

# CITY OF ALBUQUERQUE



*Planning Department*  
Suzanne Lubar, Director

*Richard J. Berry, Mayor*

September 27, 2017

Hugh Floyd, P.E.  
RESPEC  
5971 Jefferson NE, Suite 101  
Albuquerque NM 87109

**RE: Kiddie Academy - 7010 Alameda Blvd.NE**  
**Request permanent C.O. – Accepted (C19D061)**  
**Engineer's Stamp Dated 8/31/2017**

Dear Mr. Floyd

Based on the Certification received 9/22/2017 and the Drainage Covenant recorded , the site is acceptable for release of Certificate of Occupancy by Hydrology.

If you have any questions, please contact me at 924-3986 or [jhughes@cabq.gov](mailto:jhughes@cabq.gov).

PO Box 1293

Sincerely,

Albuquerque

James D. Hughes P.E.  
Principal Engineer, Planning Dept.  
Development Review Services

NM 87103

C: email      Serna, Yvette M.; Fox, Debi; Tena, Victoria C.; Sandoval, Darlene M.

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



# City of Albuquerque

Planning Department  
Development & Building Services Division

## DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

**Project Title:** Alameda & Louisiana Kiddie Academy **Building Permit #:** \_\_\_\_\_ **City Drainage #:** C19-D061  
**DRB#:** 1010997 **EPC#:** 101097 **Work Order#:** \_\_\_\_\_  
**Legal Description:** Lots 1A & 1B, Block 4, Tract 2, Unit 3 of North Albuquerque Acres in Bernalillo County, New Mexico  
**City Address:** 7010 Alameda Blvd NE; Albuquerque, NM 87113

**Engineering Firm:** RESPEC **Contact:** Hugh Floyd  
**Address:** 5971 Jefferson NE, Suite 101; Albuquerque, NM 87109  
**Phone#:** (505) 366-4187 **Fax#:** \_\_\_\_\_ **E-mail:** hugh.floyd@respec.com

**Owner:** Phil Lindborg **Contact:** Phil Lindborg  
**Address:** 12809 Donette Court NE; Albuquerque, NM 87112  
**Phone#:** (505) 450-4388 **Fax#:** \_\_\_\_\_ **E-mail:** phillindborg@comcast.net

**Architect:** Modulus Architects **Contact:** Angela Williamson  
**Address:** 100 Sun Avenue NE, Ste. 305; Albuquerque, NM 87109  
**Phone#:** (505) 338-1499 **Fax#:** \_\_\_\_\_ **E-mail:** awilliamson@modulusarchitects.com

**Other Contact:** \_\_\_\_\_ **Contact:** \_\_\_\_\_  
**Address:** \_\_\_\_\_  
**Phone#:** \_\_\_\_\_ **Fax#:** \_\_\_\_\_ **E-mail:** \_\_\_\_\_

Check all that Apply:

### DEPARTMENT:

- ☒ HYDROLOGY/ DRAINAGE  
☐ TRAFFIC/ TRANSPORTATION  
☐ MS4/ EROSION & SEDIMENT CONTROL

### TYPE OF SUBMITTAL:

- ☒ ENGINEER/ ARCHITECT CERTIFICATION  
☐ CONCEPTUAL G & D PLAN  
☐ GRADING PLAN  
☐ DRAINAGE MASTER PLAN  
☐ DRAINAGE REPORT  
☐ CLOMR/LOMR  
☐ TRAFFIC CIRCULATION LAYOUT (TCL)  
☐ TRAFFIC IMPACT STUDY (TIS)  
☐ EROSION & SEDIMENT CONTROL PLAN (ESC)  
☐ OTHER (SPECIFY) \_\_\_\_\_

### CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

- ☐ BUILDING PERMIT APPROVAL  
☒ CERTIFICATE OF OCCUPANCY **FINAL**

- ☐ 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

- ☐ PRE-DESIGN MEETING  
☐ OTHER (SPECIFY) \_\_\_\_\_

IS THIS A RESUBMITTAL?: ☐ Yes ☒ No

DATE SUBMITTED: \_\_\_\_\_ By: RESPEC, Jeremy Shell

COA STAFF: \_\_\_\_\_ ELECTRONIC SUBMITTAL RECEIVED: \_\_\_\_\_



### Hydrology Calculations

The following calculations are based on Albuquerque Development Process Manual, Section 22.2

