

# CITY OF ALBUQUERQUE

*Planning Department*  
Brennon Williams, Director



*Mayor Timothy M. Keller*

December 2, 2020

Verlyn Miller, P.E.  
Miller Engineering Consultants, Inc  
3500 Comanche NE Bldg. F  
Albuquerque, NM 87107

**RE: Mark Armijo Charter School  
6800 Gonzales Road SW  
Grading and Drainage Plan  
Engineer's Stamp Date: 11/11/20  
Hydrology File: L10D007A**

Dear Mr. Miller:

PO Box 1293  
Albuquerque  
NM 87103  
www.cabq.gov

Based upon the information provided in your submittal received 11/17/20, the Grading & Drainage Plan is approved for Grading Permit. Once the grading and paving of the project is complete, an engineering certification will be required.

As a reminder, if the project total area of disturbance (including the staging area and any work within the adjacent Right-of-Way) is 1 acre or more, then an Erosion and Sediment Control (ESC) Plan and Owner's certified Notice of Intent (NOI) is required to be submitted to the Stormwater Quality Engineer (Doug Hughes, PE, [jhughes@cabq.gov](mailto:jhughes@cabq.gov), 924-3420) 14 days prior to any earth disturbance.

Also, please provide the Drainage Covenant for the proposed retention pond per Article 6-15(C) of the DPM as soon as possible. There is a recording fee (\$25, payable to Bernalillo County). Please contact Charlotte LaBadie ([clabadie@cabq.gov](mailto:clabadie@cabq.gov), 924-3996). Due to COVID-19, please follow the instructions:

Either email a pdf copy of the executed drainage covenant and the exhibit to [clabadie@cabq.gov](mailto:clabadie@cabq.gov) or either mail or drop off the originals. Please mail the \$25.00 recording fee check made payable to Bernalillo County to:

Planning Dept./DRC  
Attn: Charlotte LaBadie  
600 2nd St. NW, Ste. 400  
ABQ, NM, 87102

If you drop off the originals, there is a drop box outside the building labeled DRC. Once approved and recorded, Charlotte will email you a copy.

# CITY OF ALBUQUERQUE

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Brennon Williams, Director



*Mayor Timothy M. Keller*

If you have any questions, please contact me at 924-3995 or [rbrissette@cabq.gov](mailto:rbrissette@cabq.gov).

Sincerely,

*Renée C. Brissette*

Renée C. Brissette, P.E. CFM  
Senior Engineer, Hydrology  
Planning Department

PO Box 1293

Albuquerque

NM 87103

[www.cabq.gov](http://www.cabq.gov)



# City of Albuquerque

Planning Department  
Development & Building Services Division

## DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 6/2018)

**Project Title:** Mark Armijo Charter School **Building Permit #:** \_\_\_\_\_ **Hydrology File #:** \_\_\_\_\_  
**DRB#:** \_\_\_\_\_ **EPC#:** \_\_\_\_\_ **Work Order#:** \_\_\_\_\_  
**Legal Description:** LT 150-B PLAT OF LTS 150-A & 150-B TOWN OF ATRISCO GRANT UNIT 6 (COMPRISING OF LTS 150 & 151 TOWN OF ATRISCO GRANT UNIT 6) CONT 2.4712 AC  
**City Address:** 6800 Gonzales Road SW, Albuquerque, NM 87121

**Applicant:** Mark Armijo Academy **Contact:** Monica Aguilar  
**Address:** 6800 Gonzales Road SW, Albuquerque, NM 87121  
**Phone#:** \_\_\_\_\_ **Fax#:** \_\_\_\_\_ **E-mail:** \_\_\_\_\_

**Other Contact:** Miller Engineering Consultants, Inc. **Contact:** Verlyn Miller  
**Address:** 3500 Comanche NE, Bldg. F, Albuquerque, NM 87107  
**Phone#:** 505-888-7500 **Fax#:** 505-888-3800 **E-mail:** vmiller@mecnm.com

**TYPE OF DEVELOPMENT:** \_\_\_\_\_ PLAT (# of lots) \_\_\_\_\_ RESIDENCE \_\_\_\_\_ DRB SITE ☒ ADMIN SITE

IS THIS A RESUBMITTAL? \_\_\_\_\_ Yes ☒ No

**DEPARTMENT** \_\_\_\_\_ TRANSPORTATION ☒ HYDROLOGY/DRAINAGE

Check all that Apply:

### TYPE OF SUBMITTAL:

- ☐ ENGINEER/ARCHITECT CERTIFICATION
- ☐ PAD CERTIFICATION
- ☐ CONCEPTUAL G & D PLAN
- ☒ GRADING PLAN
- ☐ DRAINAGE REPORT
- ☐ DRAINAGE MASTER PLAN
- ☐ FLOODPLAIN DEVELOPMENT PERMIT APPLIC
- ☐ ELEVATION CERTIFICATE
- ☐ CLOMR/LOMR
- ☐ TRAFFIC CIRCULATION LAYOUT (TCL)
- ☐ TRAFFIC IMPACT STUDY (TIS)
- ☐ STREET LIGHT LAYOUT
- ☐ OTHER (SPECIFY) \_\_\_\_\_
- ☐ PRE-DESIGN MEETING?

### TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

- ☐ BUILDING PERMIT APPROVAL
- ☐ CERTIFICATE OF OCCUPANCY
- ☐ PRELIMINARY PLAT APPROVAL
- ☐ SITE PLAN FOR SUB'D APPROVAL
- ☐ SITE PLAN FOR BLDG. PERMIT APPROVAL
- ☐ FINAL PLAT APPROVAL
- ☐ SIA/ RELEASE OF FINANCIAL GUARANTEE
- ☐ FOUNDATION PERMIT APPROVAL
- ☒ GRADING PERMIT APPROVAL
- ☐ SO-19 APPROVAL
- ☐ PAVING PERMIT APPROVAL
- ☐ GRADING/ PAD CERTIFICATION
- ☐ WORK ORDER APPROVAL
- ☐ CLOMR/LOMR
- ☐ FLOODPLAIN DEVELOPMENT PERMIT
- ☐ OTHER (SPECIFY) \_\_\_\_\_

**DATE SUBMITTED:** 11/17/2020 **By:** Verlyn A. Miller, P.E.

COA STAFF:

ELECTRONIC SUBMITTAL RECEIVED: \_\_\_\_\_

FEE PAID: \_\_\_\_\_



ZONE ATLAS K-10-Z







Existing NVCHS Drainage Calculations										
This table is based on the COA DPM Section 22.2, Zone 1										
BASIN	Area (SQ. FT.)	Area (AC.)	Land Treatment Percentages				Q(100) (cfs/ac.)	Q(100) (CFS)	WT E (inches)	V(100) <sub>240</sub> (CF)
			A	B	C	D				V(100) <sub>1440</sub> (CF)
A-1	57568	1.32	0.0%	25.0%	23.0%	52.0%	3.44	4.55	1.42	6810
B-1	51748	1.19	0.0%	31.0%	31.0%	38.0%	3.18	3.78	1.26	5447
C-1	154702	3.55	85.0%	0.0%	15.0%	0.0%	1.53	5.42	0.52	6736
TOTAL	264018	6.06						13.75		18994

Proposed (Future) NVCHS Drainage Calculations										
Ultimate Development Conditions Basin Data Table										
This table is based on the COA DPM Section 22.2, Zone 1										
BASIN	Area (SQ. FT.)	Area (AC.)	Land Treatment Percentages				Q(100) (cfs/ac.)	Q(100) (CFS)	WT E (inches)	V(100) <sub>240</sub> (CF)
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A-1	57568	1.32	0.0%	25.0%	23.0%	52.0%	3.44	4.55	1.42	6810
B-1	51748	1.19	0.0%	0.0%	50.0%	50.0%	3.62	4.30	1.48	6382
C-1	154702	3.55	85.0%	0.0%	15.0%	0.0%	1.53	5.42	0.52	6736
TOTAL	264018	6.06						14.27		19929

DRAINAGE MANAGEMENT PLAN

INTRODUCTION  
The purpose of this submittal is to provide a final grading plan and drainage management plan for the addition of two new modular classroom buildings to the existing NVCHS site located at 6800 Gonzales Road SW. The existing Pond 'A' will be removed from the site due to the new portables and Pond 'B' will be regraded per the grading plan (Sheet C101) to accommodate the required storage volume as discussed below.

Existing information referenced below was obtained from a Drainage Management Plan prepared by Applied Engineering and Surveying, Inc dated September 7, 2010.

EXISTING HYDROLOGIC CONDITIONS  
Both Lots 150-A and 150-B sheet flow from west to east and into three existing retention ponds, A, B, and C. Existing Pond A captures the northern two-thirds of Lot 150-B, Pond 'C' captures the entire Lot 150-A, and Pond 'B' captures the southern one-third of Lot 150-B in addition to the overflows from both Ponds 'A' and 'C'. Existing runoff rates and volumes are shown in the Drainage Calculations Table this sheet.

PROPOSED HYDROLOGIC CONDITIONS  
The proposed drainage patterns and basins will generally remain the same as they are today; however, Basin B has some minor increased flows due to the addition of the two new modular buildings and the associated sidewalks. Proposed runoff rates and volumes can be found in the Drainage Calculations Table this sheet.

POND A  
Pond 'A' will be filled in to make room for the new portables. The drainage from this Basin will be routed to the new Pond 'B'.

POND C  
This pond is existing and we are assuming that the Pond Volume matches that of the original design by Applied Engineering and Surveying. Per the pond volume calculations table this sheet, the existing capacity of this pond is 6,887 CF. Pond 'C' overflows to Pond 'B'. Upon future build-out of Lot 150-A, this pond will need to be redesigned and reconstructed based on developed conditions at that time.

POND B  
Pond 'B' is being reconfigured as part of this project as shown on the grading plan. The proposed capacity of the pond is 33,137.5 CF which will adequately capture the required 100-Yr, 10-day volume from Basins 'A' and 'B' which is 20,634 CF. The spillway for Pond 'B' has been redesigned to allow for the future emergency spillway flows from both Ponds 'B' and 'C'. Reference the detail this sheet for the new spillway design.

FIRST FLUSH CALCULATIONS  
Since the ponds located on site are retention ponds, they are capturing all required First Flush flows generated by the site.

CONCLUSION  
This drainage management plan provides for grading and drainage elements which are capable of safely capturing the 100Yr, 10-day storm, do not burden downstream systems, and meet city requirements. The proposed improvements to the site should not have any negative impacts to facilities downstream. With this submittal, we are requesting Drainage Management Plan and Building Permit approval.

