

Location
Lot 2-A, Block 10, Monkbridge Garden Addition, is located at 417 Headingly Ave., NW containing 0.1291 acre. See attached portion of Vicinity Map G-14-Z for exact location.

Purpose
The purpose of this drainage report is to present a grading and drainage solution for new buildings and improvement for Lot 2-A, Block 10, Monkbridge Garden Addition.

Existing Drainage Conditions
This lot is very flat and drains south into Headingly Ave., NW and no other offsite flows enters this site. There is existing block walls to the north and east property lines. There are existing gravel on site and some grading has been done.

Proposed Conditions and On-Site Drainage Management Plan
There are existing block walls to the north and east. A new block wall is proposed for west property line. We are proposing to retain all the developed flow minus the historical flow. The total volume requirement under this condition is 1,026.56 CF. We are proposing four ponds with total volume provided of 1,135.72 CF wch includes the first flush volume requirement of 106.14 CF.

VOLUME CALCULATIONS FOR 10 DAY STORM
(UNDER EXISTING CONDITIONS)

BASIN	AREA (SF)	AREA (AC)	AREA (MI ²)
ON-SITE	5,624.00	0.1291	0.007375

$E = \frac{EA(AA) + EB(AB) + EC(AC) + ED(AD)}{AA + AB + AC + AD}$

$V-360 = E(AA + AB + AC + AD)$

EA = 0.35
EB = 0.78
EC = 1.13
ED = 2.12

AA = 50.00%
AB = 50.00%
AC = 0.00%
AD = 0.00%

P-60 = 2.01
P-360 = 2.35
P-1440 = 2.75
P-10 Day = 3.95

E = 0.5650 IN
V-360 = 0.0061 AC-FT
AD = 0.0000 AC
V-10 DAY = 0.0061 AC-FT
V-10 DAY = 264.80 CF

V (REQUIRED) = 1,291.36 - 264.80 = 1,026.56 CF

PONDING VOLUME REQUIREMENTS (90TH PERCENTILE/FIRST FLUSH)

VOLUME REQUIRED = 0.34 INCHES x IMPERVIOUS AREA =
(0.34/12 x 3,746.00) = 160.14 CF

PONDING VOLUME CALCULATION

TOTAL POND AREA PROVIDED =
PONDING CALCULATIONS:

POND A:
AREA @ ELEV. 70.60 = 739.00 SF
AREA @ ELEV. 69.85 = 650.00 SF
POND VOLUME=(739.00+650.00)/2*0.75=520.88 CF

POND B:
AREA @ ELEV. 70.60 = 535.00 SF
AREA @ ELEV. 69.85 = 430.00 SF
POND VOLUME=(535.00+430.00)/2*0.75=361.88 CF

POND C:
AREA @ ELEV. 70.10 = 248.30 SF
AREA @ ELEV. 69.35 = 248.10 SF
POND VOLUME=(248.30+248.30)/2*0.75=186.22 CF

POND D:
AREA @ ELEV. 70.10 = 89.00 SF
AREA @ ELEV. 69.60 = 89.00 SF
POND VOLUME=(89.00+89.00)/2*0.75=66.75 CF

TOTAL PONDING VOLUME PROVIDED =
520.88 + 361.88 + 186.22 + 66.75 = 1,135.72 CF

VOLUME CALCULATIONS FOR 10 DAY STORM
(UNDER PROPOSED CONDITIONS)

