# CITY OF ALBUQUERQUE

*Planning Department*
David Campbell, Director

*Mayor Timothy M. Keller*

October 22, 2018

Åsa Nilsson-Weber, P.E.
Isaacson & Arfman, P.A.
128 Monroe St. N.E
Albuquerque, NM 87108

RE: **Bosque Antigua**
**Gabaldon Dr NW**
**Grading Plan Stamp Date: 10/10/18**
**Drainage Report Stamp Date: 10/10/18**
**Hydrology File: J12D015**

Dear Ms. Nilsson-Weber:

PO Box 1293

Based on the submittal received on 10/10/18 the above-referenced submittal is approved for Preliminary Plat and Grading Permit.

Albuquerque

Prior to Work Order (For Information):

1. The easements for ponds D and E will need to be recorded.

NM 87103

Prior to Building Permit (For Information):

2. Engineer's Certification (Pad Certifications), per the DPM Chapter 22.7: *Engineer's Certification Checklist For Subdivision* is required.

www.cabq.gov

Prior to Release of Financial Guarantee (For Information):

3. Engineer's Certification (All Private Grading), per the DPM Chapter 22.7: *Engineer's Certification Checklist For Subdivision* is required.

4. The (2) agreement and covenants for ponds D and E will need to be recorded.

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:** Bosque Antigua Building Permit #: _____ Hydrology File #: J12D015

DRB#: PR-2018-001327 (1001228) EPC#: _____ Work Order#: _____

Legal Description: Tract 2A & Portion of Tract 3, Kelly Tracts

City Address: _____

**Applicant:** Isaacson & Arfman, PA Contact: Åsa Nilsson-Weber

Address: 128 Monroe Street NE - Albuquerque, NM 87108

Phone#: (505) 268-8828 Fax#: _____ E-mail: asaw@iacivil.com

**Other Contact:** Las Ventanas NM, Inc. Contact: T Scott Ashcraft

Address: 8330-A Washington Place NE - Albuquerque, NM 87113

Phone#: (505) 362-6824 Fax#: _____ E-mail: _____

**TYPE OF DEVELOPMENT:** _X_ PLAT ____ RESIDENCE ____ DRB SITE ___ 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

_X_ 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?: _X_ Yes ____ No

**TYPE OF APPROVAL/ACCEPTANCE SOUGHT:**

____ 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: October 10, 2018 By: Åsa Nilsson-Weber

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COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____

OCTOBER 10, 2018

# DRAINAGE REPORT

FOR

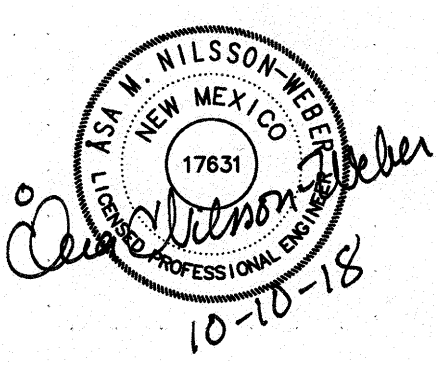
# BOSQUE ANTIGUA

## A 15-DWELLING UNIT SINGLE-DETACHED RESIDENTIAL PRIVATE COMMONS DEVELOPMENT

## ALBUQUERQUE, NEW MEXICO

.

