

CITY OF ALBUQUERQUE

Planning Department
Alan Varela, Director



Mayor Timothy M. Keller

March 23, 2023

David Soule, P.E.
Rio Grande Engineering
P.O. Box 93924
Albuquerque, NM 87199

RE: 4428 Prospect Ave. NW
Grading and Drainage Plans
Engineer's Stamp Date: 03/13/23
Hydrology File: H14D116A

Dear Mr. Soule:

Based upon the information provided in your submittal received 03/15/2023, the Grading & Drainage Plan is approved for Building Permit, Grading Permit, and SO-19 Permit. Please attach a copy of this approved plan in the construction sets for Building Permit processing along with a copy of this letter.

PO Box 1293

PRIOR TO CERTIFICATE OF OCCUPANCY:

Albuquerque

1. Engineer's Certification, per the DPM Part 6-14 (F): *Engineer's Certification Checklist For Non-Subdivision* is required.

NM 87103

2. Please provide the executed paper Drainage Covenant (latest revision) printed on one-side only with Exhibit A and a check for **\$25.00** made out to "**Bernalillo County**" for the detention pond per Article 6-15(C) of the DPM to Hydrology for review at Plaza de Sol.

www.cabq.gov

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 (Dough 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,

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



City of Albuquerque

Planning Department
Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 6/2018)

Project Title: 428 PROSPECT **Building Permit #:** _____ **Hydrology File #:** _____
DRB#: _____ **EPC#:** _____ **Work Order#:** _____
Legal Description: LOT 11A BLOCK 2 APACHE TRAIL ADDITION
City Address: 428 PROSPECT

Applicant: _____ **Contact:** _____
Address: _____
Phone#: _____ **Fax#:** _____ **E-mail:** _____

Other Contact: RIO GRANDE ENGINEERING **Contact:** DAVID SOULE
Address: PO BOX 93924 ALB NM 87199
Phone#: 505.321.9099 **Fax#:** 505.872.0999 **E-mail:** david@riograndeengineering.com

TYPE OF DEVELOPMENT: _____ PLAT _____ RESIDENCE _____ DRB SITE ☒ ADMIN SITE

Check all that Apply:

DEPARTMENT:
☒ HYDROLOGY/ DRAINAGE
_____ TRAFFIC/ TRANSPORTATION

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?

IS THIS A RESUBMITTAL?: _____ Yes ☒ No

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: _____ **By:** _____

COA STAFF:

ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____

Basin	Area (sf)	Area (acres)	Treatment A		Treatment B		Treatment C		Treatment D		Q100	V100	Q100
			%	(acres)	%	(acres)	%	(acres)	%	(acres)	GENERATED	GENERATED	DISCHARGED
EXISTING	9334.00	0.214	0%	0	50%	0.107	50%	0.107	0%	0.000	0.5	706	0.5
PROPOSED	9334.00	0.214	0%	0	0%	0.000	24%	0.051	76%	0.163	0.79	4573	0.35
											HISTORICAL		0.50
											PROPOSED		0.35

ENGINEER'S SEAL	LOT 11-A BLK 2 APCHE TRAIL ADD 428 PROSPECT AVE.	DRAWN BY DEM
	GRADING AND DRAINAGE PLAN	DATE 3-12-23
		LOT 11-A BLK 2 APCHE TRAIL ADDING
DAVID SOULE P.E. #14522		PO BOX 83624 ALBUQUERQUE, NM 87189 (505) 321-9089

AHYMO.OUT
AHYMO PROGRAM (AHYMO-S4) - Version: S4.01a - Re1: 01a
RUN DATE (MON/DAY/YR) = 03/14/2023
START TIME (HR:MIN:SEC) = 17:36:42 USER No.= RioGrandeSingl eA41963517
INPUT FILE = cuments and Settings\Owner\Desktop\2022
JOBS\202206-prospect\pondrout031423.txt
*S AHYMO - DETENTION-VENADA- PROSPECT
*S POND ROUTING
START TIME=0.0 PUNCH CODE=0
RAINFALL TYPE=2
QUARTER=0.0 ONE= 1.78 IN
SIX=2.29 IN DAY= 2.59 IN DT = 0.05 HR

