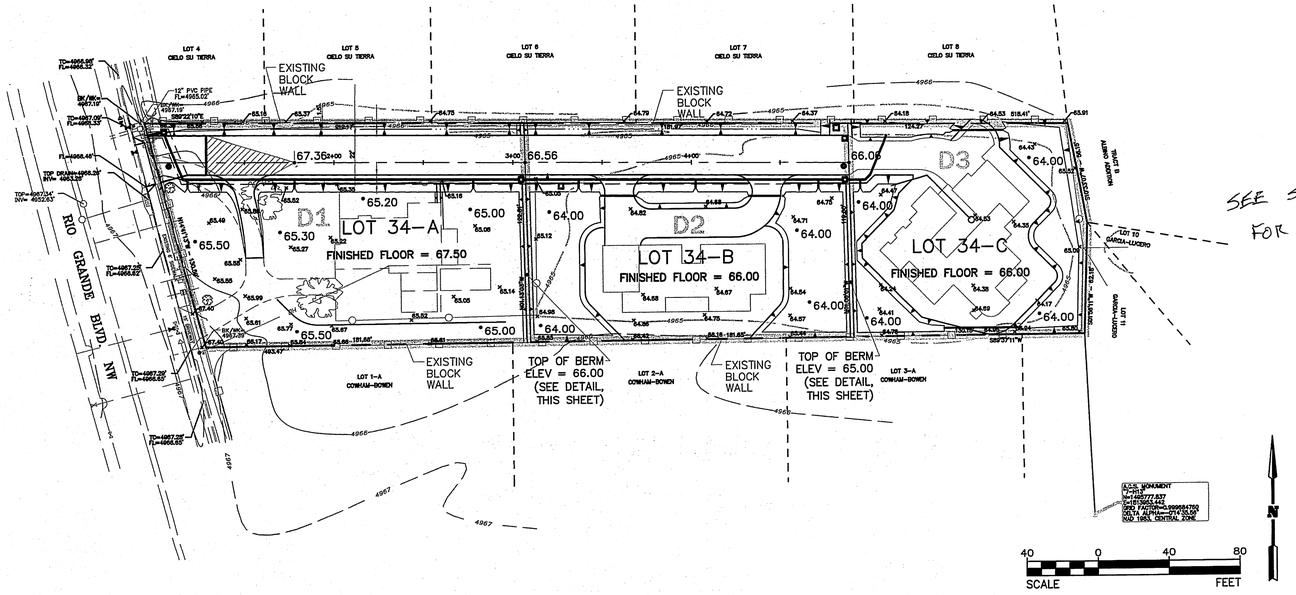
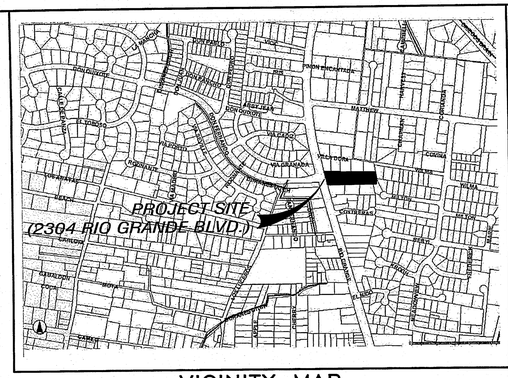
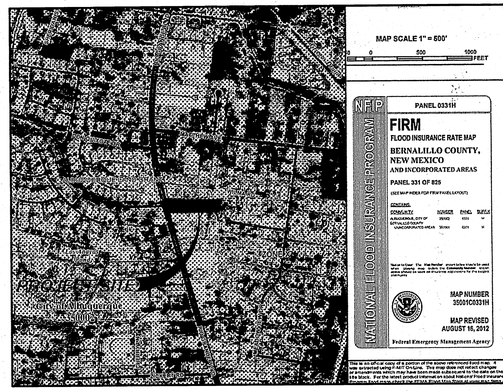


LEGEND

D1 PROPOSED BASIN LINE AND DESIGNATION



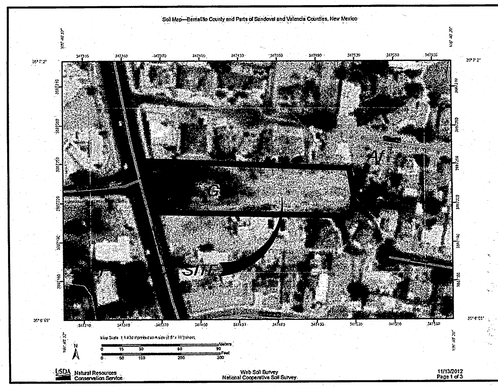
VICINITY MAP
ZONE ATLAS G-12



FIRM MAP NO. 35001C0331H

OTHER FLOOD AREAS

ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.