BY




*ISAACSON & ARFMAN, P.A.*
***Consulting Engineering Associates***

*Thomas O. Isaacson, PE & LS*
*Fred C. Arfman, PE*
*Åsa Nilsson-Weber, PE*

*I&A Project No. 2273*

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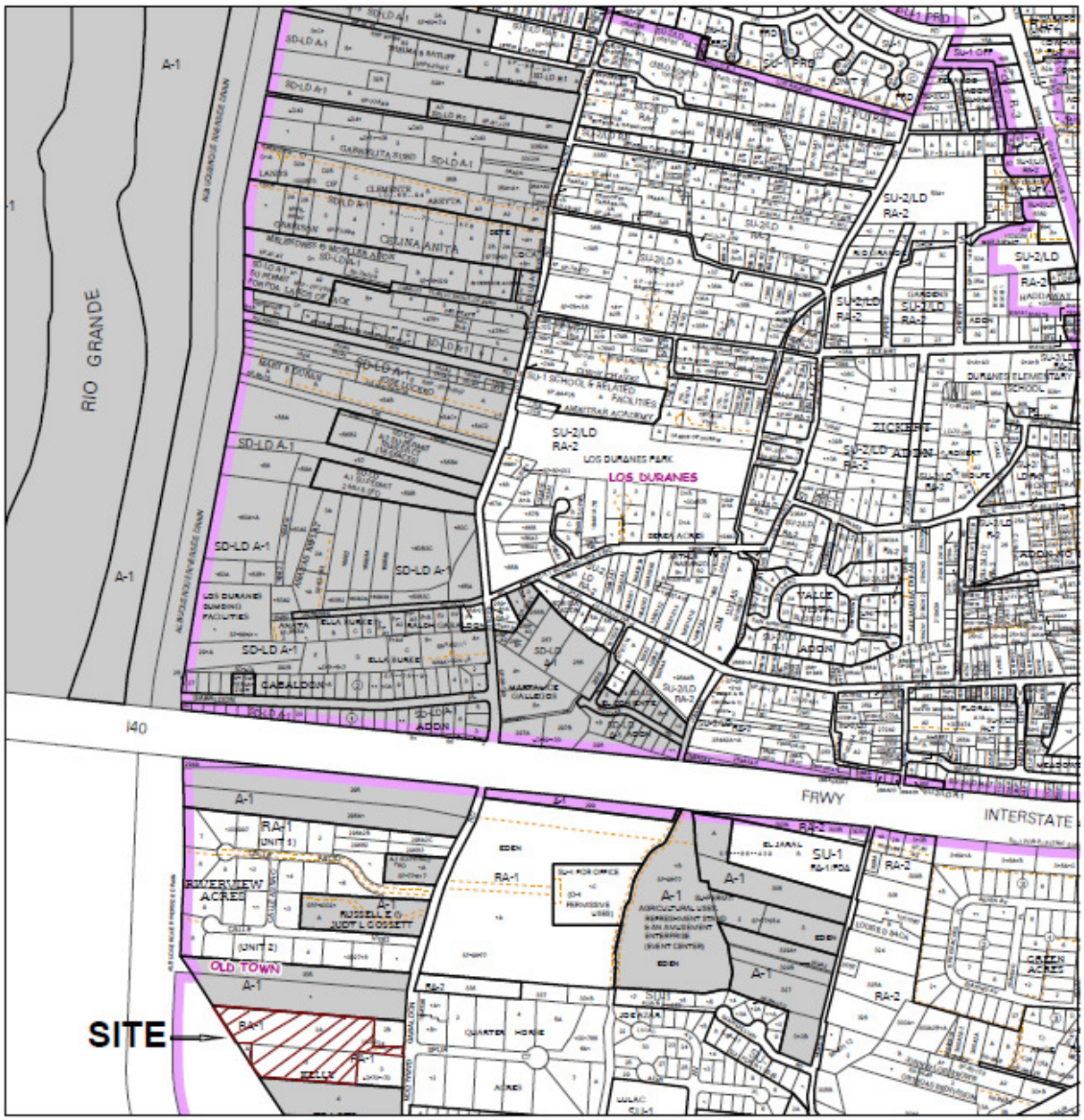
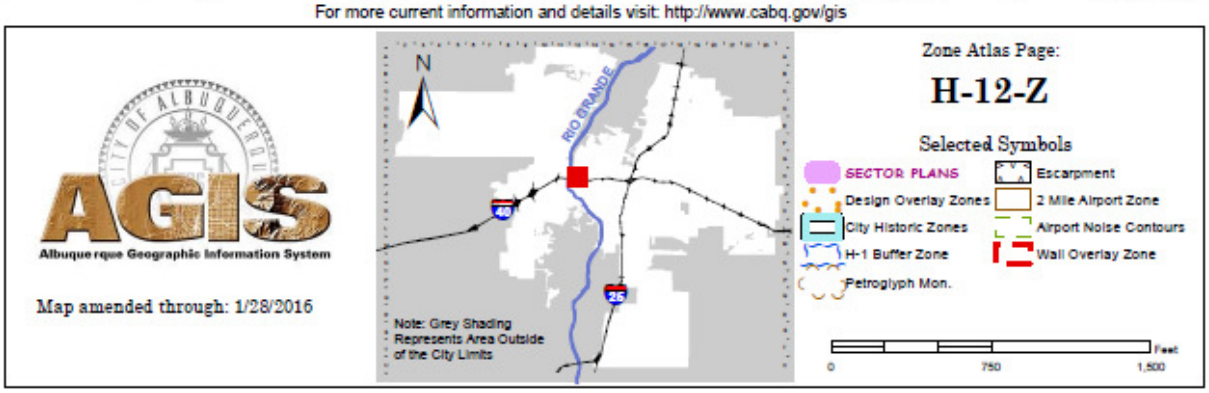
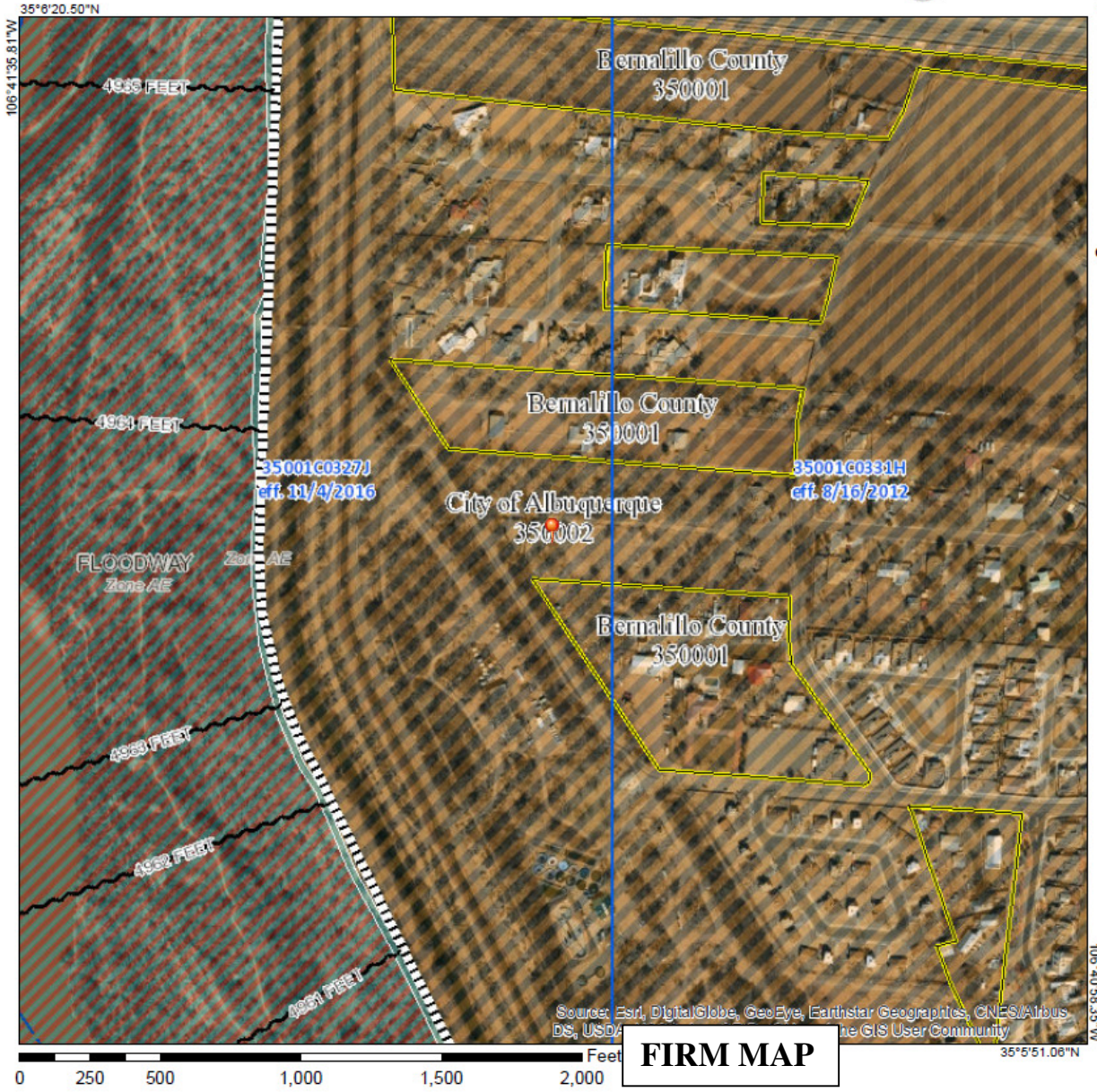



