

CITY OF ALBUQUERQUE



October 7, 2014

Mr. Craig Hagelgantz
ABQ Engineering
Suite D
8102 Menaul Boulevard NE
Albuquerque, NM 87110

**Re: Chao/Limary Residence
Grading and Drainage Plan
Engineer's Stamp Date 9-17-14 (E23D003Q)**

Dear Mr. Hagelgantz,

Based upon the information provided in your submittal received October 6, 2014, the above referenced plan is approved for Building Permit. Please attach a copy of this approved plan to the Building Permit construction sets prior to sign-off by Hydrology

PO Box 1293

Prior to Certificate of Occupancy release, Engineer Certification per the DPM checklist will be required.

Albuquerque

If you have any questions, you can contact me at 924-3994.

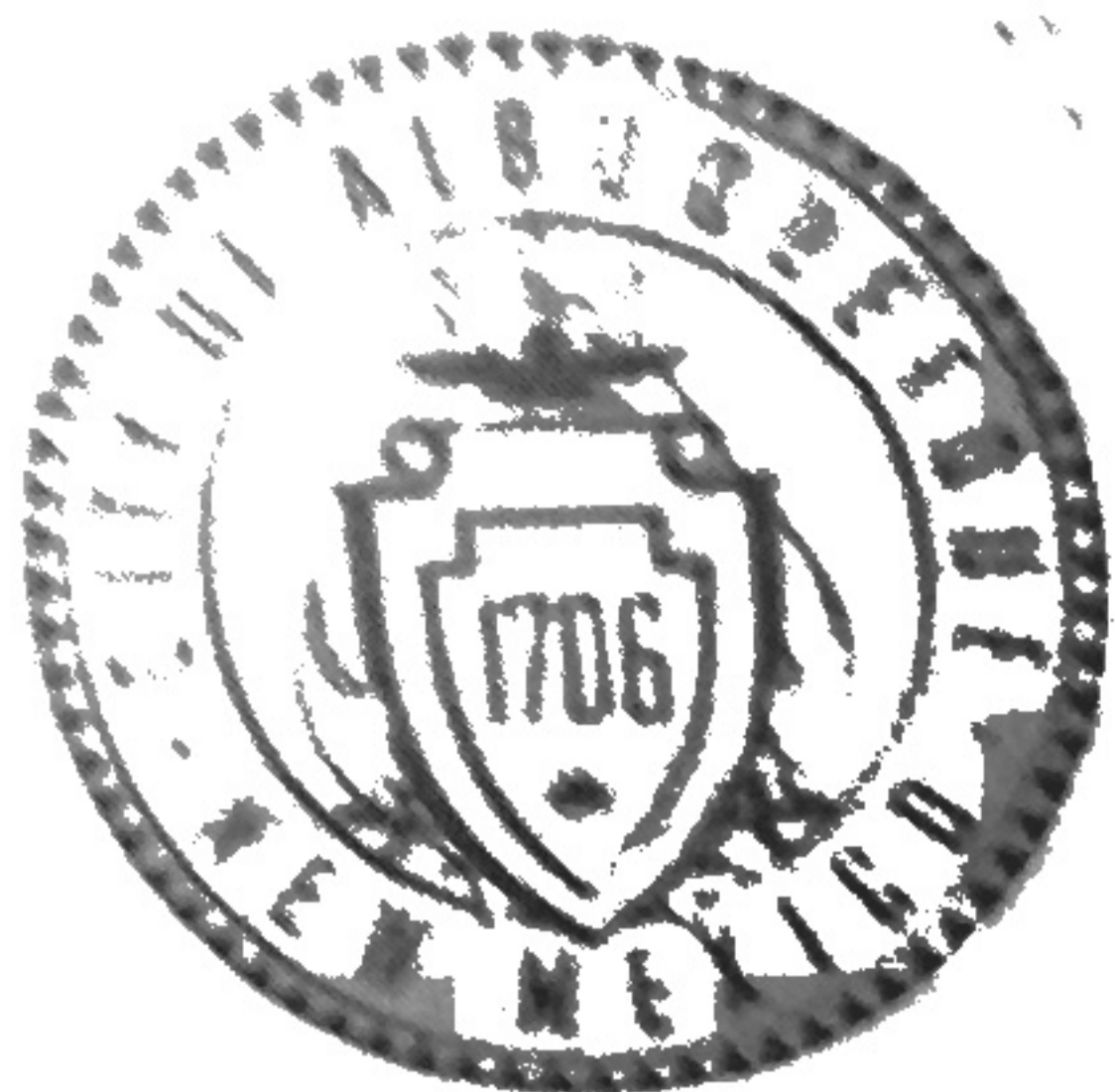
New Mexico 87103

Sincerely,

Amy L. D. Niese, P.E.
Senior Engineer, Hydrology
Planning Department

www.cabq.gov

C: e-mail



City of Albuquerque

Planning Department

Development & Building Services Division DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 02/2013)

Project Title: Chao / Limary Residence Building Permit #: T201492337 City Drainage #: _____
DRB#: _____ EPC#: _____ Work Order#: _____
Legal Description: Lot 10, Unit 2A Highlands at High Desert
City Address: 6001 Buffalograss Ct NE, Abq, NM 87111
Engineering Firm: Abq Engineering Contact: Craig Hagelgantz
Address: 8102 Menaul Blvd NE, Suite P
Phone#: 505 255-7802 Fax#: 505 255-7902 E-mail: chagelgantz@abqeng.com