OVERFLOW SPILLWAY CALCULATIONS

POND 'B' (Based on Future Developed Flows from Basin 'C')  
Given:  
C = 3.0 (Weir Coefficient)  
L = 22 feet (Width of Flow)  
H = 0.5 feet (Depth of Flow)  
  
Q = 3.0\*22\*(0.5^1.5)  
Qcap = 23.33 cfs  
  
Qreqd = 21.71cfs CHECK

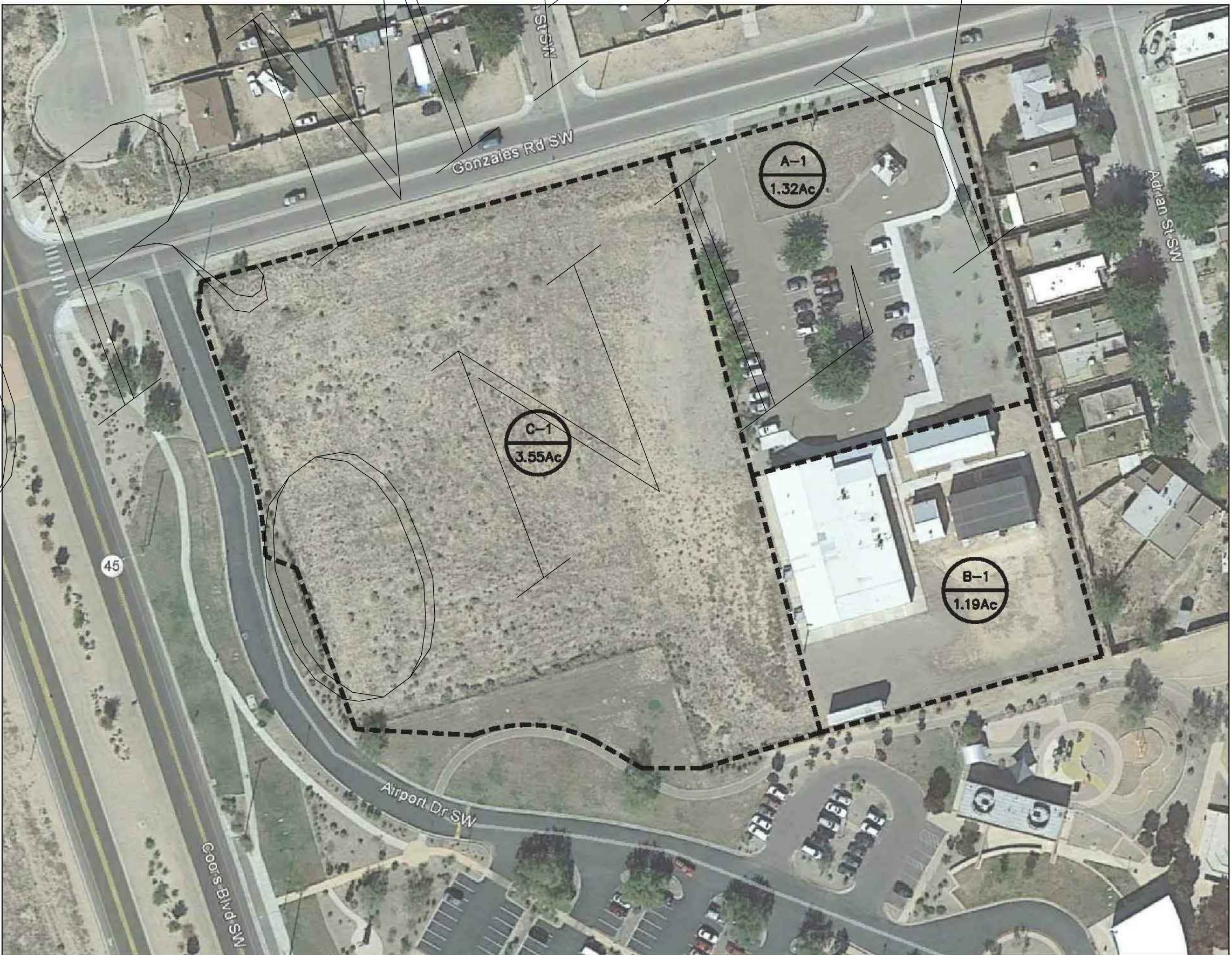
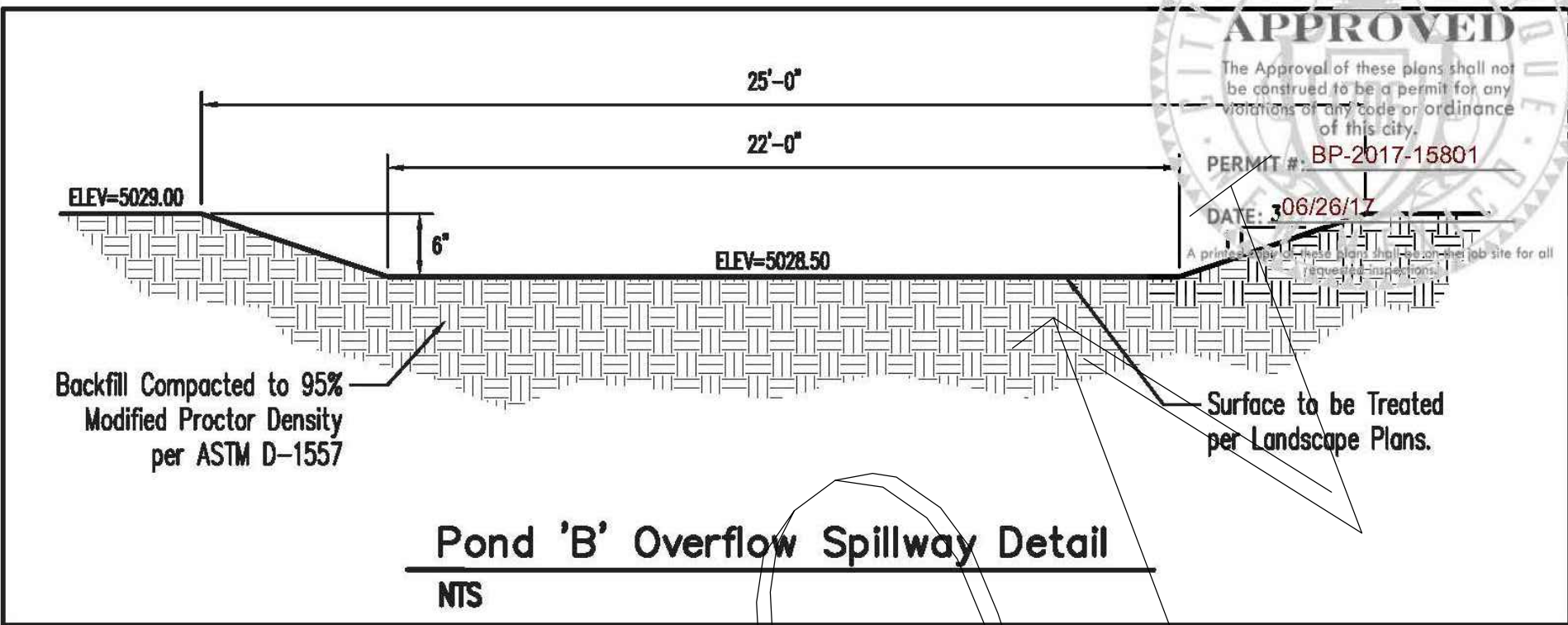
POND 'C'  
EXISTING; NOT ON PROPERTY

