

# CITY OF ALBUQUERQUE

PLANNING DEPARTMENT – Development Review Services



August 31, 2016

Michael Balaskovits, PE  
**BOHANNAN-HUSTON, INC.**  
7500 Jefferson Street NE Courtyard I  
Albuquerque, NM 87109

Richard J. Berry, Mayor

RE: **Andalucia Phase I – 6500 Coors NW**  
**Grading Management Plan and Grading and Drainage Plan**  
**Engineer's Stamp Date 8-31-2016 (File: E12D015D)**

Dear Mr. Balaskovits:

Based upon the information provided in your submittal received 8-31-16, the above referenced plans are approved for ESC Permit (Grading Permit and Paving Permit), Building Permit, and SO-19 Permit with the following conditions:

- The bottom of the pond will need to be lowered to 74.50 to allow for 0.5 ft of freeboard. The inlet grate elevations will need to be lowered (80.85), as well as the corresponding inverts.
- Inlet at north side of pond-lower the inlet grate elevation to match the other inlets
- Provide curb openings along median on private road on north side of site

Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology. Prior to Certificate of Occupancy release, Engineer Certification per the DPM checklist will be required.

A separate SO-19 permit is required for construction within City ROW. A copy of this approval letter must be on hand when applying for the excavation/barricading permit. The work in the City ROW must be inspected and accepted. Contractor must contact Jason Rodriguez at 235-8016 and Construction Coordination at 924-3416 to schedule an inspection.

If you have any questions, you can contact me at 924-3695.

Sincerely,

Rita Harmon, P.E.  
Senior Engineer, Planning Dept.  
Development Review Services

Orig: Drainage file  
c.pdf: via Email: Recipient, Jason Rodriguez



# City of Albuquerque

Planning Department

Development & Building Services Division

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

**Project Title:** Andalucia Phase 1 **Building Permit #:** \_\_\_\_\_ **City Drainage #:** \_\_\_\_\_  
**DRB#:** \_\_\_\_\_ **EPC#:** \_\_\_\_\_ **Work Order#:** \_\_\_\_\_  
**Legal Description:** 5600 Coors Blvd  
**City Address:** 101 Broadway Blvd. NE

**Engineering Firm:** Bohannon Huston, Inc **Contact:** Mike Balaskovits or Matt Satches  
**Address:** 7500 Jefferson St. NE 87109  
**Phone#:** 505-823-1000 **Fax#:** 505-798-7988 **E-mail:** mbalaskovits@bhinc.com

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

**Architect:** Studio Southwest Architects, Inc. **Contact:** Ron Burstein, AIA, CCS  
**Address:** 2101 Mountain Rd. NW Albuquerque, NM 87104  
**Phone#:** 505-843-9639 **Fax#:** 505-992-0585 **E-mail:** rburstein@studioswarch.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) Drainage Management Plan