USDA–NRCS SOIL MAP

EXISTING CONDITIONS

THE EXISTING SITE CONSISTS OF 1 LOT WITH 1 EXISTING RESIDENTIAL HOME. THE APPROVAL TO SUBDIVIDE THIS LOT INTO 3 LOTS IS IN PROCESS. IT IS ANTICIPATED THAT THIS PROCESS WILL BE COMPLETE CONCURRENT WITH THE REVIEW AND APPROVAL OF THIS GRADING AND DRAINAGE PLAN. THE SUBDIVISION ESTABLISHES 3 LOTS. 1 LOT WILL CONTAIN THE EXISTING HOME, AND 2 ADDITIONAL LOTS ARE CREATED. SINGLE FAMILY RESIDENTIAL HOMES ARE ANTICIPATED TO BE CONSTRUCTED ON THE TWO ADDITIONAL LOTS. THE SUBDIVISION REQUIRED THE CONSTRUCTION OF A DRIVEWAY, AS SHOWN, AND EXTENSION OF UTILITIES ALONG THE NORTH PORTION OF THE PROPERTY TO PROVIDE ACCESS AND SERVICES TO THE TWO NEW LOTS. THE DRIVEWAY AND UTILITIES IMPROVEMENTS HAVE BEEN COMPLETED.

THE EXISTING SITE SOILS CONSIST OF SOILS CLASSIFIED BY THE USDA, NRCS SOIL SURVEY AS MAP UNITS Ge–GILA CLAY LOAM AND Af–AGUA LOAM. BOTH ARE BOTTOMLAND SOILS CONSISTING OF MATERIAL FROM ERODED ALLUVIUM DERIVED FROM IGNEOUS AND SEDIMENTARY ROCK. BOTH ARE CLASSIFIED AS WELL DRAINED MATERIAL WITH A SHALLOW DEPTH (0 TO 24 INCHES) OVERLYING GRAVELLY SANDY LOAM. RECENT TRENCHING ON SITE HAS VERIFIED THE CONSISTENCY OF THESE SOIL TYPES AND THE PRESENCE OF GRAVELLY MATERIAL UNDERLYING THE SHALLOW SURFACE MATERIALS.

STORM WATER DOES NOT DISCHARGE FROM THE PROPERTY. THE SITE ELEVATION IS BELOW THE ADJACENT PROPERTIES ON THE NORTH, SOUTH, AND EAST AND BELOW RIO GRANDE BLVD. ON THE WEST. EACH OF THE ADJACENT PROPERTIES ALSO GENERALLY APPEAR TO RETAIN ITS STORM WATER WITHIN ITS PROPERTY BOUNDARIES. STORM WATER IN RIO GRANDE IS CONTAINED WITHIN THE CURB AND GUTTER AND STORM DRAIN SYSTEM AND FLOW FROM SOUTH TO NORTH ACROSS THE FRONTAGE OF THE PROPERTY.

THE EXISTING SITE DOES SLOPE MILDLY FROM NORTHWEST TO SOUTHEAST SO THAT THE EXISTING DRAINAGE PATTERNS WOULD ACCUMULATE RUNOFF IN THE SOUTHEAST PORTION OF THE PROPERTY. THE EXISTING

PROPOSED CONDITIONS

THE PROPOSED SITE IMPROVEMENTS WILL INCLUDE THE CONSTRUCTION OF TWO SINGLE–FAMILY RESIDENTIAL HOMES. RUNOFF FROM EACH LOT WILL BE CONTAINED WITHIN THE PROPERTY BOUNDARY OF EACH LOT. THE ELEVATION OF EACH STRUCTURE IS SUCH THAT THE FINISHED FLOOR ELEVATION IS AT LEAST 1 FOOT ABOVE THE 100–YEAR, 10–DAY RETENTION VOLUME ELEVATION WITHOUT ACCOUNTING FOR STORM WATER INFILTRATION.

HYDROLOGY:

PER SECTION 22.2, HYDROLOGY, ALBUQUERQUE, NM – DEVELOPMENT PROCESS MANUAL (DPM), VOLUME II

METHOD OF ANALYSIS: PART A – PROCEDURE FOR 40 ACRE AND SMALLER BASINS

PRECIPITATION ZONE: (TABLE A–1) ZONE 2

RAINFALL DEPTH: (INCHES) (TABLE A–2)

	100–YEAR
P_{60}	= 2.01
P_{360}	= 2.35
P_{1440}	= 2.75
P_{4DAYS}	= 3.30
P_{10DAYS}	= 3.95

RETURN PERIOD FACTORS: (TABLE A–3)

PERIOD	FACTOR
50	0.90
25	0.80
10	0.667
5	0.567
2	0.434

LAND TREATMENTS: (PER TABLE A–4) (SEE TABLE THIS SHEET)

