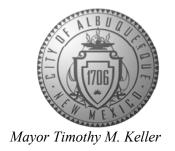
# CITY OF ALBUQUERQUE

Planning Department Alan Varela, Director



December 22, 2022

Matt Satches, PE Bohannan Huston, Inc. 7500 Jefferson St NE Albuquerque, NM 87109

RE: **Residence Inn at Highlands** 

> **Conceptual Grading & Drainage Plans** Engineer's Stamp Date: 11/30/22 Hydrology File: K15D034D

Dear Mr. Satches:

Based upon the information provided in your submittal received 11/30/2022, the Conceptual Grading & Drainage Plans are approved for action by the DRB for Site Plan for Building Permit.

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, 924-3420) 14 days prior to

any earth disturbance.

If you have any questions, please contact me at 924-3995 or rbrissette@cabq.gov.

Sincerely, www.cabq.gov Renée C. Brissette

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

PO Box 1293

Albuquerque

NM 87103



COA STAFF:

# City of Albuquerque

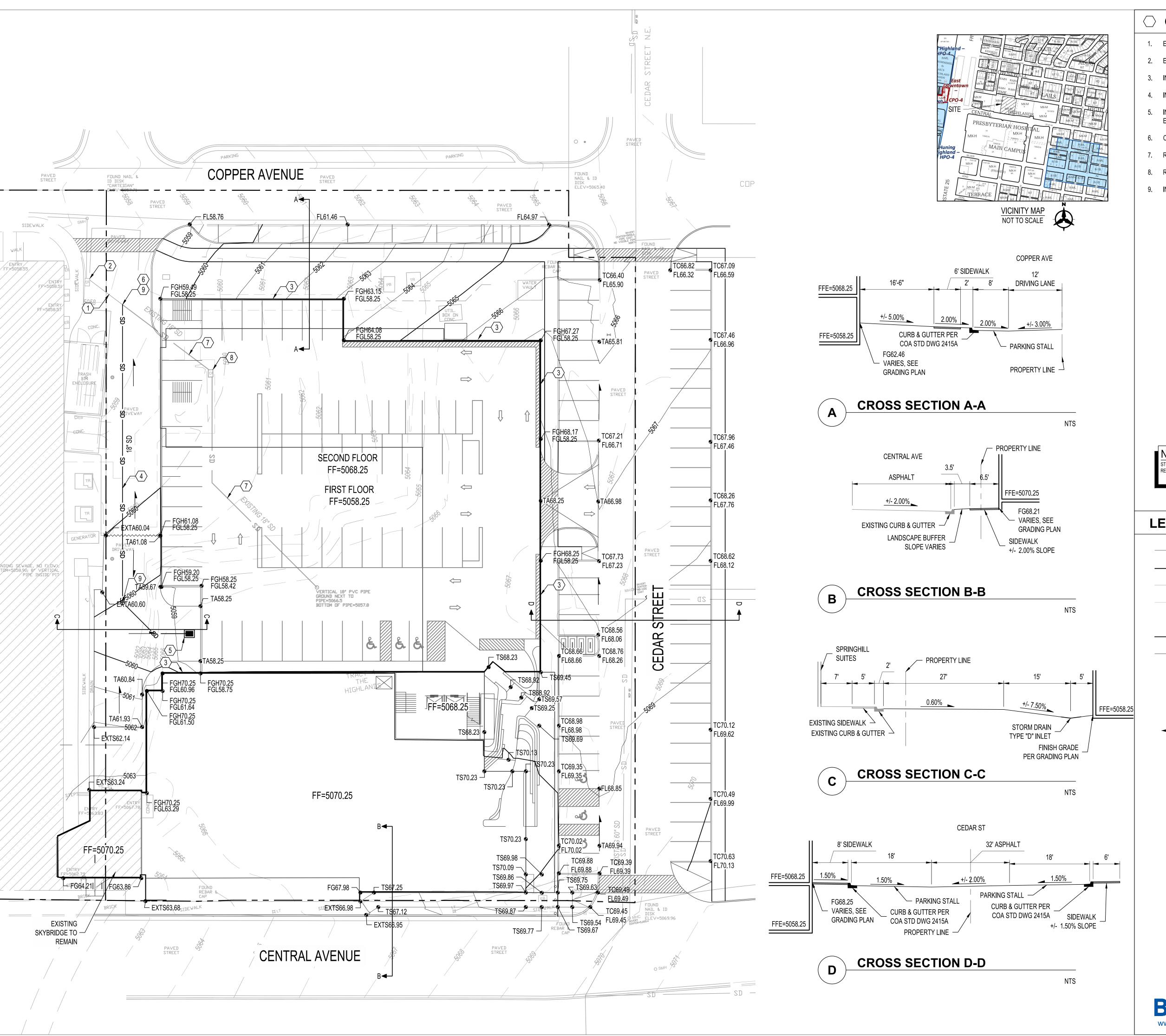
# Planning Department Development & Building Services Division

#### DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 11/2018)

Project Title: Residence Inn at Highlands	Building Permit #:	Hydrology File #:
DRB#:	EPC#:	Work Order#:
Legal Description: Tract 4 The Highlands		
City Address: UPC: 101505718237521704		
Applicant: Bohannan Huston Inc.		Contact: Matt Satches, PE
Address: 7500 Jefferson Street NE, Albuquerque, NM		Oonact.
Phone#: 505-823-1000		E-mail: msatches@bhinc.com
Owner: Titan Development		Contact: Josh Rogers
Address: 6300 Riverside Plaza Lane NW, Ste 200 Alb	uquerque, NM, 87120	
		E-mail: jrogers@titan-development.cor
IS THIS A RESUBMITTAL?:  DEPARTMENT: TRAFFIC/ TRANS		GY/ DRAINAGE
Check all that Apply:		
TYPE OF SUBMITTAL:  ENGINEER/ARCHITECT CERTIFICATION  CONCEPTUAL G & D PLAN GRADING PLAN DRAINAGE MASTER PLAN  DRAINAGE REPORT FLOODPLAIN DEVELOPMENT PERI ELEVATION CERTIFICATE CLOMR/LOMR TRAFFIC CIRCULATION LAYOUT ( TRAFFIC IMPACT STUDY (TIS) OTHER (SPECIFY) PRE-DESIGN MEETING?	BUIL   CER	F APPROVAL/ACCEPTANCE SOUGHT: LDING PERMIT APPROVAL TIFICATE OF OCCUPANCY LIMINARY PLAT APPROVAL E PLAN FOR SUB'D APPROVAL E PLAN FOR BLDG. PERMIT APPROVAL AL PLAT APPROVAL AL PLAT APPROVAL I RELEASE OF FINANCIAL GUARANTEE INDATION PERMIT APPROVAL ADING PERMIT APPROVAL ING PERMIT APPROVAL ING PERMIT APPROVAL ADING/ PAD CERTIFICATION RK ORDER APPROVAL OMR/LOMR ODPLAIN DEVELOPMENT PERMIT IER (SPECIFY)
	By: Matt Satches, PE	

ELECTRONIC SUBMITTAL RECEIVED:

FEE PAID:\_\_\_





- 1. EXISTING STORM DRAIN TO REMAIN.
- 2. EXISTING INLET TO REMAIN.
- 3. INSTALL NEW RETAINING WALL.
- 4. INSTALL HDPE STORM DRAIN PIPE. SEE PLAN FOR SIZE AND SLOPE.
- 5. INSTALL TYPE "D" INLET PER COA STD DWG 2206 (OR APPROVED EQUAL).
- 6. CONNECT TO EXISTING STORM DRAIN.
- 7. REMOVE AND DISPOSE EXISTING STORM DRAIN.
- 8. REMOVE AND DISPOSE EXISTING STORM INLET.
- 9. INSTALL PREFABRICATED PIPE FITTING.

NOTE
STORMWATER QUALITY CASH IN LIEU HAS PREVIOUSLY BEEN PAID AND IS NOT A REQUIREMENT FOR PERMITTING ON THIS PROJECT.