For more current information and details visit: http://www.cabq.gov/gis




**VICINITY MAP H-12-Z**

# National Flood Hazard Layer FIRMette




**FIRM MAP**

FEMA

## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

**SPECIAL FLOOD HAZARD AREAS**
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth
- Regulatory Floodway *Zone AE, AO, AH, VE, AR*

**OTHER AREAS OF FLOOD HAZARD**
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

**OTHER AREAS**
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

**GENERAL STRUCTURES**
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

**OTHER FEATURES**
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

**MAP PANELS**
- Digital Data Available
- No Digital Data Available
- Unmapped

N

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The base map shown complies with FEMA's base map accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 6/12/2018 at 6:45:20 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: base map imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

## I. PROJECT INFORMATION

PROPOSED LEGAL DESCRIPTION:
Bosque Antigua

EXISTING LEGAL DESCRIPTION:
Tract 2A and a Portion of Tract 3, Kelly Tracts

ENGINEER: Isaacson & Arfman, P.A.
128 Monroe Street NE
Albuquerque, NM 87108
(505) 268-8828
Attn: Åsa Nilsson-Weber

SURVEYOR: Aldrich Land Surveying
(505) 884-1990
Attn: Timothy Aldrich., NMPLS No. 7719

DEVELOPER: Las Ventanas, NM, Inc.
(505) 362-6824
Attn: Scott Ashcraft

NUMBER OF PROPOSED DWELLING UNITS: 15

TOTAL AREA: 5.4812 Ac.

FLOOD PLAIN: This property lies within shaded flood Zone X which is defined as areas of 0.2% annual chance; area of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and area with reduced flood risk due to levee as determined by FEMA and shown on flood insurance rate map no. 35001C03271, date 11/4/2016 and map no. 35001C0331H, date 8/16/12.

## II. INTRODUCTION

This site is comprised of two vacant lots located west of Gabaldon Rd. NW and south of I-40 and is bound on the west by the Bio Park (San Gabriel State Park), on the east by two private residences and on the north and south by private residences, and at the southwest corner by a Water Authority well site. The site is zoned R-A and will be re-developed as a cluster development with 15 detached residential homes with two open space area easements that will be utilized for drainage ponds .

## III. EXISTING CONDITIONS

The site is undeveloped. The site is flat and drainage ponds on the property. Gabaldon Rd. is a rural-type road with no curb and gutter or sidewalks. There is a roadside ditch at the east end of the property and an existing 18-inch culvert under the existing drive to the two existing residences and a secondary culvert south of the existing drive. The residence northeast of the site utilizes water in this ditch for irrigation. This existing culvert has been plugged at the south end.

## IV. PROPOSED CONDITIONS

The site will be developed as a gated residential cluster development. The two existing residences will be included in the gated community. Easements A and B will be granted as open space (private commons areas) that will be used for ponding the 100-year, 10-day volumes. Maxum Ln. (Tract PR) will be crowned and slope to the north and to the south directing the flows to the retention ponds in the private commons open space easements. The road will have mountable estate curb and no sidewalks. There will be a view fence along the open space easements in the back yards to allow drainage to pass to the ponds. The elevation of the road was set to approximately existing grade to maintain cover over an existing 16-inch waterline in the road that will remain.

Gabaldon Rd. will remain as a rural-type road with no curb and gutter or sidewalks. An existing culvert under the existing drive and to the south will be removed.

The grading & drainage plan is included in the back pocket of this report.

### LAND TREATMENTS & BASIN AREAS

Land treatment percent D was calculated for the developed area based on the building pad, driveway and roadway areas, and the remaining area was split between land treatments B and C. See Appendix A for land treatment calculations and basin area table.

## HYDROLOGY

Appendix A includes a Drainage Basin Exhibit and the 100-year, 10-day pond volume calculations using the equations from the Drainage Design Criteria for City of Albuquerque Section 22.2, DPM, Vol 2, dated Jan., 1993.

## PONDING IN OPEN SPACE EASEMENTS A & B

Pond A in easement A has a capacity of 865 cy at a water surface elevation of 4957.5, which exceeds the required 10-day storm volume of 855 cy; Pond B in easement B has a capacity of 876 cy at a water surface elevation of 4957.0, which exceeds the required volume of 843 cy; Pond C in Tract A has a capacity of 38 cy at a water surface elevation of 4958.5, which exceeds the required volume of 36 cy. The ponding capacity was calculated using AutoCAD Civil 3D by creating a composite comparison surface with the proposed ground surface and a top-of-pond surface at the water surface elevation (see Appendix A for a pond volume exhibit).

## PONDING ON TRACT 2B, KELLY TRACTS AND PORTION OF TRACT 3, KELLY TRACTS

A v-ditch shall be graded on the two offsite properties to store the 100-yr., 10-day volume from Gabaldon Rd. Tract 2B uses water in the ditch for irrigation, but the existing culvert under the drive has been plugged since many years back so that no flows enter the ditch on Portion of Tract 3. Therefore, the culvert shall be removed. The pond volumes were calculated by the cross-sectional area of the ditch and the length (see pond volume exhibit in Appendix A). A public drainage easement and agreement & covenant shall be recorded. The easements shall be maintained by the Homeowners' Association.

## FIRST FLUSH REQUIREMENTS

The first flush requirement will be met by directing flows to the pond areas in the private common open space easements.

## V. SUMMARY & CONCLUSIONS

The site will be developed with 15 detached residential homes and a private, gated road. Open space easements A & B will be designated as a private commons area with private ponding areas for flows from the subdivision.

Based on this report, it is recommended that the following improvements be constructed:

- Paved street with crown and mountable estate curb.
- Retention ponds in easements A & B.
- Retention ponds on offsite Tract 2B, Kelly Tracts and Portion of Tract 3, Kelly Tracts with public drainage easement and agreement & covenant.
- Perimeter walls that are concrete filled and water proofed to one foot above the water surface elevation, where applicable.

