CITY OF ALBUQUERQUE

Planning Department
David Campbell, Director

Mayor Timothy M. Keller

June 20, 2019

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

RE: **10101 Norman NE**
Grading and Drainage Plan
Engineer's Stamp Date: 6/13/19
Drainage File: E10D063

Dear Mr. Soule:

Based on the submittal received on 6/14/19, the grading and drainage plan is approved for Grading Permit and 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 (Curtis Cherne, PE, ccherne@cabq.gov, 924-3420) 14 days prior to any earth disturbance.

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

Prior to Certificate of Occupancy (For Information):

1. Engineer's Certification, per the DPM Chapter 22.7: *Engineer's Certification Checklist For Non-Subdivision* is required.

2. A Bernalillo County Recorded Private Facility Drainage Covenant is required for the stormwater quality ponds. The original notarized form, exhibit A (legible on 8.5x11 paper), and recording fee ($25, payable to Bernalillo County) must be turned into DRC (4th, Plaza del Sol) for routing. Please contact Charlotte LaBadie (clabadie@cabq.gov, 924-3996) or Madeline Carruthers (mtafoya@cabq.gov, 924-3997) regarding the routing and recording process for covenants. The routing and recording process for covenants can take a month or longer; Hydrology recommends beginning this process as soon as possible as to not delay approval for certificate of occupancy.

If you have any questions, please contact me at 924-3695 or dpeterson@cabq.gov.

Sincerely,

Dana Peterson, P.E.
Senior Engineer, Planning Dept.
Development Review Services

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 6/2018)

Project Title: 10101 Norman Building Permit #:_____ Hydrology File #: _____

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

Legal Description: LOT 44 BLOCK 125 SNOW HEIGHTS

City Address: 10101 Norman

Applicant: BRIAN LEE 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 X ADMIN SITE

Check all that Apply:

DEPARTMENT:

X HYDROLOGY/ DRAINAGE

___ TRAFFIC/ TRANSPORTATION

TYPE OF SUBMITTAL:

___ ENGINEER/ARCHITECT CERTIFICATION

___ PAD CERTIFICATION

___ CONCEPTUAL G & D PLAN

X 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 X No

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

X 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

X 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:_____

DRAINAGE REPORT

For

Norman Apartment

Albuquerque, New Mexico

Prepared by

Rio Grande Engineering
PO Box 93924
Albuquerque, New Mexico 87199

June 2019

David Soule P.E. No. 14522

TABLE OF CONTENTS

Appendix

Map Pocket

Site Grading and Drainage Plan

PURPOSE

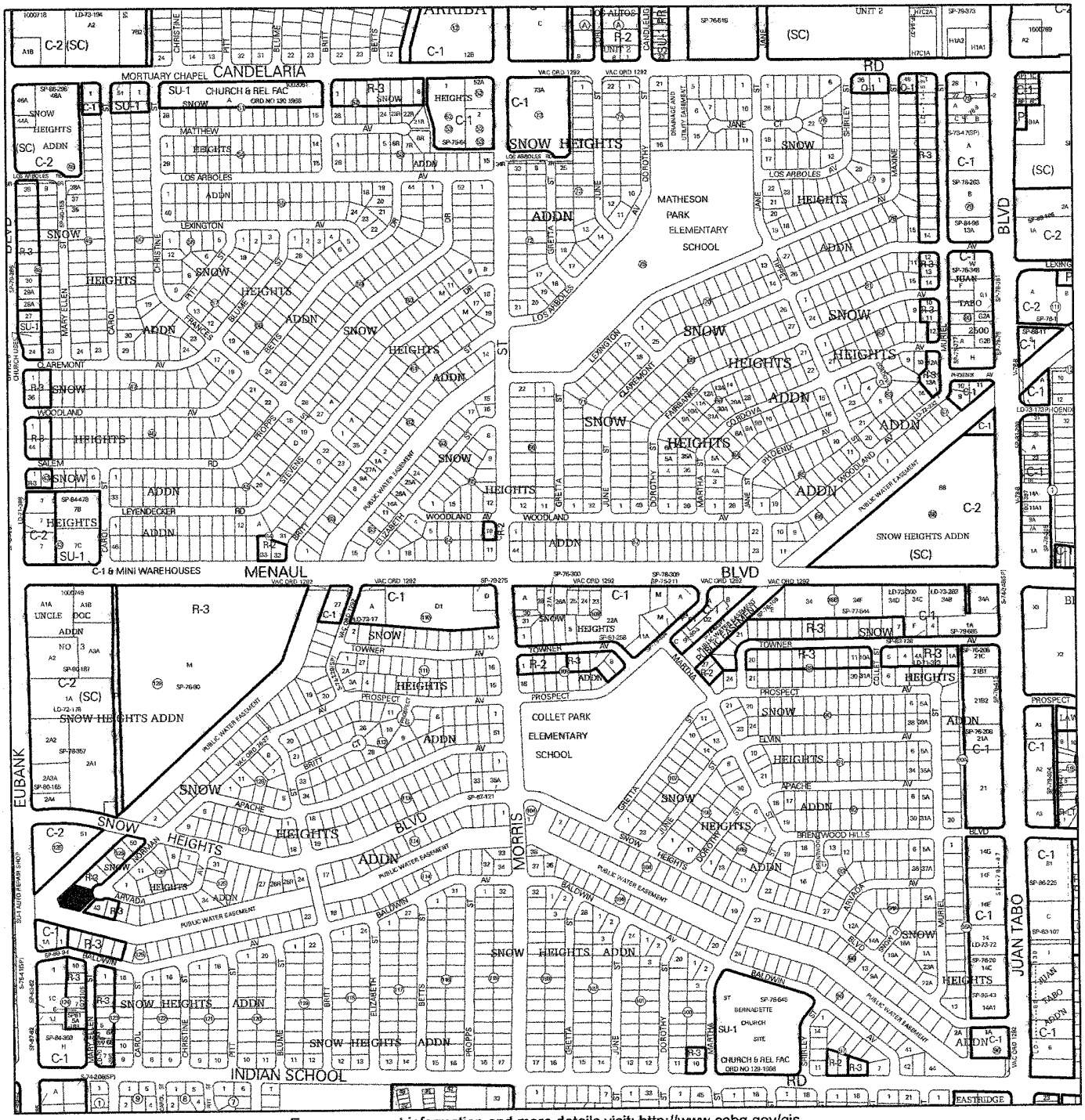
The purpose of this report is to provide the Drainage Management Plan for the infill development of an existing lot between Snow Heights and Indian School east of Eubank. . This plan was prepared in accordance with the City of Albuquerque design regulations, utilizing the City of Albuquerque's Development Process Manual drainage guidelines. This report will demonstrate that the grading does not adversely affect the surrounding properties, nor the upstream or downstream facilities.

INTRODUCTION

The subject of this report, as shown on the Exhibit A, is a 0.39-acre parcel of land located at 10101 Norman NE in north east Albuquerque. The legal description of this site is lot 44 Block 125 Snow heights Addition. As shown on FIRM map35001C0356HG, the entire property is located within Flood Zone X. This site is surrounded by fully developed parcels. The site is bound by two city maintained drainage channels. This site is an existing developed site within fully developed areas. Based on the site location and the adjacent drainage infrastructure this development must maintain existing drainage patterns and match existing conditions as closely as possible.