EXCESS PRECIPITATION (E): (INCHES) (TABLE A–8)

LAND TREATMENT	E_{100-6}
EA	0.53
EB	0.78
EC	1.13
ED	2.12

PEAK DISCHARGE (Qp): (CFS) (TABLE A–9)

LAND TREATMENT	Q_{p100-6}
Q_{PA}	1.56
Q_{PB}	2.28
Q_{PC}	3.14
Q_{PD}	4.70

CALCULATIONS:

TOTAL $Q_p = Q_{PA}A_A + Q_{PB}A_B + Q_{PC}A_C + Q_{PD}A_D$ (a–10)

WEIGHTED E (INCHES) = $(E_AA_A + E_BA_B + E_CA_C + E_DA_D)/(A_A + A_B + A_C + A_D)$ (a–5)

$V_{360} = ((\text{WEIGHTED } E/12)) * (A_A + A_B + A_C + A_D)$ (a–6)

$V_{1440} = V_{360} + (A_D * ((P_{1440} - P_{360})/12))$ (a–7)

$V_{10DAYS} = V_{360} + (A_D * ((P_{10DAYS} - P_{360})/12))$ (a–9)

HYDROLOGIC DATA – DEVELOPED CONDITION

BASIN	BASIN AREA	LAND TREATMENT PERCENTAGES(ACREAGE) BY TYPE				YIELD	$Q_{P_{100-6}}$	V_{100-6}	V_{100-24}	$V_{100-10DAY}$
		A	B	C	D					
	(Acres)	%A(AA)	%B(AB)	%C(AC)	%D(AD)	(cfs/ac)	(cfs)	(cfs)	(ac–ft)	(ac–ft)
D1	0.56	0(0.00)	46(0.26)	11(0.06)	43(0.24)	3.41	1.91	0.065	0.073	0.097
D2	0.51	0(0.00)	47(0.24)	10(0.05)	43(0.22)	3.41	1.74	0.059	0.067	0.089
D3	0.35	0(0.00)	54(0.19)	12(0.04)	34(0.12)	3.21	1.12	0.037	0.041	0.053

FLAT GRADING SCHEME DATA

	LOT 34-A(BASIN D1)	LOT 34-B(BASIN D2)	LOT 34-C(BASIN D3)
•PERCENT IMPERVIOUS (SEE NOTE BELOW):	= 43%	= 43%	= 43%
•TOTAL STORAGE VOLUME REQUIRED($V_{100-10DAY}$):	= 0.10 AC–FT	= ~~0.9~~ AC–FT 0.09*	= ~~0.5~~ AC–FT 0.05*
•TOTAL STORAGE VOLUME PROVIDED:	= 0.17 AC–FT	= 0.15 AC–FT	= 0.10 AC–FT
• MAXIMUM WATER SURFACE ELEVATION (100–YR, 10–DAY):	= 4965.59	= 4964.60	= 4964.50
• FINISHED FLOOR ELEVATION:	= 4967.50	= 4966.00	= 4966.00

*TYPO ON ORIGINAL PLAN CORRECTED

NOTE: THE PERCENT IMPERVIOUS USED FOR DETERMINATION OF REQUIRED STORAGE VOLUME FOR EACH LOT INCLUDES THE AREA OF ALL DRIVEWAYS, PLUS AN ADDITIONAL AREA OF 200 SQ. FT. FOR PATIOS, SIDEWALKS, ETC.

CRITERIA (DPMSECTION 5.G. FLAT GRADING SCHEME)

PER SECTION 22.5.G, FLAT GRADING SCHEME, ALBUQUERQUE, NM – DEVELOPMENT PROCESS MANUAL (DPM), VOLUME II, DESIGN CRITERIA

A FLAT GRADING SCHEME WILL BE ALLOWED ONLY IN THE VALLEY REGION OF THE CITY AND UNDER THE FOLLOWING CONDITIONS:

1. THE SITE MUST BE FLAT OR CAN BE GRADED FLAT
2. THE MAXIMUM PERCENT IMPERVIOUS OF THE LOT AND THE CONTRIBUTING AREA MAY NOT BE GREATER THAN 45%
3. PAD ELEVATION SHALL BE A MINIMUM OF ONE (1) FOOT ABOVE THE 100–YEAR, 10–DAY STORM WATER SURFACE ELEVATION.
4. THE FLOW BETWEEN THE FRONT AND BACK YARD CANNOT BE OBSTRUCTED. THE STORM WATER MUST BE ALLOWED TO EQUALIZE TO THE SAME LEVEL BETWEEN THE FRONT YARD AND BACK YARD.
5. A PERMANENT PERIMETER WALL OR BARRIER AROUND THE PROPERTY IS REQUIRED TO CONTAIN THE 100–YEAR, 10–DAY STORM WATER SURFACE ELEVATION.
6. THE HIGH POINT OF THE STREET SHOULD BE FOUR INCHES ABOVE THE 100–YEAR, 10–DAY STORM WATER SURFACE ELEVATION.
7. THERE ARE NO ACCESSIBLE STORM DRAINS NEAR THE PROPOSED DEVELEOPMENT.