# **LEGEND**

PROPERTY LINE

PROJECT LIMITS OF GRADING

4925 EXISTING INDEX CONTOUR

EXISTING INTERMEDIATE CONTOUR

EXISTING GROUND SPOT ELEVATION

PROPOSED INDEX CONTOUR

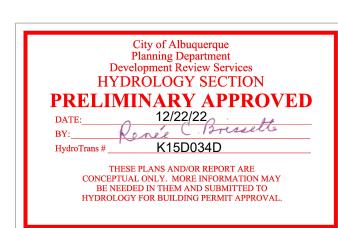
PROPOSED INTERMEDIATE CONTOUR

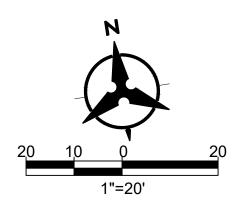
PROPOSED INTERMEDIATE CONTOUR

PROPOSED GRADE SPOT ELEVATION
FL=FLOW LINE
TC=TOP OF CURB
TS=TOP OF SIDEWALK

DIRECTION OF FLOW

WATER BLOCK/GRADE BREAK









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CIVIL ENGINEER
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OWNER/DEVELOPER
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6300 Riverside Plaza Lane NW, Ste 200
Albuquerque, New Mexico 87120
(505-998-0163 Josh Rogers)



ISSUE TITLE

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•			

CONCEPTUAL GRADING PLAN

RESIDENCE INN - ALBUQUERQUE CENTRAL AVE. & CEDAR AVE. ALBUQUERQUE, NM 87106

210046 C100 SHEET NUMBER

									(0)		
					Res	sidence l	lnn				
				Existing D	Developed	Condition	s Basin Data	Table			
				This table	is based o	n the DPM C	hapter 6, Zone:	2			
Basin	Area	Area	Land	d Treatmei	nt Percent	ages	Q(100yr)	Q(100yr)	V(100yr)	V <sub>(100yr-6hr)</sub>	V <sub>(100yr-24hr)</sub>
ID	(SQ. FT)	(AC.)	Α	В	С	D	(cfs/ac.)	(CFS)	(inches)	(CF)	(CF)
CURRENT ONSITE BASINS											
BASIN 1	2764	0.06	0.0%	0.0%	40.0%	60.0%	3.82	0.24	1.81	417	458
BASIN 2	23840	0.55	0.0%	0.0%	25.0%	75.0%	4.02	2.20	2.01	3983	4430
BASIN 3	35039	0.80	0.0%	0.0%	0.0%	100.0%	4.34	3.49	2.33	6803	7679
BASIN 4	12545	0.29	0.0%	0.0%	10.0%	90.0%	4.21	1.21	2.20	2300	2582
BASIN 5	2098	0.05	0.0%	0.0%	10.0%	90.0%	4.21	0.20	2.20	385	432
										40000	15500
TOTAL	76287	1.75	<u> </u>	-	_	-	-	7.35	-	13888	15582

/ PNM EASMT.

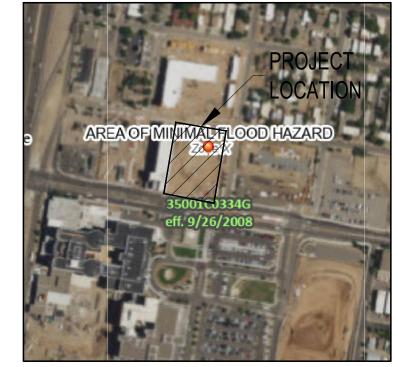
BASIN 3

TRACT 4

EASMT, (DUC.