EXISTING CONDITIONS

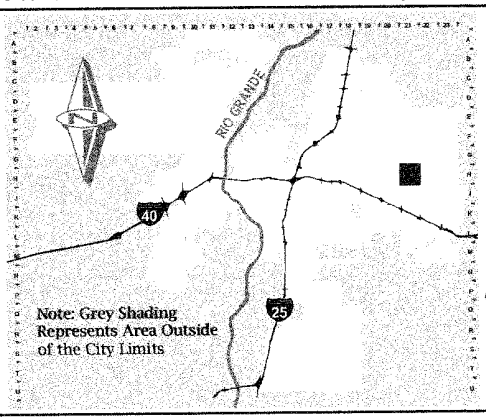
The site is currently developed as a single family residential lot. The site is not in native condition. Due to curb and gutter and adjacent drainage infrastructure, this lot is not impacted by upland flow. The site currently discharges 1.07 cfs to thru the rear wall to the adjacent channels. The discharge leaves the site thru a series of turned blocks within the perimeter wall.



For more current information and more details visit: http://www.cabq.gov/gis

Albuquerque Geographic Information System

Map amended through: 2/4/2010



Zone Atlas Page:

H-21-Z

Selected Symbols

- SECTOR PLANS
- Design Overlay Zones
- City Historic Zones
- H-1 Buffer Zone
- Petroglyph Mon.
- Escarpment
- 2 Mile Airport Zone
- Airport Noise Contours
- Wall Overlay Zone

Feet

0 750 1,500

PROPOSED CONDITIONS

The proposed improvements consist of a two unit townhouse building and associated parking area. The site will be graded to accommodate the new building while maintaining the existing drainage patterns. As shown on the grading plan, the site will be graded to contain two basins. The site was modeled utilizing NOAA atlas rainfall data and AHMYO, located appendix B. The northern basin contains the northern half of the new units and a portion of the existing building. This basin generates 0.50 cfs. The flow drains through a water quality/detention basin at the northwest corner of the site. The pond discharges to the existing drainage rights of way via the existing turned blocks in the wall. The required first flush volume of 44 cf is retained onsite. The southern basin contains the remaining portion of the lot. This basin generates 0.85 cfs. The basin discharges to a new 6" pipe connected to an existing concrete channel. The parking area serves as a detention basin and the peak routed flow leaving this basin 0.43 cfs. An emergency overflow for this basin is provided by a turned block. The combined proposed peak flow leaving the site will be 0.82 cfs. The required first flush volume of 142 cf is retained onsite.

SUMMARY AND RECOMMENDATIONS

This project is an infill project within a completely developed area of North Albuquerque. The site is currently undeveloped. The site currently discharges 1.07 cfs to the adjacent drainage right of way. The site is not impacted by upland flows. The proposed drainage plan will maintain the existing drainage patterns and reduce the peak flow to 0.82 cfs to pass through the site. The first flush volumes are retained onsite. since this site work area encompasses less than 1 acre, a NPDES permit and Erosion and Sediment Control Plan may not be required prior to any construction activity.

APPENDIX A

SITE HYDROLOGY / AHYMO MODEL

General Information
Homepage
Progress Reports
FAQ
Glossary

Precipitation Frequency
Data Server
GIS Grids
Maps
Time Series
Temporals
Documents

Probable Maximum Precipitation
Documents

Miscellaneous
Publications
Storm Analysis
Record Precipitation

Contact Us
Inquiries

USA.gov

NOAA ATLAS 14 POINT PRECIPITATION FREQUENCY ESTIMATES: NM

Data description

Data type: Precipitation depth ▼ **Units:** English ▼ **Time series type:** Partial duration ▼

Select location

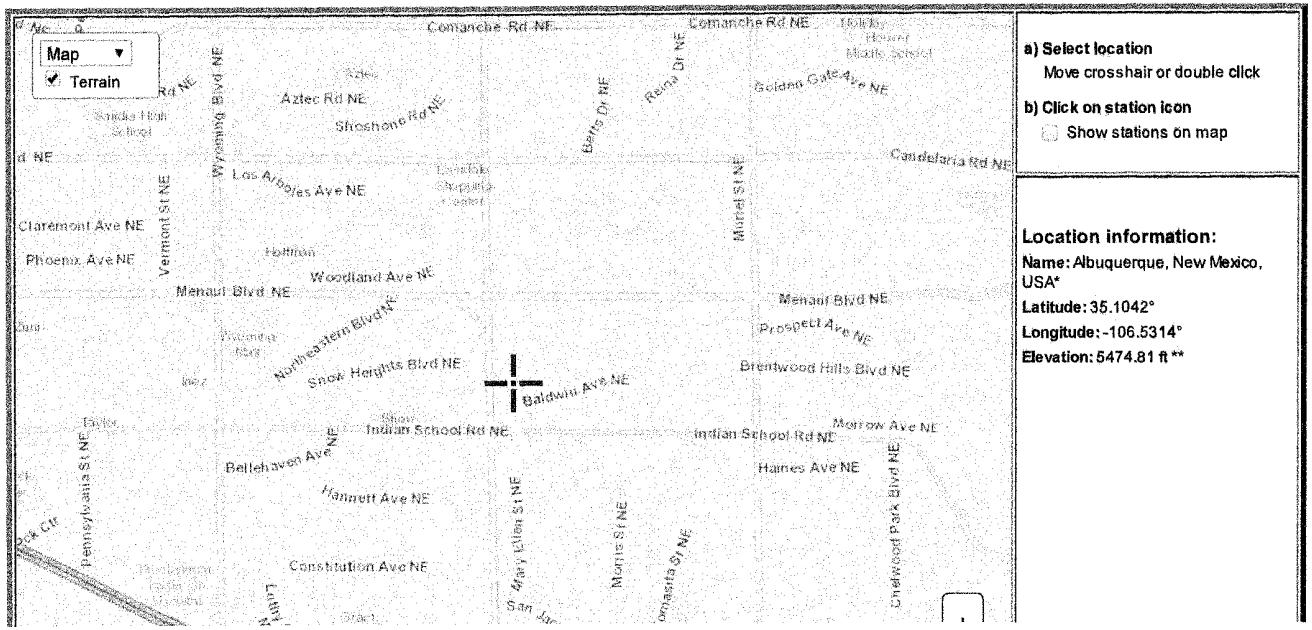
1) Manually:

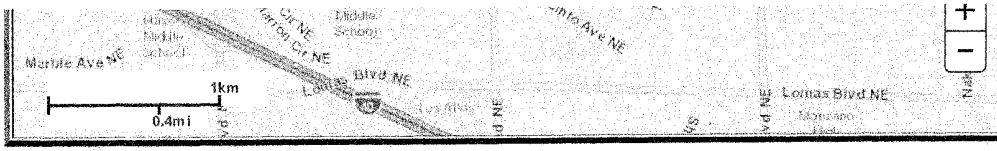
a) By location (decimal degrees, use "-" for S and W); Latitude: Longitude: Submit

b) By station (list of NM stations): Select station ▼

c) By address Search

2) Use map (if ESRI interactive map is not loading, try adding the host: **https://js.arcgis.com/** to the firewall, or contact us at hdsc.questions@noaa.gov):





