

CITY OF ALBUQUERQUE

PLANNING DEPARTMENT – Development & Building Services



August 29, 2013

David Soule, P.E.
Rio Grande Engineering
P.O. Box 93924
Albuquerque, New Mexico 87199

Richard J. Berry, Mayor

RE: **Beehive Homes – SW Corner Four Hills Road and Wenonah NE** **L23/D022**
Four Hills Village Shopping Center, Tract 1-B2 **PE Stamp: 7/7/13**
Grading & Drainage Plan for Site Development Plan and Building Permit

Dear Mr. Soule,

Based upon the information provided in your submittal received 7/9/2013, the above referenced plan is cannot be approved for **Site Plan, Grading Permit, nor Building Permit**. As discussed in our meeting yesterday afternoon, the following issues need to be addressed on this plan:

1. The abutting, Four Hills Channel is a City owned and maintained facility.
 - a. The proposed connection to the channel wall must be done under our Special Order 19 (SO-19) procedure, for Private Infrastructure within the Public R/W. These plans must include standard SO-19 notes, and specific construction details for the penetration of the vertical walled channel section.
 - b. Plans must clearly require the contractor to call Storm Maintenance for inspections of the work in progress, prior to and including cutting the wall and placement of concrete. "CALL: Jason Rodriguez at 857-8074"
 - c. Raise the invert of your connection about 3' above the channel bottom, to minimize the impact of this penetration on the strength of the wall.
 - d. I previously forwarded you a copy of the record drawings for a portion of the Four Hill Channel, which will give you more information on rebar size and placement, and assist in detailing the penetration of the wall.
 - e. Details should call for the contractor to locate the existing rebar and adjust the penetration location to minimize the number of vertical and horizontal bars cut. To expedite approval, I suggest that you contact this office to preview your structural connection details, prior to formal submittal.
2. The Drainage Report indicates that you are retaining the first 0.44" of runoff from the site. However, the detention pond detailed has an outlet at the bottom of pond, effectively releasing all flows.
 - a. Per our discussion, the site storm drain piping will be changed to connect directly to the Four Hills Channel, and by-pass the retention pond.
 - b. The pond at the SE corner of the site will be resized to accommodate expected runoff from the eastern side of the site, and some of the site water harvesting

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- will be accommodated in smaller retention ponds on the upper portions of the site, filtering the first flush, and minimizing the outfall pond size?
- c. Raise the grate on the pond inlet, or substitute a stand pipe to set the pond overflow grade and retained volume.
 - d. The pond spillway should be located on the south side, coincident with the existing swale.
 - e. Show how retention pond will be accessed for maintenance.
3. Clarify how site “Rough Grading” is intended to be completed, with pad elevations 5-feet below the building FF elevations? This is critical as building completions are expected to be done in phases.
 4. Label the building numbers and phases anticipated by the developer.
 5. What is the purpose of the CMU wall shown along the south side of the site? It appears to create a “no-mans-land” between it and the existing garden walls, with no means of access for maintenance. Will the south swale be plated, similar to the 2:1 slope?
 6. Drafting issues that need to be corrected:
 - a. Legend symbologies chosen tend to obscure some of the critical details, or are not clearly differentiable. (e.g.- the Retaining Wall and Stem walls are too similar; limits of retaining wall at SE corner; the rock plating obscures contours; etc.)
 - b. The proposed contour labels are not legible
 - c. Clarify limits of paving, and add sidewalks/conc.(?) symbol to the Legend.
 - d. What are the limits of the Cobble Swale(s)? Same line type has been used for cobble and non-cobble swales.
 - e.
 7. The drainage plan needs to include flow arrows where off-site flows enter the site, and indicate the design Q's. Also, show how/where on-site flows get into the Water Harvesting Ponds, and indicate estimated volumes retained.
 8. Show where roof flows leave the structures and enter the site drainage paths.
 9. Clarify the inlet details at the southern ends of the paved areas, and show how flows will be captured by the inlet, and not allowed to overflow to the landscaped area and steep southern slopes/swale.

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10. The flow course between the two central buildings shows flow southerly, crossing under the sidewalk but, the grades slope north. Also, just east of that sidewalk culvert location, flows appear to cross the sidewalk without a pipe or culvert.
11. At the NW corner of the western building pad, the swale appears to cut under the building corner.
12. Clarify grades around parking areas, typical; sidewalk grades vs. pavement grades. Provide flow arrows and Proposed Contours to clarify flow patterns.
13. Records indicate a public sanitary sewer line passing through the site, with a manhole at the south end of your easterly access drive. Show the manhole on this plan, and clarify grades in the area to ensure that site runoff does not drain into the manhole cover openings.
14. DETAILS, Sheet 2:
 - a. COBBLE SWALE: Are they 6" cobbles? How thick is the cobble section? Is subgrade compaction or filter fabric required?
 - b. SECTION A-A: Verify pipe slope. Show proposed direct connection of site drain to channel penetration. Clarify if the screen wall is to be built on the property line.
 - c. SECTION B-B: Verify need for second wall, and swale lining.
 - d. EMERGENCY SPILLWAY: Revise per pond revisions discussed above.
 - e. CHANNEL PENETRATION DETAILS: Provide specific details to minimize impact on existing wall reinforcement. Discussed above...

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Since this site exceeds one (1) acre, an Erosion and Sediment Control (ESC) Plan prepared by a NM Registered Professional Engineer must be submitted to this office and approved, prior to start of **Grading**.

If you have any questions, please contact me at grolson@cabq.gov or phone 924-3994.

Sincerely,

Gregory R. Olson, P.E.

Senior Engineer

Orig: Drainage file L23-D022
c.pdf Addressee via Email: david@riograndeengineering.com