2019044288)

2018066401



MAP #: 35001C0334G

# FEMA MAP

 $C\square P$ 

HIGHLA FILED: 6/ (2017C-

AP #2

BASIN 4

# DRAINAGE NARRATIVE

#### INTRODUCTION

THE RESIDENCE INN -- ALBUQUERQUE PROJECT IS LOCATED AT THE NORTHWEST CORNER OF CENTRAL AVENUE AND CEDAR STREET. THE HYDROLOGY DOCUMENTS FOR THE SPRINGHILL SUITES (HYDRO FILE #K15D034B AND #K15D034D) ARE USED TO ANALYZE THE DRAINAGE FOR THIS SITE. THE SITE LIES WITHIN FEMA FLOODPLAIN MAP 35001C0334G, BUT IT IS NOT IN ANY FLOOD HAZARD AREA. THE SITE IS IN RAINFALL ZONE 2 PER THE ALBUQUERQUE DPM, CHAPTER 6, FIGURE

#### **METHODOLGY**

THE METHODOLOGY USED FOR HYDROLOGY AND HYDRAULICS CALCULATIONS ARE IN ACCORDANCE WITH THE ALBUQUERQUE DEVELOPMENT PROCESS MANUAL, CHAPTER 6. THE SITE CONSISTS OF FIVE DRAINAGE BASINS. FOUR ANALYSIS POINTS WERE ANALYZED AS PRIMARY DISCHARGE POINTS THROUGHOUT THE SITE. LAND TREATMENT PERCENTAGES WERE CALCULATED BASED ON THE OBSERVED EXISTING CONDITIONS WITHIN EACH ONSITE BASIN. REFER TO THE "EXISTING CONDITIONS" TABLE, THIS SHEET, FOR MORE INFORMATION. THE SITE WAS ANALYZED FOR A 100-YR, 6-HR STORM EVENT USING THE RATIONAL METHOD, AS DEFINED BY THE CITY OF ALBUQUERQUE DPM.

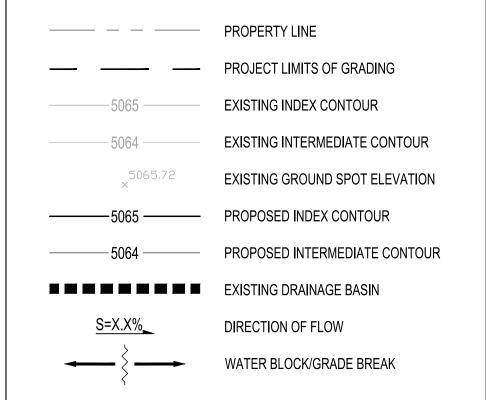
#### **EXISTING CONDITIONS**

THE EXISTING SITE INCLUDES THE SPRINGHILL SUITES PARKING LOT, LOCATED AT THE NORTHWEST CORNER OF THE PROPERTY, AN UNDEVELOPED AREA WITH MINIMAL VEGETATION NEAR THE SOUTHEASTERN PART, THE SOUTHERN HALF OF COPPER, AND THE WESTERN HALF OF CEDAR STREET.

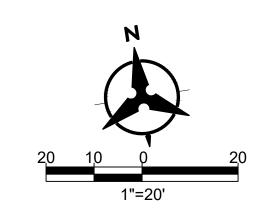
BASIN 1 SHEET FLOWS ALONG THE EXISTING CURB FLOWLINE ADJACENT TO COPPER AVENUE INTO DOWNSTREAM INLETS. BASIN 2, CONSISTING OF THE SPRINGHILL SUITES PARKING LOT AND PEDESTRIAN BRIDGE TOWER, CONVEYS FLOW TOWARDS THE EXISTING STORM DRAIN INLET NEAR THE DRIVE PAD. BASIN 3 IS UNDEVELOPED, AND FLOW DISCHARGES INTO AN 18" STORM DRAIN INLET. BASIN 4 IS CONVEYED TO THE EAST TOWARDS COPPER AVENUE. BASIN 5 IS CONVEYED TO THE SOUTHWEST TOWARDS CENTRAL AVENUE, WHERE FLOW IS CAPTURED BY OFFSITE INLETS. THE SPRINGHILL SUITES DMP (HYDRO FILE #K15D034D) WAS USED TO DETERMINE FLOW DIRECTION AND BASIN BOUNDARIES. FOR OFFSITE INFORMATION AND INLET CAPACITIES, REFER TO HYDRO FILE #K15D034B. BASED ON THIS APPROVED DRAINAGE MANAGEMENT PLAN, THE SITE WAS ALLOWED FREE DISCHARGE TO THE EXISTING STORM DRAIN SYSTEM IN COPPER.

