

CITY OF ALBUQUERQUE

PLANNING DEPARTMENT – Development Review Services



Richard J. Berry, Mayor

November 3, 2016

Mr. Philip W. Clark, P.E.
Clark Consulting Engineers
19 Ryan Rd.
Edgewood, NM 87015

**RE: Signal Pointe Subdivision
Pad Certification – All Pads
Engineer's Stamp Date 7-21-2016 (File: C20D0070)**

Dear Mr. Clark:

Based upon the information provided in your submittal received 9-20-2016 (electronic copy received 7-21-2016), the above referenced Grading and Drainage Plan is approved for Pad Certification of all Pads within the subdivision with the following condition:

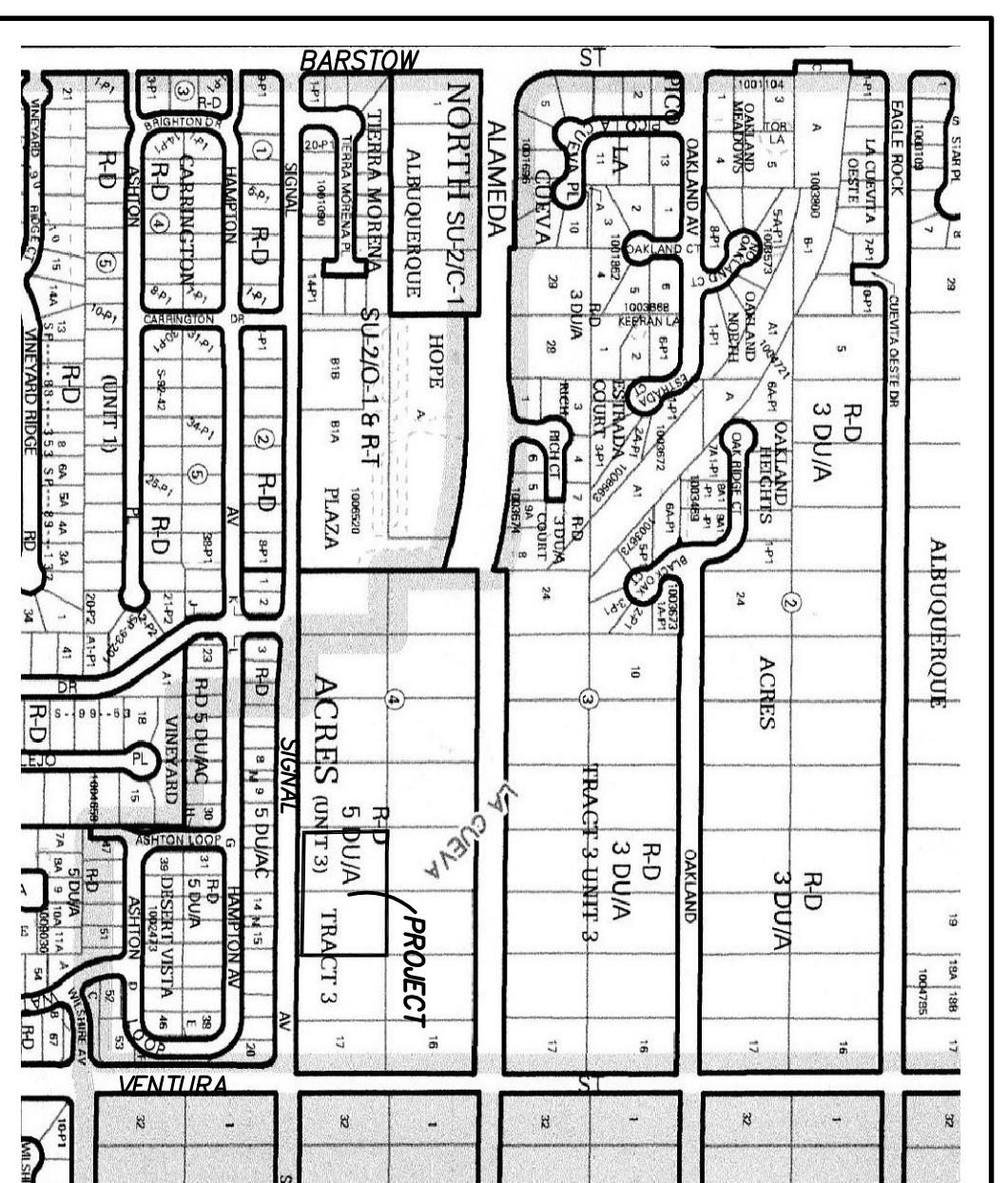
1. The turn blocks were not incorporated into the western wall, as an outlet for the water quality pond. This has the potential to adversely affect the home that is currently under construction on Lot 5 when the subdivision is built out. This will need to be addressed before any further action on this subdivision is approved (final plat, ROFG, future building permits).

