

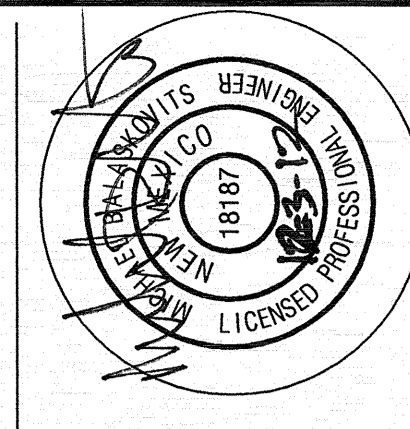
**NELSON ARCHITECT, LTD**  
330 S FAIRBANK ST. ADDISON IL 60101  
708.275.1901

# Desert Hills Healthcare

(5310) 5200 SEQUOIA RD. NW, ALBUQUERQUE, NM 87120

## Residential Treatment Facility

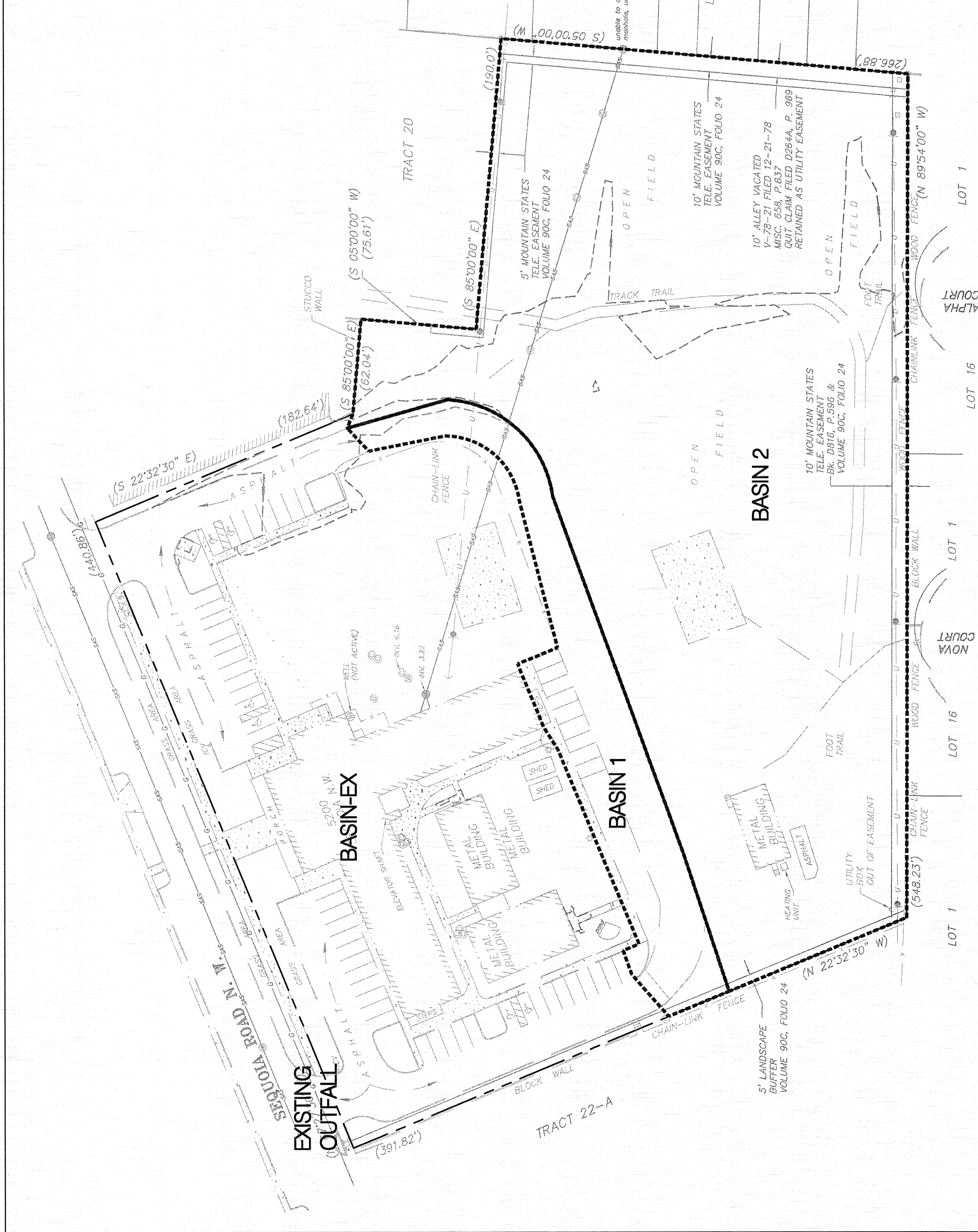
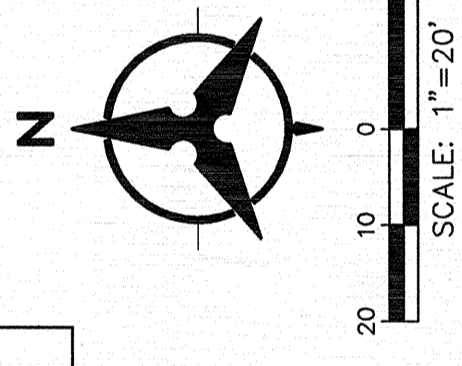
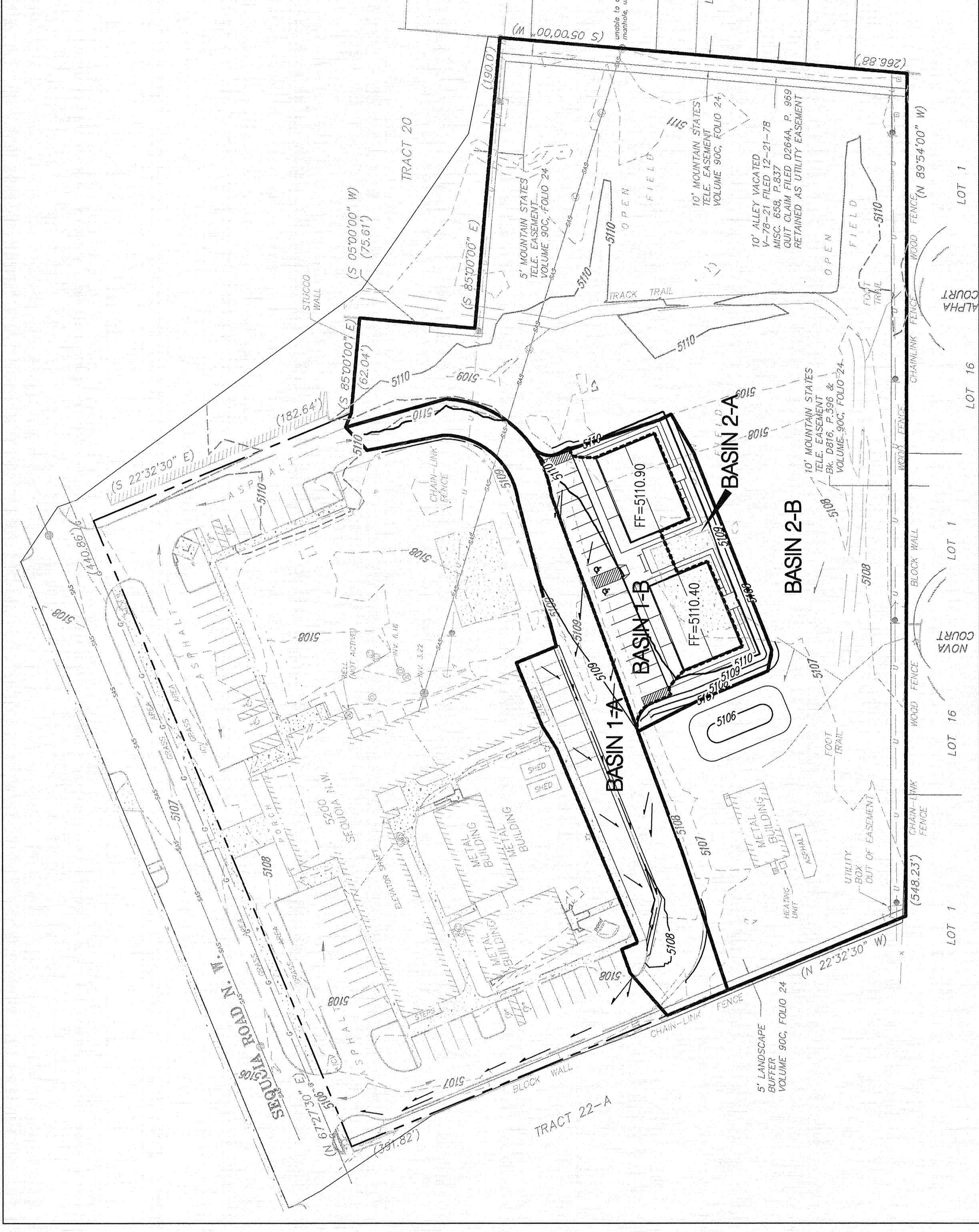
**Bohannon** **Huston**



| # | Issued             | Date       |
|---|--------------------|------------|
| 1 | Design Review      | 2012-07-27 |
| 2 | Permit and Pricing | 2012-10-05 |
| 3 | Construction       | 2012-12-03 |
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SEAL NO. 10011  
 State of New Mexico  
 Professional Engineer  
 Approved For Renewal 2012-11-19  
**DRAINAGE  
MANAGEMENT  
PLAN**  
 SHEET NUMBER