AZ) - D1
24-HOUR RAINFALL DIST. - BASED ON NOAA ATLAS 14 FOR CONVECTIVE AREAS (NM &
DT = 0.050000 HOURS END TIME = 24.000002 HOURS
0.0000 0.0034 0.0069 0.0107 0.0147 0.0189 0.0236
0.0303 0.0409 0.0523 0.0640 0.0768 0.0898 0.1032
0.1170 0.1310 0.1465 0.1627 0.1802 0.2092 0.2389
0.2634 0.3025 0.3507 0.4151 0.4876 0.6127 0.8072
1.1405 1.3747 1.5594 1.6522 1.7336 1.7921 1.8386
1.8791 1.9088 1.9361 1.9585 1.9770 1.9934 2.0082
2.0221 2.0343 2.0460 2.0573 2.0683 2.0773 2.0823
2.0873 2.0922 2.0968 2.1014 2.1058 2.1102 2.1145
2.1186 2.1226 2.1265 2.1304 2.1343 2.1379 2.1415
2.1451 2.1486 2.1521 2.1554 2.1587 2.1619 2.1651
2.1683 2.1714 2.1745 2.1775 2.1805 2.1835 2.1864
2.1893 2.1922 2.1950 2.1978 2.2006 2.2033 2.2060
2.2087 2.2114 2.2140 2.2166 2.2191 2.2217 2.2242
2.2267 2.2292 2.2316 2.2340 2.2364 2.2388 2.2412
2.2435 2.2458 2.2481 2.2503 2.2526 2.2548 2.2570
2.2592 2.2614 2.2635 2.2657 2.2678 2.2699 2.2720
2.2740 2.2761 2.2781 2.2801 2.2821 2.2841 2.2861
2.2881 2.2900 2.2908 2.2917 2.2925 2.2933 2.2942
2.2950 2.2958 2.2967 2.2975 2.2983 2.2992 2.3000
2.3008 2.3017 2.3025 2.3033 2.3042 2.3050 2.3058
2.3067 2.3075 2.3083 2.3092 2.3100 2.3108 2.3117
2.3125 2.3133 2.3142 2.3150 2.3158 2.3167 2.3175
2.3183 2.3192 2.3200 2.3208 2.3217 2.3225 2.3233
2.3242 2.3250 2.3258 2.3267 2.3275 2.3283 2.3292
2.3300 2.3308 2.3317 2.3325 2.3333 2.3342 2.3350
2.3358 2.3367 2.3375 2.3383 2.3392 2.3400 2.3408
2.3417 2.3425 2.3433 2.3442 2.3450 2.3458 2.3467
2.3475 2.3483 2.3492 2.3500 2.3508 2.3517 2.3525
2.3533 2.3542 2.3550 2.3558 2.3567 2.3575 2.3583
2.3592 2.3600 2.3608 2.3617 2.3625 2.3633 2.3642
2.3650 2.3658 2.3667 2.3675 2.3683 2.3692 2.3700
2.3708 2.3717 2.3725 2.3733 2.3742 2.3750 2.3758
2.3767 2.3775 2.3783 2.3792 2.3800 2.3808 2.3817
2.3825 2.3833 2.3842 2.3850 2.3858 2.3867 2.3875
2.3883 2.3892 2.3900 2.3908 2.3917 2.3925 2.3933
2.3942 2.3950 2.3958 2.3967 2.3975 2.3983 2.3992
2.4000 2.4008 2.4017 2.4025 2.4033 2.4042 2.4050
2.4058 2.4067 2.4075 2.4083 2.4092 2.4100 2.4108
2.4117 2.4125 2.4133 2.4142 2.4150 2.4158 2.4167
2.4175 2.4183 2.4192 2.4200 2.4208 2.4217 2.4225
2.4233 2.4242 2.4250 2.4258 2.4267 2.4275 2.4283
2.4292 2.4300 2.4308 2.4317 2.4325 2.4333 2.4342
2.4350 2.4358 2.4367 2.4375 2.4383 2.4392 2.4400
2.4408 2.4417 2.4425 2.4433 2.4442 2.4450 2.4458
2.4467 2.4475 2.4483 2.4492 2.4500 2.4508 2.4517
2.4525 2.4533 2.4542 2.4550 2.4558 2.4567 2.4575
2.4583 2.4592 2.4600 2.4608 2.4617 2.4625 2.4633
2.4642 2.4650 2.4658 2.4667 2.4675 2.4683 2.4692
2.4700 2.4708 2.4717 2.4725 2.4733 2.4742 2.4750
2.4758 2.4767 2.4775 2.4783 2.4792 2.4800 2.4808
Page 1

