CITY OF ALBUQUERQUE

Planning Department
Alan Varela, Director

Mayor Timothy M. Keller

March 30, 2023

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

RE: 4231 Coe Dr. NE
Permanent C.O. – Accepted
Engineer's Certification Date: 03/15/23
Engineer's Stamp Date: 04/15/21
Hydrology File: J17D038

Dear Mr. Soule:

Based on the Certification received 03/16/2023 and site visit on 03/29/2023, this letter serves as a "green tag" from Hydrology Section for a Permanent Certificate of Occupancy to be issued by the Building and Safety Division.

If you have any questions, please contact me at 924-3995 or 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

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 6/2018)

Project Title: 4231 COE NE Building Permit #:_____ Hydrology File #: _____

DRB#: _____ EPC#: _____ Work Order#: _____

Legal Description: LOT 110 BLOCK 2 NEATS PARK ADDITION

City Address: 4231 COE NE

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 __X__ RESIDENCE ___ DRB SITE ___ ADMIN SITE

Check all that Apply:

DEPARTMENT:

__X__ HYDROLOGY/ DRAINAGE

____ TRAFFIC/ TRANSPORTATION

TYPE OF SUBMITTAL:

__X__ 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?: __X__ Yes ____ No

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

____ BUILDING PERMIT APPROVAL

__X__ 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 DATA

Basin	Area (sf)	Area (acres)	Treatment A %	Treatment A (acres)	Treatment B %	Treatment B (acres)	Treatment C %	Treatment C (acres)	Treatment D %	Treatment D (acres)	Q100 GENERATED	Q100 DISCHARGED
EXISTING SITE DISCHARGE	14540.00	0.334	0%	0	24%	0.080	45%	0.1502	31%	0.103	1.06	1.06
ROPOSED UNIMPACTED ARE	9646.00	0.221	0%	0	24%	0.053	30%	0.0664	46%	0.102	0.75	0.75
PROPOSED DEV AREA	4894.00	0.112	0%	0	34%	0.038	40%	0.0449	26%	0.029	0.35	0.22
TOTAL EXISTING												**1.06**
TOTAL PROPOSED												**0.92**