24" STORM DRAIN CALCULATIONS

ORIFICE EQUATION; Q = C\*A\*(2gH)^0.5  
Given:  
C = 0.6 (Orifice Coefficient)  
A = 3.14 sqft (Area of Opening)  
2g = 64.4  
H = 1.50 ft (Depth of Flow)  
  
Q = 18.51cfs  
  
PIPE IS INLET CONTROLLED

RETENTION POND VOLUME CALCULATIONS

POND 'A'				
REMOVED FROM SITE				
POND 'B'	5025.00	6,808 SF	7,523.0 CF	
BASED ON DESIGN	5026.00	8,238 SF	9,027.0 CF	
	5027.00	9,816 SF	10,569.0 CF	
	5028.00	11,520 SF	12,554.0 CF	
	5028.50	12,554 SF	13,137.5 CF	
TOTAL			33,137.5 CF	
			REQ'D 20,634.0 CF	
POND 'C'	5030.00	2,589 SF	3,896.0 CF	
BASED ON PRIOR PLANS	5031.00	5,203 SF	7,245.0 CF	
	5031.50	6,762 SF	9,387.0 CF	
TOTAL			6,736.0 CF	
			REQ'D 6,736.0 CF	
GRAND TOTAL			40,024.5 CF	



Basin Map  
NTS

Wooten  
Engineering  
1005 21st Street SE, Suite 13  
Rio Rancho, N.M. 87124  
Phone: (505) 980-3560

STUDIO CONSULTANTS, INC  
PO BOX 1515  
CEDAR CREST NM, 87008  
DANIEL@ARIASCINC.COM  
(505) 506-2314

NUESTROS VALORES  
CHARTER HIGH SCHOOL  
6800 Gonzales Road SW  
Albuquerque, NM 87121

Architect/Engineer		
1	5/25/2017	Revisions per City
2	6/2/2017	Revised Calculations
MARK	DATE	DESCRIPTION
REVISIONS		
ISSUE	PERMIT	
PROJECT NO	2017008	
CAD DWG FILE		
DRAWN BY	JTW	
CHECKED BY	JTW	
DATE	4/12/2017	

DRAINAGE MANAGEMENT PLAN  
AND DRAINAGE DETAILS

C102

MILLER ENGINEERING CONSULTANTS  
Engineers • Planners  
3000 COMANCHE, NE  
ALBUQUERQUE, NM 87107  
(505) 888-2200  
(505) 888-3600 (FAX)  
WWW.MECM.COM