# APPENDIX A

**Basin Area and Land Treatment Table**
**Drainage Basin Exhibit**
**Drainage Calculations**
**Pond Volume Calcs Exhibit**

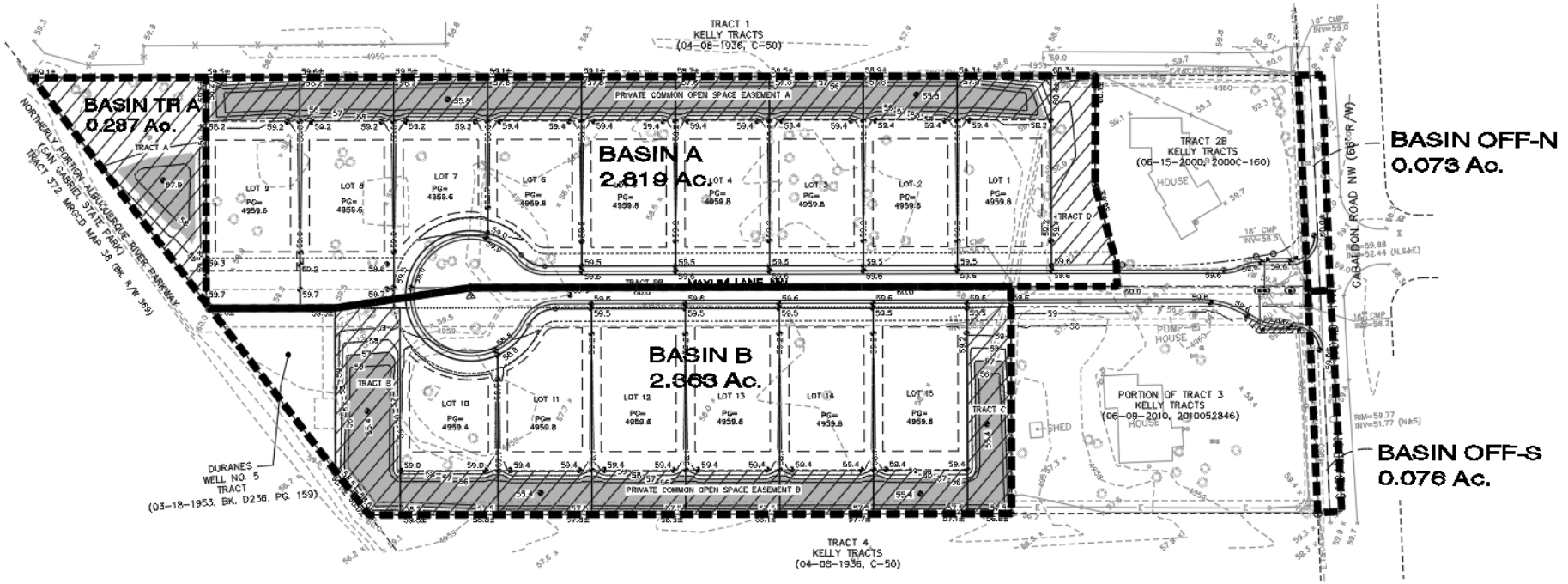
# BOSQUE ANTIGUA

## BASIN AREA AND LAND TREATMENT TABLE-- PROPOSED CONDITIONS

| *BASIN* | *AREA* | | *LAND TREATMENT (%)* | | | | Required V100-10 day | Required V100-10 day | Provided V100-10 day |
|---|---|---|---|---|---|---|---|---|---|
| | *SF* | *AC.* | *A* | *B* | *C* | *D* | CF | CY | CY |
| A | 122,810 | 2.819 | 0 | 24 | 29 | 47 | 23,086 | 855 | 865 |
| B | 102,911 | 2.363 | 0 | 18 | 21 | 61 | 22,764 | 843 | 876 |
| TR A | 12,489 | 0.287 | 0 | 70 | 30 | 0 | 921 | 34 | 38 |
| TOTAL | 238,210 | 5.469 | | | | | 46,771 | 1,732 | 1,779 |
| OFF-N | 3,188 | 0.073 | 0 | 22 | 22 | 56 | 672 | 25 | 25 |
| OFF-S | 3,308 | 0.076 | 0 | 18 | 21 | 61 | 705 | 26 | 28 |

| IMPERVIOUS AREA CALCULATION | | | | | | |
|---|---|---|---|---|---|---|
| BASIN | TOT. AREA | ROAD | PAD | DRIVEWAY | TOTAL IMP | %D |
| A | 122,810 | 9,315 | 44,226 | 3,600 | 57,141 | 47% |
| B | 102,911 | 28,486 | 32,376 | 2,400 | 63,262 | 61% |
| OFF-N | 3,188 | 1,813 | | | 1,813 | 57% |
| OFF-S | 3,308 | 1,929 | | | 1,929 | 58% |

# DRAINAGE BASIN EXHIBIT



| | |
|---|---|
| Job Name: | **Bosque Antigua** |
| Client: | Las Ventanas NM |
| Date Prepared: | 6/26/2018 |
| Date Modified: | 8/26/2018 |
| Precipitation Zone: | 2 |

For Zone 2

| | | | |
|---|---|---|---|
| EA = | 0.53 | QpA = | 1.56 |
| EB = | 0.78 | QpB = | 2.28 |
| EC = | 1.13 | QpC = | 3.14 |
| ED = | 2.12 | QpD = | 4.70 |

**BASIN NO. A** — **DESCRIPTION**

Area of basin flows = 122810 SF = 2.8 Ac.

The following calculations are based on Treatment areas as shown in table to the right

Sub-basin Weighted Excess Precipitation (see formula above)

Weighted E = 1.51 in.

Sub-basin Volume of Runoff (see formula above)

$V_{360}$ = 15467 CF

Sub-basin Peak Discharge Rate: (see formula above)

$Q_P$ = 10.3 cfs

| LAND TREATMENT | |
|---|---|
| A = | 0% |
| B = | 24% |
| C = | 29% |
| D = | 47% |

**BASIN NO. B** — **DESCRIPTION**

Area of basin flows = 102911 SF = 2.4 Ac.

The following calculations are based on Treatment areas as shown in table to the right

Sub-basin Weighted Excess Precipitation (see formula above)

Weighted E = 1.67 in.