If you have any questions you can contact me at 924-3986.

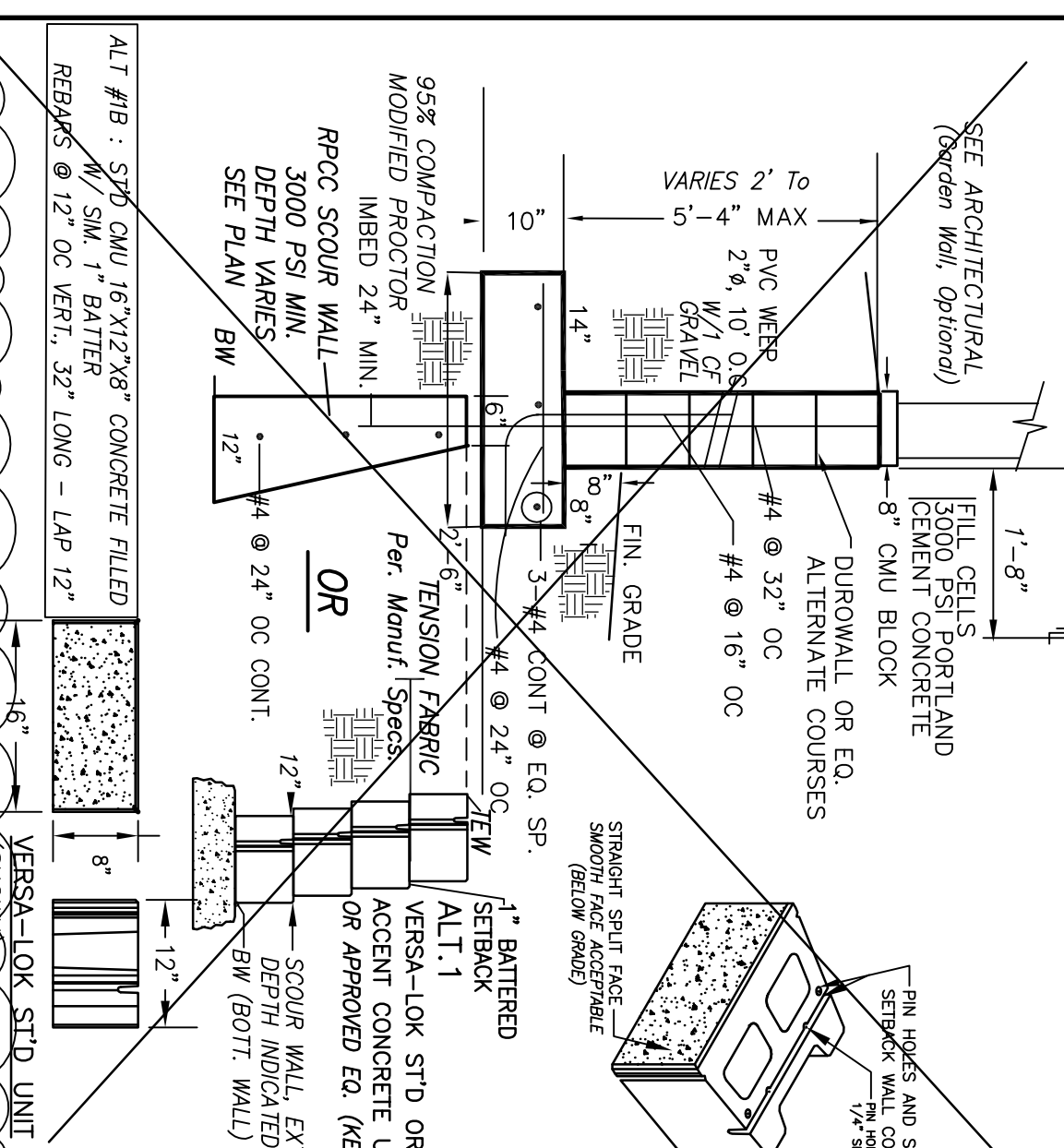
Sincerely,

Abiel Carrillo, P.E.
Principal Engineer, Planning Dept.
Development Review Services

Orig: Drainage file



VICINITY MAP
ZONE C-20



CMU RETAINING WALL / SCOUR WALL SECT. A
DELETED, SEE 10/26/15 SECTIONS & AS-BUILT CERT. 3/3/16

DESIGN CRITERIA
HYDROLOGIC METHODS PER SECTION 22.2. HYDROLOGIC OF THE DEVELOPMENT PROCESS MANUAL (DPM) REVISED JANUARY 1993 FOR CITY OF ALBUQUERQUE, ADOPTED BY THE COUNTY OF BERNALILLO DISCHARGE RATE: Q-PEAK X AREA, Peak Discharge Rates for Small Watersheds²
VOLUMETRIC DISCHARGE: VOLUME = Elongated x AREA
PI00 = 2.60 inches, Zone 3
Time of Concentration, TC = 10 Minutes
DESIGN STORM: 100-YEAR/6-HOUR, 10-YEAR/6-HOUR [] = 10 YEAR VALUES

