. The conclusion section was updated to present the general findings of the report.

Grading and Drainage Plan Comments:

1. The requested FEMA Benchmark Maintenance (BMM) statement was added to the plans.
2. The FEMA Flood Insurance Rate Map (FIRM) Information block was added to the plans as requested.
3. Peak Discharge flows were clarified on the drawings with "Q100" labels.
4. Existing culvert information was included at the main driveway across the North wash as requested.
5. The drainage easements were noted and clarified between the existing and proposed easements on the drawings.
6. The erosion hazard setback limits were shown for both the North Wash and the South Wash for the site.

Please feel free to contact us if you have any questions.

Thank you,

A handwritten signature in blue ink that reads 'Matt Peterson'.

Matthew Peterson, PE
Project Manager