AHYMO.OUT
2.4817 2.4825 2.4833 2.4842 2.4850 2.4858 2.4867
2.4875 2.4883 2.4892 2.4900 2.4908 2.4917 2.4925
2.4933 2.4942 2.4950 2.4958 2.4967 2.4975 2.4983
2.4992 2.5000 2.5008 2.5017 2.5025 2.5033 2.5042
2.5050 2.5058 2.5067 2.5075 2.5083 2.5092 2.5100
2.5108 2.5117 2.5125 2.5133 2.5142 2.5150 2.5158
2.5167 2.5175 2.5183 2.5192 2.5200 2.5208 2.5217
2.5225 2.5233 2.5241 2.5250 2.5258 2.5266 2.5275
2.5283 2.5291 2.5300 2.5308 2.5316 2.5325 2.5333
2.5341 2.5350 2.5358 2.5366 2.5375 2.5383 2.5391
2.5400 2.5408 2.5416 2.5425 2.5433 2.5441 2.5450
2.5458 2.5466 2.5475 2.5483 2.5491 2.5500 2.5508
2.5516 2.5525 2.5533 2.5541 2.5550 2.5558 2.5566
2.5575 2.5583 2.5591 2.5600 2.5608 2.5616 2.5625
2.5633 2.5641 2.5650 2.5658 2.5666 2.5675 2.5683
2.5691 2.5700 2.5708 2.5716 2.5725 2.5733 2.5741
2.5750 2.5758 2.5766 2.5775 2.5783 2.5791 2.5800
2.5808 2.5816 2.5825 2.5833 2.5841 2.5850 2.5858
2.5866 2.5875 2.5883 2.5891 2.5900
*OVERALL SITE EXISTING
COMPUTE NM HYD ID=1 HYD NO=101 DA= .000334375 SQ MI
PER A=0 PER B=50 PER C=50 PER D=0
TP=-.170 MASSRAIN=-1
K = 0.151398HR TP = 0.170000HR K/TP RATIO = 0.890574 SHAPE CONSTANT, N =
3.982130
UNIT PEAK = 0.69625 CFS UNIT VOLUME = 0.9819 B = 353.98 P60 =
1.7800
AREA = 0.000334 SQ MI IA = 0.42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000
PRINT HYD ID=1 CODE=3
PARTIAL HYDROGRAPH 101.00
FLOW TIME FLOW TIME FLOW TIME FLOW TIME FLOW TIME
CFS HRS HRS CFS CFS HRS CFS HRS CFS HRS
0.0 0.000 0.0 4.950 0.0 9.900 0.0 14.850
0.0 0.150 0.0 5.100 0.0 10.050 0.0 15.000
0.0 0.300 0.0 5.250 0.0 10.200 0.0 15.150
0.0 0.450 0.0 5.400 0.0 10.350 0.0 15.300
0.0 0.600 0.0 5.550 0.0 10.500 0.0 15.450
0.0 0.750 0.0 5.700 0.0 10.650 0.0 15.600
0.0 0.900 0.0 5.850 0.0 10.800 0.0 15.750
0.0 1.050 0.1 6.000 0.0 10.950 0.0 15.900
0.0 1.200 0.1 6.150 0.0 11.100 0.0 16.050
0.0 1.350 0.2 6.300 0.0 11.250 0.0 16.200
0.0 1.500 0.7 6.450 0.0 11.400 0.0 16.350
0.0 1.650 0.6 6.600 0.0 11.550 0.0 16.500
0.0 1.800 0.3 6.750 0.0 11.700 0.0 16.650
0.0 1.950 0.2 6.900 0.0 11.850 0.0 16.800
0.0 2.100 0.1 7.050 0.0 12.000 0.0 16.950
0.0 2.250 0.1 7.200 0.0 12.150 0.0 17.100
0.0 2.400 0.0 7.350 0.0 12.300 0.0 17.250
0.0 2.550 0.0 7.500 0.0 12.450 0.0 17.400
0.0 2.700 0.0 7.650 0.0 12.600 0.0 17.550
0.0 2.850 0.0 7.800 0.0 12.750 0.0 17.700
0.0 3.000 0.0 7.950 0.0 12.900 0.0 17.850
0.0 3.150 0.0 8.100 0.0 13.050 0.0 18.000
0.0 3.300 0.0 8.250 0.0 13.200 0.0 18.150
0.0 3.450 0.0 8.400 0.0 13.350 0.0 18.300
0.0 3.600 0.0 8.550 0.0 13.500 0.0 18.450
0.0 3.750 0.0 8.700 0.0 13.650 0.0 18.600
0.0 3.900 0.0 8.850 0.0 13.800 0.0 18.750
0.0 4.050 0.0 9.000 0.0 13.950 0.0 18.900
0.0 4.200 0.0 9.150 0.0 14.100 0.0 19.050
0.0 4.350 0.0 9.300 0.0 14.250 0.0 19.200
0.0 4.500 0.0 9.450 0.0 14.400 0.0 19.350
RUNOFF VOLUME = 0.90620 INCHES AT 0.0162 ACRE-FEET
PEAK DISCHARGE RATE = 0.50 CFS PER 1.550 HOURS BASIN AREA = 0.0003 SQ. MI.
*OVERALL SITE PROPOSED
COMPUTE NM HYD ID=2 HYD NO=102 DA= .000334375 SQ MI
PER A=0 PER B=00 PER C=24 PER D=76
TP=-.170 MASSRAIN=-1
K = 0.092650HR TP = 0.170000HR K/TP RATIO = 0.545000 SHAPE CONSTANT, N =
7.106428
UNIT PEAK = 0.78670 CFS UNIT VOLUME = 0.9858 B = 526.28 P60 =
1.7800
AREA = 0.000254 SQ MI IA = 0.10000 INCHES INF = 0.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000
K = 0.133719HR TP = 0.170000HR K/TP RATIO = 0.786584 SHAPE CONSTANT, N =
4.563783
Page 2