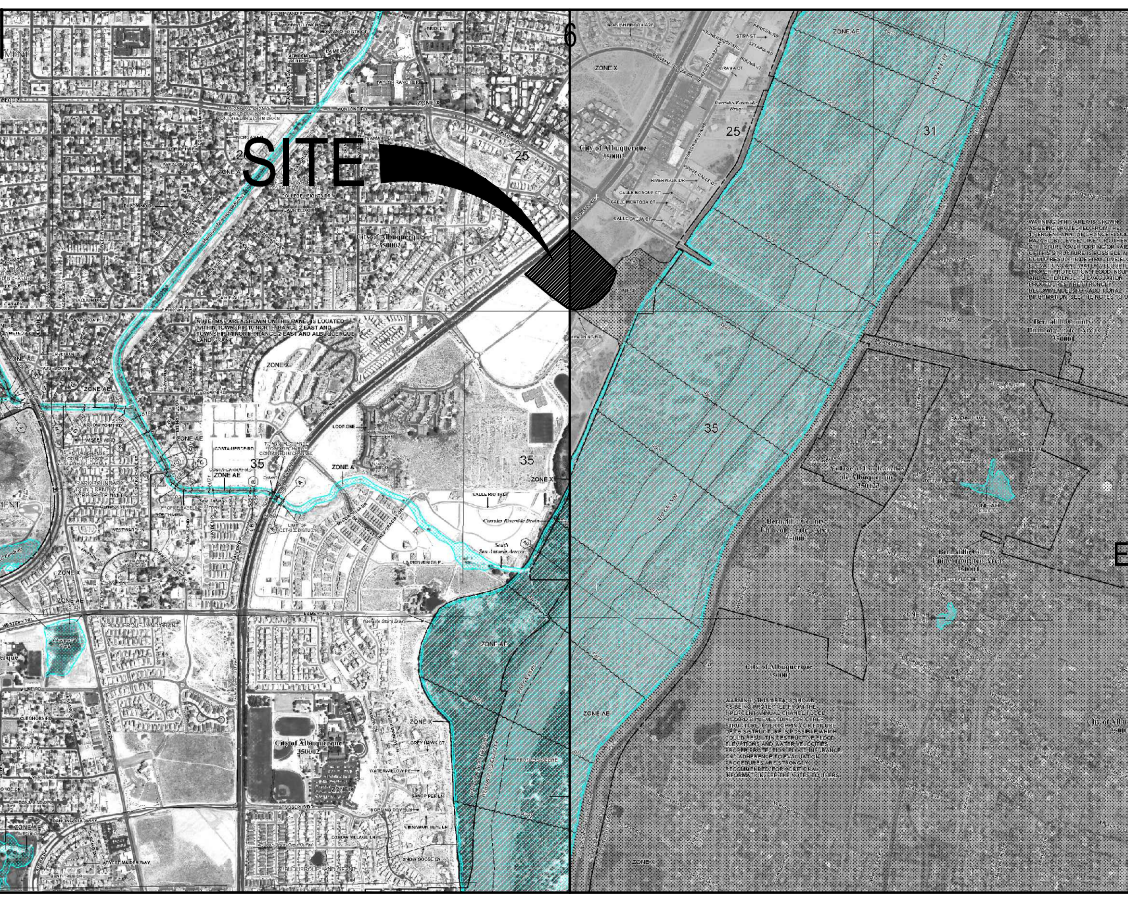
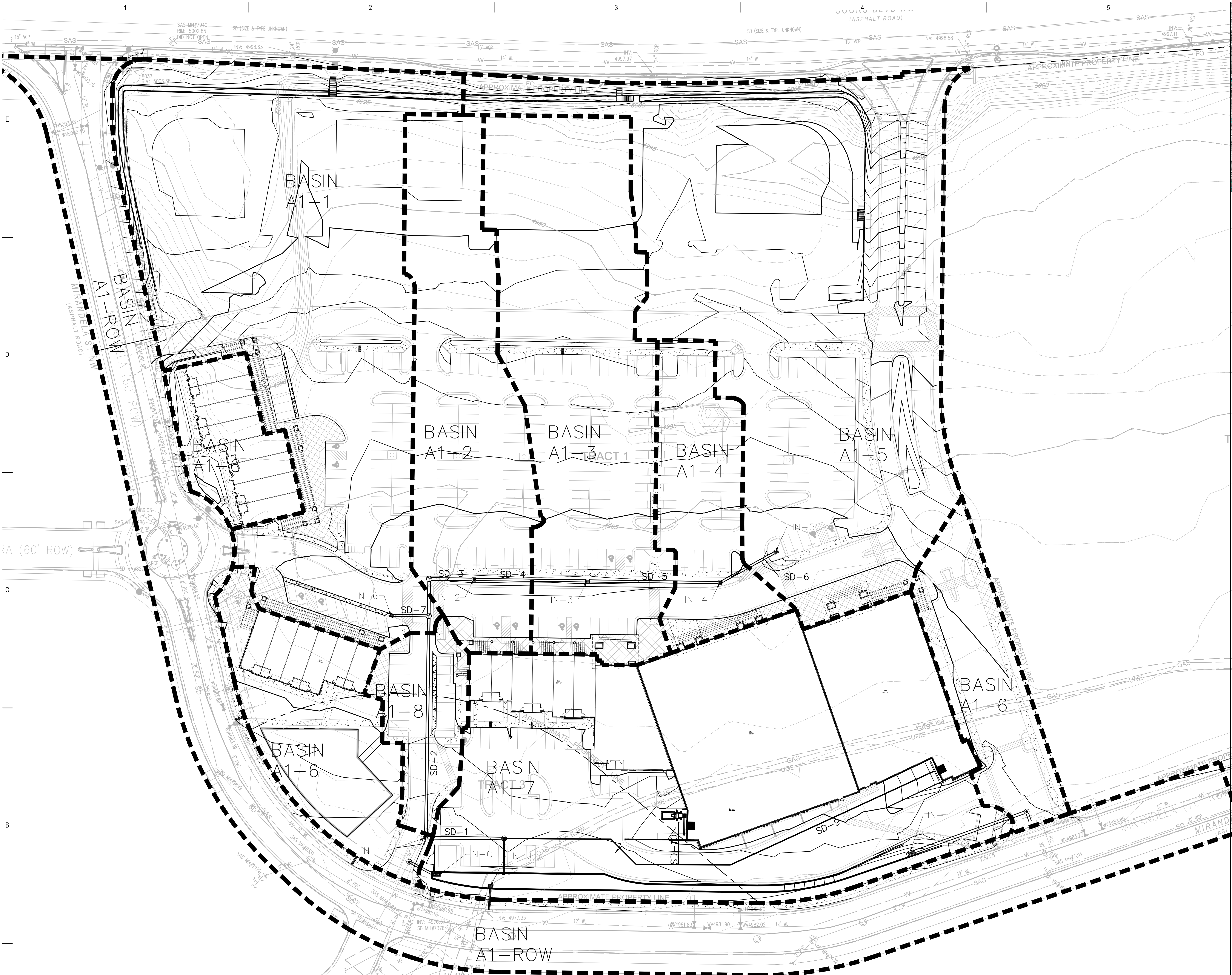
IS THIS A RESUBMITTAL?: ☐ Yes ☒ No