HISTORIC CONDITIONS PER EXIST. LOT
100% A
PROJECT AREA = 0.89 ACRES, WHERE EXCESS PRECIP. Weighted = 0.66 in. [0.19]
PEAK DISCHARGE, Q100 = 1.8 CFS [1.06] WHERE UNIT PEAK DISCHARGE $\gamma_u = 1.9$ CFS/AC. [0.60]
THEREFORE: VOLUME 100 = 2132 CF [614]

DEVELOPED CONDITIONS DETERMINE LAND TREATMENTS, PEAK DISCHARGE AND VOLUMETRIC DISCHARGE FOR STUDY AREA

| AREA | LAND TREATMENT | Q Peak | E |
|---------------------------|-----------------|-------------|-------------|
| UNDEVELOPED | 0.22 AC | 1.87 [0.86] | 0.66 [0.19] |
| LANDSCAPING | 0.29 AC (17%) B | 2.00 [1.07] | 0.92 [0.36] |
| COMPACTED SOIL & Slopes > | 1.20 AC (67%) C | 5.02 [3.39] | 2.36 [1.50] |
| ROOF - PAVEMENT | 1.78 AC | | |

THEREFORE: $E_{weighted} = 1.95$ in. [1.16] & VOLUME 100 = 12800 CF
Q100 = 7.75 CFS
Q10 = 5.0 CFS