Owner: Jocelyn Chao & Victor Limary Contact: Jocelyn Chao
Address: 11405 Canyonlands Rd SE, 87123
Phone#: 505 480-8643 Fax#: _____ E-mail: jocelyn-chao@yahoo.com
Architect: _____ Contact: _____
Address: _____
Phone#: _____ Fax#: _____ E-mail: _____
Surveyor: Alpha Pro Surveying Contact: Gary Britsko
Address: 1436 32nd Circle SE, Rio Rancho
Phone#: 892-1076 Fax#: 891-0471 E-mail: info@alphaprosurveying.com
Contractor: Boulevard Homes LLC Contact: Amber Kennaghan
Address: 1914 Rio Grande NW, 87104
Phone#: 505 507-0451 Fax#: _____ E-mail: amber@abqmodern.com

TYPE OF SUBMITTAL:

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

☐ DRAINAGE REPORT

☐ SIA/FINANCIAL GUARANTEE RELEASE

☒ DRAINAGE PLAN 1st SUBMITTAL

☐ PRELIMINARY PLAT APPROVAL

☐ DRAINAGE PLAN RESUBMITTAL

☐ S. DEV. PLAN FOR SUB'D APPROVAL

☐ CONCEPTUAL G & D PLAN

☐ S. DEV. FOR BLDG. PERMIT APPROVAL

☐ GRADING PLAN

☐ SECTOR PLAN APPROVAL

☐ EROSION & SEDIMENT CONTROL PLAN (ESC)

☐ FINAL PLAT APPROVAL

☐ ENGINEER'S CERT (HYDROLOGY)

☐ CERTIFICATE OF OCCUPANCY (PERM)

☐ CLOMR/LOMR

☐ CERTIFICATE OF OCCUPANCY (TCL TEMP)

☐ TRAFFIC CIRCULATION LAYOUT (TCL)

☐ FOUNDATION PERMIT APPROVAL

☐ ENGINEER'S CERT (TCL)

☐ BUILDING PERMIT APPROVAL

☐ ENGINEER'S CERT (DRB SITE PLAN)

☐ GRADING PERMIT APPROVAL

☐ ENGINEER'S CERT (ESC)

☐ PAVING PERMIT APPROVAL

☐ SO-19

☐ WORK ORDER APPROVAL

☐ OTHER (SPECIFY)