# C0.1



**DESERT HILLS GROUP HOMES**  
Development Conditions Basin Data Table

This table is based on the DPM Section 22.2, Zone: 1

| Basin ID     | Area (SQ. FT) | Area (AC) | Land Treatment Percentages |       |       |       | Q (cfs/sec) | D    | C    | WT E (Inches) | V (cfs/acre) |    |
|--------------|---------------|-----------|----------------------------|-------|-------|-------|-------------|------|------|---------------|--------------|----|
|              |               |           | A                          | B     | C     | D     |             |      |      |               | CF           | CF |
| Existing     | 101612        | 2.33      | 0.0%                       | 15.0% | 71.0% | 14.0% | 2.95        | 6.89 | 1.08 | 9738          | 10887        |    |
| EX To remain | 18750         | 0.43      | 0.0%                       | 0.0%  | 50.0% | 50.0% | 3.62        | 7.48 | 2313 | 3467          | 12763        |    |
| TOTAL        | 134464        | 3.09      | 0.0%                       | 30.0% | 60.0% | 10.0% | 2.77        | 6.84 | 0.99 | 17116         | 12763        |    |
| Proposed     |               |           |                            |       |       |       |             |      |      |               |              |    |
| 1-A          | 18750         | 0.43      | 0.0%                       | 0.0%  | 5.0%  | 95.0% | 4.30        | 1.95 | 1.92 | 3002          | 5184         |    |
| 1-B          | 12138         | 0.28      | 0.0%                       | 0.0%  | 50%   | 50.2% | 4.30        | 1.30 | 1.92 | 1943          | 3355         |    |
| TOTAL        | 30888         | 0.71      |                            |       |       |       |             |      |      |               |              |    |
| 2-A          | 5630          | 0.13      | 0.0%                       | 0.0%  | 75.0% | 25.0% | 3.25        | 0.42 | 1.24 | 579           | 752          |    |
| 2-B          | 116698        | 2.68      | 0.0%                       | 30.0% | 60.0% | 10.0% | 2.77        | 7.42 | 0.99 | 9647          | 11077        |    |
| TOTAL        | 122328        | 2.81      |                            |       |       |       |             |      |      |               |              |    |

**DRAINAGE MANAGEMENT PLAN**

**I. INTRODUCTION**  
THE PURPOSE OF THIS SUBMITTAL IS TO PROVIDE A DRAINAGE MANAGEMENT PLAN AND FINAL GRADING PLAN FOR TWO NEW 2,500SF GROUP HOMES LOCATED WITHIN THE DESERT HILLS FACILITY ON 5310 SEQUOIA ROAD NW IN SUPPORT OF BUILDING PERMIT APPROVAL.

**II. SITE LOCATION**  
THE SITE IS LOCATED ON THE SOUTH SIDE OF SEQUOIA IN THE BACK OF THE EXISTING DESERT HILLS FACILITY. IT IS BOUND TO THE NORTH BY AN EXISTING ACCESS DRIVE TO THE SOUTH AND EAST BY UNDEVELOPED LAND AND TO THE WEST BY AN EXISTING PORTABLE BUILDING. THE CON ZONE MAP PAGE ASSOCIATED WITH THE SITE IS C-11. THE TOTAL SITE AREA IS APPROXIMATELY 3.05 ACRES. ONLY THE SOUTHERN PORTION OF THE SITE WILL BE AFFECTED AS A RESULT OF THIS PROJECT (APPROXIMATELY 1.25 ACRES) REFERRED TO HEREINAFTER AS THE SITE.

**III. EXISTING HYDROLOGIC CONDITIONS**  
CURRENTLY THE SITE IS UNDEVELOPED. THERE IS AN EXISTING CONCRETE SLAB AND AN EXISTING METAL BUILDING WITH LITTLE VEGETATION. THE PROJECT IS LOCATED WITHIN HYDROLOGIC ZONE 1 AS DEFINED BY FIGURE A-1 IN CHAPTER 22.2 OF THE DPM.