BASIN	AREA (SF)	AREA (AC)	AREA (MI ²)
ON-SITE	5,624.00	0.1291	0.007375

$E = \frac{EA(AA) + EB(AB) + EC(AC) + ED(AD)}{AA + AB + AC + AD}$

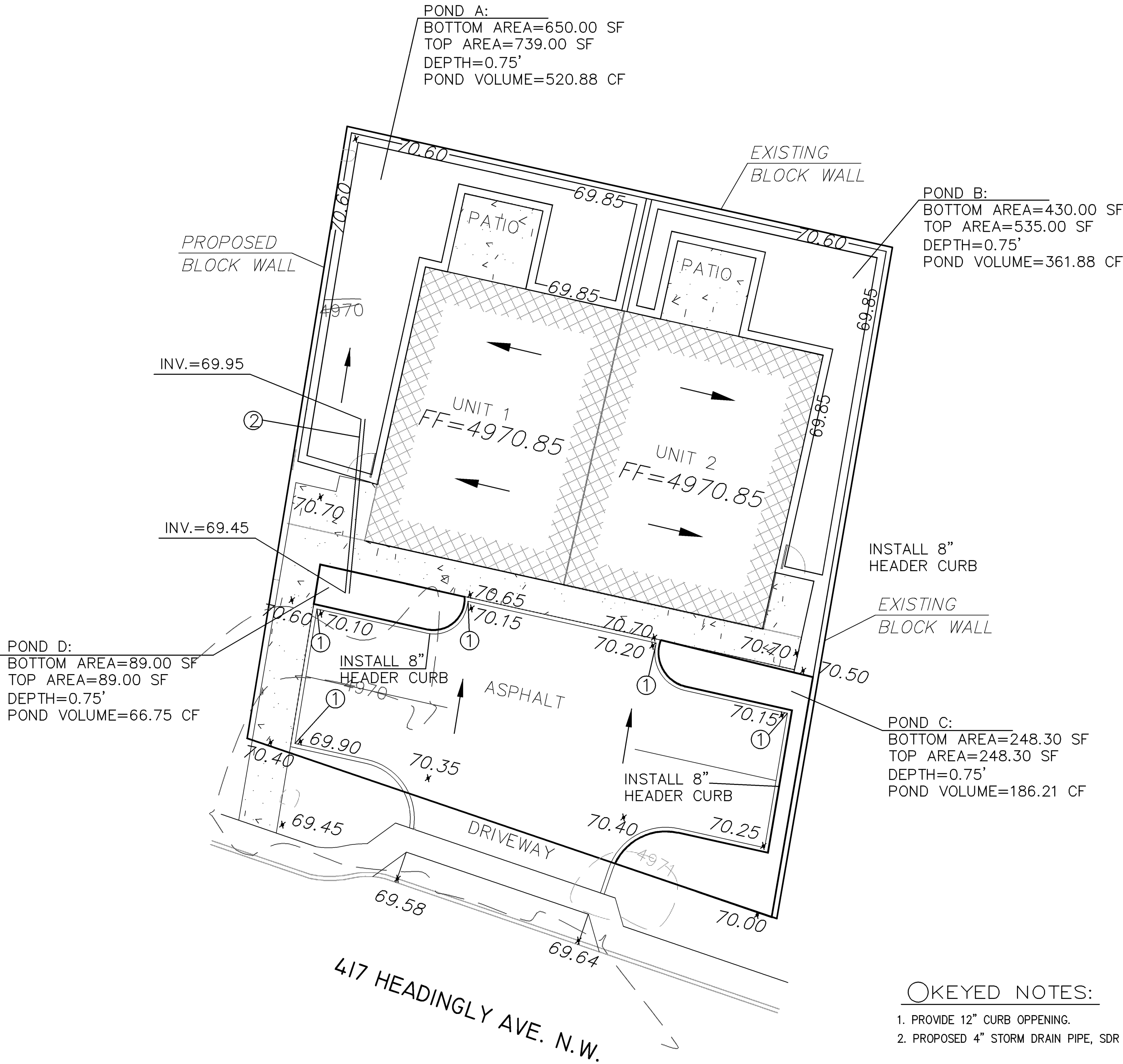
$V-360 = E(AA + AB + AC + AD)$

EA = 0.35
EB = 0.78
EC = 1.13
ED = 2.12

AA = 0.00%
AB = 24.00%
AC = 10.00%
AD = 66.00%

P-60 = 2.01
P-360 = 2.35
P-1440 = 2.75
P-10 Day = 3.95

E = 1.6994 IN
V-360 = 0.0183 AC-FT
AD = 0.0852 AC
V-10 DAY = 0.2187 AC-FT
V-10 DAY = 1,291.71 CF



KEYED NOTES:

- PROVIDE 12" CURB OPENNING.
- PROPOSED 4" STORM DRAIN PIPE, SDR 35 OR SCHEDULE 40.