☐ GRADING CERTIFICATION

☐ SO-19 APPROVAL

☐ ESC PERMIT APPROVAL

☐ ESC CERT. ACCEPTANCE

☐ OTHER (SPECIFY)

WAS A PRE-DESIGN CONFERENCE ATTENDED: _____

Yes

No

Copy Provided

DATE SUBMITTED: 10/2/14

By: [Signature]

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location, and scope to the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

1. **Conceptual Grading and Drainage Plan:** Required for approval of Site Development Plans greater than five (5) acres and Sector Plans
2. **Drainage Plans:** Required for building permits, grading permits, paving permits and site plans less than five (5) acres
3. **Drainage Report:** Required for subdivision containing more than ten (10) lots or constituting five (5) acres or more
4. **Erosion and Sediment Control Plan:** Required for any new development and redevelopment site with 1-acre or more of land disturbing area, including project less than 1-acre than are part of a larger common plan of development



35001C0163H

MAP REVISED
AUGUST 16, 2012

- also determined.
- ZONE AR** Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

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.

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D Boundary
- CBRS and OPA Boundary

Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.

Base Flood Elevation line and value; elevation in feet*
Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

Cross section line

Transect line

Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere

1000-meter Universal Transverse Mercator grid values, zone 13

5000-foot grid ticks: New Mexico State Plane coordinate system, Central zone (FIPSZONE 3002), Transverse Mercator

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

KEYED NOTES

1. CONSTRUCT 86 LF RETAINING WALL. SEE DETAIL 3, THIS SHEET.
2. INSTALL COLORED CONCRETE DRIVEWAY (BY OTHERS).
3. CONSTRUCT NEW PATIO. SEE ARCHITECTURAL PLANS FOR DETAILS.
4. CONSTRUCT NEW DECK. SEE ARCHITECTURAL PLANS FOR DETAILS.
5. INSTALL COLORED CONCRETE WALKWAY. SEE ARCHITECTURAL PLANS FOR DETAILS.
6. INSTALL NEW 6" TUF-TITE TR1 TRENCH DRAIN.
7. 24 LF 4" SCH. 40 PVC DRAIN PIPE SEE PLAN FOR INVERT ELEVATIONS.

