

TIERRA WEST, LLC

April 12, 2011

Mr. Curtis Cherne, PE
Senior Engineer
City of Albuquerque
PO Box 1293
Albuquerque, NM 87102

**RE: THE BOULDERS – PHASE 1 SUBDIVISION
DRAINAGE REPORT AND GRADING AND DRAINAGE PLAN
PROJECT #1002632
ZONE ATLAS PAGE B-10 & B-11**

Dr. Mr. Cherne:

I have reviewed your letter regarding the grading and drainage plan for The Boulders Phase One. Attached is a revised plan and report with your comments addressed as follows:

1. The report and plan are stamped by different engineers. Who is the engineer of record?
Ron Bohannon is the engineer of record and both the revised plans and report are stamped and signed by him.
2. Basin maps for existing and proposed conditions were not included in the map pocket as stated in the report. There is a proposed basin map in the report, just no existing conditions basin map.
No basin map for existing conditions was prepared. Flows from the entire site generally flowed from NW to SE and drained into the mouth of the Piedras Marcadas Arroyo. The report has been modified accordingly.
3. Please provide a Grading and Drainage Plan on a larger scale 1"=40' or similar where the houses are and the adjacent area.
Larger scale grading plans are included with the new report.
4. Please state when you expect (Phase) to drain the Chamisa Storm Drain to the Unser Pond.
The upland flows associated with the Chamisa Storm Drain will not be routed to the Unser Pond until the 48" and 60" outfall is constructed from the Unser Pond to the existing storm drain stub at Paradise and Unser. The ponds on the upstream properties will remain in place as retention ponds until this outfall is completed. The outfall will be required to be in place for the construction of The Boulders Phase Three.
5. The 48" RCP in Unser Blvd is shown as existing. Please provide the City Project Number that it was built with.
The 48" RCP shown on the plans as existing is a segment of the Unser Pond outfall that was constructed with City Project Number 761781.
6. Provide flow line elevations or a profile for Unser Blvd fronting this development.
Proposed flow line elevations were added to the grading plan for the future

section of Unser that fronts Phase I. This portion of Unser will be deferred to be designed and constructed when required.

7. Provide the Volume Required, Volume Provided and Water Surface Elevation for the Unser Pond for Phase I on the grading plan and for all three phases in the drainage report.

Phase I volume and WSE was added to the grading plan and for all 3 phases in the drainage report.

8. It appears some grading will be necessary offsite west of the furthest northwest lots of Phase 1.

Slope ties at 3:1 maximum grades are shown where this occurs.

9. In the basin calculation tables "Upland East" and "Upland West" are listed, but they do not appear elsewhere in the report.

Upland East and Upland West basins are the two basins that make encompass the Paradise View Subdivision to the north of the Boulders. They are noted on the basing map as Basins #34 & #33 respectively.

10. Include the portion of Unser Blvd in the basin calculation table.

The portion of Unser that borders Phase I is included in the calculation table as Basins #12 & #13.

11. The Volume Calculation table in the report shows the WSE at 5343 for 22.5 ac-ft. Finished Floor elevations east of the pond are around 5334 to 5346. It is not desirable to perch water 9 feet above adjoining houses.

The top of pond elevation is 5340 for Phase I and for the ultimate conditions. The MWSE for Phase One is 5337.12. The MWSE under ultimate conditions is 5337.46. Both are listed on the grading plan. The pond volume calculation table was corrected to reflect this.

12. Basins 15, 16, 17, 18 and the corresponding street calculations are for developed streets that do not appear to be part of Phase 1 per the Grading Plan.

Analysis Point 10 was used to determine the ultimate size of storm drain required to be constructed under Unser with COA Project Number 761784. The flows from these basins to be constructed in future phases will be directed to this storm drain and into the Unser Pond.

13. Flows through the above listed basins appear to be routed to AP-10, where the flows are not accounted for in the street calculations.

See explanation above. The flows are from future phases.

14. I did not see in the report the flows that are in the storm drain vs. the flows that are in the street. This makes it difficult to determine street depths (e.g AP-9, 10).

A summary sheet is included in the report that lists the street capacity, storm drain capacity and the and the basins and flows contributing to each analysis point.

15. Your retaining wall line work should match the legend.

The line work was corrected to match the legend.

16. It appears from reviewing the church grading plan that retaining walls will be required on the south side of the church lot.

A retaining wall is shown on the common wall between the church lot and The Boulders. We are working with the church to coordinate the construction of the wall between the two projects.

17. What is programmed for the open space tract that receives the 48 cfs from Paradise View Subdivision? That seems like a good place for a LID feature.

A concrete channel is shown in the easement between Paradise View and the proposed storm drain.

Sincerely,



Ronald R. Bohannon, P.E.

Enclosures

cc: Pierre Amestoy - AmGo Properties, LLC

JN: 2011005
RRB/VC/cla