* Source: ESRI Maps
** Source: USGS

POINT PRECIPITATION FREQUENCY (PF) ESTIMATES

WITH 90% CONFIDENCE INTERVALS AND SUPPLEMENTARY INFORMATION
NOAA Atlas 14, Volume 1, Version 5

PF tabular PF graphical Supplementary information Print page

PDS-based precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.179** (0.152-0.211)	**0.232** (0.196-0.274)	**0.310** (0.262-0.367)	**0.371** (0.313-0.438)	**0.455** (0.382-0.536)	**0.520** (0.434-0.612)	**0.589** (0.488-0.692)	**0.661** (0.544-0.776)	**0.758** (0.619-0.892)	**0.836** (0.679-0.983)
10-min	**0.272** (0.231-0.321)	**0.352** (0.298-0.416)	**0.473** (0.399-0.558)	**0.565** (0.476-0.666)	**0.692** (0.581-0.815)	**0.791** (0.661-0.932)	**0.896** (0.743-1.05)	**1.00** (0.829-1.18)	**1.15** (0.942-1.36)	**1.27** (1.03-1.50)
15-min	**0.338** (0.286-0.398)	**0.437** (0.369-0.516)	**0.586** (0.495-0.692)	**0.701** (0.590-0.826)	**0.858** (0.720-1.01)	**0.981** (0.820-1.16)	**1.11** (0.921-1.31)	**1.25** (1.03-1.47)	**1.43** (1.17-1.68)	**1.58** (1.28-1.86)
30-min	**0.455** (0.385-0.536)	**0.588** (0.497-0.695)	**0.789** (0.667-0.932)	**0.944** (0.794-1.11)	**1.16** (0.970-1.36)	**1.32** (1.10-1.56)	**1.50** (1.24-1.76)	**1.68** (1.38-1.97)	**1.93** (1.57-2.27)	**2.12** (1.72-2.50)
60-min	**0.563** (0.477-0.663)	**0.727** (0.615-0.860)	**0.976** (0.825-1.15)	**1.17** (0.983-1.38)	**1.43** (1.20-1.68)	**1.64** (1.37-1.93)	**1.85** (1.54-2.18)	**2.08** (1.71-2.44)	**2.38** (1.95-2.80)	**2.63** (2.13-3.09)
2-hr	**0.668** (0.557-0.817)	**0.857** (0.714-1.05)	**1.13** (0.942-1.38)	**1.35** (1.12-1.64)	**1.66** (1.36-2.01)	**1.91** (1.56-2.31)	**2.17** (1.76-2.62)	**2.44** (1.97-2.94)	**2.82** (2.25-3.40)	**3.13** (2.48-3.78)
3-hr	**0.713** (0.598-0.866)	**0.907** (0.758-1.10)	**1.19** (0.994-1.44)	**1.41** (1.18-1.70)	**1.72** (1.42-2.08)	**1.97** (1.62-2.38)	**2.24** (1.83-2.69)	**2.52** (2.04-3.03)	**2.91** (2.34-3.49)	**3.23** (2.57-3.88)
6-hr	**0.831** (0.703-1.00)	**1.05** (0.888-1.27)	**1.35** (1.14-1.63)	**1.59** (1.34-1.91)	**1.92** (1.60-2.30)	**2.17** (1.81-2.60)	**2.44** (2.02-2.92)	**2.72** (2.24-3.25)	**3.10** (2.54-3.70)	**3.42** (2.77-4.08)
12-hr	**0.926** (0.795-1.08)	**1.17** (1.00-1.37)	**1.48** (1.26-1.73)	**1.73** (1.47-2.02)	**2.06** (1.75-2.40)	**2.32** (1.96-2.70)	**2.59** (2.18-3.01)	**2.87** (2.39-3.34)	**3.24** (2.68-3.78)	**3.55** (2.91-4.14)
24-hr	**1.07** (0.932-1.24)	**1.34** (1.17-1.55)	**1.68** (1.46-1.94)	**1.95** (1.70-2.25)	**2.32** (2.01-2.68)	**2.60** (2.25-3.00)	**2.90** (2.49-3.34)	**3.20** (2.74-3.68)	**3.61** (3.07-4.15)	**3.93** (3.32-4.52)
2-day	**1.14** (0.993-1.30)	**1.43** (1.25-1.63)	**1.80** (1.57-2.05)	**2.08** (1.82-2.38)	**2.48** (2.15-2.83)	**2.78** (2.41-3.18)	**3.10** (2.67-3.54)	**3.43** (2.94-3.92)	**3.86** (3.29-4.43)	**4.21** (3.57-4.83)
3-day	**1.25** (1.12-1.40)	**1.56** (1.40-1.74)	**1.94** (1.74-2.17)	**2.24** (2.00-2.50)	**2.65** (2.36-2.96)	**2.96** (2.63-3.31)	**3.28** (2.90-3.66)	**3.61** (3.18-4.03)	**4.04** (3.54-4.53)	**4.38** (3.82-4.91)
4-day	**1.36** (1.25-1.49)	**1.69** (1.55-1.85)	**2.09** (1.91-2.28)	**2.40** (2.19-2.62)	**2.82** (2.56-3.08)	**3.14** (2.85-3.43)	**3.46** (3.13-3.78)	**3.79** (3.42-4.14)	**4.22** (3.79-4.62)	**4.56** (4.07-5.00)
7-day	**1.57** (1.44-1.71)	**1.95** (1.79-2.12)	**2.38** (2.19-2.60)	**2.72** (2.49-2.97)	**3.18** (2.90-3.45)	**3.51** (3.21-3.82)	**3.85** (3.51-4.19)	**4.19** (3.80-4.55)	**4.62** (4.18-5.04)	**4.95** (4.46-5.40)
10-day	**1.74** (1.61-1.90)	**2.17** (1.99-2.36)	**2.67** (2.45-2.90)	**3.06** (2.81-3.32)	**3.58** (3.28-3.88)	**3.97** (3.63-4.30)	**4.37** (3.98-4.73)	**4.76** (4.32-5.16)	**5.28** (4.77-5.73)	**5.67** (5.10-6.16)
20-day	**2.23** (2.05-2.43)	**2.78** (2.55-3.03)	**3.39** (3.11-3.68)	**3.84** (3.53-4.18)	**4.43** (4.06-4.82)	**4.86** (4.45-5.28)	**5.28** (4.82-5.74)	**5.68** (5.17-6.17)	**6.19** (5.62-6.73)	**6.56** (5.94-7.15)

30-day	**2.69** (2.47-2.92)	**3.35** (3.07-3.63)	**4.04** (3.71-4.38)	**4.56** (4.18-4.94)	**5.22** (4.78-5.64)	**5.69** (5.20-6.14)	**6.14** (5.60-6.63)	**6.57** (5.98-7.10)	**7.09** (6.44-7.67)	**7.47** (6.77-8.09)
45-day	**3.29** (3.04-3.56)	**4.08** (3.77-4.42)	**4.88** (4.50-5.28)	**5.46** (5.03-5.90)	**6.17** (5.67-6.67)	**6.66** (6.12-7.20)	**7.12** (6.54-7.70)	**7.54** (6.91-8.15)	**8.04** (7.35-8.70)	**8.37** (7.65-9.07)
60-day	**3.79** (3.50-4.11)	**4.70** (4.34-5.09)	**5.62** (5.19-6.09)	**6.29** (5.80-6.81)	**7.09** (6.54-7.68)	**7.65** (7.05-8.28)	**8.17** (7.52-8.85)	**8.64** (7.95-9.38)	**9.21** (8.45-10.00)	**9.58** (8.80-10.4)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