**IV. PROPOSED HYDROLOGIC CONDITIONS**  
PER PREVIOUS GRADING AND DRAINAGE PLAN SUBMITTALS (OHA HYDRO FILE 611/051), THE ENTIRE 5.85 ACRES IS INTENDED TO FREELY DISCHARGE DIRECTLY TO SEQUOIA RD VIA SURFACE FLOW UNDER DEVELOPED CONDITIONS. THIS PORTION OF THE SITE SHOULD DRAIN TO THE NORTHWEST CORNER OF THE PROPERTY; HOWEVER, BASED ON THE EXISTING TOPOGRAPHIC SURVEY, A PORTION OF THE SITE (BASIN 2) CURRENTLY SLOPES FROM EAST TO WEST AT APPROXIMATELY 1.5% IN LIEU OF TOWARD THE NORTH. THE EXISTING UNPAVED ACCESS DRIVE (BASIN 1) IS INTENDED TO DRAIN TO THE NORTHWEST CORNER OF THE SITE. THE EXISTING LAND TREATMENTS AND PEAK RUNOFF FLOW RATES ARE SHOWN ON THE DEVELOPMENT CONDITIONS BASIN DATA TABLE.

THE REMAINDER OF DESERT HILLS FACILITY (APPROXIMATELY 2.33 ACRES) WILL REMAIN UNCHANGED AND CONTINUE TO DRAIN TO THE NORTH INTO SEQUOIA RD.

**V. PROPOSED HYDROLOGIC CONDITIONS**  
THE PROPOSED IMPROVEMENTS FOR THE GROUP HOMES ARE SHOWN ON THE GRADING PLAN SHEET C10. THIS DEVELOPMENT CONSISTS OF A NEW GROUP HOMES APPROXIMATELY 2,500SF EACH WITH ADJACENT PARKING, DRIVE DRIVEWAYS, DRIVE TREATMENTS, DRIVE TREATMENTS AND PEAK RUNOFF FLOW RATES ARE SHOWN ON THE DEVELOPMENT CONDITIONS BASIN DATA TABLE UNDER PROPOSED CONDITIONS.

THE INTENT OF THE PROPOSED REDESIGN IS NOT TO DISRUPT THE CURRENT DRAINAGE BUT TO ENSURE THE PROPOSED NEW BUILDINGS DRAIN IN ACCORDANCE WITH THE ORIGINAL DRAINAGE SCHEME AND OUTFALL DIRECTLY TO SEQUOIA RD.

BASIN 1-B WILL NOW DRAIN TO THE NORTH VIA SURFACE FLOW IN LIEU OF TO THE WEST, AND COMBINE WITH DEVELOPED BASIN 1-A. THIS DRAINAGE WILL BE CONVEYED TO A WATER TREATMENT FACILITY. THE REMAINDER OF BASIN 1-A WILL REMAIN UNCHANGED AND CONTINUE TO DRAIN TO THE WEST VIA SURFACE FLOW. THE ADJACENT PARKING AND DRIVEWAYS WILL BE CONVEYED INTO SEQUOIA, AS INTENDED. THE TOTAL FLOW INTO SEQUOIA WILL BE 8.840CS WHICH IS BELOW THE 17.0CS SHOWN ON PREVIOUS PLANS.

THE REMAINDER OF THE SITE (BASIN 2-3) WILL REMAIN UNCHANGED AND CONTINUE TO DRAIN TO THE WEST VIA SURFACE FLOW. THE SOUTHERN PORTION OF THE TWO NEW GROUP HOMES WILL OUTFALL TO THE SOUTH (BASIN 2-A) AND THEIR 100 YEAR FLOOD WATER PONDING AREA (APPROXIMATELY 8000 SQ FT) WILL BE MAINTAINED UNDER DEVELOPED CONDITIONS. THE RESULTANT O WITHIN THIS AREA IS REDUCED FROM 8.45CS TO 7.83CS.

**VI. CONCLUSION**  
THE DRAINAGE MANAGEMENT PLAN AND GRADING PLAN DEMONSTRATE THAT THE DRAINAGE ELEMENTS PROPOSED WITH THE PROJECT ARE CAPABLE OF SAFELY CONVEYING THE 100 YEAR, 6 HOUR FLOOD EVENT IN ACCORDANCE WITH THE DEVELOPMENT PROCESS MANUAL. WITH THIS SUBMITTAL, WE ARE REQUESTING GRADING AND DRAINAGE APPROVAL FOR BUILDING PERMIT APPROVAL.