FIRST FLUSH(REDEVELOPMEENT (0.46" PER SF IMP) 0.000 required, 42.000 provided

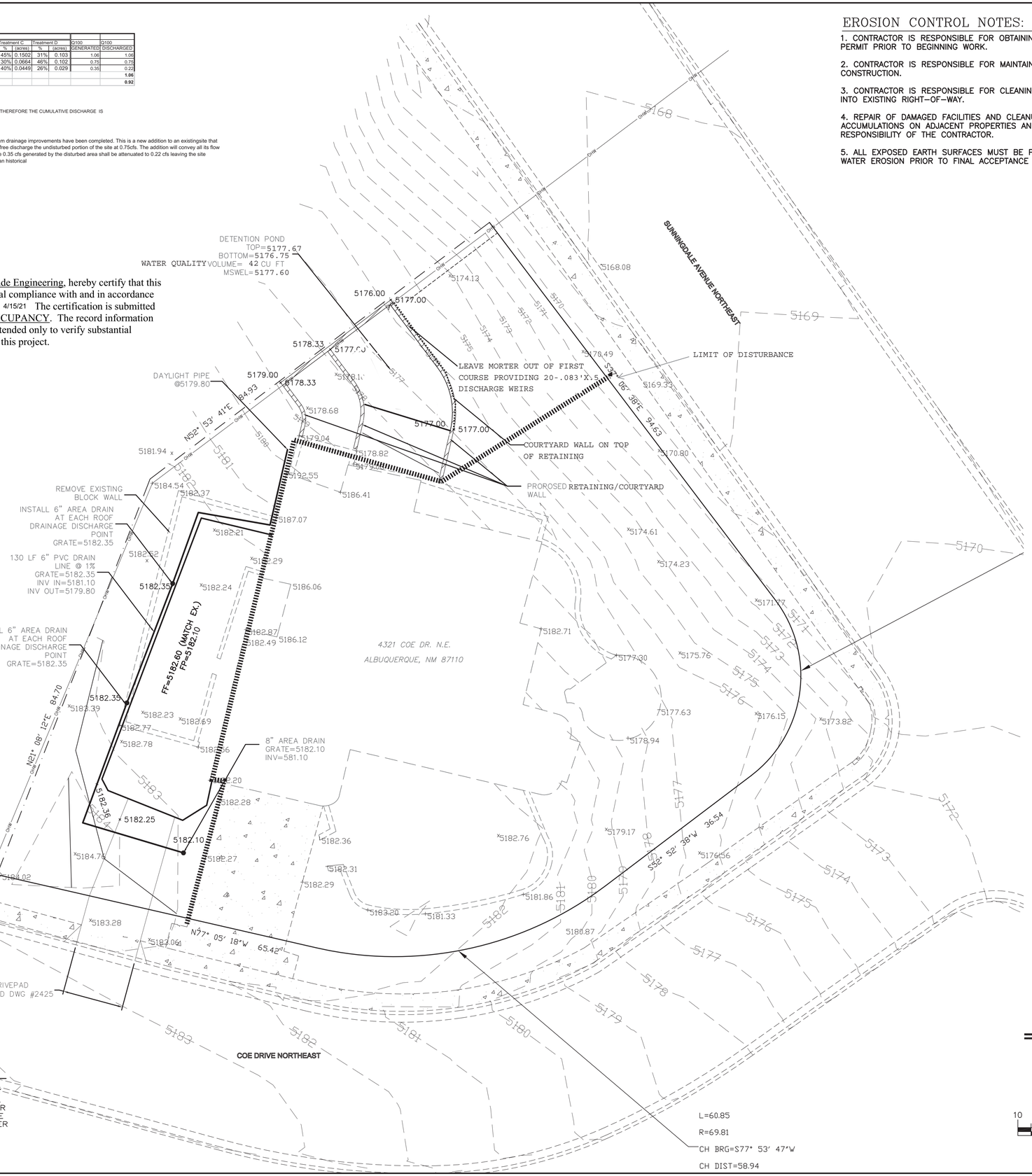
* SITE DISCHARGE CALCULATED UTILIZING AHYMO. THE DETENTION POND HAS DIFFERENT Tp THEREFORE THE CUMULATIVE DISCHARGE IS SLIGHTLY LESS THAT THE SUMMATION OF EACH BASIN

Narrative
The subject property is located within a fully developed area of Albuquerque. All down stream drainage improvements have been completed. This is a new addition to an existingsite that discharges 1.06 cfs to the adjacent roadwayr. The proposed improvements will continue to free discharge the undisturbed portion of the site at 0.75cfs. The addition will convey all its flow to an shallow detention area controlled by open joints at the bottom of a court yard wall. The 0.35 cfs generated by the disturbed area shall be attenuated to 0.22 cfs leaving the site
The total flow leaving the site in the developed condition is 0.92 cfs, which is .14 cfs less than historical

I David Soule, NMPE 14522, of the firm Rio Grande Engineering, hereby certify that this project has been graded and will drain in substantial compliance with and in accordance with the design intend of the approved plan dated 4/15/21 The certification is submitted in support of a request for CERTIFICATE OR OCCUPANCY. The record information presented heron is not necessarily complete and intended only to verify substantial compliance of the grading and drainage aspects of this project.

DAVID SOULE NEW MEXICO 14522 REGISTERED PROFESSIONAL ENGINEER

3/15/23



EROSION CONTROL NOTES:

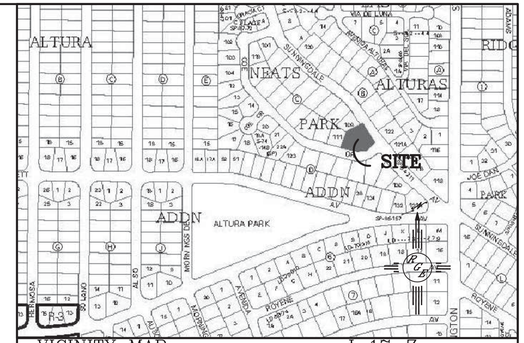
1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TOPSOIL DISTURBANCE PERMIT PRIOR TO BEGINNING WORK.