Estimates from the table in CSV format: Precipitation frequency estimates ▼ Submit

Main Link Categories:
Home | OWP

US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
Office of Water Prediction (OWP)
1325 East West Highway
Silver Spring, MD 20910
Page Author: HDSC webmaster
Page last modified: April 21, 2017

FIRST FLUSH VOLUMES

NORTH BASIN

REQUIRED=1550X.034/12=44 CU. FT

PROVIDED=60 CU.FT

SOUTH BASIN= 5024 SF x0.34/12=142 CU FT

PROVIDED=144 CU.FT

VOLUME CALCULATIONS

pond b

OUTLET@73

outlet at 74

ACTUAL ELEV.	DEPTH (FT)	AREA SF	VOLUME PER UNIT	VOLUME CUMULATIVE	VOLUME AC-FT	Q (CFS)
73.00	0.00	30.00	0	0	0.000	0.00
74.00	0.00	1106.00	568.00	568	0.001	0.00
74.50	0.83	1520.00	656.50	1224.5	0.028	0.86
75.00	1.33	2400.00	980.00	2204.5	0.051	1.09

Orifice Equation

$Q = CA\ SQRT(2gH)$

C =	0.6
Diameter (in)	6
Area (ft^2)=	0.196349541
g =	32.2
H (Ft) =	Depth of water above center of orifice
Q (CFS)=	Flow

```
*S      AHYMO -  DETENTION-NORMAN
*S             POND ROUTING

START                TIME=0.0  PUNCH CODE=0


RAINFALL             TYPE=2
                     QUARTER=0.0    ONE= 1.85 IN
                     SIX=2.44 IN   DAY= 2.90 IN   DT = 0.05 HR



*Basin EXISTING
COMPUTE NM HYD       ID=1  HYD NO=101  DA= .000606348 SQ MI

                     PER A=00  PER B=41 PER C=42  PER D=17
                     TP=-.170  MASSRAIN=-1


PRINT HYD            ID=1  CODE=3



*Basin NORTH PROPOSED
COMPUTE NM HYD       ID=2  HYD NO=102  DA= .000240796 SQ MI

                     PER A=00  PER B=23 PER C=39  PER D=38
                     TP=-.170  MASSRAIN=-1

PRINT HYD            ID=2  CODE=3


*Basin SOUTH PROPOSED
COMPUTE NM HYD       ID=3  HYD NO=103  DA= .000365552 SQ MI

                     PER A=00  PER B=10 PER C=25  PER D=65
                     TP=-.170  MASSRAIN=-1

PRINT HYD            ID=3  CODE=3


* 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          74.00
                        0.86             0.028          74.50
                        1.09             0.051          75.00

*TOTAL PROPOSED

ADD HYD              ID=5  HYD NO=105  ID I=2 ID II=4

PRINT HYD            ID=5  CODE=3


FINISH
```

```
        AHYMO PROGRAM (AHYMO-S4)                    - Version: S4.01a - Rel:
01a
             RUN DATE (MON/DAY/YR) = 06/13/2019
             START TIME (HR:MIN:SEC) = 17:00:38     USER NO.=
RioGrandeSingleA41963517
             INPUT FILE = C:\Documents and Settings\Owner\Desktop\2019
JOBS\1976-norman\pondrout061219.txt


    *S      AHYMO -  DETENTION-NORMAN

    *S               POND ROUTING


    START            TIME=0.0  PUNCH CODE=0



    RAINFALL         TYPE=2

                     QUARTER=0.0    ONE= 1.85 IN

                     SIX=2.44 IN    DAY= 2.90 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  0.0039  0.0080  0.0123  0.0170  0.0218  0.0273
                    0.0350  0.0473  0.0605  0.0742  0.0891  0.1041  0.1196
                    0.1355  0.1517  0.1696  0.1883  0.2083  0.2329  0.2596
                    0.2955  0.3361  0.3863  0.4532  0.5285  0.6585  0.8606
                    1.2070  1.4505  1.6425  1.7389  1.8235  1.8843  1.9326
                    1.9747  2.0056  2.0339  2.0573  2.0777  2.0966  2.1136
                    2.1297  2.1439  2.1574  2.1706  2.1833  2.1938  2.1997
                    2.2054  2.2110  2.2163  2.2216  2.2267  2.2317  2.2367
                    2.2414  2.2460  2.2506  2.2551  2.2595  2.2637  2.2679
                    2.2720  2.2761  2.2801  2.2839  2.2877  2.2915  2.2952
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2.2988	2.3024	2.3060	2.3095	2.3130	2.3164	2.3198
2.3232	2.3265	2.3298	2.3330	2.3362	2.3394	2.3425
2.3456	2.3487	2.3518	2.3548	2.3577	2.3607	2.3636
2.3665	2.3694	2.3722	2.3750	2.3778	2.3805	2.3833
2.3860	2.3886	2.3913	2.3939	2.3965	2.3991	2.4017
2.4042	2.4068	2.4093	2.4117	2.4142	2.4166	2.4191
2.4215	2.4238	2.4262	2.4285	2.4309	2.4332	2.4355
2.4377	2.4400	2.4423	2.4445	2.4468	2.4490	2.4512
2.4535	2.4557	2.4579	2.4601	2.4623	2.4645	2.4667