#### NAA Scenario Runoff Rate:

Treatment Type Areas  
Area<sub>A</sub> = 0 ac Area<sub>B</sub> = 0.3233 ac Area<sub>C</sub> = 0.1940 ac Area<sub>D</sub> = 0.7759 ac

Peak Discharge values based on Zone 3 from Table A-9

Q<sub>A</sub> = 1.87 cfs/ac Q<sub>B</sub> = 2.60 cfs/ac Q<sub>C</sub> = 3.45 cfs/ac Q<sub>D</sub> = 5.02 cfs/ac

Peak Discharge calculation for a 100-yr, 24-hr storm event from equation A-10

Q<sub>p</sub> = Q<sub>A</sub> • Area<sub>A</sub> + Q<sub>B</sub> • Area<sub>B</sub> + Q<sub>C</sub> • Area<sub>C</sub> + Q<sub>D</sub> • Area<sub>D</sub> = 5.4 cfs

#### Proposed Conditions Runoff Rate:

Treatment Type Areas  
Area<sub>A</sub> = 0 ac Area<sub>B</sub> = 0.0706 ac Area<sub>C</sub> = 0.0706 ac Area<sub>D</sub> = 0.9955 ac

Peak Discharge values based on Zone 3 from Table A-9

Q<sub>A</sub> = 1.87 cfs/ac Q<sub>B</sub> = 2.60 cfs/ac Q<sub>C</sub> = 3.45 cfs/ac Q<sub>D</sub> = 5.02 cfs/ac

Peak Discharge calculation for a 100-yr, 24-hr storm event from equation A-10

Q<sub>p</sub> = Q<sub>A</sub> • Area<sub>A</sub> + Q<sub>B</sub> • Area<sub>B</sub> + Q<sub>C</sub> • Area<sub>C</sub> + Q<sub>D</sub> • Area<sub>D</sub> = 5.4 cfs

#### Water Quality:

V<sub>WQ</sub> = Area<sub>A</sub> • 0.34" = 1229 ft<sup>3</sup>

Water Quality Pond A				
Elev.	Area (Sq. Ft.)	Vol (Cu. Ft.)	Cum. (Cu. Ft.)	
5305.75	12	0	0	
5306.0	28	5	5	
5307.0	136	82	87	
5307.5	213	87	174	

Water Quality Pond B				
Elev.	Area (Sq. Ft.)	Vol (Cu. Ft.)	Cum. (Cu. Ft.)	
5305.25	15	0	0	
5306.0	79	35	35	
5307.0	226	153	188	
5307.5	324	138	326	

Total Water Quality Volume = 1038 ft<sup>3</sup>

Water Quality Pond C				
Elev.	Area (Sq. Ft.)	Vol (Cu. Ft.)	Cum. (Cu. Ft.)	
5305.75	12	0	0	
5306.0	18	3	3	
5307.0	125	71	74	
5307.5	204	82	157	

Water Quality Pond D				
Elev.	Area (Sq. Ft.)	Vol (Cu. Ft.)	Cum. (Cu. Ft.)	
5310.25	35	0	0	
5311.0	108	53	53	
5312.0	267	188	241	
5312.85	461	310	550	

#### SIDEWALK CULVERT

Rectangular Channel		
Input		
Flow	5.4 cfs	
Slope	0.0238 ft/ft	
Manning's n	0.013	
Base Width	1.5 ft	
Right Side Slope	0:1	
Left Side Slope	0:1	
Output		
Depth	0.468 ft	
Flow Area	0.0238 sf	
Velocity	7.44 fps	
Velocity Head	0.920 ft	
Top Width	1.50 ft	
Froude Number	1.98	
Critical Depth	0.739 ft	
Critical Slope	0.00680 ft/ft	

