

CITY OF ALBUQUERQUE



January 30, 2015

Brian Patterson, P.E.
Bohannon Huston, Inc.
7500 Jefferson St NE
Albuquerque, NM 87109

**Re: Del Webb @Mirehaven Amendment No.2
Drainage Report and Grading Plan
Engineer's Stamp Date 1-8-15 (H09D017C)**

Dear Mr. Patterson,

Based upon the information provided in your submittal received 1-8-15, the above referenced report and plan cannot be approved for Administrative Amendment or Grading Permit until the following comments are addressed:

1. Additional comments on the submittal are provided beginning with number 2 below. However, an inlet and pipe combination is too susceptible to clogging due to the Mirehaven Arroyo being earthen. Initial flows will be laden with debris and sediment. Windblown sediment is also common on the west side of town.
 - a. It appears the cost to build the 5 foot wide by 3 foot deep channel is higher than expected. Hydrology requested the 5 feet in width to provide excess capacity for sediment and so that it could be cleaned with a skid-steer or similar piece of equipment.
 - b. The channel is oversized in the upper reach. To help reduce costs in the channel construction, it would be acceptable to reduce the channel cross-section to 3 feet wide by 2 feet deep in the upper reach. The 5 foot wide x 3 foot deep channel should begin 110 feet south of the Tract N2A2 north property line in this location. This location was selected based on a site visit. There should be a hydraulically favorable transition between the two cross sections.
 - c. Hydrology realizes the smaller channel will most likely have to be manually cleaned.
2. The 65 cfs from Basin 12.18B is not included in the Swale Analysis and these flows appear to be diverted with the berm shown in Detail E-E back into the monument. Flows should be accepted in the area of the berm.
3. The mound-pipe shown will deflect flows north along the monument boundary. This is also causing grading to occur within 5 feet of the monument boundary. In general, storm drains are not constructed above grade. It is a matter of time before the slopes will erode and the pipe may be exposed.
4. On the PNP, what is the basis for the downstream HGL (station 9+00)? It appears to be having a backwater effect. In our previous discussion, we agreed upon gravity flow in the pipe.
5. The inlets should be perched a minimum of 1 foot above grade to allow for wind-blown and waterborne sediment deposition. This should be shown to scale, with grate and invert elevations, in Section B-B and Section D-D and Section D-D should be cut through the inlet. This may cause the berm/channel to be deeper.

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6. There does not appear to be enough cover over the pipe to construct the scour wall downstream of the inlet (station 3+00).
7. The main reason a channel was agreed upon initially was that: it provided protection from offsite flows, allowed for simple inspection and could be maintained with a skid-steer or similar. How will the inspection and cleaning/maintenance be completed with a pipe design?

If you have any questions, you can contact me at 924-3986.

Sincerely,

Curtis Cherne, P.E.
Principal Engineer, Hydrology
Planning Dept.

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C: e-mail