2.4689	2.4711	2.4733	2.4755	2.4776	2.4798	2.4820
2.4841	2.4863	2.4884	2.4906	2.4927	2.4948	2.4969
2.4991	2.5012	2.5033	2.5054	2.5075	2.5096	2.5117
2.5137	2.5158	2.5179	2.5199	2.5220	2.5241	2.5261
2.5281	2.5302	2.5322	2.5342	2.5363	2.5383	2.5403
2.5423	2.5443	2.5463	2.5483	2.5503	2.5522	2.5542
2.5562	2.5581	2.5601	2.5621	2.5640	2.5659	2.5679
2.5698	2.5717	2.5736	2.5756	2.5775	2.5794	2.5813
2.5832	2.5850	2.5869	2.5888	2.5907	2.5925	2.5944
2.5962	2.5981	2.5999	2.6018	2.6036	2.6054	2.6073
2.6091	2.6109	2.6127	2.6145	2.6163	2.6181	2.6198
2.6216	2.6234	2.6252	2.6269	2.6287	2.6304	2.6322
2.6339	2.6356	2.6374	2.6391	2.6408	2.6425	2.6442
2.6459	2.6476	2.6493	2.6510	2.6527	2.6543	2.6560
2.6577	2.6593	2.6610	2.6626	2.6643	2.6659	2.6675
2.6692	2.6708	2.6724	2.6740	2.6756	2.6772	2.6788
2.6804	2.6820	2.6835	2.6851	2.6867	2.6882	2.6898
2.6913	2.6929	2.6944	2.6959	2.6975	2.6990	2.7005
2.7020	2.7035	2.7050	2.7065	2.7080	2.7095	2.7109
2.7124	2.7139	2.7153	2.7168	2.7182	2.7197	2.7211
2.7225	2.7240	2.7254	2.7268	2.7282	2.7296	2.7310
2.7324	2.7338	2.7352	2.7366	2.7379	2.7393	2.7407
2.7420	2.7434	2.7447	2.7461	2.7474	2.7487	2.7500
2.7513	2.7527	2.7540	2.7553	2.7566	2.7578	2.7591
2.7604	2.7617	2.7629	2.7642	2.7655	2.7667	2.7680
2.7692	2.7704	2.7717	2.7729	2.7741	2.7753	2.7765
2.7777	2.7789	2.7801	2.7813	2.7825	2.7836	2.7848
2.7860	2.7871	2.7883	2.7894	2.7906	2.7917	2.7928
2.7939	2.7951	2.7962	2.7973	2.7984	2.7995	2.8006
2.8017	2.8027	2.8038	2.8049	2.8059	2.8070	2.8081
2.8091	2.8101	2.8112	2.8122	2.8132	2.8142	2.8153
2.8163	2.8173	2.8183	2.8193	2.8202	2.8212	2.8222
2.8232	2.8241	2.8251	2.8260	2.8270	2.8279	2.8289
2.8298	2.8307	2.8316	2.8325	2.8334	2.8344	2.8352
2.8361	2.8370	2.8379	2.8388	2.8396	2.8405	2.8414
2.8422	2.8431	2.8439	2.8447	2.8456	2.8464	2.8472
2.8480	2.8488	2.8496	2.8504	2.8512	2.8520	2.8528
2.8536	2.8543	2.8551	2.8559	2.8566	2.8574	2.8581
2.8588	2.8596	2.8603	2.8610	2.8617	2.8624	2.8631
2.8638	2.8645	2.8652	2.8659	2.8666	2.8672	2.8679
2.8686	2.8692	2.8699	2.8705	2.8711	2.8718	2.8724
2.8730	2.8736	2.8742	2.8748	2.8754	2.8760	2.8766
2.8772	2.8778	2.8783	2.8789	2.8795	2.8800	2.8806
2.8811	2.8816	2.8822	2.8827	2.8832	2.8837	2.8842
2.8847	2.8852	2.8857	2.8862	2.8867	2.8872	2.8876
2.8881	2.8886	2.8890	2.8895	2.8899	2.8903	2.8908
2.8912	2.8916	2.8920	2.8924	2.8928	2.8932	2.8936
2.8940	2.8944	2.8948	2.8951	2.8955	2.8958	2.8962
2.8965	2.8969	2.8972	2.8976	2.8979	2.8982	2.8985
2.8988	2.8991	2.8994	2.8997	2.9000		

*Basin EXISTING

COMPUTE NM HYD ID=1 HYD NO=101 DA= .000606348 SQ MI

PER A=00 PER B=41 PER C=42 PER D=17

TP=-.170 MASSRAIN=-1

K = 0.092650HR TP = 0.170000HR K/TP RATIO = 0.545000

SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 0.31911 CFS UNIT VOLUME = 0.9655 B = 526.28 P60 = 1.8500
AREA = 0.000103 SQ MI IA = 0.10000 INCHES INF = 0.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

K = 0.150918HR TP = 0.170000HR K/TP RATIO = 0.887754

SHAPE CONSTANT, N = 3.995652
UNIT PEAK = 1.0506 CFS UNIT VOLUME = 0.9888 B = 354.88 P60 = 1.8500
AREA = 0.000503 SQ MI IA = 0.42410 INCHES INF = 1.03747 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 HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
0.000	0.0	4.050	0.0	8.100	0.0
12.150	0.0	16.200	0.0		
0.150	0.0	4.200	0.0	8.250	0.0
12.300	0.0	16.350	0.0		
0.300	0.0	4.350	0.0	8.400	0.0
12.450	0.0	16.500	0.0		
0.450	0.0	4.500	0.0	8.550	0.0
12.600	0.0	16.650	0.0		
0.600	0.0	4.650	0.0	8.700	0.0

12.750	0.0	16.800	0.0				
0.750	0.0	4.800	0.0	8.850	0.0		
12.900	0.0	16.950	0.0				
0.900	0.0	4.950	0.0	9.000	0.0		
13.050	0.0	17.100	0.0				
1.050	0.0	5.100	0.0	9.150	0.0		
13.200	0.0	17.250	0.0				
1.200	0.0	5.250	0.0	9.300	0.0		
13.350	0.0	17.400	0.0				
1.350	0.2	5.400	0.0	9.450	0.0		
13.500	0.0	17.550	0.0				
1.500	1.0	5.550	0.0	9.600	0.0		
13.650	0.0	17.700	0.0				
1.650	0.9	5.700	0.0	9.750	0.0		
13.800	0.0	17.850	0.0				
1.800	0.4	5.850	0.0	9.900	0.0		
13.950	0.0	18.000	0.0				
1.950	0.2	6.000	0.0	10.050	0.0		
14.100	0.0	18.150	0.0				
2.100	0.1	6.150	0.0	10.200	0.0		