#### 12" ADS PIPE

Circular Channel		
Input		
Flow	5.4 cfs	
Slope	0.015 ft/ft	
Manning's n	0.011	
Diameter	12 in	
Output		
Depth	0.870 ft	
Flow Area	0.728 sf	
Velocity	7.44 fps	
Velocity Head	0.861 ft	
Top Width	0.672 ft	
Froude Number	1.26	
Critical Depth	0.935 ft	
Critical Slope	0.0142 ft/ft	

### SURVEYOR CERTIFICATION

THE CHANGES SHOWN HEREON ARE BASED UPON A FIELD SURVEY CONDUCTED BY ME OR UNDER MY SUPERVISION AND REFLECT THE LOCATIONS (VERTICALLY AND HORIZONTALLY) TO THE BEST OF MY KNOWLEDGE AND BELIEF.

BRIAN J MARTINEZ  
NMP# 18374

8/31/17  
DATE

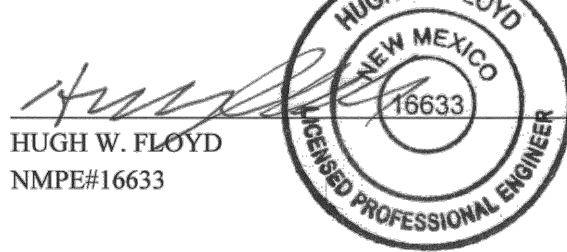


- ⊙ STORM DRAIN MANHOLE
- ⊙ TRAFFIC MAST
- ⊙ SIGNAL BOX
- ⊙ INLET GRATE
- S302 --- EXISTING CONTOURS
- S312 --- PROPOSED CONTOURS
- TC XXXX  
FL XXXX PROPOSED SPOT ELEVATIONS