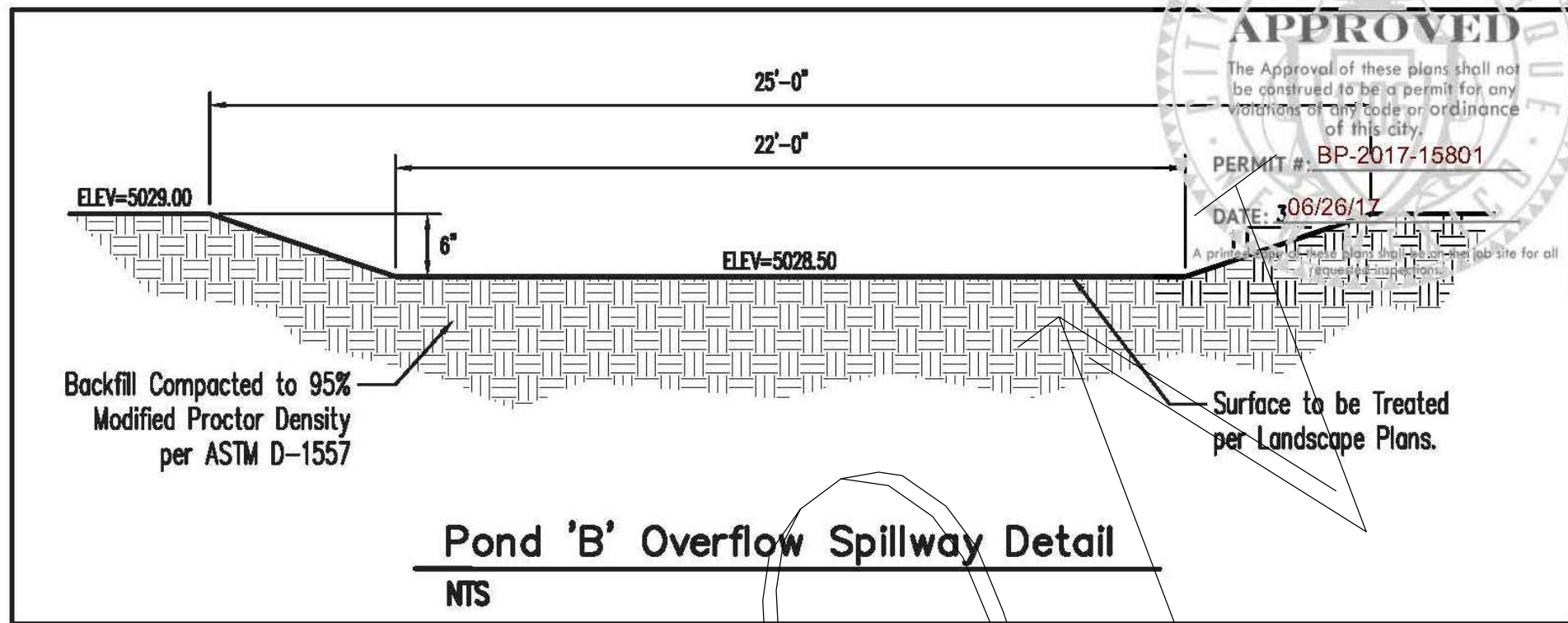
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$Q_{cap} = 23.33 \text{ cfs}$

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Given:

C = 0.6 (Orifice Coefficient)

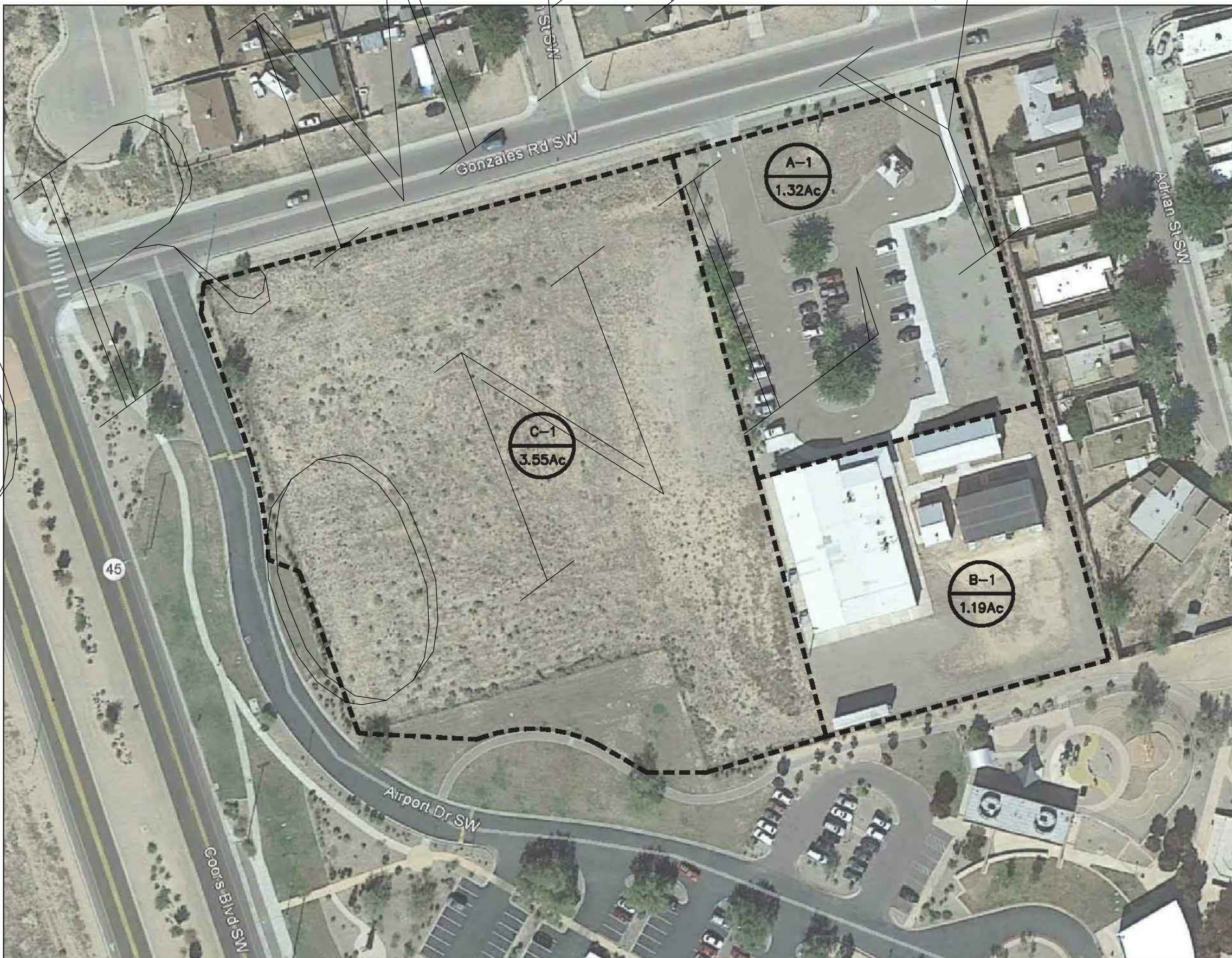
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PIPE IS INLET CONTROLLED