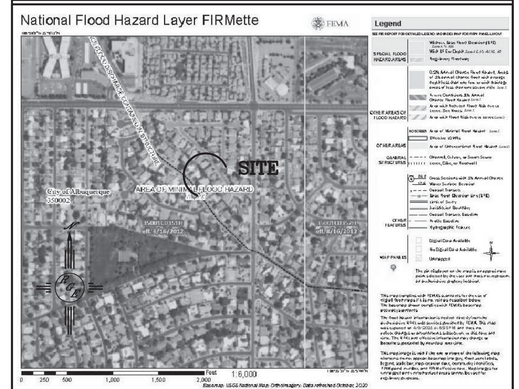
2. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING RUN-OFF ON SITE DURING CONSTRUCTION.

3. CONTRACTOR IS RESPONSIBLE FOR CLEANING ALL SEDIMENT THAT GETS INTO EXISTING RIGHT-OF-WAY.

4. REPAIR OF DAMAGED FACILITIES AND CLEANUP OF SEDIMENT ACCUMULATIONS ON ADJACENT PROPERTIES AND IN PUBLIC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.

5. ALL EXPOSED EARTH SURFACES MUST BE PROTECTED FROM WIND AND WATER EROSION PRIOR TO FINAL ACCEPTANCE OF ANY PROJECT.





LEGAL DESCRIPTION:

LOT 110, BLK C, NEATS ALTURAS PARK ADDITION

NOTES:

1. ALL SPOT ELEVATIONS REPRESENT FLOWLINE ELEVATION UNLESS OTHERWISE NOTED.

2. ALL SLOPES SHALL BE 3:1 MAX. AND GRAVEL OR NATIVE SEEDING PRIOR TO CO.

LEGEND

- EXISTING CONTOUR
- EXISTING INDEX CONTOUR
- PROPOSED CONTOUR
- PROPOSED INDEX CONTOUR
- SLOPE TIE
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- LOT LINE
- CENTERLINE
- RIGHT-OF-WAY
- PROPOSED 4" PVC SD
- GRAVEL LINED SWALE
- EXISTING CURB AND GUTTER
- PROPOSED CMU RETAINING WALL-DESIGN BY OTHERS

CAUTION:

EXISTING UTILITIES ARE NOT SHOWN. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO ANY EXCAVATION TO DETERMINE THE ACTUAL LOCATION OF UTILITIES & OTHER IMPROVEMENTS.

N

10 5 0 5 10

SCALE: 1"=10'

ENGINEER'S SEAL DAVID SOULE NEW MEXICO 14522 REGISTERED PROFESSIONAL ENGINEER 4/15/21 DAVID SOULE P.E. #14522	4321 COE GRADING AND DRAINAGE PLAN	DRAWN BY WCWJ 4-14-21 3-24-21 21021040-LAYOUT-4-14-21
Rio Grande Engineering 1606 CENTRAL AVENUE SE SUITE 201 ALBUQUERQUE, NM 87106 (505) 872-0999		SHEET # 1 OF 2
		JOB # 21021040

STAGE/STORAGE VOLUME CALCULATIONS

pond B

ACTUAL ELEV.	DEPTH (FT)	AREA SF	VOLUME PER UNIT	VOLUME CUMULATIVE	VOLUME AC-FT	Q (CFS)	X22
77.00	0.00	324.00	0	0	0.001	0.00	
77.67	0.67	382.00	236.51	236.51	0.0054	0.01	0.24707036