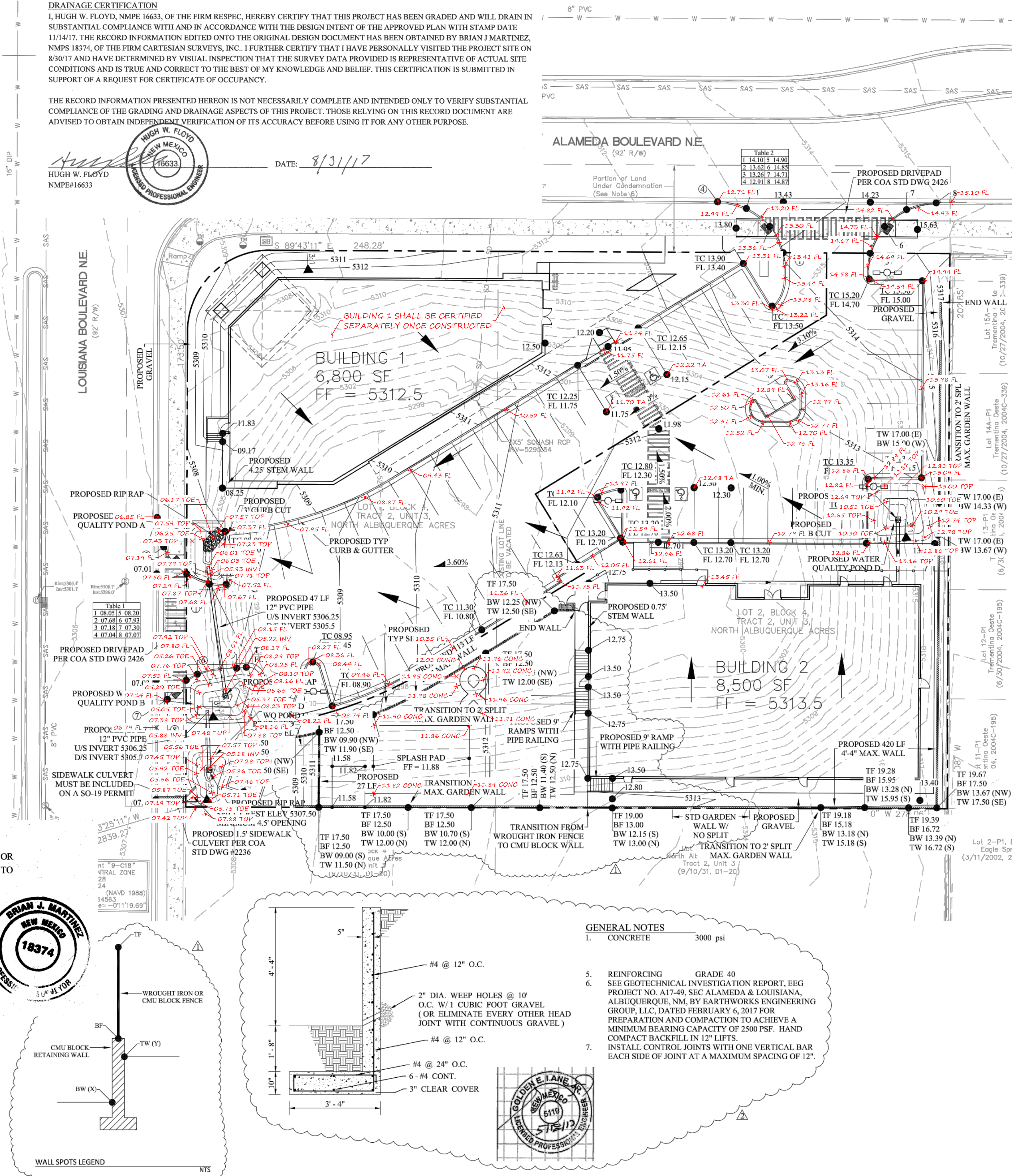
### DRAINAGE CERTIFICATION

I, HUGH W. FLOYD, NMP# 16633, OF THE FIRM RESPEC, HEREBY CERTIFY THAT THIS PROJECT HAS BEEN GRADED AND WILL DRAIN IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE APPROVED PLAN WITH STAMP DATE 11/14/17. THE RECORD INFORMATION EDITED ONTO THE ORIGINAL DESIGN DOCUMENT HAS BEEN OBTAINED BY BRIAN J MARTINEZ, NMP# 18374, OF THE FIRM CARTESIAN SURVEYS, INC. I FURTHER CERTIFY THAT I HAVE PERSONALLY VISITED THE PROJECT SITE ON 8/30/17 AND HAVE DETERMINED BY VISUAL INSPECTION THAT THE SURVEY DATA PROVIDED IS REPRESENTATIVE OF ACTUAL SITE CONDITIONS AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS CERTIFICATION IS SUBMITTED IN SUPPORT OF A REQUEST FOR CERTIFICATE OF OCCUPANCY.

THE RECORD INFORMATION PRESENTED HEREON IS NOT NECESSARILY COMPLETE AND INTENDED ONLY TO VERIFY SUBSTANTIAL COMPLIANCE OF THE GRADING AND DRAINAGE ASPECTS OF THIS PROJECT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE USING IT FOR ANY OTHER PURPOSE.



DATE: 8/31/17



#### GENERAL NOTES

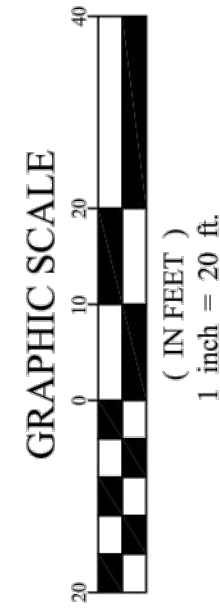
- CONCRETE 3000 psi
- REINFORCING GRADE 40
- SEE GEOTECHNICAL INVESTIGATION REPORT, EEG PROJECT NO. A17-49, SEC ALAMEDA & LOUISIANA, ALBUQUERQUE, NM, BY EARTHWORKS ENGINEERING GROUP, LLC, DATED FEBRUARY 6, 2017 FOR PREPARATION AND COMPACTION TO ACHIEVE A MINIMUM BEARING CAPACITY OF 2500 PSF. HAND COMPACT BACKFILL IN 12" LIFTS.
- INSTALL CONTROL JOINTS WITH ONE VERTICAL BAR EACH SIDE OF JOINT AT A MAXIMUM SPACING OF 12".
- WROUGHT IRON OR CMU BLOCK FENCE
- CMU BLOCK RETAINING WALL
- WALL SPOTS LEGEND