Basin Map  
NTS

**Wooten Engineering**  
1005 21st Street SE, Suite 13  
Rio Rancho, N.M. 87124  
Phone: (505) 980-3560

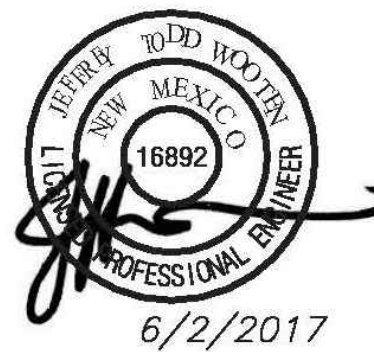
**ARIA**

STUDIO CONSULTANTS, INC  
PO BOX 1515  
CEDAR CREST NM, 87008  
DANIEL@ARIASCINC.COM  
(505) 506-2314



**NUESTROS VALORES**  
CHARTER HIGH SCHOOL

6800 Gonzales Road SW  
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Architect/Engineer

1	5/25/2017	Revisions per City
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CAD DWG FILE		
DRAWN BY	JTW	
CHECKED BY	JTW	
DATE	4/12/2017	

**DRAINAGE MANAGEMENT PLAN  
AND DRAINAGE DETAILS**

C102



CONSULTANT



## Mark Armijo Academy - Master Plan

## Project Status

6800 Gonzales Rd SW  
Albuquerque, NM 87121

AUGUST 2020

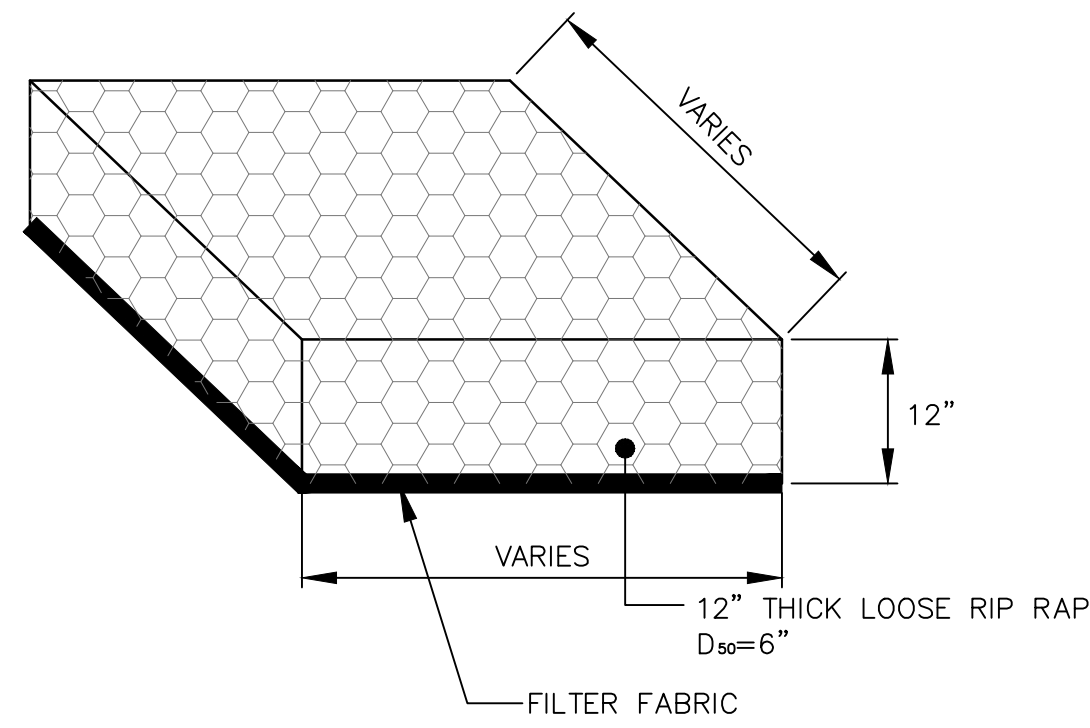
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SHEET TITLE