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

**DATE SUBMITTED:** 8-31-2016 **By:** Michael Balaskovits, PE

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



STUDIO

SW

ARCHITECTS

STUDIO SOUTHWEST ARCHITECTS, INC.

2101 Mountain Rd. NW, Albuquerque, NM 87104

505.843.9639 Fax 505.843.9683

Web Site: [www.studioswarch.com](http://www.studioswarch.com)

Email: [mail@studioswarch.com](mailto:mail@studioswarch.com)

© 2014, Studio Southwest Architects, Inc.

Duplication or reproduction by any means without the express written consent of Studio Southwest Architects, Inc. is a violation of federal and international law. The information contained in this document is the intellectual property of Studio Southwest, Inc. and all rights thereto are Reserved. For exceptions refer to the Owner-Architect Agreement.

FEMA FIRM MAPS: 35001C0118G & 35001C0114H

## DRAINAGE NARRATIVE

**SITE INTRODUCTION:**  
ANDALUCIA PHASE ONE IS LOCATED NEAR THE SOUTHEAST CORNER OF COORS BOULEVARD AND MONTANO ROAD (5600 COORS BOULEVARD NW 87120). THE SITE IS CURRENTLY UNDEVELOPED, BUT WAS CONTAINED IN PART OF THE NORTH ANDALUCIA DRAINAGE MASTER PLAN (CITY OF ALBUQUERQUE DRAINAGE FILE H09-D017B). ACCORDING TO THE AFOREMENTIONED DRAINAGE MASTER PLAN, OUR SITE IS WITHIN BASIN A-1. DUE TO OUR SITE ACCOUNTING FOR APPROXIMATELY 56% OF BASIN A-1, OUR SITE WAS ANALYZED AS SUCH. THE PROPOSED DEVELOPMENT WILL ADHERE TO THE REQUIREMENTS DESCRIBED IN THE NORTH ANDALUCIA DRAINAGE MASTER PLAN.

THE SITE IS LOCATED PARTIALLY WITHIN A FEMA DESIGNATED FLOOD ZONE X. THIS MEANS THAT THE SITE IS EITHER SUBJECT TO THE 500 YEAR FLOODPLAIN, LOCATED WITHIN AN AREA OF 1.0% CHANCE OF ANNUAL FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT, OR IS LOCATED IN AN AREA PROTECTED BY LEVEES FROM THE 1.0% ANNUAL CHANCE OF FLOOD.

**METHODOLOGY:**  
THE SITE IS LOCATED IN THE CITY OF ALBUQUERQUE, THEREFORE, THE DEVELOPMENT PROCESS MANUAL SECTION 22.2 WAS USED TO ANALYZE THE SITE'S PROPOSED DRAINAGE. PRECIPITATION ZONE 1 WAS USED DUE TO THE SITE LYING WEST OF THE RIO GRANDE. PER SECTION 22.2, THE ONSITE STORM DRAINS WERE SIZED BASED OFF OF MANNING'S EQUATION. THE ONSITE INLETS WERE SIZED WITH THE INLETS IN SUMP CONDITION (UNLESS OTHERWISE SPECIFIED) AND USING MANUFACTURER PROVIDED NOMOGRAPHS.