<u>WIER EQUATION</u>
Q=CLH^1.5

C = 2.95
L= 0.0833

H (Ft) = Depth of water above invert
Q (CFS)= Flow

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                                   AHYMO.OUT
        AHYMO PROGRAM (AHYMO-S4)                    - Version: S4.01a - Rel: 01a
              RUN DATE (MON/DAY/YR) = 04/21/2021
              START TIME (HR:MIN:SEC) = 10:19:01     USER NO.=
RioGrandeSingleA41963517
              INPUT FILE = cuments and Settings\Owner\Desktop\2021 JOBS\2021143-4231
coe\pondrout041921.txt

    *S      AHYMO -  DETENTION-COE
    *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

             24-HOUR RAINFALL DIST. - BASED ON NOAA ATLAS 14 FOR CONVECTIVE
AREAS (NM & AZ) - D1
                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  0.2032  0.2289
                 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
                                     Page 1
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                                   AHYMO.OUT
                 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
                 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

    *Basin EXISTING SITE
    COMPUTE NM HYD        ID=1  HYD NO=101  DA= .0005216SQ MI
                          PER A=0  PER B=24 PER C=45  PER D=31
                          TP=-.138 MASSRAIN=-1

           K =  0.075210HR    TP =  0.138000HR    K/TP RATIO =  0.545000     SHAPE
CONSTANT, N =  7.106428
           UNIT PEAK =  0.61664    CFS   UNIT VOLUME =   0.9806       B =   526.28
 P60 = 1.7800
           AREA =       0.000162 SQ MI    IA =   0.10000 INCHES    INF =   0.04000
INCHES PER HOUR
           RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000

           K =  0.118532HR    TP =  0.138000HR    K/TP RATIO =  0.858925     SHAPE
CONSTANT, N =  4.140489
           UNIT PEAK =  0.95043    CFS   UNIT VOLUME =   0.9876       B =   364.43
 P60 = 1.7800
           AREA =       0.000360 SQ MI    IA =   0.40217 INCHES    INF =   0.97609
INCHES PER HOUR
           RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000

    PRINT HYD             ID=1  CODE=3

                                       PARTIAL HYDROGRAPH   101.00

         TIME      FLOW           TIME      FLOW            TIME      FLOW
TIME      FLOW           TIME      FLOW
          HRS       CFS            HRS       CFS             HRS       CFS
HRS       CFS            HRS       CFS
         0.000      0.0           4.950      0.0            9.900      0.0
14.850     0.0          19.800     0.0
         0.150      0.0           5.100      0.0           10.050      0.0
                                     Page 2
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                                   AHYMO.OUT
15.000     0.0          19.950     0.0
         0.300      0.0           5.250      0.0           10.200      0.0
15.150     0.0          20.100     0.0
         0.450      0.0           5.400      0.0           10.350      0.0
15.300     0.0          20.250     0.0
         0.600      0.0           5.550      0.0           10.500      0.0
15.450     0.0          20.400     0.0
         0.750      0.0           5.700      0.0           10.650      0.0
15.600     0.0          20.550     0.0
         0.900      0.0           5.850      0.0           10.800      0.0
15.750     0.0          20.700     0.0
         1.050      0.0           6.000      0.0           10.950      0.0
15.900     0.0          20.850     0.0
         1.200      0.1           6.150      0.0           11.100      0.0
16.050     0.0          21.000     0.0
         1.350      0.3           6.300      0.0           11.250      0.0
16.200     0.0          21.150     0.0
         1.500      1.1           6.450      0.0           11.400      0.0
16.350     0.0          21.300     0.0
         1.650      0.7           6.600      0.0           11.550      0.0
16.500     0.0          21.450     0.0
         1.800      0.3           6.750      0.0           11.700      0.0
16.650     0.0          21.600     0.0
         1.950      0.1           6.900      0.0           11.850      0.0
16.800     0.0          21.750     0.0
         2.100      0.1           7.050      0.0           12.000      0.0
16.950     0.0          21.900     0.0
         2.250      0.1           7.200      0.0           12.150      0.0
17.100     0.0          22.050     0.0
         2.400      0.0           7.350      0.0           12.300      0.0
17.250     0.0          22.200     0.0
         2.550      0.0           7.500      0.0           12.450      0.0
17.400     0.0          22.350     0.0
         2.700      0.0           7.650      0.0           12.600      0.0
17.550     0.0          22.500     0.0
         2.850      0.0           7.800      0.0           12.750      0.0
17.700     0.0          22.650     0.0
         3.000      0.0           7.950      0.0           12.900      0.0
17.850     0.0          22.800     0.0
         3.150      0.0           8.100      0.0           13.050      0.0
18.000     0.0          22.950     0.0
         3.300      0.0           8.250      0.0           13.200      0.0
18.150     0.0          23.100     0.0
         3.450      0.0           8.400      0.0           13.350      0.0
18.300     0.0          23.250     0.0
         3.600      0.0           8.550      0.0           13.500      0.0
18.450     0.0          23.400     0.0
         3.750      0.0           8.700      0.0           13.650      0.0
18.600     0.0          23.550     0.0
         3.900      0.0           8.850      0.0           13.800      0.0
18.750     0.0          23.700     0.0
         4.050      0.0           9.000      0.0           13.950      0.0
18.900     0.0          23.850     0.0
         4.200      0.0           9.150      0.0           14.100      0.0
19.050     0.0          24.000     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     0.0
         4.650      0.0           9.600      0.0           14.550      0.0
19.500     0.0
         4.800      0.0           9.750      0.0           14.700      0.0
19.650     0.0