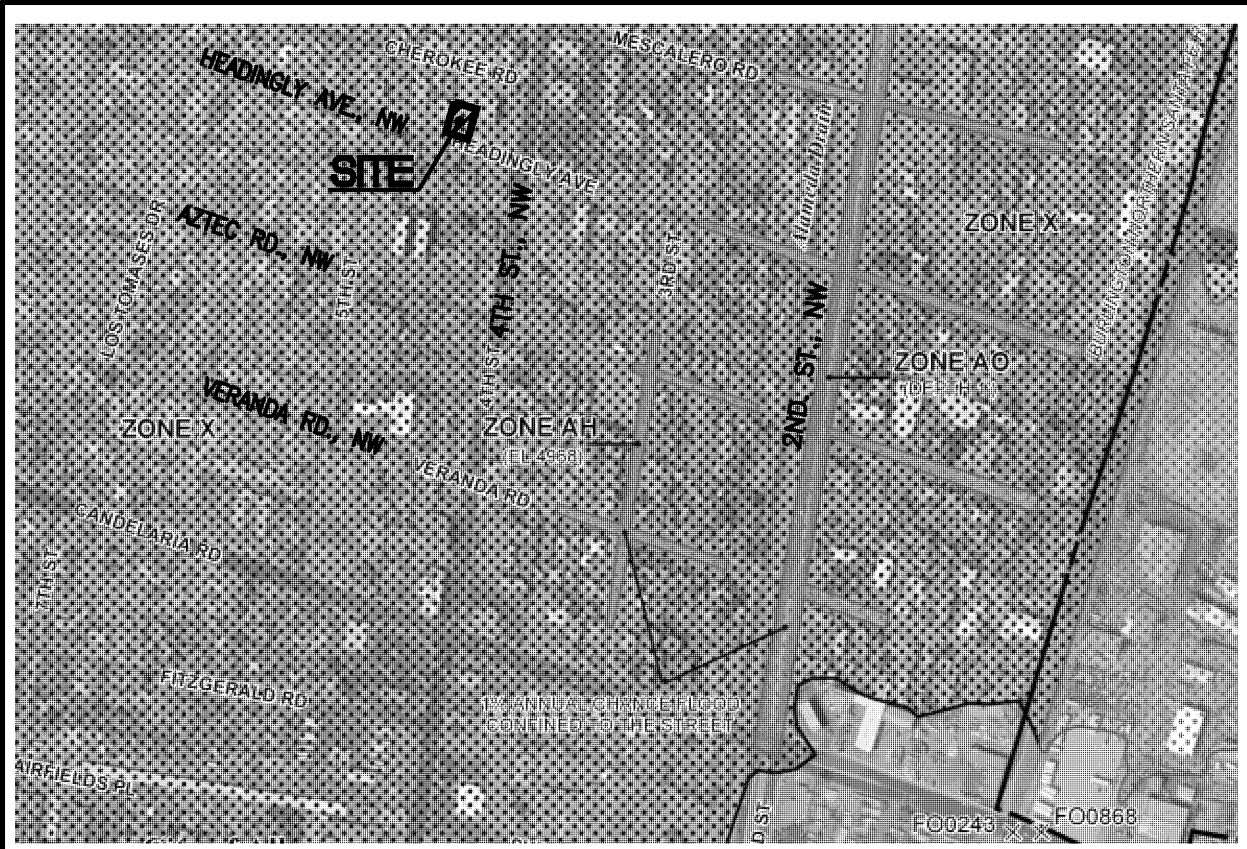
GENERAL NOTES:

- CONTOUR INTERVAL IS HALF (1.00) FOOT.
- ELEVATIONS ARE BASED ON CITY OF ALBUQUERQUE CONTROL STATION 20_G14, HAVING AN ELEVATION OF 4971.007 FEET ABOVE SEA LEVEL.
- UTILITIES SHOWN HEREON ARE IN THEIR APPROXIMATE LOCATION BASED ONLY ON ABOVE GROUND EVIDENCE FOUND IN THE FIELD AND AS-BUILT INFORMATION PROVIDED BY THE CLIENT. UTILITIES SHOWN HEREON, WHETHER INDICATED AS ABANDONED OR NOT, SHALL BE VERIFIED BY OTHERS FOR EXACT LOCATION AND/ OR DEPTH PRIOR TO EXCAVATION OR DESIGN CON-SIDERATIONS.
- THIS IS NOT A BOUNDARY SURVEY, BEARINGS ARE ASSUMED. DISTANCES AND FOUND PROPERTY CORNERS ARE FOR INFORMATIONAL PURPOSES ONLY.
- SLOPES ARE AT 3:1 MAXIMUM.
- ADD 4900 TO ALL PROPOSED SPOT ELEVATIONS.



VICINITY MAP:

G-14-Z



FIRM MAP:

FM35001C0332G

LEGAL DESCRIPTION:

LOT 2-B, BLOCK 10, MONKBRIDGE ADDITION

ADDRESS: 417 HEADINGLY AVE., NW

LEGEND

- 5030 — EXISTING CONTOUR (MAJOR)
- 5029 — EXISTING CONTOUR (MINOR)
- — BOUNDARY LINE
- ✕ 42.70 PROPOSED SPOT ELEVATION
- ✕ 5029.16 EXISTING GRADE
- ✕ 5075.65 EXISTING FLOWLINE ELEVATION
- █ PROPOSED RETAINING WALL
- BC=41.30 BOTTOM OF CHANEL
- TF=42.00 TOP OF FOOTING
- TRW=45.12 TOP OF RETAINING WALL
- HP HIGH POINT
- 42.40 AS-BUILT GRADES
- ✕ 5141.50 AS-BUILT SPOT ELEVATIONS
- ~~FF=5142.30~~ FP=5142.25

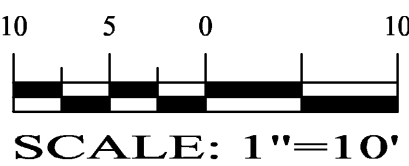


REZA AFAGHPOUR
P.E. #11814

**SBS CONSTRUCTION
AND ENGINEERING, LLC**

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GRAPHIC SCALE



**417 HEADINGLY AVE., NW
GRADING PLAN**

DRAWING:	DRAWN BY:	DATE:	SHEET #
201803-GD.DWG	SH-B	3-6-2018	1