**PROPOSED CONDITIONS:**  
THE CONSTRUCTION OF PHASE ONE OF ANDALUCIA WILL CONSIST OF SEVERAL LARGE RETAIL BUILDINGS, ASSOCIATED PARKING, AND LANDSCAPING. EXISTING INFRASTRUCTURE INSTALLED WITH THE NORTH ANDALUCIA MASTER PLAN WILL BE UTILIZED. RUNOFF GENERATED BY THE DEVELOPMENT WILL RETAIN THE VOLUME DESCRIBED IN THE NORTH ANDALUCIA DRAINAGE MASTER PLAN AND DISCHARGE INTO THREE SEPRETEALY CONTROLLED DISCHARGE POINTS BEFORE ULTIMATELY OUTFALLING INTO A SERIES OF PONDS DOWNSTREAM OF THE SITE CONSTRUCTED TO PREVENT FLOODING TO THE BOSQUE SCHOOL. DETAILED AND FURTHER EXPLAINED IN THE "NORTH ANDALUCIA DRAINAGE MASTER PLAN".

BASED ON THE PROPOSED GRADING, THE SITE WILL BE DIVIDED INTO 8 ONSITE DRAINAGE BASINS. THE PROPOSED ONSITE BASINS ARE ALLOWED DISCHARGE TO THE EXISTING DRAINAGE SYSTEM IN THREE SPERATE CONNECTIONS. THESE CONNECTIONS ARE NOTED AS IN-G, IN-J AND IN-L AND WILL BE CONTROLLED BASED ON THE HEAD ABOVE THE INLETS. THE ALLOWABLE Q'S ARE BASED ON THE "NORTH ANDALUCIA DRAINAGE MASTER PLAN" AND CAN BE FOUND ON SHEET C-001 STORM DRAIN PIPE TABLE AS PIPE #S G, J AND L. PRIOR TO DISCHARGE INTO THE PUBLIC STORM DRAIN SYSTEM, THE SITE MUST RETAIN A PORTION OF THE VOLUME DESCRIBED IN THE NORTH ANDALUCIA DRAINAGE MASTER PLAN. BASIN A-1 (OF THE AFOREMENTIONED DRAINAGE MASTER PLAN) REQUIRES 1.02 AC-FT TO BE RETAINED ONSITE. DUE TO OUR SITE BEING APPROXIMATELY 56% OF THE TOTAL BASIN (INCLUDING BASIN A-1 ROW), THE SITE WILL RETAINING APPROXIMATELY 0.60 AC-FT.

DISCHARGE FOR ALL OF THE ONSITE BASINS WAS DETERMINED USING THE LAND TREATMENTS DESCRIBED IN THE DEVELOPMENT PROCESS MANUAL SECTION 22.2. DUE TO THE CONSTRUCTION OF THE SITE BEING PERFORMED IN PHASES, ALL ONSITE BASIN FLOWS WERE DETERMINED BASED ON ULTIMATE DEVELOPED CONDITIONS. BASINS A-1, A-1-2, A-1-3, A-1-4, A-1-5, A-1-7, AND A-1-8 FLOW FROM WEST TO EAST THROUGH THE SITES ASSOCIATED PARKING LOTS AND LANDSCAPING BEFORE ENTERING THE ONSITE STORM DRAIN SYSTEM. THE SITES LANDSCAPED AREAS WILL BE DEPRESSED TO ALLOW FOR WATER HARVESTING WHICH HELPS IN THE TOTAL REQUIRED RETENTION NECESSARY FOR THE SITE. THE ONSITE STORM DRAIN SYSTEM THEN OUTFALLS INTO A LARGER RETENTION POND ALONG THE EASTERN PORTION OF THE SITE. ONCE THE POND FILLS UP TO 81.35 INLETS HAVE BEEN STRATEGICALLY PLACED TO ACCEPT THE REMAINING RUNOFF BASED ON THE ALLOWABLE DISCHARGES ASSOCIATED WITH THE SITE (SEE INLET TABLE). BASIN A-1-6 IS A COMBINATION OF SEVERAL BASINS THROUGHOUT THE SITE THAT DISCHARGE DIRECTLY INTO THE RIGHT WHICH ULTIMATELY DRAIN TO THE LARGER RETENTION FACILITY ASSOCIATED DESCRIBED WITHIN THE NORTH ANDALUCIA MASTER DRAINAGE PLAN.

PEAK DISCHARGE FROM THE SITE IS APPROXIMATELY 57.7 CFS. THE TOTAL ONSITE RETENTION VOLUME IS APPROXIMATELY 0.67 AC-FT. THIS IS GREATER THAN THE REQUIRED 0.60 AC-FT DESCRIBED IN THE MASTER DRAINAGE REPORT. THE VOLUME PROVIDED IS ALSO GREATER THAN THE 0.35 AC-FT REQUIRED TO MEET THE CITY OF ALBUQUERQUE FIRST FLUSH REQUIREMENT.

GIVEN THE ABOVE INFORMATION, WE ARE REQUESTING CITY HYDROLOGY BUILDING PERMIT APPROVAL.