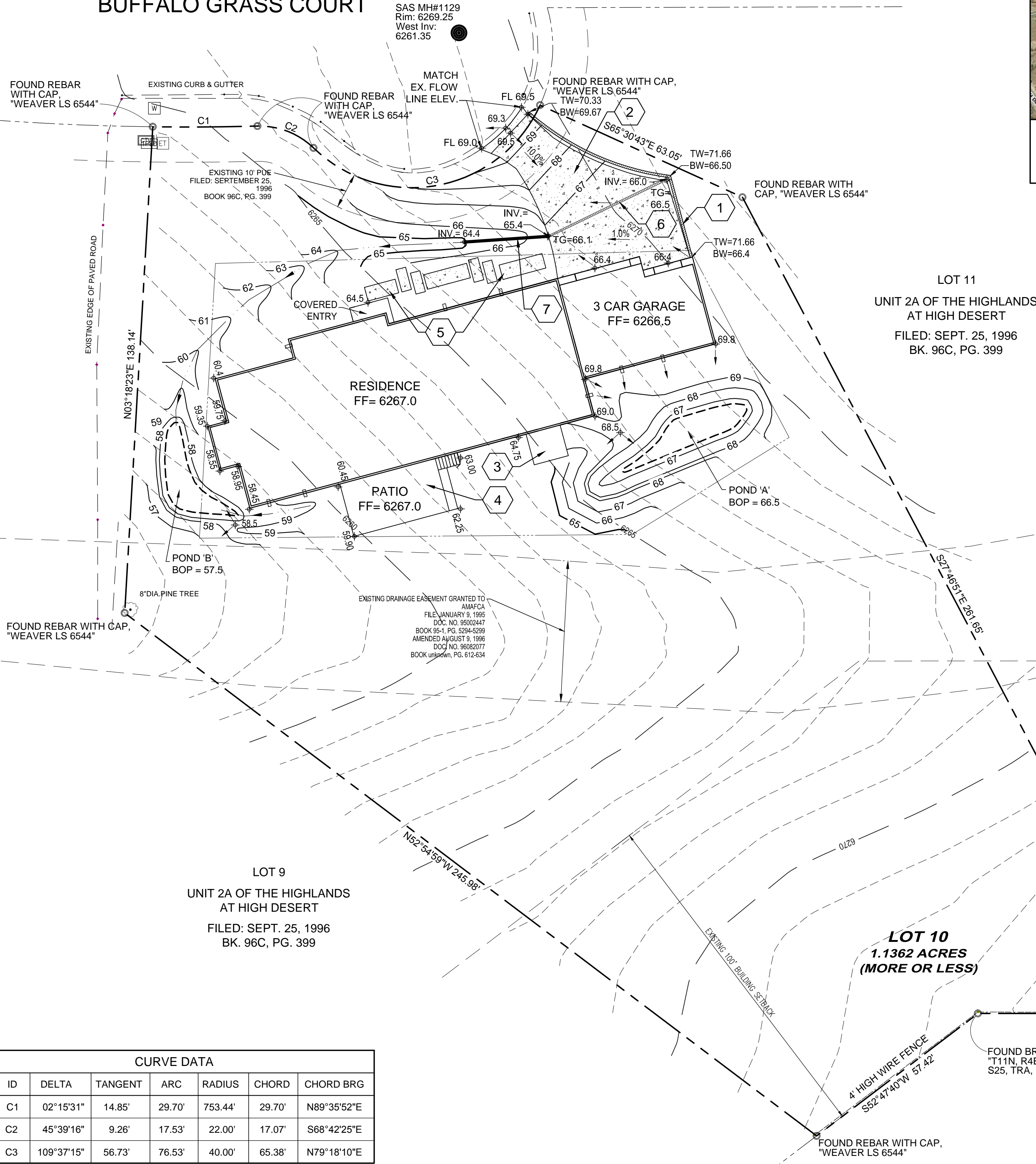
LEGAL DESCRIPTION

LOT NUMBERED 10, UNIT 2A OF THE HIGHLANDS AT HIGH DESERT, ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO, AS THE SAME AS IS SHOWN AND DESIGNATED ON THE PLAT THEREOF, FILED IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NEW MEXICO.

UPC NUMBER

1024-062-049-161-304-03

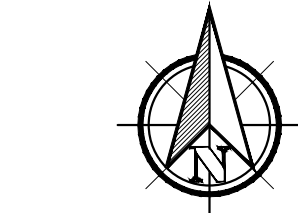
BUFFALO GRASS COURT



CURVE DATA						
ID	DELTA	TANGENT	ARC	RADIUS	CHORD	CHORD BRG
C1	02°15'31"	14.85'	29.70'	753.44'	29.70'	N89°35'52"E
C2	45°39'16"	9.26'	17.53'	22.00'	17.07'	S68°42'25"E
C3	109°37'15"	56.73'	76.53'	40.00'	65.38'	N79°18'10"E

GRADING & DRAINAGE PLAN

Scale: 1" = 20'



ENGINEER'S STATEMENT

I, THE ENGINEER OF RECORD CERTIFY THAT I HAVE PERSONALLY VISITED THE SITE AND THE EXISTING GRADES AND CONTOURS DEPICTED ON THIS PLAN MATCH WHAT PRESENTLY EXISTS AT THIS LOCATION.

