

Memo

December 4, 2022

To: Ms. Ashley Hammer, Sr. Community Manager, ACMS, LLC

From: Massoud Rezakhani, Principal, MRC LLC

RE: Signature at Stagecoach Pass Preliminary Drainage Report

This Preliminary Drainage Report (PDR) for the proposed Stagecoach Pass development (Site) has been prepared by Kimley-Horn and Associates to meet the drainage requirements outlined in Chapter 4 of the City of Scottsdale Design Standards and Policies Manual (DS&PM). The Site consists of 15 lots in the approximately 30-acre Site. Lots 1- 13 are zoned R1-70 and lots 14-15 are zoned R1-190. The Site is undeveloped natural desert, characterized by braided washes and rock features of varying sizes. Undeveloped desert is also characterized by native desert grasses and brush.

Below are a list of sections and the comments for each section along with action items pertaining to the PDR.

Existing Offsite Drainage Conditions

This section states that the sub-basins for the existing conditions hydrologic model were delineated using City quarter section topography and that no topography is available north of Stagecoach Pass Road as it is in outside of the City.

Action item: Topography north of Stagecoach Pass must be investigated to verify that no flows impact the site from the north. Also, state the datum for the topography.

Proposed Onsite Drainage Plan

The onsite detention basins are identified in this section to be 3-feet deep with an overflow weir six inches below the top of basin. Basins S55 and S60 are identified to have a 100-year depth within the basins of 2.94 and 2.65 feet, respectively. During a 100-year event, these ponding depth are above the overflow weir depth and the detention basins will be overflowing.

Action item: Adjust the basin dimensions so that there is adequate freeboard and overflow does not occur during the 100-year storm event.

Hydrology

This section states “One soil type was identified for the offsite and onsite sub-basins using the web soil survey from the National Resource Conservation Service (NRCS) STATSGO soil survey.” Table 2 shows 2 soil types.

Action item: Rectify the discrepancy between the text and the table.

Figure 5

It is not clear why the onsite basins in the southwest portion of the site, specifically ON25B, do not follow the parcel lines. If there are portions of ON25B that are offsite, then they should be designated as such.

The proposed 2' culvert from ON40A does not match the Proposed 3' 3-barrel culvert from ON40B to ON40D. The 2D analysis for this wash indicates 113-cfs exiting from the proposed 2' culverts. The Culvert Report for Culvert ON-40A indicates a maximum of 3-cfs. These values do not match.

Action item: Review onsite basins in the southwest portion of the site. Divide offsite and onsite basins appropriately.

Review the flows in the wash in basins ON40B and ON40D. The upstream culvert of 2' does not make sense if there is a 3-barrel 3' culvert downstream. Also, the 2D analysis indicates 113-cfs in that wash coming from the 2' culvert – which cannot be conveyed by a 2' culvert. And finally, the Culvert Report for the 2' culvert (ON-40A) indicates only 3-cfs in this culvert. The discrepancies must be resolved.