Sub-basin Volume of Runoff (see formula above)

$V_{360}$ = 14329 CF

Sub-basin Peak Discharge Rate: (see formula above)

$Q_P$ = 9.3 cfs

| LAND TREATMENT | |
|---|---|
| A = | 0% |
| B = | 18% |
| C = | 21% |
| D = | 61% |

**BASIN NO. TR A** — **DESCRIPTION**

Area of basin flows = 12489 SF = 0.3 Ac.

The following calculations are based on Treatment areas as shown in table to the right

Sub-basin Weighted Excess Precipitation (see formula above)

Weighted E = 0.89 in.

Sub-basin Volume of Runoff (see formula above)

$V_{360}$ = 921 CF

Sub-basin Peak Discharge Rate: (see formula above)

$Q_P$ = 0.7 cfs

| LAND TREATMENT | |
|---|---|
| A = | 0% |
| B = | 70% |
| C = | 30% |
| D = | 0% |

**BASIN OFF-N** — **DESCRIPTION**

Area of basin flows = 3188 SF = 0.073 Ac.

The following calculations are based on Treatment areas as shown in table to the right

Sub-basin Weighted Excess Precipitation (see formula above)

Weighted E = 1.62 in.

Sub-basin Volume of Runoff (see formula above)

$V_{360}$ = 430 CF

Sub-basin Peak Discharge Rate: (see formula above)

$Q_P$ = 0.3 cfs

| LAND TREATMENT | |
|---|---|
| A = | 0% |
| B = | 22% |
| C = | 21% |
| D = | 57% |

**BASIN NO. OFF-S** — **DESCRIPTION**

Area of basin flows = 3308 SF = 0.076 Ac.

The following calculations are based on Treatment areas as shown in table to the right

Sub-basin Weighted Excess Precipitation (see formula above)

Weighted E = 1.63 in.

Sub-basin Volume of Runoff (see formula above)

$V_{360}$ = 450 CF

Sub-basin Peak Discharge Rate: (see formula above)

$Q_P$ = 0.3 cfs

| LAND TREATMENT | |
|---|---|
| A = | 0% |
| B = | 21% |
| C = | 21% |
| D = | 58% |

## Pond in Easement A

Note: For ponds which hold water for longer than 6 hours, longer duration storms are required to establish runoff volumes. Since the additional precipitation is assumed to occur over a long period, the additional volume is based on the runoff from the impervious areas only.

| | |
|---|---|
| $V_{360}$ (from previous calculation) | 15467 |
| Area Treatment D (SF) | 57141 |
| Zone | 2 |

For 10 Day Storms:

$V_{10day} = V_{360} + A_D * (P_{10day} - P_{360})*43560$ SF/AC

| | | |
|---|---|---|
| $V_{360}$ | = | 15467 |
| $A_D$ (SF) | = | 57141 |
| Zone | = | 2 |
| $P_{10day}$ | = | 3.95 |
| $P_{360}$ | = | 2.35 |

| | | |
|---|---|---|
| $V_{360}$ | = | 15467 |
| + imp. area | = | 7619 |

| | | |
|---|---|---|
| Total Pond Volume ($V_{10\ day}$) | = | 23086 |

## Pond in Easement B

Note: For ponds which hold water for longer than 6 hours, longer duration storms are required to establish runoff volumes. Since the additional precipitation is assumed to occur over a long period, the additional volume is based on the runoff from the impervious areas only.

| | |
|---|---|
| $V_{360}$ (from previous calculation) | 14329 |
| Area Treatment D (SF) | 63262 |
| Zone | 2 |

For 10 Day Storms:

$V_{10day} = V_{360} + A_D * (P_{10day} - P_{360})*43560$ SF/AC

| | | |
|---|---|---|
| $V_{360}$ | = | 14329 |
| $A_D$ (SF) | = | 63262 |
| Zone | = | 2 |
| $P_{10day}$ | = | 3.95 |
| $P_{360}$ | = | 2.35 |

| | | |
|---|---|---|
| $V_{360}$ | = | 14329 |
| + imp. area | = | 8435 |

| | | |
|---|---|---|
| Total Pond Volume ($V_{10\ day}$) | = | 22764 |

## Pond in OFF-N

Note: For ponds which hold water for longer than 6 hours, longer duration storms are required to establish runoff volumes. Since the additional precipitation is assumed to occur over a long period, the additional volume is based on the runoff from the impervious areas only.

| | |
|---|---|
| $V_{360}$ (from previous calculation) | 430 |
| Area Treatment D (SF) | 1817 |
| Zone | 2 |

For 10 Day Storms:

$V_{10day} = V_{360} + A_D * (P_{10day} - P_{360})*43560$ SF/AC

| | | |
|---|---|---|
| $V_{360}$ | = | 430 |
| $A_D$ (SF) | = | 1817 |
| Zone | = | 2 |
| $P_{10day}$ | = | 3.95 |
| $P_{360}$ | = | 2.35 |

| | | |
|---|---|---|
| $V_{360}$ | = | 430 |
| + imp. area | = | 242 |

| | | |
|---|---|---|
| Total Pond Volume ($V_{10\ day}$) | = | 672 |

## Pond in OFF-S

Note: For ponds which hold water for longer than 6 hours, longer duration storms are required to establish runoff volumes. Since the additional precipitation is assumed to occur over a long period, the additional volume is based on the runoff from the impervious areas only.

| | |
|---|---|
| $V_{360}$ (from previous calculation) | 450 |
| Area Treatment D (SF) | 1919 |
| Zone | 2 |

For 10 Day Storms:

$V_{10day} = V_{360} + A_D * (P_{10day} - P_{360})*43560$ SF/AC

| | | |
|---|---|---|
| $V_{360}$ | = | 450 |
| $A_D$ (SF) | = | 1919 |
| Zone | = | 2 |
| $P_{10day}$ | = | 3.95 |
| $P_{360}$ | = | 2.35 |