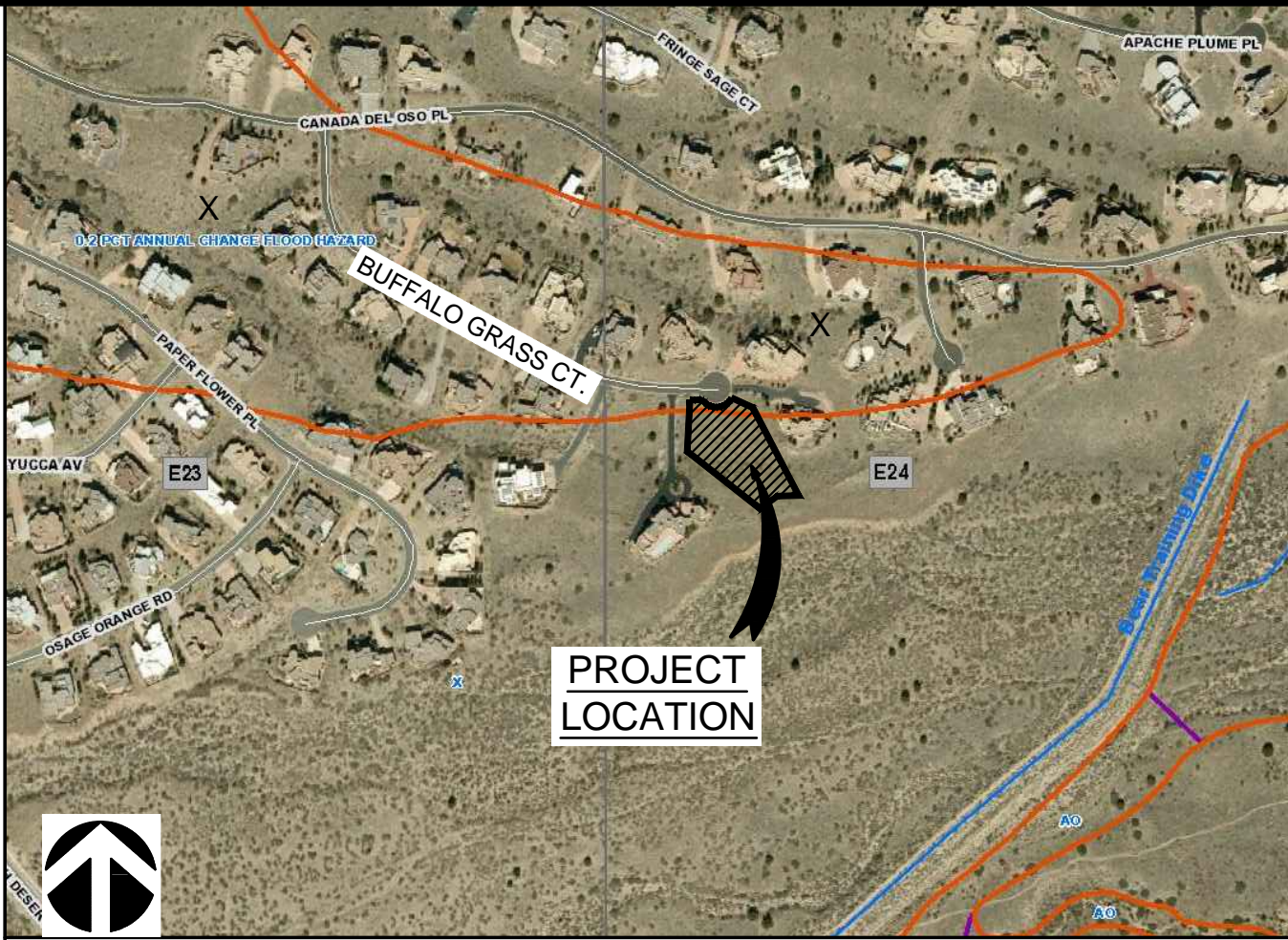
JAMES CRAIG HAGELGANTZ, NMPE #15559

BENCHMARK

PROJECT BENCHMARK:
FOUND BRASS CAP,
T11N, R4E, TR1, AP4,
S25, TRA, LS 6544, 1983"
ELEV = 6274.03

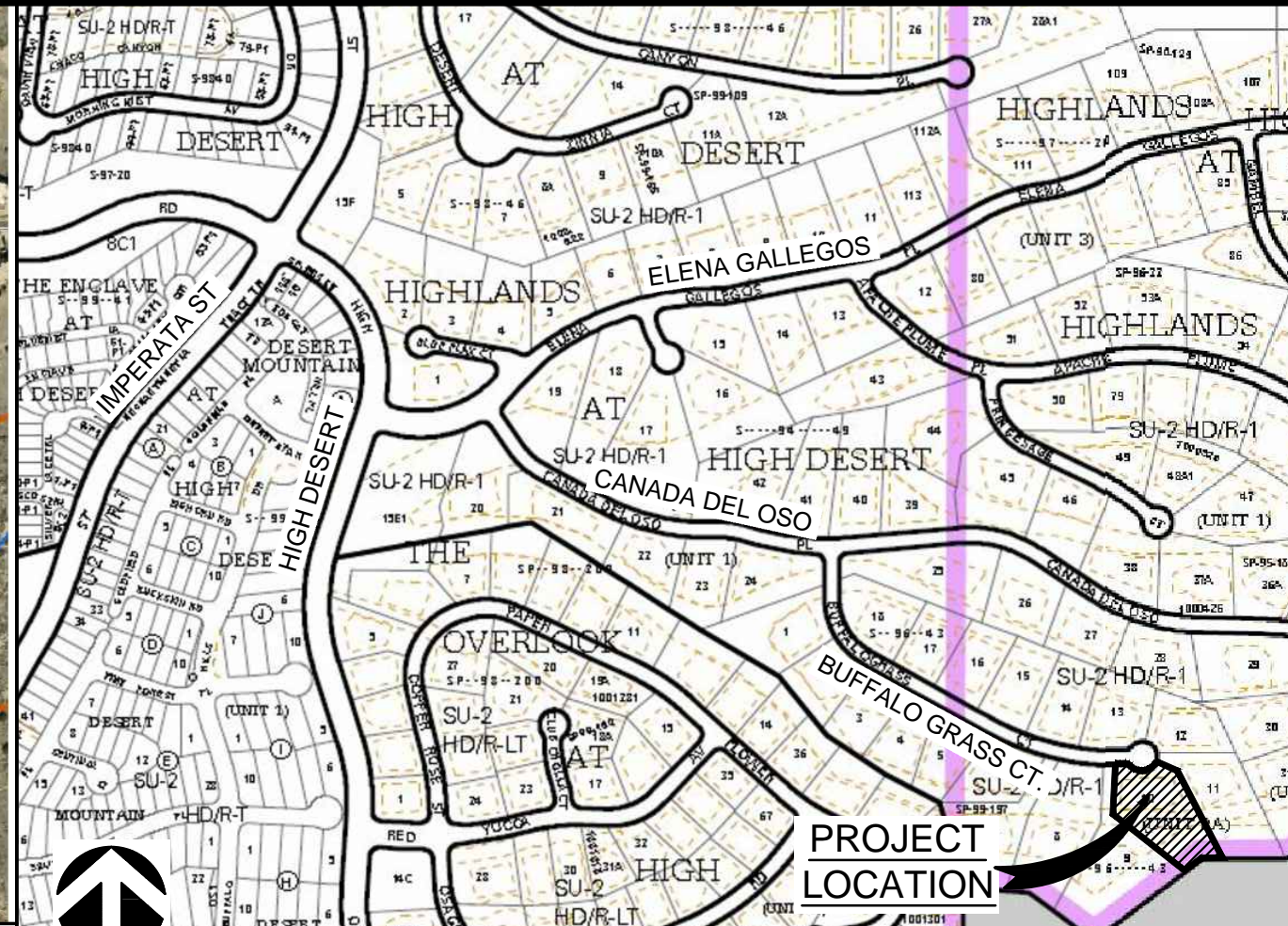
FIRM MAP

SCALE: NONE



LOCATION MAP

SCALE: NONE



DRAINAGE NARRATIVE

THE SITE FOR THIS GRADING PLAN IS LOT 10 TRACT 14 B (E23DD003K) OF HIGH DESERT ESTATES IN ALBUQUERQUE, NEW MEXICO. THE SITE IS CONTAINED WITHIN THE HIGH DESERT MASTER DRAINAGE PLAN. THE SITE IS LOCATED ON SOUTH SIDE OF A CUL-DE-SAC AT THE END OF BUFFALO GRASS COURT. THE SITE CONTAINS APPROXIMATELY 1.136 ACRES AND IS CURRENTLY UNDEVELOPED WITH NO STRUCTURES OR DRIVEWAY. THE SITE CURRENTLY DRAINS FROM EAST TO WEST ALONG NATURAL SLOPES AND IS BISECTED WITH AN AMAFCA DRAINAGE EASEMENT. THE PORTION OF THE NORTH SIDE OF THE LOT IS WITHIN A TYPE X FLOOD PLAIN. (SEE MAP THIS SHEET) NO PORTION OF THE LOT IS LOCATED WITHIN A 100 YEAR FLOOD PLAIN.