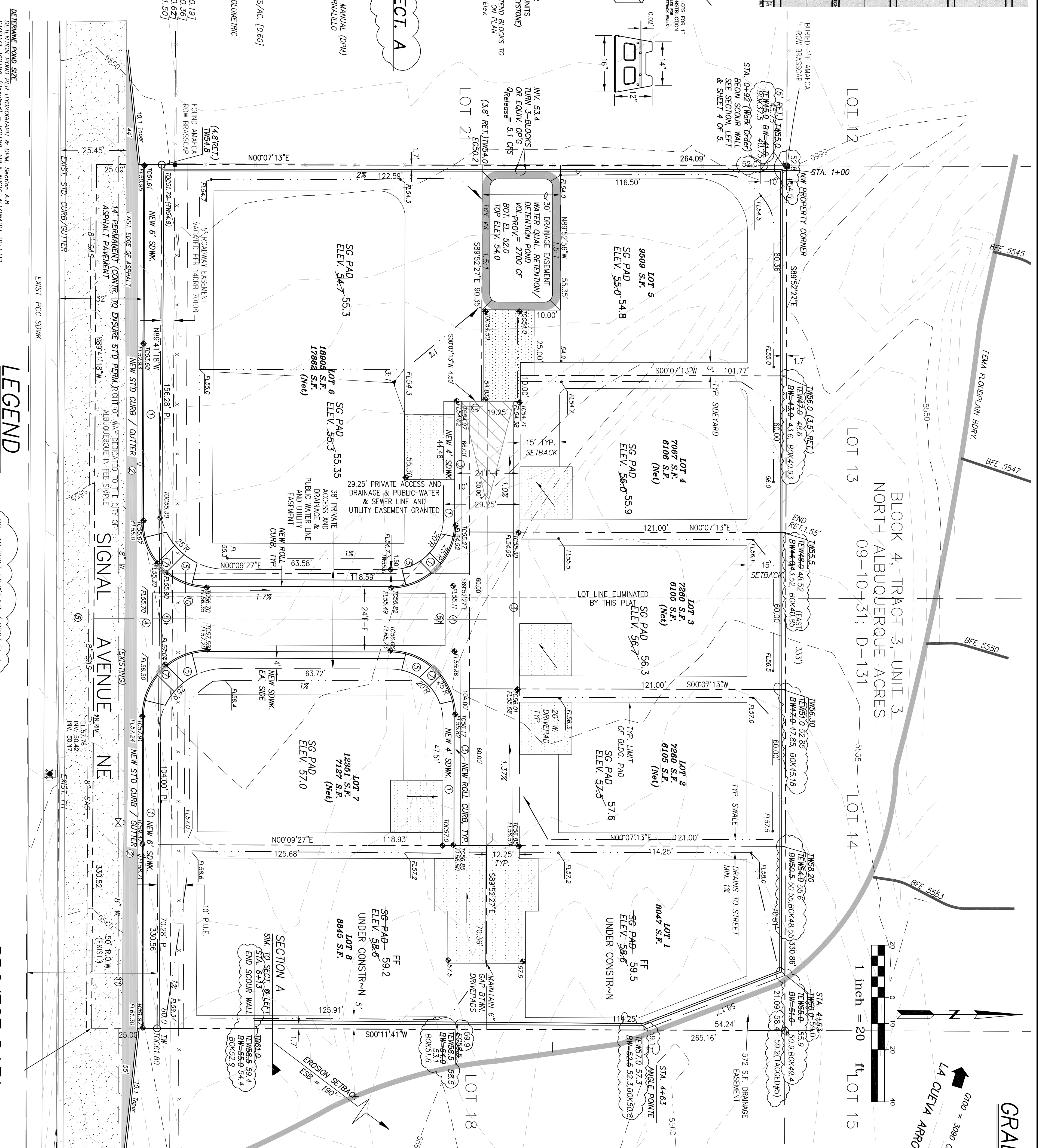
UNIT DISCHARGE = 7.75 CFS/1.78 AC. = 4.35 CFS/AC.
CALC. 1ST FLUSH, $P(4-6MO) = 0.6"$ Per Table 2 Water Qual. Storm PRO-RATE: $7.70 = 0.35 \times 0.09 = 0.03 + 0.27 = 0.3$ INCHES $\times 1.78$ (43660/12) = 1838 CF

UPSTREAM ANALYSIS - SET HEC-RAS WATER SURFACE MODEL OF LA CUESTA, ON THE WITH CITY HYDROLOGIST (REF. C-20/D/35) (REVISED 11/8/12)
PER RI STUDY, Q100 = 3090 CFS AT VENTURA ST. (SEE LOMR2012)

EROSION SET BACK ANALYSIS - PER SEDIMENT EROSION DESIGN GUIDE (SEDO)
 $Q_{100} = 3090$ CFS...LA CUESTA ARROYO
 $Q_{10} = 0.20$ = 618 CFS $W_p = 4.66'$ & 60 FEET
LANDU = $[0.8 + 4.0(0.2)] W_p = 718$ FEET BANK SETBACK = LANDU/4 = 179 FEET
CENTER LINE SETBACK = $BSB + W_p/2 = 190$ FEET
THEREFORE, EROSION CONTROL IMPROVEMENTS REQUIRED - PER DISCUSSION WITH CITY AND AMFCA CONSTRUCT SCOUR WALL ON EAST/NORTH SIDE OF DEVELOPMENT