         RUNOFF VOLUME =     1.37405 INCHES     =        0.0382 ACRE-FEET
         PEAK DISCHARGE RATE =       1.06 CFS  AT   1.500 HOURS   BASIN AREA =
                                     Page 3
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                                   AHYMO.OUT
0.0005 SQ. MI.

    *basin PROPOSED UNDISTURBED SITE
    COMPUTE NM HYD        ID=2  HYD NO=102  DA= .0003460 SQ MI
                          PER A=0  PER B=24 PER C=30 PER D=46
                          TP=-.138  MASSRAIN=-1

           K =  0.075210HR    TP =  0.138000HR    K/TP RATIO =  0.545000     SHAPE
CONSTANT, N =  7.106428
           UNIT PEAK =  0.60697    CFS   UNIT VOLUME =   0.9806       B =   526.28
 P60 = 1.7800
           AREA =       0.000159 SQ MI    IA =   0.10000 INCHES    INF =   0.04000
INCHES PER HOUR
           RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000

           K =  0.121305HR    TP =  0.138000HR    K/TP RATIO =  0.879020     SHAPE
CONSTANT, N =  4.038364
           UNIT PEAK =  0.48432    CFS   UNIT VOLUME =   0.9760       B =   357.72
 P60 = 1.7800
           AREA =       0.000187 SQ MI    IA =   0.41667 INCHES    INF =   1.01667
INCHES PER HOUR
           RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000