14.250	0.0	18.300	0.0				
2.250	0.1	6.300	0.0	10.350	0.0		
14.400	0.0	18.450	0.0				
2.400	0.1	6.450	0.0	10.500	0.0		
14.550	0.0	18.600	0.0				
2.550	0.0	6.600	0.0	10.650	0.0		
14.700	0.0	18.750	0.0				
2.700	0.0	6.750	0.0	10.800	0.0		
14.850	0.0	18.900	0.0				
2.850	0.0	6.900	0.0	10.950	0.0		
15.000	0.0	19.050	0.0				
3.000	0.0	7.050	0.0	11.100	0.0		
15.150	0.0	19.200	0.0				
3.150	0.0	7.200	0.0	11.250	0.0		
15.300	0.0	19.350	0.0				
3.300	0.0	7.350	0.0	11.400	0.0		
15.450	0.0	19.500	0.0				
3.450	0.0	7.500	0.0	11.550	0.0		
15.600	0.0	19.650	0.0				
3.600	0.0	7.650	0.0	11.700	0.0		
15.750	0.0	19.800	0.0				
3.750	0.0	7.800	0.0	11.850	0.0		
15.900	0.0	19.950	0.0				
3.900	0.0	7.950	0.0	12.000	0.0		

16.050 0.0

RUNOFF VOLUME = 1.25558 INCHES = 0.0406 ACRE-FEET
PEAK DISCHARGE RATE = 1.07 CFS AT 1.550 HOURS BASIN AREA =

0.0006 SQ. MI.

*Basin NORTH PROPOSED

COMPUTE NM HYD ID=2 HYD NO=102 DA= .000240796 SQ MI

PER A=00 PER B=23 PER C=39 PER D=38

TP=-.170 MASSRAIN=-1

K = 0.092650HR TP = 0.170000HR K/TP RATIO = 0.545000

SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 0.28327 CFS UNIT VOLUME = 0.9587 B =

526.28 P60 = 1.8500
AREA = 0.000092 SQ MI IA = 0.10000 INCHES INF = 0.04000

INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT

= 0.050000

K = 0.146886HR TP = 0.170000HR K/TP RATIO = 0.864036

SHAPE CONSTANT, N = 4.113943
UNIT PEAK = 0.31852 CFS UNIT VOLUME = 0.9582 B =

362.70 P60 = 1.8500
AREA = 0.000149 SQ MI IA = 0.40565 INCHES INF = 0.98581

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 HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
0.000	0.0	3.900	0.0	7.800	0.0
0.150	0.0	4.050	0.0	7.950	0.0
0.300	0.0	4.200	0.0	8.100	0.0
0.450	0.0	4.350	0.0	8.250	0.0
0.600	0.0	4.500	0.0	8.400	0.0
0.750	0.0	4.650	0.0	8.550	0.0
0.900	0.0	4.800	0.0	8.700	0.0
1.050	0.0	4.950	0.0	8.850	0.0
1.200	0.0	5.100	0.0	9.000	0.0
1.350	0.1	5.250	0.0	9.150	0.0
1.500	0.5	5.400	0.0	9.300	0.0
1.650	0.4	5.550	0.0	9.450	0.0
1.800	0.2	5.700	0.0	9.600	0.0
1.950	0.1	5.850	0.0	9.750	0.0
2.100	0.1	6.000	0.0	9.900	0.0
2.250	0.0	6.150	0.0	10.050	0.0
2.400	0.0	6.300	0.0	10.200	0.0
2.550	0.0	6.450	0.0	10.350	0.0
2.700	0.0	6.600	0.0	10.500	0.0
2.850	0.0	6.750	0.0	10.650	0.0

14.550	0.0	18.450	0.0				
3.000	0.0	6.900	0.0	10.800	0.0		
14.700	0.0	18.600	0.0				
3.150	0.0	7.050	0.0	10.950	0.0		
14.850	0.0	18.750	0.0				
3.300	0.0	7.200	0.0	11.100	0.0		
15.000	0.0	18.900	0.0				
3.450	0.0	7.350	0.0	11.250	0.0		
15.150	0.0	19.050	0.0				
3.600	0.0	7.500	0.0	11.400	0.0		
15.300	0.0						
3.750	0.0	7.650	0.0	11.550	0.0		
15.450	0.0						

RUNOFF VOLUME = 1.62552 INCHES = 0.0209 ACRE-FEET
PEAK DISCHARGE RATE = 0.50 CFS AT 1.550 HOURS BASIN AREA = 0.0002 SQ. MI.

*Basin SOUTH PROPOSED

COMPUTE NM HYD ID=3 HYD NO=103 DA= .000365552 SQ MI

PER A=00 PER B=10 PER C=25 PER D=65

TP=-.170 MASSRAIN=-1

K = 0.092650HR TP = 0.170000HR K/TP RATIO = 0.545000
SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 0.73557 CFS UNIT VOLUME = 0.9858 B = 526.28 P60 = 1.8500
AREA = 0.000238 SQ MI IA = 0.10000 INCHES INF = 0.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

K = 0.144092HR TP = 0.170000HR K/TP RATIO = 0.847598
SHAPE CONSTANT, N = 4.200762

UNIT PEAK = 0.27722 CFS UNIT VOLUME = 0.9548 B = 368.34 P60 = 1.8500
AREA = 0.000128 SQ MI IA = 0.39286 INCHES INF = 0.95000 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 HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
0.000	0.0	4.800	0.0	9.600	0.0
14.400	0.0	19.200	0.0		
0.150	0.0	4.950	0.0	9.750	0.0
14.550	0.0	19.350	0.0		
0.300	0.0	5.100	0.0	9.900	0.0
14.700	0.0	19.500	0.0		
0.450	0.0	5.250	0.0	10.050	0.0
14.850	0.0	19.650	0.0		
0.600	0.0	5.400	0.0	10.200	0.0
15.000	0.0	19.800	0.0		
0.750	0.0	5.550	0.0	10.350	0.0
15.150	0.0	19.950	0.0		
0.900	0.0	5.700	0.0	10.500	0.0
15.300	0.0	20.100	0.0		
1.050	0.1	5.850	0.0	10.650	0.0
15.450	0.0	20.250	0.0		
1.200	0.1	6.000	0.0	10.800	0.0
15.600	0.0	20.400	0.0		
1.350	0.2	6.150	0.0	10.950	0.0
15.750	0.0	20.550	0.0		
1.500	0.8	6.300	0.0	11.100	0.0