CLASSIFICATION AND GRADATION OF RIPRAP

| DESIGN VELOCITY (ft/s) | DESIGN WAVE PERIOD (s) | DESIGN WAVE HEIGHT (ft) | DESIGN WAVE LENGTH (ft) | DESIGN WAVE PERIOD (s) | DESIGN WAVE HEIGHT (ft) | DESIGN WAVE LENGTH (ft) |
|------------------------|------------------------|-------------------------|-------------------------|------------------------|-------------------------|-------------------------|
| 70-100 | 5-10 | 4 | 4 | 4 | 4 | 4 |
| 35-50 | 2-10 | 4 | 4 | 4 | 4 | 4 |



DETERMINE POND SIZE
DRAINAGE FROM PER HYDROGRAPH & PPM Section A8
STORM VOLUME (Required) = VOLUME AREA ABOVE ALLOWABLE RELEASE



LEGEND

KEYED NOTES

LEGAL DESCRIPTION

PROJECT DATA

GRADING & DRAINAGE PLAN

THE RESIDENTIAL HOME PROJECT IS LOCATED IN UNIT 3 OF NORTH ALBUQUERQUE ACRES APPROXIMATELY 11 MILES FROM THE DOWNTOWN CORE OF ALBUQUERQUE, NM. THE GRADING AND DRAINAGE SCHEME HEREON IS IN COMPLIANCE WITH THE BERNALILLO COUNTY FLOOD ORDINANCE. THE PLAN IS REQUIRED IN ORDER TO FACILITATE THE OWNER'S REQUEST FOR BUILDING PERMIT. THE PLAN SHOWS:

- EXISTING CONDITIONS, SPOT ELEVATIONS, AND EXISTING DRAINAGE PATTERNS.
- PROPOSED IMPROVEMENTS, 8 RESIDENTIAL HOME PAD SITES, NEW PERIMETER SOIL WALL, CONCRETE DRIVEWAYS, AND NEW GRADE ELEVATIONS.
- UTILITY BETWEEN EXISTING AND PROPOSED ELEVATIONS, FLOWS WHICH CONTRIBUTE TO THE DEVELOPED FLOWS GENERATED BY THE IMPROVEMENTS, ANALYSIS AS TO WATER SURFACE MODEL AND EROSION SETBACK.

THE PURPOSE OF THE PLAN IS TO ESTABLISH CRITERIA FOR ALLOWING HISTORIC FLOWS TO CONTINUE TO DRAIN THROUGH THE PROPERTY, PRESENTLY, THE SITE IS BOUNDED ON THE EAST SOUTH AND NORTH BY UNDEVELOPED PROPERTY, SIGNAL AVENUE ON THE WEST IS THE SITE BOUNDARY. THE SITE IS BOUNDED BY BARSTOW ST. ON THE WEST. ALL OFFSITE FLOWS ARE QUANTIFIED ON THE PLAN, AND ADDRESSED IN THE CALCULATIONS.

A PORTION OF THE SITE IS ENGINEERED BY A DESIGNATED FEMA FLOODPLAIN.

HISTORICAL SITE RUNOFF OUTFALL LOCATIONS WILL REMAIN UNCHANGED IN DEVELOPMENT, SINCE SIGNAL AVE IS IMPROVED ANNUAL GRADING IS PROPOSED WITHIN THE CITY R.O.W. FREE DISCHARGE OF DEVELOPED FLOW IS ACCEPTABLE SINCE DOWNSSTREAM CAPACITY (LA CUESTA CHANNEL) EXISTS.