ANALYSIS POINT #1 (AP #1) IS LOCATED AT THE DRIVE PAD ENTRANCE ON COPPER AVENUE, WHERE BASINS 1 AND 4 CONTRIBUTE FLOW. AP #2 CONTAINS FLOW FROM BASIN 4 AT CEDAR AVENUE. AP #3 IS LOCATED AT THE SOUTHWEST CORNER OF BASIN 5, CONTRIBUTING FLOW TO CENTRAL AVENUE. ANALYSIS POINT #4 SHOWS FLOW FROM BASINS 2 AND 3 THAT DISCHARGES INTO THE EXISTING STORM DRAIN

# **LEGEND**



HYDROLOGY SECTION PRELIMINARY APPROVED
12/22/22 DATE: 12/22/22
BY: Brissette K15D034D CONCEPTUAL ONLY. MORE INFORMATION MAY BE NEEDED IN THEM AND SUBMITTED TO HYDROLOGY FOR BUILDING PERMIT APPROVAL.







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Albuquerque, New Mexico 87120

6300 Riverside Plaza Lane NW, Ste 200

(505-764-9801 James Strozier)

OWNER/DEVELOPER

(505-998-0163 Josh Rogers)

NOT FOR CONSTRUCTION

	·	

EXISTING DRAINAGE MANAGEMENT PLAN

**RESIDENCE INN - ALBUQUERQUE** CENTRAL AVE. & CEDAR AVE. ALBUQUERQUE, NM 87106

210046 PROJECT NUMBER

C-001

EXISTING 16" WL

EXISTING 8" SAS

60' PUBLIC ACCESS,

P.U.E.(2017C-73)

Q<sub>100</sub> = 7.14 CFS

AP #4

SIDEWALK

 $\Box$  Q<sub>APPROVED</sub> = 6.10 CFS -Q<sub>100</sub> = 5.69 CFS

AVAILABLES

Q<sub>100</sub> = 0.20 CFS

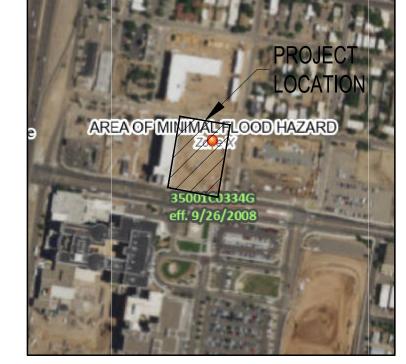
**EXISTING 8" SAS** EXISTING 12" WL

PNM EASMT. (NO

5' P.U.E. (PER 2017C-73; SHOWN WITH NOTATION

AVAILABLE)

#### Residence Inn Proposed Developed Conditions Basin Data Table This table is based on the DPM Chapter 6, Zone: 2 V<sub>(100yr-6hr)</sub> | V<sub>(100yr-24hr)</sub> V(100yr) Q(100yr) Q(100yr) Weighted FIRST FLUSH Basin Area Area Land Treatment Percentages Curve # (SQ. FT) (AC.) (cfs/ac.) (CFS) (CF) (CF) A | B | C D (inches) (CF) **ONSITE BASINS** BASIN A 0.0% 4.21 0.72 2.20 1367 1534 97 235 7454 0.0% 10.0% | 90.0% **BASIN B** 6942 0.16 0.0% 0.0% 5.0% 95.0% 4.28 0.68 2.27 1310 1475 97 231 0.38 726 **BASIN C** 3844 0.09 0.0% 0.0% 5.0% 95.0% 4.28 2.27 817 97 128 2.35 BASIN D 23947 0.55 0.0% 0.0% 5.0% 95.0% 4.28 4520 5089 796 0.15 2.27 **BASIN E** 1543 0.04 0.0% 0.0% 5.0% 95.0% 4.28 291 328 42970 0.99 0.0% 0.0% 0.0% | 100.0% 4.34 4.28 2.33 8343 9418 1504 BASIN F 98 TOTAL 86698 1.99 8.56 8213 9243 1441



# DRAINAGE NARRATIVE

PROPOSED CONDITIONS

SEE SHEET C-001 FOR INTRODUCTION, EXISTING CONDITIONS, AND METHODOLGY.