15.900	0.0	20.700	0.0		
1.650	0.7	6.450	0.0	11.250	0.0
16.050	0.0	20.850	0.0		
1.800	0.3	6.600	0.0	11.400	0.0
16.200	0.0	21.000	0.0		
1.950	0.2	6.750	0.0	11.550	0.0
16.350	0.0	21.150	0.0		
2.100	0.1	6.900	0.0	11.700	0.0

16.500	0.0	21.300	0.0				
2.250	0.1	7.050	0.0	11.850	0.0		
16.650	0.0	21.450	0.0				
2.400	0.0	7.200	0.0	12.000	0.0		
16.800	0.0	21.600	0.0				
2.550	0.0	7.350	0.0	12.150	0.0		
16.950	0.0	21.750	0.0				
2.700	0.0	7.500	0.0	12.300	0.0		
17.100	0.0	21.900	0.0				
2.850	0.0	7.650	0.0	12.450	0.0		
17.250	0.0	22.050	0.0				
3.000	0.0	7.800	0.0	12.600	0.0		
17.400	0.0	22.200	0.0				
3.150	0.0	7.950	0.0	12.750	0.0		
17.550	0.0	22.350	0.0				
3.300	0.0	8.100	0.0	12.900	0.0		
17.700	0.0	22.500	0.0				
3.450	0.0	8.250	0.0	13.050	0.0		
17.850	0.0	22.650	0.0				
3.600	0.0	8.400	0.0	13.200	0.0		
18.000	0.0	22.800	0.0				
3.750	0.0	8.550	0.0	13.350	0.0		
18.150	0.0	22.950	0.0				
3.900	0.0	8.700	0.0	13.500	0.0		
18.300	0.0	23.100	0.0				
4.050	0.0	8.850	0.0	13.650	0.0		
18.450	0.0	23.250	0.0				
4.200	0.0	9.000	0.0	13.800	0.0		
18.600	0.0	23.400	0.0				
4.350	0.0	9.150	0.0	13.950	0.0		
18.750	0.0	23.550	0.0				
4.500	0.0	9.300	0.0	14.100	0.0		
18.900	0.0	23.700	0.0				
4.650	0.0	9.450	0.0	14.250	0.0		
19.050	0.0						

RUNOFF VOLUME = 2.07762 INCHES = 0.0405 ACRE-FEET
PEAK DISCHARGE RATE = 0.85 CFS AT 1.550 HOURS BASIN AREA =

0.0004 SQ. MI.

* 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	74.00
0.86	0.028	74.50
1.09	0.051	75.00

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TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
0.00	0.00	74.00	0.001	0.00
0.15	0.00	74.00	0.001	0.00
0.30	0.00	74.00	0.001	0.00
0.45	0.00	74.00	0.001	0.00
0.60	0.00	74.00	0.001	0.00
0.75	0.02	74.00	0.001	0.00
0.90	0.04	74.01	0.001	0.01
1.05	0.05	74.01	0.002	0.02
1.20	0.10	74.02	0.002	0.04
1.35	0.23	74.04	0.003	0.08
1.50	0.77	74.12	0.008	0.21
1.65	0.66	74.23	0.014	0.40
1.80	0.32	74.24	0.014	0.42
1.95	0.18	74.21	0.012	0.36
2.10	0.11	74.17	0.010	0.29
2.25	0.08	74.13	0.008	0.22
2.40	0.05	74.10	0.006	0.17
2.55	0.02	74.07	0.005	0.13
2.70	0.01	74.05	0.004	0.09
2.85	0.01	74.04	0.003	0.07
3.00	0.01	74.03	0.002	0.05
3.15	0.01	74.02	0.002	0.03
3.30	0.01	74.02	0.002	0.03
3.45	0.01	74.01	0.002	0.02
3.60	0.01	74.01	0.001	0.02
3.75	0.01	74.01	0.001	0.01
3.90	0.01	74.01	0.001	0.01
4.05	0.01	74.01	0.001	0.01
4.20	0.01	74.00	0.001	0.01
4.35	0.01	74.00	0.001	0.01
4.50	0.01	74.00	0.001	0.01
4.65	0.01	74.00	0.001	0.01
4.80	0.01	74.00	0.001	0.01
4.95	0.01	74.00	0.001	0.01
5.10	0.01	74.00	0.001	0.01
5.25	0.01	74.00	0.001	0.01
5.40	0.01	74.00	0.001	0.01
5.55	0.01	74.00	0.001	0.01
5.70	0.01	74.00	0.001	0.01

5.85	0.01	74.00	0.001	0.01
6.00	0.01	74.00	0.001	0.01
6.15	0.01	74.00	0.001	0.01
6.30	0.01	74.00	0.001	0.01
6.45	0.01	74.00	0.001	0.01
6.60	0.01	74.00	0.001	0.01
6.75	0.01	74.00	0.001	0.01
6.90	0.01	74.00	0.001	0.01
7.05	0.01	74.00	0.001	0.01
7.20	0.01	74.00	0.001	0.01
7.35	0.01	74.00	0.001	0.01
7.50	0.01	74.00	0.001	0.01
7.65	0.01	74.00	0.001	0.01
7.80	0.01	74.00	0.001	0.01
7.95	0.01	74.00	0.001	0.01
8.10	0.01	74.00	0.001	0.01
8.25	0.01	74.00	0.001	0.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
8.40	0.01	74.00	0.001	0.01
8.55	0.01	74.00	0.001	0.01
8.70	0.01	74.00	0.001	0.01
8.85	0.01	74.00	0.001	0.01
9.00	0.01	74.00	0.001	0.01
9.15	0.01	74.00	0.001	0.01
9.30	0.01	74.00	0.001	0.01
9.45	0.01	74.00	0.001	0.01
9.60	0.01	74.00	0.001	0.01
9.75	0.01	74.00	0.001	0.01
9.90	0.01	74.00	0.001	0.01
10.05	0.01	74.00	0.001	0.01
10.20	0.01	74.00	0.001	0.01
10.35	0.01	74.00	0.001	0.01
10.50	0.01	74.00	0.001	0.01
10.65	0.01	74.00	0.001	0.01
10.80	0.01	74.00	0.001	0.01
10.95	0.01	74.00	0.001	0.01
11.10	0.01	74.00	0.001	0.01
11.25	0.01	74.00	0.001	0.01
11.40	0.01	74.00	0.001	0.01
11.55	0.01	74.00	0.001	0.01
11.70	0.01	74.00	0.001	0.01
11.85	0.01	74.00	0.001	0.01
12.00	0.01	74.00	0.001	0.01
12.15	0.00	74.00	0.001	0.01
12.30	0.00	74.00	0.001	0.01
12.45	0.00	74.00	0.001	0.00

PEAK DISCHARGE = 0.428 CFS - PEAK OCCURS AT HOUR 1.75