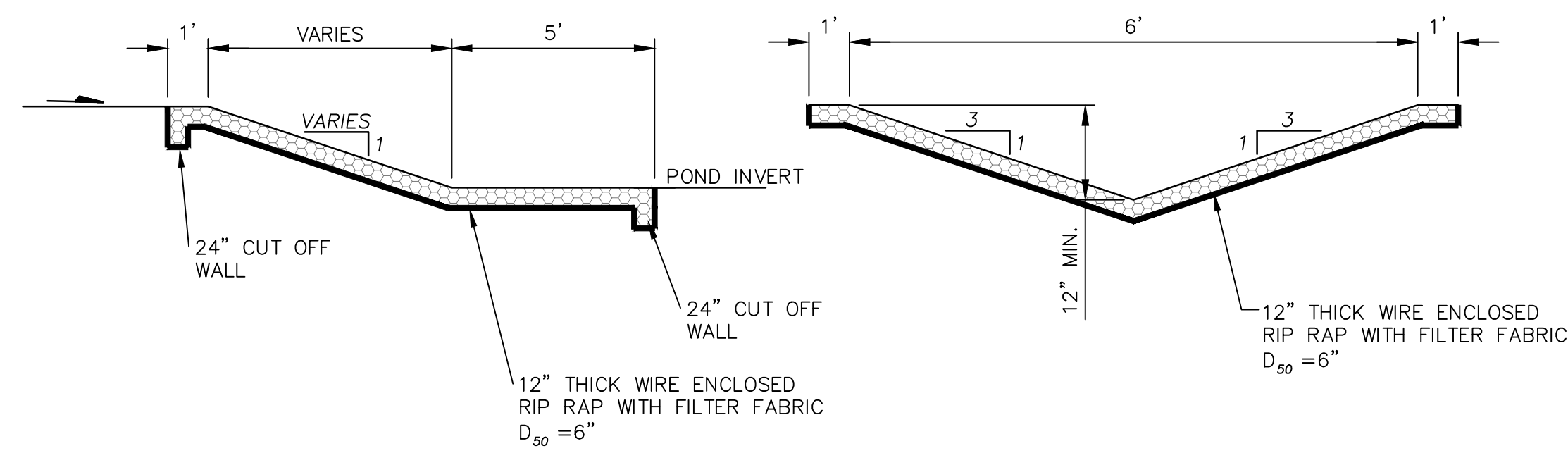
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MISCELLANEOUS  
DETAILS

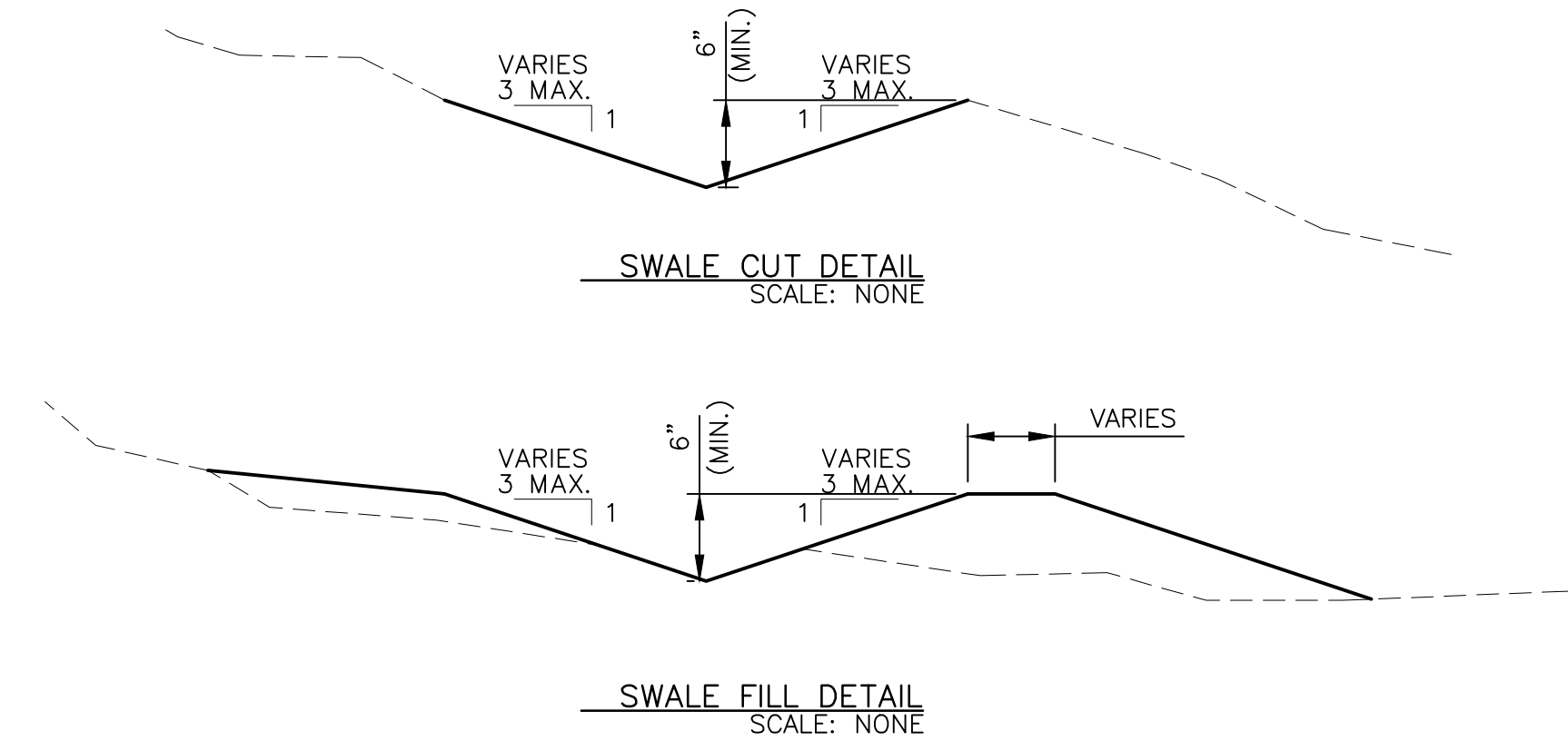
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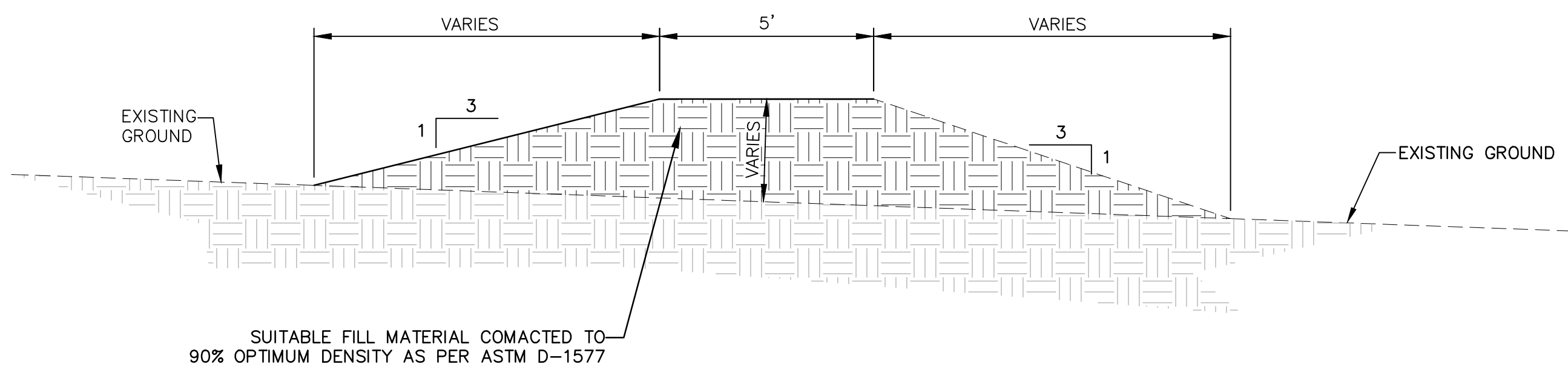
**D1 CLASS 'A' RIP RAP PAD DETAIL**  
SCALE: NOT TO SCALE  
SEE PLANS FOR SHAPE AND DIMENSIONS