WITH THIS DEVELOPMENT, THE PROPOSED RESIDENCE WILL BE CONSTRUCTED ON THE NORTHERN PORTION OF THE SITE WITH A DRIVEWAY BETWEEN THE ADJACENT STREET AND PROPOSED GARAGE. THE MAJORITY OF THE SITE HISTORICALLY DRAINED TOWARD THE ARROYO IN THE MIDDLE OF THE SITE. THE PORTION OF THE SITE SOUTH OF THE ARROYO WILL REMAIN UNDEVELOPED. WHILE THE NEW GRADING MAINTAINS THE HISTORICAL DRAINAGE PATTERN, THE ADDITION OF THE ONSITE PONDING AREAS WILL CAPTURE AND MANAGE THE 90TH PERCENTILE STORM EVENT WHICH IS 0.44 IN. THE PONDING AREAS HAVE BEEN SIZED TO RETAIN THE "FIRST FLUSH" RUNOFF PER COA DRAINAGE ORDINANCE (SEE CALCULATIONS BELOW)

ONSITE DRAINAGE RETENTION

STORAGE REQUIRED BY COA HYDROLOGY:

PROVIDE STORAGE FOR FIRST FLUSH RUNOFF PER SECTION 22 OF DPM
TABLE A-6 USE 0.1 - 0.44 = 0.34 IN

FIRST FLUSH (IN) APPLIED OVER IMPERVIOUS AREAS (ACRES)