    PRINT HYD             ID=2  CODE=3

                                       PARTIAL HYDROGRAPH   102.00

         TIME      FLOW           TIME      FLOW            TIME      FLOW
TIME      FLOW           TIME      FLOW
          HRS       CFS            HRS       CFS             HRS       CFS
HRS       CFS            HRS       CFS
         0.000      0.0           4.950      0.0            9.900      0.0
14.850     0.0          19.800     0.0
         0.150      0.0           5.100      0.0           10.050      0.0
15.000     0.0          19.950     0.0
         0.300      0.0           5.250      0.0           10.200      0.0
15.150     0.0          20.100     0.0
         0.450      0.0           5.400      0.0           10.350      0.0
15.300     0.0          20.250     0.0
         0.600      0.0           5.550      0.0           10.500      0.0
15.450     0.0          20.400     0.0
         0.750      0.0           5.700      0.0           10.650      0.0
15.600     0.0          20.550     0.0
         0.900      0.0           5.850      0.0           10.800      0.0
15.750     0.0          20.700     0.0
         1.050      0.0           6.000      0.0           10.950      0.0
15.900     0.0          20.850     0.0
         1.200      0.1           6.150      0.0           11.100      0.0
16.050     0.0          21.000     0.0
         1.350      0.2           6.300      0.0           11.250      0.0
16.200     0.0          21.150     0.0
         1.500      0.8           6.450      0.0           11.400      0.0
16.350     0.0          21.300     0.0
         1.650      0.5           6.600      0.0           11.550      0.0
16.500     0.0          21.450     0.0
         1.800      0.2           6.750      0.0           11.700      0.0
16.650     0.0          21.600     0.0
         1.950      0.1           6.900      0.0           11.850      0.0
16.800     0.0          21.750     0.0
                                     Page 4
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                                   AHYMO.OUT
         2.100      0.1           7.050      0.0           12.000      0.0
16.950     0.0          21.900     0.0
         2.250      0.0           7.200      0.0           12.150      0.0
17.100     0.0          22.050     0.0
         2.400      0.0           7.350      0.0           12.300      0.0
17.250     0.0          22.200     0.0
         2.550      0.0           7.500      0.0           12.450      0.0
17.400     0.0          22.350     0.0
         2.700      0.0           7.650      0.0           12.600      0.0
17.550     0.0          22.500     0.0
         2.850      0.0           7.800      0.0           12.750      0.0
17.700     0.0          22.650     0.0
         3.000      0.0           7.950      0.0           12.900      0.0
17.850     0.0          22.800     0.0
         3.150      0.0           8.100      0.0           13.050      0.0
18.000     0.0          22.950     0.0
         3.300      0.0           8.250      0.0           13.200      0.0
18.150     0.0          23.100     0.0
         3.450      0.0           8.400      0.0           13.350      0.0
18.300     0.0          23.250     0.0
         3.600      0.0           8.550      0.0           13.500      0.0
18.450     0.0          23.400     0.0
         3.750      0.0           8.700      0.0           13.650      0.0
18.600     0.0          23.550     0.0
         3.900      0.0           8.850      0.0           13.800      0.0
18.750     0.0          23.700     0.0
         4.050      0.0           9.000      0.0           13.950      0.0
18.900     0.0          23.850     0.0
         4.200      0.0           9.150      0.0           14.100      0.0
19.050     0.0          24.000     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     0.0
         4.650      0.0           9.600      0.0           14.550      0.0
19.500     0.0
         4.800      0.0           9.750      0.0           14.700      0.0
19.650     0.0

         RUNOFF VOLUME =     1.57183 INCHES     =        0.0290 ACRE-FEET
         PEAK DISCHARGE RATE =       0.75 CFS  AT   1.500 HOURS   BASIN AREA =
0.0003 SQ. MI.

    *basin PROPOSED DISTURBED SITE
    COMPUTE NM HYD        ID=3  HYD NO=103  DA= .0001755 SQ MI
                          PER A=0  PER B=34 PER C=40  PER D=26
                          TP=-.138  MASSRAIN=-1

           K =  0.075210HR    TP =  0.138000HR    K/TP RATIO =  0.545000     SHAPE
CONSTANT, N =  7.106428
           UNIT PEAK =  0.17401    CFS   UNIT VOLUME =   0.9307       B =   526.28
 P60 = 1.7800
           AREA =       0.000046 SQ MI    IA =   0.10000 INCHES    INF =   0.04000
INCHES PER HOUR
           RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000

           K =  0.121736HR    TP =  0.138000HR    K/TP RATIO =  0.882143     SHAPE
CONSTANT, N =  4.023019
           UNIT PEAK =  0.33569    CFS   UNIT VOLUME =   0.9628       B =   356.70
 P60 = 1.7800
                                     Page 5
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                                   AHYMO.OUT
           AREA =       0.000130 SQ MI    IA =   0.41892 INCHES    INF =   1.02297
INCHES PER HOUR
           RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000