#### LEGAL DESCRIPTION:

PORTIONS OF LOTS 1 & 2,  
BLOCK 4, TRACT 2, UNIT 3  
OF NORTH ALBUQUERQUE  
ACRES IN BERNALILLO  
COUNTY, NEW MEXICO

#### ALAMEDA & LOUISIANA COMMERCIAL DEVELOPMENT

#### GRADING & DRAINAGE PLAN



SHEET NUMBER:

C-1

ISSUED FOR  
CONSTRUCTION

#### Background

Lots 1 & 2 account for approximately 1.3 acres in Block 4, Tract 2, Unit 3 of North Albuquerque Acres in Bernalillo County, New Mexico. These lots are located on the southeast corner of the intersection of Alameda Boulevard and Louisiana Boulevard. The site has been previously developed to serve as a drainage pond to relieve Alameda Boulevard of excess runoff. Due to recent roadway and storm drain improvements along Alameda Boulevard, the existing pond can be eliminated per the Drainage report for the Alameda Widening Project (TEC, January 2012). Storm water from the site is restricted by the North Albuquerque Acres Drainage Plan to 5.4 cfs.

#### Methodology

Hydrology calculations for the properties are performed in accordance with the Hydrology DPM Section 22.2 using the Rational Method to calculate peak flow rates to insure all flow paths are sufficient to carry flows to the water quality ponding located on-site. The water quality ponding volume required was calculated by multiplying the impervious area onsite by the first flush runoff value of 0.34". The hydrology and hydraulic calculations can be found on this sheet.

#### Existing Conditions

The existing site is a detention pond with 3:1 (H:V) slopes, a bottom elevation of 5297, and maximum spill crest elevation of 5307. There is a 3x5' square reinforced concrete pipe with an invert of 5295.54 located at the bottom of the pond. Lots 1 & 2 do not appear to be receiving additional surface runoff from adjacent lands.

#### Proposed Conditions

The Alameda storm drain system has been constructed to convey the runoff previously held by the existing detention pond west to the San Pedro storm drain. Therefore, the existing detention pond is no longer needed per the report referenced above.

The Hydrology Report for North Albuquerque Acres by Resource Technology, Inc. in November 1998 is used to determine the allowable discharge from the site. The subject property is located in subbasin 117.4 per this report. Table B-3 on page Appendix - 19 assigns future conditions land treatment types as 0% A, 25% B, 15% C, and 60% D for this subbasin. The allowable discharge using the Rational Method and the assigned treatment types above is 5.4 cfs. The calculation is shown on the left side of this sheet.

It is proposed that the site, in general, drains from east to west toward Louisiana Boulevard. The small amount of runoff from the area south of Building 2 and the play area west of Building 2 are contained within the play area, which has a permeable surface and is recessed approximately 1'. Accordingly, this area is removed from the subbasin area for the 100 year storm water runoff. Under proposed conditions, the remainder of the site generates 5.4 cfs. See Hydrology Calculations on the left side of this sheet. Therefore, no detention ponding is required to reduce the flow rate. Runoff from the entire site enters into Pond A through a 2' curb cut located at the southwest corner of Building 1. Water then enters a 12" pipe transferring runoff from Pond A to Pond B. There is another 12" pipe that connects Pond B to Pond C. Manning's calculations for both pipes can be found on the left side of this sheet. Once a maximum water surface elevation of 5307.5 is reached, runoff begins to spill into a sidewalk culvert located at the southwest corner of the site. The Manning's calculation for the sidewalk culvert can be found on the left side of this sheet. From there water enters the storm drain system through a grate located in the median in Louisiana Boulevard.

Before Building 2 drains across the site, runoff is routed through Pond D. Once the pond has filled to a maximum water surface elevation of 5312.85, the pond discharges through a 2' curb cut into the parking lot. Pond rating curves for all ponds can be seen on the left side of this sheet. The total proposed water quality pond volume for the site is 1239 cubic feet. The required volume is 1229 cubic feet. See the calculation on the left side of this sheet.