THEREFORE 0.34/12 X 0.169 X 43560 = 209CF

FIRST FLUSH PONDING AREA REQD. = 209 CF < 815 CF PROVIDED

DRAINAGE CALCULATIONS

Hydrology Calculations				
DPM - Volume 2, October 2008				
Section 22.2.Hydrology				
Precipitation Zone	4			
100 Year Storm Depth, P (360)	2.9			
Treatment Area	A	B	C	D
Excess Precipitation Factors	0.8	1.08	1.46	2.64
Peak Discharge Factors	2.20	2.92	3.73	5.25
Land Treatment Area	Acres	Existing	Allowable	Proposed
Type "D" (Impervious, Roof, Driveway, Ect.)	0	0.19	0.169	
Type "C" (Compacted Soil >10%)	0	0.23	0.01	
Type "B" (Compacted Native Soil)	0	0.23	0.06	
Type "A" (Undeveloped)	1.1362	0.49	0.90	
Total (Acres)	1.136	1.136	1.136	
Excess Precipitation(in)	0.80	1.30	1.09	
Volume (100), cf	3300	5364	4515	
Volume (10),cf	221	3594	3025	
Q (100), c/s	2.50	3.61	3.07	
Q (10), c/s	1.67	2.42	2.06	
Ponding Volume Required_cf = V(10)proposed-V(10)existing	815			