THE PROPOSED SITE WILL MAINTAIN SIMILAR FLOW PATTERS AS THE EXISTING CONDITIONS WITH MINOR CHANGES. BASIN A, COPPER AVENUE, WILL CONTINUE TO FLOW FROM EAST TO WEST. BASIN B WILL DIRECT FLOW FROM THE NORTHERN LANDSCAPE AREA AND WESTERN ACCESS DRIVE NORTH TOWARDS THE EXISTING INLET AT THE EXISTING DRIVEWAY OFF COPPER, FOLLOWING THE FLOW PATTERN OF EXISTING BASIN 2. BASIN C WILL FLOW TOWARDS THE PARKING STRUCTURE EXIT TO A NEW INLET AND STORM DRAIN THAT DISCHARGES TO THE EXISTING STORM DRAIN IN COPPER AVENUE. PROPOSED ON-STREET PARKING AT THE FRONT OF THE BUILDING WILL SLOPE DOWN TO THE CURB FLOWLINE AND DRAIN TO COPPER AVENUE. BASIN E CONSISTS OF FLOW FROM THE NEW SIDEWALK OUTSIDE OF THE BUILDING, WHERE IT DISCHARGES TO CENTRAL AVENUE AND FLOWS OFFSITE. BASIN F CONTAINS FLOW FROM THE NEW BUILDING AND PARKING STRUCTURE. THIS FLOW WILL BE DISCHARGED TO AN UNDERGROUND STORM DRAIN SYSTEM THAT CONNECTS TO THE EXISTING STORM DRAIN IN COPPER AVENUE.

ANALYSIS POINT 1 (AP #1) IS LOCATED AT THE DRIVE PAD, WHERE CUMULATIVE FLOW FROM BASINS A, D, AND F ARE ASSESSED. AP #2 ASSESSES FLOW ON CEDAR AVENUE FROM BASIN D. AP #3 ANALYZES THE FLOW FROM BASIN E, THE SOUTH SIDE OF THE BUILDING. AP #4 ASSESSES THE NEW FLOW FROM BASINS B, C, AND F GOING INTO THE EXISTING STORM DRAIN INLET.

### CONCLUSION

BASED ON THE APPROVED HYDROLOGY FILE #K15D034D, THE SITE IS ALLOWED FREE DISCHARGE TO THE COPPER STORM DRAIN. THE CONDITIONS DESCRIBED ABOVE FOLLOW THE ALLOWABLE DRAINAGE PATTERN. AS SUCH, WE ARE REQUESTING COA DRB HYDROLGY SITE PLAN FOR BUILDING PERMIT APPROVAL.

### **LEGEND**

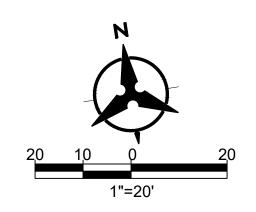
	PROPERTY LINE
	PROJECT LIMITS OF GRADING
5065	EXISTING INDEX CONTOUR
5064	EXISTING INTERMEDIATE CONTOUR
5065.72 ×	EXISTING GROUND SPOT ELEVATION
5065	PROPOSED INDEX CONTOUR
5064	PROPOSED INTERMEDIATE CONTOUR
********	EXISTING DRAINAGE BASIN
<u>S=X.X%</u>	DIRECTION OF FLOW
<del></del>	WATER BLOCK/GRADE BREAK

City of Albuquerque
Planning Department
Development Review Services
HYDROLOGY SECTION
PRELIMINARY APPROVED

DATE: 12/22/22

BY: K15D034D

THESE PLANS AND/OR REPORT ARE
CONCEPTUAL ONLY. MORE INFORMATION MAY
BE NEEDED IN THEM AND SUBMITTED TO
HYDROLOGY FOR BUILDING PERMIT APPROVAL.