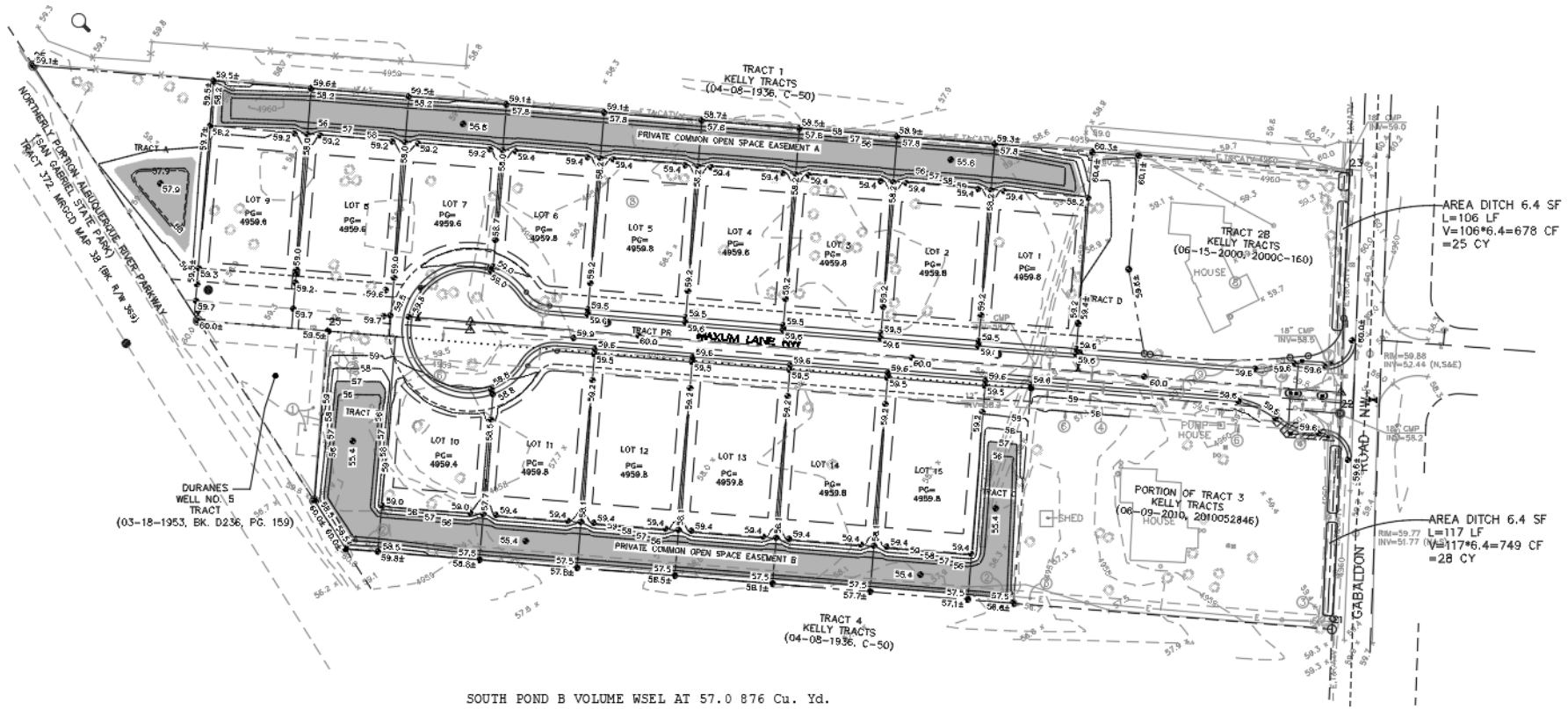
| | | |
|---|---|---|
| $V_{360}$ | = | 450 |
| + imp. area | = | 256 |

| | | |
|---|---|---|
| Total Pond Volume ($V_{10\ day}$) | = | 705 |

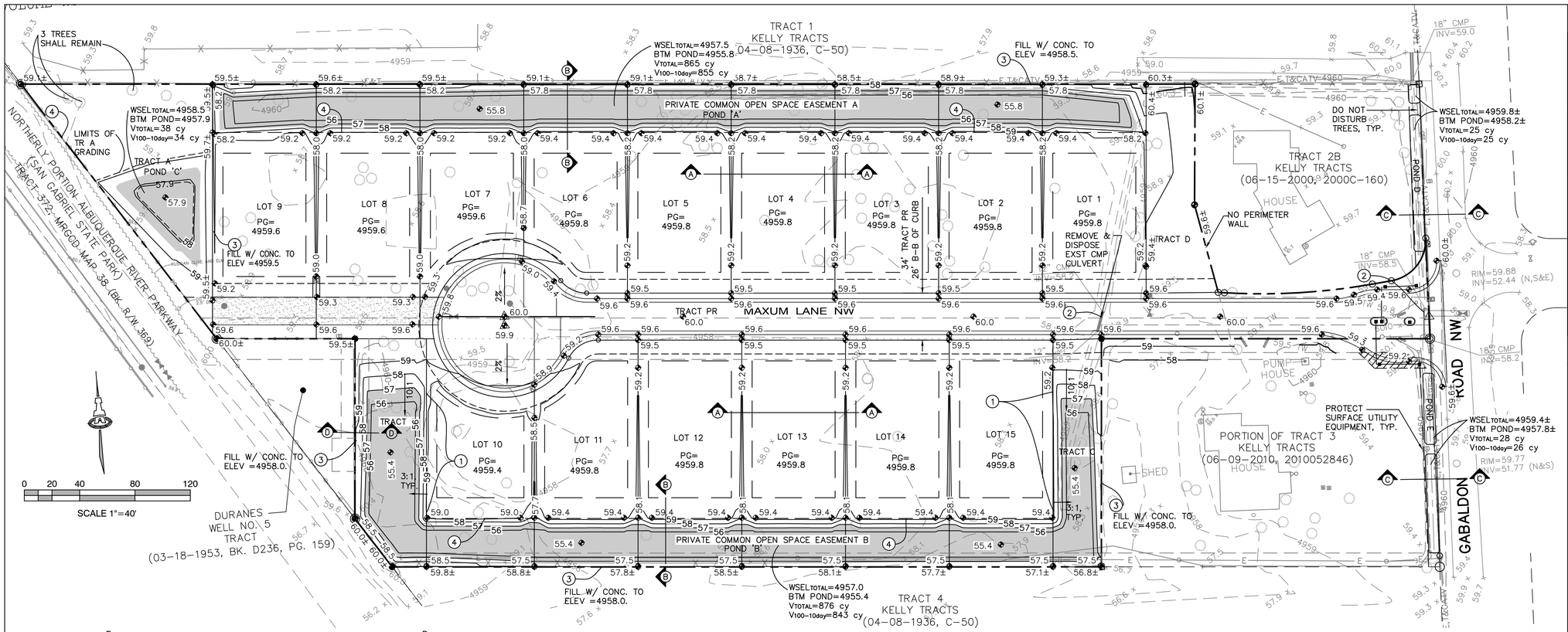
# AUTOCAD CIVIL 3D
# POND VOLUME CALCS EXHIBIT

TRACT A POND C VOLUME WSEL AT 58.5 38 Cu. Yd.