AHYMO.OUT
UNIT PEAK = 0.18465 CFS UNIT VOLUME = 0.9289 B = 391.16 P60 =
1.7800
AREA = 0.000080 SQ MI IA = 0.35000 INCHES INF = 0.83000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000
PRINT HYD ID=2 CODE=3
PARTIAL HYDROGRAPH 102.00
FLOW TIME FLOW TIME FLOW TIME FLOW TIME
CFS HRS HRS CFS CFS HRS CFS HRS CFS HRS
0.0 0.000 0.0 4.950 0.0 9.900 0.0 14.850
0.0 0.150 0.0 5.100 0.0 10.050 0.0 15.000
0.0 0.300 0.0 5.250 0.0 10.200 0.0 15.150
0.0 0.450 0.0 5.400 0.0 10.350 0.0 15.300
0.0 0.600 0.0 5.550 0.0 10.500 0.0 15.450
0.0 0.750 0.0 5.700 0.0 10.650 0.0 15.600
0.0 0.900 0.0 5.850 0.0 10.800 0.0 15.750
0.0 1.050 0.1 6.000 0.0 10.950 0.0 15.900
0.0 1.200 0.1 6.150 0.0 11.100 0.0 16.050
0.0 1.350 0.2 6.300 0.0 11.250 0.0 16.200
0.0 1.500 0.7 6.450 0.0 11.400 0.0 16.350
0.0 1.650 0.6 6.600 0.0 11.550 0.0 16.500
0.0 1.800 0.3 6.750 0.0 11.700 0.0 16.650
0.0 1.950 0.2 6.900 0.0 11.850 0.0 16.800
0.0 2.100 0.1 7.050 0.0 12.000 0.0 16.950
0.0 2.250 0.1 7.200 0.0 12.150 0.0 17.100
0.0 2.400 0.0 7.350 0.0 12.300 0.0 17.250
0.0 2.550 0.0 7.500 0.0 12.450 0.0 17.400
0.0 2.700 0.0 7.650 0.0 12.600 0.0 17.550
0.0 2.850 0.0 7.800 0.0 12.750 0.0 17.700
0.0 3.000 0.0 7.950 0.0 12.900 0.0 17.850
0.0 3.150 0.0 8.100 0.0 13.050 0.0 18.000
0.0 3.300 0.0 8.250 0.0 13.200 0.0 18.150
0.0 3.450 0.0 8.400 0.0 13.350 0.0 18.300
0.0 3.600 0.0 8.550 0.0 13.500 0.0 18.450
0.0 3.750 0.0 8.700 0.0 13.650 0.0 18.600
0.0 3.900 0.0 8.850 0.0 13.800 0.0 18.750
0.0 4.050 0.0 9.000 0.0 13.950 0.0 18.900
0.0 4.200 0.0 9.150 0.0 14.100 0.0 19.050
0.0 4.350 0.0 9.300 0.0 14.250 0.0 19.200
0.0 4.500 0.0 9.450 0.0 14.400 0.0 19.350
Page 3