DRAINAGE CERTIFICATION

I, SHELDON GREER, NMPE 17154, OF THE FIRM GND, LLC CONSTULTING ENGINEERS, HEREBY CERTIFY THAT THIS PROJECT HAS BEEN GRADED AND WILL DRAIN IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE APPROVED PLAN DATED 8/22/13. THE RECORD INFORMATION EDITED ONTO THE ORIGINAL DESIGN DOCUMENT HAS BEEN OBTAINED BY LEONARD MATINEZ NMPLS 9801, OF THE FIRM SBS CONSTRUCTION AND ENGINEERING, LLC. I FURTHER CERTIFY THAT I HAVE PERSONALLY VISITED THE PROJECT SITE ON 1/2/14 AND HAVE DETERMINED BY VISUAL INSPECTION THAT THE SURVEY DATA PROVIDED IS REPRESENTATIVE OF ACTUAL SITE CONDITIONS AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS CERIFICATION IS SUBMITTED IN SUPPORT OF A REQUEST FOR CERTIFICATE OF OCCUPANCY.

THE RECORD INFORMATION PRESENTED HEREON IS NOT NECESSARILY COMPLETE AND INTENDED ONLY TO VERIFY SUBSTANTIAL COMPLIANCE OF THE GRADING AND DRAINAGE ASPECTS OF THIS PROJECT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE USING IT FOR ANY OTHER PURPOSE.

SHELDON GREER, NMPE 17154

1/2/14
DATE

SHELDON E. GREER NEW MEXICO 17154 LICENSED PROFESSIONAL ENGINEER

NOTE: CERTIFICATION FOR LOT 34-C ONLY

Legal

A CERTAIN TRACT OF LAND BEING AND COMPRISING THE SOUTH ONE HALF (S1/2) OF LOT NUMBERED THIRTY–FOUR (34) OF ALVARADO GARDENS UNIT NO. 1, A SUBDIVISION TO THE PLAT THEREOF, FILED IN THE OFFICE OF THE COUTY CLERK OF BERNALILLO COUNTY, NEW MEXICO ON AUGUST 15, 1932 IN PLAT BOOK C2, PAGE 10.

SAID TRACT IS IN SUBDIVISION PROCESS TO CREATE LOTS AS SHOWN, DRB #1001941.

ASSOCIATED INFRASTRUCTURE IMPROVEMENTS APPROVED WITH DRC PROJECT #724282.

AS BUILT INFORMATION

CONTRACTOR — DATE
WORKED BY — DATE
INSPECTOR'S ACCEPTANCE BY — DATE
FIELD VERIFICATION BY — DATE
DRAWINGS CORRECTED BY — DATE
RECORDED BY
NO.

BENCH MARKS

ACS MONUMENT 7–H13
INTX. OF RIO GRANDE BLVD. AND INDIAN SCHOOL ROAD
THE STATION MARK SI A CITY OF ALBUQUERQUE
SURVEY CONTROL 3" BRASS STAMPED "7–H13"
SET FLUSH WITH THE TOP OF THE ASPHALT PAVING.
X = 1513953.442 Y = 1495777.837 (NAD 1983)
ELEV.: 4964.364 (NAVD 1988)
GROUND TO GRID FACTOR: 0.9996847600

MICRO–FILM INFORMATION

SURVEY INFORMATION

FIELD NOTES

NO.	BY	DATE
	ADVANTAGE SURVEYING	JUNE 2009
	P.O. BOX 11955	
	ALBUQUERQUE, NM. 87192	

ENGINEER'S SEAL

SHELDON E. GREER NEW MEXICO 17154 LICENSED PROFESSIONAL ENGINEER 12-13-13

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	DESIGNED BY SEG — DATE MAR 2012
			DRAWN BY SEG — DATE MAR 2012
			CHECKED BY SEG — DATE MAR 2012

GND, LLC
CONSULTING ENGINEERS
10224 Green River Place NW
Albuquerque, NM 87114
Phone: (505)-264-0472

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

ALVARADO GARDENS UNIT 1

LOTS 34 A, B, & C

GRADING & DRAINAGE PLAN

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	Mo./DAY/YR.	Mo./DAY/YR.

CITY PROJECT No. 724282 | ZONE MAP NO. G–12–Z | SHEET 1 OF 2