    PRINT HYD             ID=3  CODE=3

                                       PARTIAL HYDROGRAPH   103.00

         TIME      FLOW           TIME      FLOW            TIME      FLOW
TIME      FLOW           TIME      FLOW
          HRS       CFS            HRS       CFS             HRS       CFS
HRS       CFS            HRS       CFS
         0.000      0.0           1.350      0.1            2.700      0.0
4.050      0.0          5.400      0.0
         0.150      0.0           1.500      0.4            2.850      0.0
4.200      0.0          5.550      0.0
         0.300      0.0           1.650      0.2            3.000      0.0
4.350      0.0          5.700      0.0
         0.450      0.0           1.800      0.1            3.150      0.0
4.500      0.0          5.850      0.0
         0.600      0.0           1.950      0.0            3.300      0.0
4.650      0.0          6.000      0.0
         0.750      0.0           2.100      0.0            3.450      0.0
4.800      0.0
         0.900      0.0           2.250      0.0            3.600      0.0
4.950      0.0
         1.050      0.0           2.400      0.0            3.750      0.0
5.100      0.0
         1.200      0.0           2.550      0.0            3.900      0.0
5.250      0.0

         RUNOFF VOLUME =     1.28542 INCHES     =        0.0120 ACRE-FEET
         PEAK DISCHARGE RATE =       0.35 CFS  AT   1.500 HOURS   BASIN AREA =
0.0002 SQ. MI.

    *  ROUTE BASIN PROPOSED DISTURBED BASIN THRU DETENTION

    * ROUTE THE TOTAL FLOW THROUGH THE PROPOSED RESERVOIR
    ROUTE RESERVOIR      ID=4   HYD NO=104   INFLOW=3   CODE=3
                         OUTFLOW(CFS)    STORAGE(AC-FT)    ELEV(FT)
                            0.00              0.001          77.00
                            0.247             0.0054         77.67

      *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *

        TIME      INFLOW     ELEV      VOLUME     OUTFLOW
        (HRS)     (CFS)     (FEET)     (AC-FT)    (CFS)

        0.00      0.00      77.00      0.001      0.00
        0.15      0.00      77.00      0.001      0.00
        0.30      0.00      77.00      0.001      0.00
        0.45      0.00      77.00      0.001      0.00
        0.60      0.00      77.00      0.001      0.00
        0.75      0.00      77.00      0.001      0.00
        0.90      0.01      77.01      0.001      0.00
        1.05      0.01      77.02      0.001      0.01
        1.20      0.02      77.03      0.001      0.01
        1.35      0.09      77.08      0.002      0.03
        1.50      0.35      77.37      0.003      0.14
                                     Page 6
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                                   AHYMO.OUT
        1.65      0.23      77.60      0.005      0.22
        1.80      0.09      77.49      0.004      0.18
        1.95      0.04      77.32      0.003      0.12
        2.10      0.02      77.20      0.002      0.07
        2.25      0.01      77.13      0.002      0.05
        2.40      0.01      77.08      0.001      0.03
        2.55      0.00      77.04      0.001      0.02
        2.70      0.00      77.02      0.001      0.01
        2.85      0.00      77.01      0.001      0.01
        3.00      0.00      77.01      0.001      0.00
     PEAK DISCHARGE =         0.221 CFS - PEAK OCCURS AT HOUR    1.65
     MAXIMUM WATER SURFACE ELEVATION =       77.599
     MAXIMUM STORAGE =        0.0049 AC-FT      INCREMENTAL TIME=    0.050000HRS