VOLUME CALCULATIONS

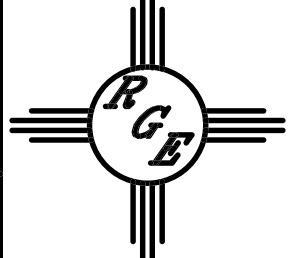
STAGE/STORAGE ONSITE DETENTION

ACTUAL ELEV.	DEPTH (FT)	AREA SF	VOLUME PER UNIT	VOLUME TUMULATIVI	VOLUME AC-FT	Q (CFS)
60.75	0.00	2.00	0	0	0.000	0.00
62.50	0.00	400.00	0.00	12	0.000	0.00
63.00	2.13	700.00	275.00	287	0.007	0.34
63.50	2.63	2057.00	689.25	976.25	0.022	0.38
63.90	3.03	3585.00	1128.40	2104.65	0.048	0.41

Orifice Equation
 $Q = CA \sqrt{2gH}$

C = 0.6
Diameter (in) 3
Area (ft²)= 0.049087385
g = 32.2
H (Ft) = Depth of water above center of orifice
Q (CFS)= Flow



ENGINEER'S SEAL	LOT 11-A BLK 2 APCHÉ TRAIL ADD 428 PROSPECT AVE.	DRAWN BY DEM
		DATE 3-12-23
	GRADING AND DRAINAGE PLAN SHEET 2	LOT 11A BLK2 APCHÉ TRAIL ADDING
		SHEET # C2
3/13/23	 <i>Rio Grande Engineering</i> PO BOX 83604 ALBUQUERQUE, NM 87199 (505) 321-9099	JOB # _____
DAVID SOULE P.E. #14522		