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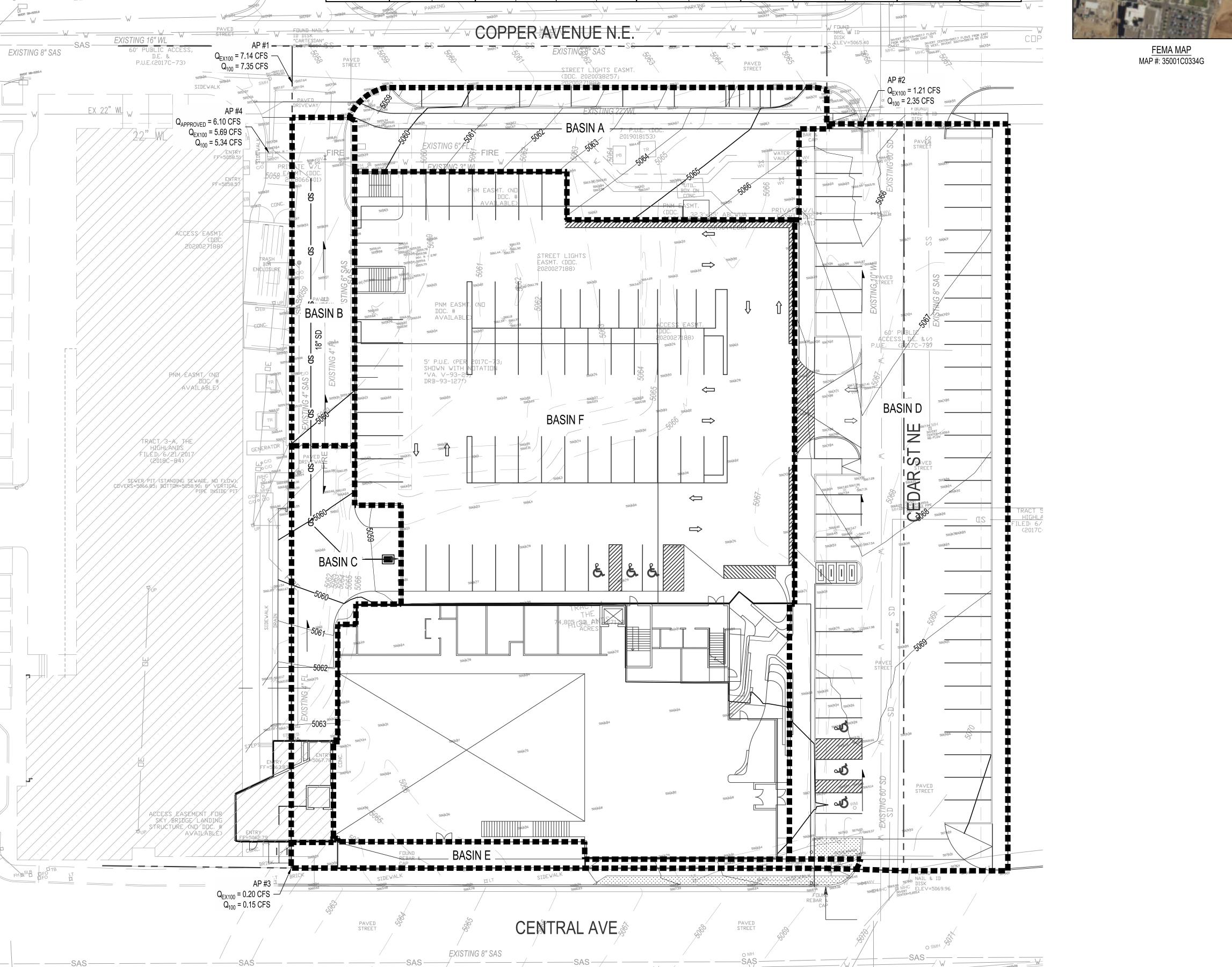
PROPOSE	D DRA	INAGE

MANAGEMENT PLAN

RESIDENCE INN - ALBUQUERQUE CENTRAL AVE. & CEDAR AVE. ALBUQUERQUE, NM 87106

210046 PROJECT NUMBER

C-002 Sheet Number



EXISTING 12" WL

SKY BRIDGE EASMT.