ANDALUCIA PHASE 1										
Proposed Developed 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(100yr) (cfs/ac.)	Q(100yr) (CFS)	V(100yr) (inches)	FIRST FLUSH (CF)
A	B	C	D							
CURRENT ONSITE BASINS										
A1-ROW	117650	2.70	0.0%	0.0%	20.0%	80.0%	4.07	10.99	1.77	17393
A1-1	117871	2.71	0.0%	0.0%	9.0%	91.0%	4.24	11.46	1.88	18484
A1-2	49153	1.13	0.0%	0.0%	7.0%	93.0%	4.27	4.81	1.90	7788
A1-3	70525	1.62	0.0%	0.0%	8.0%	92.0%	4.25	6.88	1.89	11117
A1-4	23377	0.54	0.0%	0.0%	10.0%	90.0%	4.22	2.26	1.87	3647
A1-5	131338	3.02	0.0%	0.0%	10.0%	90.0%	4.22	12.72	1.87	20489
A1-6	65638	1.51	0.0%	0.0%	11.0%	89.0%	4.21	6.34	1.86	10186
A1-7	123643	2.84	0.0%	0.0%	12.0%	88.0%	4.19	11.89	1.85	19086
A1-8	13250	0.30	0.0%	0.0%	5.0%	95.0%	4.30	1.31	1.92	2121
TOTAL	712445	16.36	-	-	-	-	68.67	-	110311	134501

STORM DRAIN PIPE TABLE						
PIPE #	INLET/SD/BASIN	Size in.	Slope	Capacity* cfs	ACTUAL FLOW cfs	
SD1	IN1, SD2	30	1.00%	41.02	39.45	
SD2	SD3, SD7	30	1.00%	41.02	38.14	
SD3	IN2, SD4	30	0.67%	33.57	26.68	
SD4	IN3, SD5	24	0.50%	16.00	21.87	
SD5	IN4, SD6	24	0.50%	16.00	14.99	
SD6	IN5	24	0.50%	16.00	12.72	
SD7	IN6	24	0.50%	16.00	11.46	
SD8	SD9, SD10	6	1.50%	0.69	0.68	
SD9	TRENCH DRAIN	6	1.50%	0.69	0.15	
SD10	TRENCH DRAIN	6	1.50%	0.69	0.53	
Capacity Based on Manning's Eq w/ N=0.013						

INLET TABLE					
Inlet #	Inlet Type <sup>2</sup>	Basin	Actual Flow (cfs)	Avail Head (ft)	Capacity <sup>3</sup> (cfs)
IN-1	1 - SGL COA TYPE C	A1-8	1.31	0.25	9.25
IN-2	1 - 30" NYLOPAST (DOME GRATE)	A1-2	4.81	0.75	11.70
IN-3	1 - 30" NYLOPAST (DOME GRATE)	A1-3	6.88	0.75	11.70
IN-4	1 - 30" NYLOPAST (DOME GRATE)	A1-4	2.26	0.75	11.70
IN-5	1 - 30" NYLOPAST (DOME GRATE)	A1-5	12.72	0.75	11.70
IN-6	1 - SGL COA TYPE C	A1-1	11.46	0.25	9.25
IN-G <sup>1</sup>	1 - DBL COA TYPE D	OUTFALL TO SD	22.55	0.65	23.55
IN-J <sup>1</sup>	1 - SGL COA TYPE D	OUTFALL TO SD	11.56	0.65	11.80
IN-L <sup>1</sup>	1 - DBL COA TYPE D	OUTFALL TO SD	21.32	0.65	23.55
1. NYLOPAST INLETS BASED ON MANUFACTURER NOMOGRAPHS					
2. INLETS PLACED IN SUMP CONDITION AND CAPACITIES BASED ON LESSER OF ORIFICE AND WER EQUATIONS					
3. ACTUAL FLOW FOR THESE INLETS IS BASED ON NORTH ANDALUCIA DRAINAGE MASTER PLAN (CPN-H09/D017B)					

Bohannon

Huston

[www.bhinc.com](http://www.bhinc.com)

800.877.5332

CONSULTANTS

Architect Engineer

Andalucia Phase 1

5600 Coors Boulevard NW  
Albuquerque, NM 87120

Key Plan

NTS

No	Date	Description
Revision Schedule		
ISSUE:	CON DOCS	
PROJECT NUMBER:	1535	
FILE:	0000A-621.RVT	
DRAWN BY:		
CHECKED BY:		
DATE:	AUGUST 1, 2016	

SHEET TITLE

PROPOSED DRAINAGE MANAGEMENT PLAN

C-001