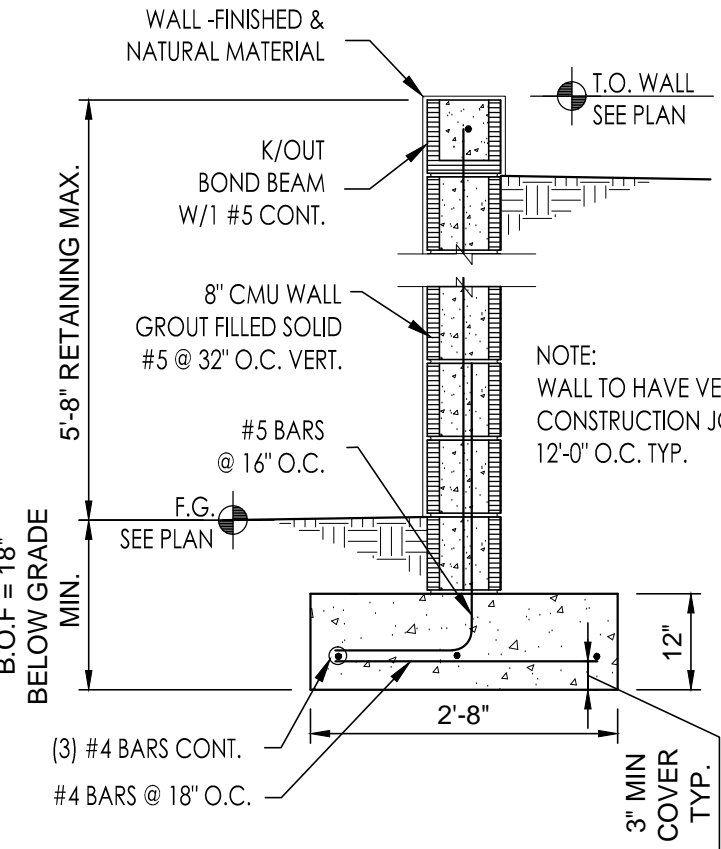
POND VOLUME PROVIDED:

POND 'A' = 685 CF
POND 'B' = 130 CF

TOTAL PONDING PROVIDED = 820 CF > 815 CF

LEGEND

---	6510	EXISTING INDEX CONTOUR
---	6509	EXISTING INTERIM CONTOUR
---	10	NEW INDEX CONTOUR
---	09	NEW INTERIM CONTOUR
+	22.8	NEW SPOT ELEVATION
---	FF	NEW CONCRETE DRIVEWAY
---	FF	NEW BUILDING
---	FF	FINISH FLOOR ELEVATION
---	FF	EXISTING SANITARY SEWER MANHOLE
---	FF	DIRECTION OF FLOW
---	FF	EXISTING FENCE LINE
---	FF	REBAR/BRASS CAP
---	FF	EXISTING TREE/SHRUB
---	FF	FLOWLINE

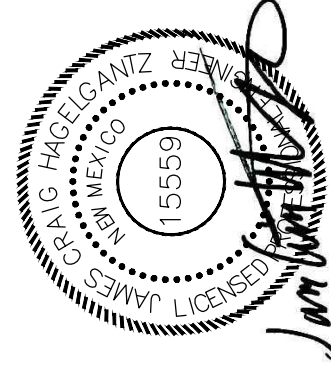


RETAINING WALL DETAIL

Scale: NTS

ABQ Engineering

Engineers • Planners • Construction Services
8102 Meriut Blvd. NE, Suite D, Albuquerque, NM 87110
tele: 505.255.7802
www.abqeng.com



DO NOT SCALE DRAWINGS
CONTRACTOR TO VERIFY ALL
EXISTING CONDITIONS AND
DIMENSIONS- NOTIFY
ENGINEER/ARCHITECT OF ANY
DISCREPANCIES PRIOR TO
BEGINNING CONSTRUCTION

CHAO \ LIMARY HOME
6001 BUFFALO GRASS COURT
ALBUQUERQUE, NEW MEXICO 87111

DESIGNED BY: PROJECT NO.: 14-034
DRAWN BY: DATE: AUGUST 2014

SHEET TITLE

SHEET NUMBER