NORTH POND A VOLUME WSEL AT 57.5 865 Cu. Yd.




SOUTH POND B VOLUME WSEL AT 57.0 876 Cu. Yd.




## VICINITY MAP

## PROJECT DATA

LEGAL DESCRIPTION: TRACT 2A AND A PORTION OF TRACT 3, KELLY TRACTS

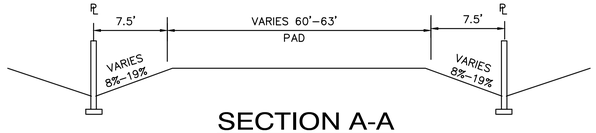
SITE AREA: 5.4812 ACRES

FLOOD ZONE: SHADED ZONE X. FIRM MAPS 35001C0327I DATED 11/4/16 AND AND 35001C0331H, DATED 8/16/12

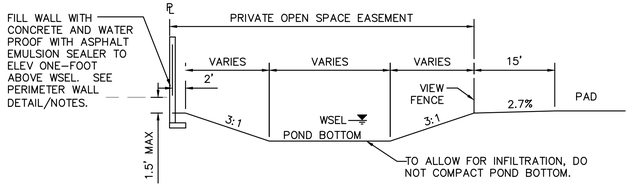
ENGINEER: ÅSA NILSSON-WEBER
ISAACSON & ARFMAN, P.A.
128 MONROE ST NE, ABQ. NM 87108
PHONE: (505) 268-8828

SURVEYOR: TIMOTHY ALDRICH
ALDRICH LAND SURVEYING
P.O. BOX 30701, ALBQ., N.M. 87190
PHONE: (505) 884-1990

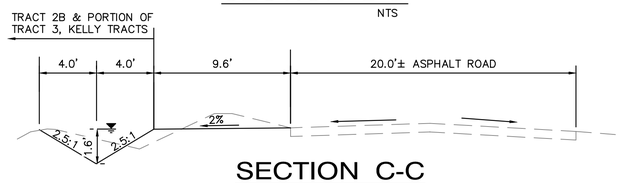
BENCHMARK:
AGRS Aluminum Cap stamped "20-J11 1989" N.M. State Plane Coordinates (Central Zone) N=1491770.982, E=1506437.513, G-G=0.999680825, DA=-00°15'27.22" Elevation, in feet (NAVD88) = 5094.032



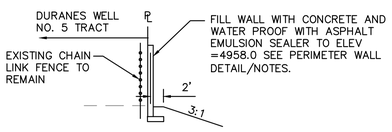

## SECTION A-A
NTS



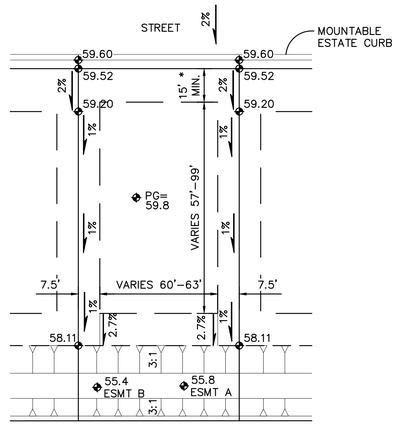

## SECTION B-B
NTS



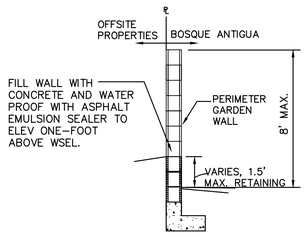

## SECTION C-C
NTS




## SECTION D-D
NTS




## TYPICAL LOT DETAIL
NTS




PERIMETER WALL NOTES:

UNLESS WRITTEN PERMISSION IS OBTAINED FROM ADJACENT, OFFSITE PROPERTY OWNERS, PERIMETER WALL SHALL BE CONSTRUCTED ON THIS PROPERTY, INCLUDING FOOTINGS.

## PERIMETER WALL DETAIL/NOTES
NTS

## GENERAL NOTES

A. THE CONTRACTOR SHALL ABIDE BY ALL STATE, LOCAL, AND FEDERAL LAWS, CODES, RULES AND REGULATIONS WHICH APPLY TO THE CONSTRUCTION OF THESE IMPROVEMENTS, INCLUDING EPA AND ADA REQUIREMENTS.

B. ALL SITE PREPARATION, GRADING OPERATIONS, FOUNDATION CONSTRUCTION, AND PAVEMENT INSTALLATION WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT, WHICH WILL BE PROVIDED BY THE OWNER OR ARCHITECT. ALL OTHER WORK SHALL, UNLESS OTHERWISE NOTED IN THE PLANS, BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.

C. NO WORK SHALL BE PERFORMED WITHOUT THE APPROPRIATE PERMITS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS FOR THE PROJECT PRIOR TO COMMENCING CONSTRUCTION, OR PRIOR TO OCCUPANCY, AS APPROPRIATE. IF PERMITS ARE DELAYED OR ISSUED WITH CONDITIONS, THE CONTRACTOR SHALL NOTIFY THE OWNER AND ARCHITECT IMMEDIATELY.

D. COORDINATE WORK WITH SITE PLAN, UTILITY PLAN, DEMOLITION PLAN, AND LANDSCAPE PLAN.

E. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING OBSTRUCTIONS, AND CONDITION OF ALL EXISTING INFRASTRUCTURE PRIOR TO CONSTRUCTION. REPORT ALL DISCREPANCIES TO THE ENGINEER AND VERIFY THE ENGINEER'S INTENT BEFORE PROCEEDING.

F. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SITE SAFETY.

G. THE CONTRACTOR SHALL MAINTAIN RECORD DRAWINGS ON SITE AT ALL TIMES. THE CONTRACTOR SHALL NOT SCALE DRAWINGS. ONLY WRITTEN DIMENSIONS OR KEYED NOTES SHALL BE USED.