NOTES

- ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, W/ 8 UPDATES.
- AN EXCAVATION/CONSTRUCTION PERMIT IS REQUIRED BEFORE BEGINNING ANY WORK WITHIN WORK AREA, AN APPROVED COPY OF THIS PLAN MUST BE SUBMITTED AT THE TIME OF APPLICATION.
- ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES, AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
- CONTRACTOR SHALL ENSURE THAT NO SITE SOILS/SEDIMENT OR SILT ENTER THE RIGHT-OF-WAYS DURING CONSTRUCTION.
- AREAS DISTURBED DUE TO CONSTRUCTION PER CITY OF ALBUO. SPEC. 1072 NATURE SEED MIX.
- MAXIMUM SITE GRADING WITHOUT EROSION PROTECTION: 3 HORIZONTAL TO 1 VERTICAL, 3:1 ALL DIMENSIONS TO FACE OF CURB UNLESS NOTED OTHERWISE.

AS-CONSTRUCTED

SCOUR WALL ONLY AS NOTED ABOVE

NOTE: ADDED SUBGRADE PAD / SPOT ELEVATIONS @ NW & NE CORNER OUTSIDE WALL GRADES OBTAINED BY PHIL TURNER, N.M.P.S. 10204, OF TERRAMETRICS NM. 7/20/16

PHILIP W. CLARK, P.E. #0285 3/17/16

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Clark Consulting Engineers

19 Ryan Road Edgewood, New Mexico 87015
Tel: (505) 281-2444 Fax: (505) 281-2444

Grading & Drainage Plan

DESIGNED BY: PWC DRAWM BY: COE
DATE: 2/28/15 FILE # 5/D SHEET 1 OF 1

AMAFCA

**Albuquerque, NM 87122
(505)**

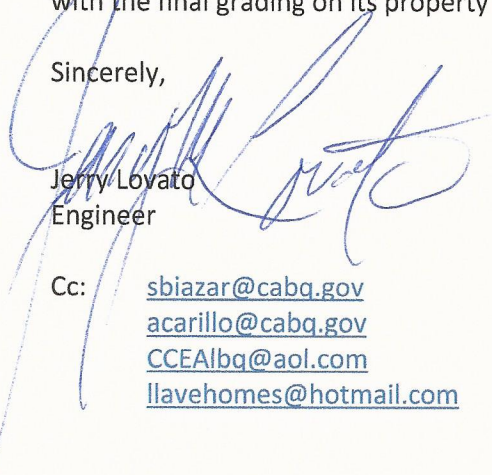
Mr. Shahab Biazar, PE
City Engineer
Development Review Services Division
600 2nd St. NW
Suite 201
Albuquerque, NM 87102
(505) 924-3999

Re: Signal Pointe Subdivision

Dear Mr. Biazar,

AMAFCA is the Owner of Lots 21, Block 4, Tract 3, Unit 3, NAA adjacent on the west side of formerly Lot 20, Block 4, Tract 3, Unit 3, NAA now incorporated into Signal Pointe Subdivision. AMAFCA is satisfied with the final grading on its property and requires nothing more to be done.

Sincerely,


Jerry Lovato
Engineer

8/31/2016

Cc: sbiazar@cabq.gov
acarillo@cabq.gov
CCEAlbq@aol.com
llavehomes@hotmail.com

**Llave Enterprises, Inc.
8830 Keeran Ln. NE
Albuquerque, NM 87122
(505) 249-1502**

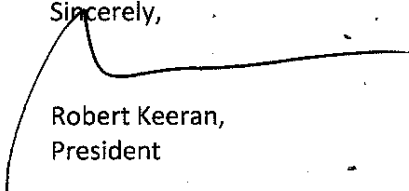
Mr. Shahab Biazar, PE
City Engineer
Development Review Services Division
600 2nd St. NW
Suite 201
Albuquerque, NM 87102
(505) 924-3999

Re: Signal Pointe Subdivision

Dear Mr. Biazar,

Llave Enterprises, Inc. is the Owner of Lot 13, Block 4, Tract 3, Unit 3, NAA adjacent on the north side of formerly Lot 20, Block 4, Tract 3, Unit 3, NAA now incorporated into Signal Pointe Subdivision. Llave is satisfied with the final grading on its property and requires nothing more to be done.

Sincerely,



Robert Keeran,
President

Cc: Clark Consulting Engineers

Signal Pointe Shahab Final Grading Letter