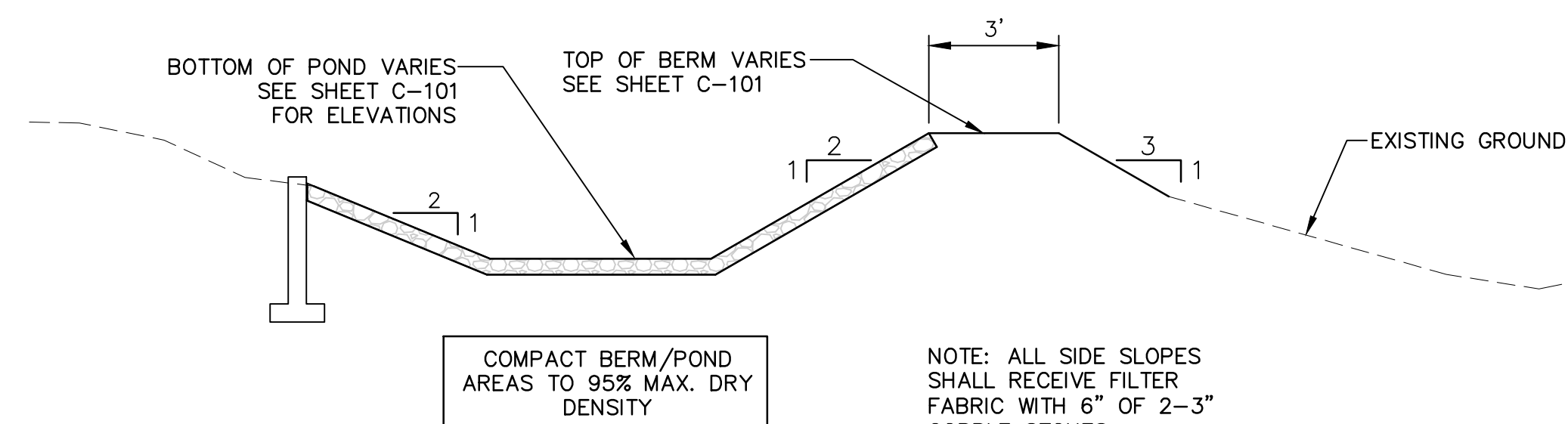
**C2** RIP RAP RUNDOWN DETAIL  
SCALE: NOT TO SCALE



**D4** **EARTHEN SWALE**  
SCALE: NOT TO SCALE



**A4** **BERM DETAIL**  
SCALE: NOT TO SCALE



**A3** TYPICAL WATER HARVEST AREA SECTION DETAIL  
SCALE: NOT TO SCALE