    *  TOTAL PROPOSED DISCHARGE
    ADD HYD               ID=5  HYD NO=105  ID I=2 ID II=4

    PRINT HYD             ID=5  CODE=3

                                       PARTIAL HYDROGRAPH   105.00

         TIME      FLOW           TIME      FLOW            TIME      FLOW
TIME      FLOW           TIME      FLOW
          HRS       CFS            HRS       CFS             HRS       CFS
HRS       CFS            HRS       CFS
         0.000      0.0           4.950      0.0            9.900      0.0
14.850     0.0          19.800     0.0
         0.150      0.0           5.100      0.0           10.050      0.0
15.000     0.0          19.950     0.0
         0.300      0.0           5.250      0.0           10.200      0.0
15.150     0.0          20.100     0.0
         0.450      0.0           5.400      0.0           10.350      0.0
15.300     0.0          20.250     0.0
         0.600      0.0           5.550      0.0           10.500      0.0
15.450     0.0          20.400     0.0
         0.750      0.0           5.700      0.0           10.650      0.0
15.600     0.0          20.550     0.0
         0.900      0.0           5.850      0.0           10.800      0.0
15.750     0.0          20.700     0.0
         1.050      0.0           6.000      0.0           10.950      0.0
15.900     0.0          20.850     0.0
         1.200      0.1           6.150      0.0           11.100      0.0
16.050     0.0          21.000     0.0
         1.350      0.2           6.300      0.0           11.250      0.0
16.200     0.0          21.150     0.0
         1.500      0.9           6.450      0.0           11.400      0.0
16.350     0.0          21.300     0.0
         1.650      0.7           6.600      0.0           11.550      0.0
16.500     0.0          21.450     0.0
         1.800      0.4           6.750      0.0           11.700      0.0
16.650     0.0          21.600     0.0
         1.950      0.2           6.900      0.0           11.850      0.0
16.800     0.0          21.750     0.0
         2.100      0.1           7.050      0.0           12.000      0.0
16.950     0.0          21.900     0.0
         2.250      0.1           7.200      0.0           12.150      0.0
17.100     0.0          22.050     0.0
         2.400      0.1           7.350      0.0           12.300      0.0
17.250     0.0          22.200     0.0
         2.550      0.0           7.500      0.0           12.450      0.0
17.400     0.0          22.350     0.0
         2.700      0.0           7.650      0.0           12.600      0.0
17.550     0.0          22.500     0.0
         2.850      0.0           7.800      0.0           12.750      0.0
17.700     0.0          22.650     0.0
         3.000      0.0           7.950      0.0           12.900      0.0
                                     Page 7
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                                   AHYMO.OUT
17.850     0.0          22.800     0.0
         3.150      0.0           8.100      0.0           13.050      0.0
18.000     0.0          22.950     0.0
         3.300      0.0           8.250      0.0           13.200      0.0
18.150     0.0          23.100     0.0
         3.450      0.0           8.400      0.0           13.350      0.0
18.300     0.0          23.250     0.0
         3.600      0.0           8.550      0.0           13.500      0.0
18.450     0.0          23.400     0.0
         3.750      0.0           8.700      0.0           13.650      0.0
18.600     0.0          23.550     0.0
         3.900      0.0           8.850      0.0           13.800      0.0
18.750     0.0          23.700     0.0
         4.050      0.0           9.000      0.0           13.950      0.0
18.900     0.0          23.850     0.0
         4.200      0.0           9.150      0.0           14.100      0.0
19.050     0.0          24.000     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     0.0
         4.650      0.0           9.600      0.0           14.550      0.0
19.500     0.0
         4.800      0.0           9.750      0.0           14.700      0.0
19.650     0.0

         RUNOFF VOLUME =     1.44791 INCHES     =        0.0403 ACRE-FEET
         PEAK DISCHARGE RATE =       0.92 CFS  AT   1.550 HOURS   BASIN AREA =
0.0005 SQ. MI.

    FINISH

         NORMAL PROGRAM FINISH          END TIME (HR:MIN:SEC) = 10:19:01
                                     Page 8
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ENGINEER'S SEAL

DAVID SOULE · NEW MEXICO · 14522 · REGISTERED PROFESSIONAL ENGINEER

4/15/21

DAVID SOULE
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(505) 872-0999

DRAWN BY WCWJ

4-14-21
3-24-21

210210040-LAYOUT-4-14-21

SHEET #
2 OF 2

JOB #
21021040