MAXIMUM WATER SURFACE ELEVATION = 74.249
MAXIMUM STORAGE = 0.0144 AC-FT INCREMENTAL TIME=

0.050000HRS

*TOTAL PROPOSED

ADD HYD ID=5 HYD NO=105 ID I=2 ID II=4

PRINT HYD ID=5 CODE=3

PARTIAL HYDROGRAPH 105.00

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
0.000	0.0	4.800	0.0	9.600	0.0
14.400	0.0	19.200	0.0		
0.150	0.0	4.950	0.0	9.750	0.0
14.550	0.0	19.350	0.0		
0.300	0.0	5.100	0.0	9.900	0.0
14.700	0.0	19.500	0.0		
0.450	0.0	5.250	0.0	10.050	0.0
14.850	0.0	19.650	0.0		
0.600	0.0	5.400	0.0	10.200	0.0
15.000	0.0	19.800	0.0		
0.750	0.0	5.550	0.0	10.350	0.0
15.150	0.0	19.950	0.0		
0.900	0.0	5.700	0.0	10.500	0.0
15.300	0.0	20.100	0.0		
1.050	0.0	5.850	0.0	10.650	0.0
15.450	0.0	20.250	0.0		
1.200	0.1	6.000	0.0	10.800	0.0
15.600	0.0	20.400	0.0		
1.350	0.2	6.150	0.0	10.950	0.0
15.750	0.0	20.550	0.0		
1.500	0.7	6.300	0.0	11.100	0.0
15.900	0.0	20.700	0.0		
1.650	0.8	6.450	0.0	11.250	0.0
16.050	0.0	20.850	0.0		
1.800	0.6	6.600	0.0	11.400	0.0
16.200	0.0	21.000	0.0		
1.950	0.5	6.750	0.0	11.550	0.0
16.350	0.0	21.150	0.0		
2.100	0.3	6.900	0.0	11.700	0.0
16.500	0.0	21.300	0.0		
2.250	0.3	7.050	0.0	11.850	0.0
16.650	0.0	21.450	0.0		
2.400	0.2	7.200	0.0	12.000	0.0
16.800	0.0	21.600	0.0		
2.550	0.1	7.350	0.0	12.150	0.0
16.950	0.0	21.750	0.0		
2.700	0.1	7.500	0.0	12.300	0.0

17.100	0.0	21.900	0.0				
2.850	0.1	7.650	0.0	12.450	0.0		
17.250	0.0	22.050	0.0				
3.000	0.1	7.800	0.0	12.600	0.0		
17.400	0.0	22.200	0.0				
3.150	0.0	7.950	0.0	12.750	0.0		
17.550	0.0	22.350	0.0				
3.300	0.0	8.100	0.0	12.900	0.0		
17.700	0.0	22.500	0.0				
3.450	0.0	8.250	0.0	13.050	0.0		
17.850	0.0	22.650	0.0				
3.600	0.0	8.400	0.0	13.200	0.0		
18.000	0.0	22.800	0.0				
3.750	0.0	8.550	0.0	13.350	0.0		
18.150	0.0	22.950	0.0				
3.900	0.0	8.700	0.0	13.500	0.0		
18.300	0.0	23.100	0.0				
4.050	0.0	8.850	0.0	13.650	0.0		
18.450	0.0	23.250	0.0				
4.200	0.0	9.000	0.0	13.800	0.0		
18.600	0.0	23.400	0.0				
4.350	0.0	9.150	0.0	13.950	0.0		
18.750	0.0	23.550	0.0				
4.500	0.0	9.300	0.0	14.100	0.0		
18.900	0.0	23.700	0.0				
4.650	0.0	9.450	0.0	14.250	0.0		
19.050	0.0	23.850	0.0				

RUNOFF VOLUME = 1.88736 INCHES = 0.0610 ACRE-FEET
PEAK DISCHARGE RATE = 0.82 CFS AT 1.600 HOURS BASIN AREA =

0.0006 SQ. MI.

FINISH

NORMAL PROGRAM FINISH END TIME (HR:MIN:SEC) = 17:00:38

EROSION CONTROL NOTES:

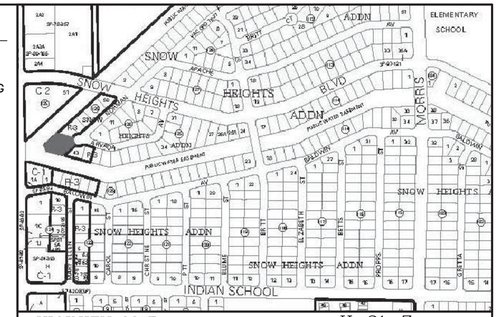
1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TOPSOIL DISTURBANCE PERMIT PRIOR TO BEGINNING WORK.

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

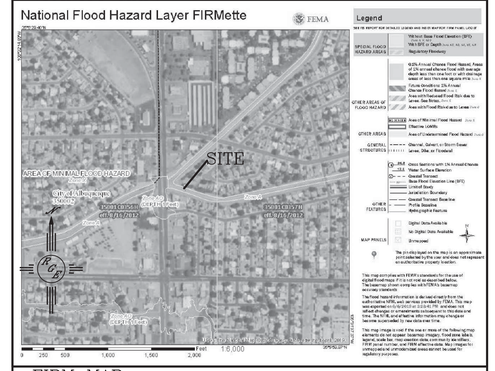
3. CONTRACTOR IS RESPONSIBLE FOR CLEANING ALL SEDIMENT THAT GETS INTO EXISTING RIGHT–OF–WAY.

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.



VICINITY MAP: H–21–Z



FIRM MAP:

LEGAL DESCRIPTION:

Lot 44, Block 125, Snow Heights Addition

NOTES:

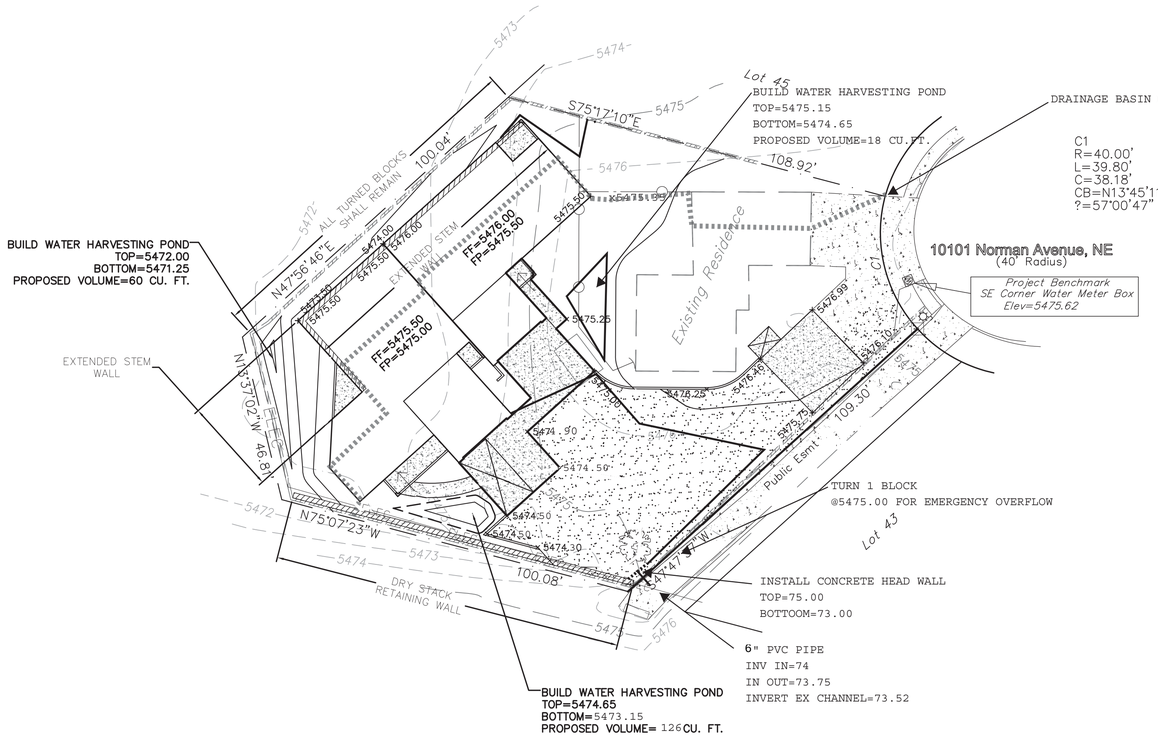
1. ALL SPOT ELEVATIONS REPRESENT FLOWLINE ELEVATION UNLESS OTHERWISE NOTED.

2. ALL CURB AND GUTTER TO 6" HEADER UNLESS OTHERWISE NOTED.

3. ALL RETAINING WALL DESIGN SHALL BE BY OTHERS.

4. ANY CURBS OR PAVEMENT NEGATIVELY IMPACTED BY CONSTRUCTION ACTIVITY SHALL BE REPLACED TO MATCH EXISTING CONDITIONS.

5. ALL SITE WORK SHALL CONFORM TO BERNALILLO COUNTY STANDARDS FOR PUBLIC WORKS CONSTRUCTION EDITION 9



LEGEND

5414	EXISTING CONTOUR
5415	EXISTING INDEX CONTOUR
5414	PROPOSED CONTOUR
5415	PROPOSED INDEX CONTOUR
	SLOPE TIE
× 4048.25	EXISTING SPOT ELEVATION
× 4048.25	PROPOSED SPOT ELEVATION
	BOUNDARY
	CENTERLINE
	RIGHT–OF–WAY
	PROPOSED CURB
	EXISTING CURB AND GUTTER
	EXISTING SIDEWALK
	PROPOSED RETAINING WALL DESIGN BY OTHERS
	FLOW LINE

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

GRAPHIC SCALE

20 10 0 10 20

SCALE: 1"=20'

ENGINEER'S SEAL

DAVID SOULE NEW MEXICO 14522 REGISTERED PROFESSIONAL ENGINEER

6/13/19

DAVID SOULE
P.E. #14522

10101 NORMAN

GRADING AND DRAINAGE PLAN

Rio Grande Engineering
1606 CENTRAL AVENUE SE
SUITE 201
ALBUQUERQUE, NM 87106
(505) 872–0999

DRAWN BY WCWJ

DATE 6–11–19

2109054–LAYOUT–6–11–19

SHEET #

JOB # 2109054