H. CONSTRUCTION ACTIVITY SHALL BE LIMITED TO THE PROPERTY AND/OR PROJECT LIMITS. ANY DAMAGE TO ADJACENT STRUCTURES RESULTING FROM THE CONSTRUCTION PROCESS SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL BE RESPONSIBLE FOR DOCUMENTING EXISTING CONDITIONS PRIOR TO CONSTRUCTION.

I. CONSTRUCTION EQUIPMENT SHALL NOT OBSTRUCT DRIVEWAYS. EQUIPMENT SHALL ONLY OBSTRUCT DESIGNATED TRAFFIC LANES IF APPROPRIATE BARRICADING PERMITS HAVE BEEN OBTAINED. THE CONTRACTOR SHALL NOT STORE ANY EQUIPMENT OR MATERIAL IN THE RIGHT-OF-WAY.

J. THE CONTRACTOR SHALL PROVIDE A CONSTRUCTION TRAFFIC CONTROL AND SIGNING PLAN THAT CONFORMS TO THE LATEST EDITION OF THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND LOCAL REQUIREMENTS. THE CONTRACTOR SHALL OBTAIN BARRICADING PERMITS FROM THE APPROPRIATE AUTHORITIES PRIOR TO ANY CONSTRUCTION WORK ON OR ADJACENT TO EXISTING STREETS.

K. THE CONTRACTOR SHALL MAINTAIN ALL BARRICADING AND CONSTRUCTION SIGNING AT ALL TIMES. THE CONTRACTOR SHALL VERIFY THE PROPER LOCATION OF ALL BARRICADING AT THE END AND BEGINNING OF EACH DAY.

L. EXISTING UTILITY LINES ARE SHOWN IN AN APPROXIMATE MANNER ONLY AND MAY BE INCOMPLETE OR OBSOLETE. SUCH LINES MAY OR MAY NOT EXIST WHERE SHOWN OR NOT SHOWN. CONTRACTOR SHALL CONTACT NM-811 FOR UTILITY LINE SPOTS FIVE WORKING DAYS PRIOR TO CONDUCTING SITE FIELD WORK. CONTRACTOR SHALL FIELD VERIFY AND LOCATE ALL UTILITIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES, PIPELINES, AND UNDERGROUND UTILITY LINES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF NECESSARY DRY UTILITY ADJUSTMENTS.

M. ALL TRASH, DEBRIS, & SURFACE VEGETATION SHALL BE CLEARED AND LEGALLY DISPOSED OF OFFSITE.

N. VIBRATORY COMPACTION SHALL NOT BE USED OVER IN-PLACE UTILITIES.

O. SOIL TESTING AND INSPECTION SERVICES DURING SITE OPERATIONS ARE REQUIRED. CONTRACTOR SHALL ALLOW TESTING LABS TO INSPECT AND APPROVE COMPACTED SUBGRADES, BACKFILL, AND FILL LAYERS BEFORE FURTHER CONSTRUCTION WORK IS DONE. SHOULD COMPACTION TESTS INDICATE INADEQUATE DENSITY, CONTRACTOR SHALL PROVIDE ADDITIONAL COMPACTION AND TESTING AT THE CONTRACTOR'S SOLE EXPENSE.

P. CONTRACTOR SHALL LOCATE AND PRESERVE ALL BOUNDARY CORNERS AND REPLACE ANY LOST OR DISTURBED CORNERS AT CONTRACTOR'S SOLE EXPENSE. PROPERTY CORNERS SHALL ONLY BE RESET BY A REGISTERED LAND SURVEYOR.

Q. CONTRACTOR SHALL PROVIDE CONSTRUCTION STAKING. TO FACILITATE ACCURACY IN CONSTRUCTION STAKING, UPON WRITTEN REQUEST FROM THE CONTRACTOR, A FILE CONTAINING THE ELECTRONIC DATA COMPRISING THE SITE CIVIL DRAWINGS WILL BE FORWARDED TO THE LICENSED LAND SURVEYOR TO PERFORM CONSTRUCTION STAKING. ALL SITE CONSTRUCTION LAYOUT MUST BE PERFORMED BY A LICENSED SURVEYOR USING ELECTRONIC DATA PROVIDED IN AUTOCAD *.DWG (CURRENT VERSION) BY ISAACSON & ARFMAN, P.A. CONTACT PROJECT CIVIL ENGINEER, ÅSA NILSSON-WEBER, PE AT (505)-266-1688.

R. ADJUST ANY RIMS OF EXISTING UTILITY FEATURES AS NECESSARY TO MATCH NEW GRADES. UTILITIES IN PAVED AREAS SHALL BE HS-25 TRAFFIC RATED.

S. CONTRACTOR SHALL COMPLY WITH LOCAL REGULATIONS FOR RESEEDING OF DISTURBED AREAS.

## ○ KEYED NOTES

1. TURN EVERY OTHER BLOCK TO PROVIDE OPENINGS FOR DRAINAGE INTO OPEN SPACE PONDING AREA.
2. REMOVE & DISPOSE EXISTING CMP CULVERT.
3. PERIMETER WALL. FILL WITH CONCRETE AND WATER PROOF TO 1' ABOVE WATER SURFACE ELEVATION.
4. VIEW FENCE.

## LEGEND

| | |
|---|---|
| — — — — — | EXISTING CONTOUR |
| 56.6 + | EXISTING SPOT ELEVATION |
| ○ | EXISTING TREE |
| ——— | PROPOSED CONTOUR |
| ◆ 59.20 | PROPOSED SPOT ELEVATION |

ÅSA M. NILSSON-WEBER NEW MEXICO 17631 LICENSED PROFESSIONAL ENGINEER
10-10-18

**ISAACSON & ARFMAN, P.A.**
*Consulting Engineering Associates*
128 Monroe Street N.E.
Albuquerque, New Mexico 87108
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2273 CG-101.dwg Oct 09,2018

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BOSQUE ANTIGUA SUBDIVISION

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# GRADING & DRAINAGE PLAN

| Date: | No. | Revision: | Date: | Job No. |
|---|---|---|---|---|
| 08/26/18 | | | | 2273 |
| Drawn By: JTS | | | | CG-101 |
| Ckd By: ÅNW | | | | SH. OF |