CITY OF ALBUQUERQUE

Planning Department
Alan Varela, Director

Mayor Timothy M. Keller

February 22, 2023

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

RE: 5504 Escondina Lane NW
Grading and Drainage Plan
Engineer's Certification Date: 02/13/23
Engineer's Stamp Date: 12/07/22
Hydrology File: F14D076E

Dear Ms. Nilsson-Weber:

Based upon the information provided in your submittal received 02/13/2023, the Grading and Drainage Plan is approved for Building Permit and Building Pad Certification for 5504 Escondina Lane NW. Please attach a copy of this approved plan in the construction sets for Building Permit processing along with a copy of this letter.

PRIOR TO CERTIFICATE OF OCCUPANCY:

1. Engineer's Certification, per the DPM Part 6-14 (G): Engineer's Certification Checklist for Subdivision and Part 6-14 (H): Required Certification Language is required.

If you have any questions, please contact me at 924-3995 or rbrissette@cabq.gov.

Sincerely,

Renée C. Brissette

Renée C. Brissette, P.E. CFM
Senior Engineer, Hydrology
Planning Department

PO Box 1293
Albuquerque
NM 87103
www.cabq.gov

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

Project Title: 5504 Escondida Lane **Building Permit #**_____ **Hydrology File #** F14D076E
DRB# PR-2018-001501 **EPC#**_____
Legal Description: Lot 7, Bosque Escondido City Address OR Parcel 5504 Escondida Ln. NW

Applicant/Agent: Isaacson & Arfman, Inc. **Contact:** Åsa Nilsson-Weber or Bryan J. Bobrick
Address: 128 Monroe Street NE **Phone:** (505) 268-8828
Email: asaw@iacivil.com
byranb@iacivil.com
Applicant/Owner: _____ **Contact:** _____
Address: _____ **Phone:** _____
Email: _____

TYPE OF DEVELOPMENT: ___PLAT (#of lots) __RESIDENCE X DRB SITE ___ ADMIN SITE: ____
RE-SUBMITTAL: _____YES __X__ NO

DEPARTMENT: _____TRANSPORTATION __X__ HYDROLOGY/DRAINAGE
Check all that apply:

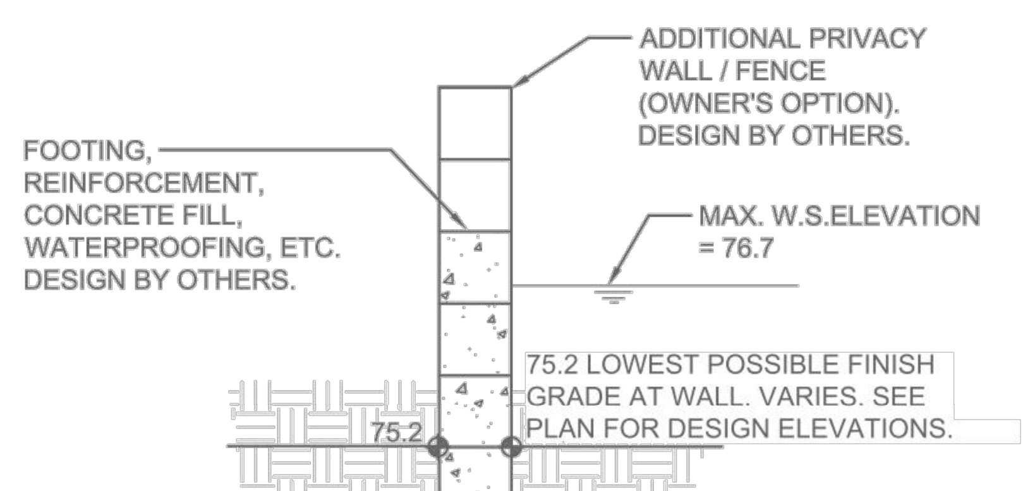
TYPE OF SUBMITTAL:

___ENGINEER/ARCHITECT CERTIFICATION
_X_PAD CERTIFICATION
___CONCEPTUAL G&D PLAN
___GRADING PLAN
___DRAINAGE REPORT
___DRAINAGE MASTER PLAN
___FLOOD PLAN DEVELOPMENT PERMIT APP.
___ELEVATION CERTIFICATE
___CLOMR/LOMR
___TRAFFIC CIRCULATION LAYOUT (TCL) ADMINISTRATIVE
___TRAFFIC CIRCULATION LAYOUT FOR DRB APPROVAL
___TRAFFIC IMPACT STUDY (TIS)
___STREET LIGHT LAYOUT
___OTHER (SPECIFY)
___PRE-DESIGN MEETING?

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

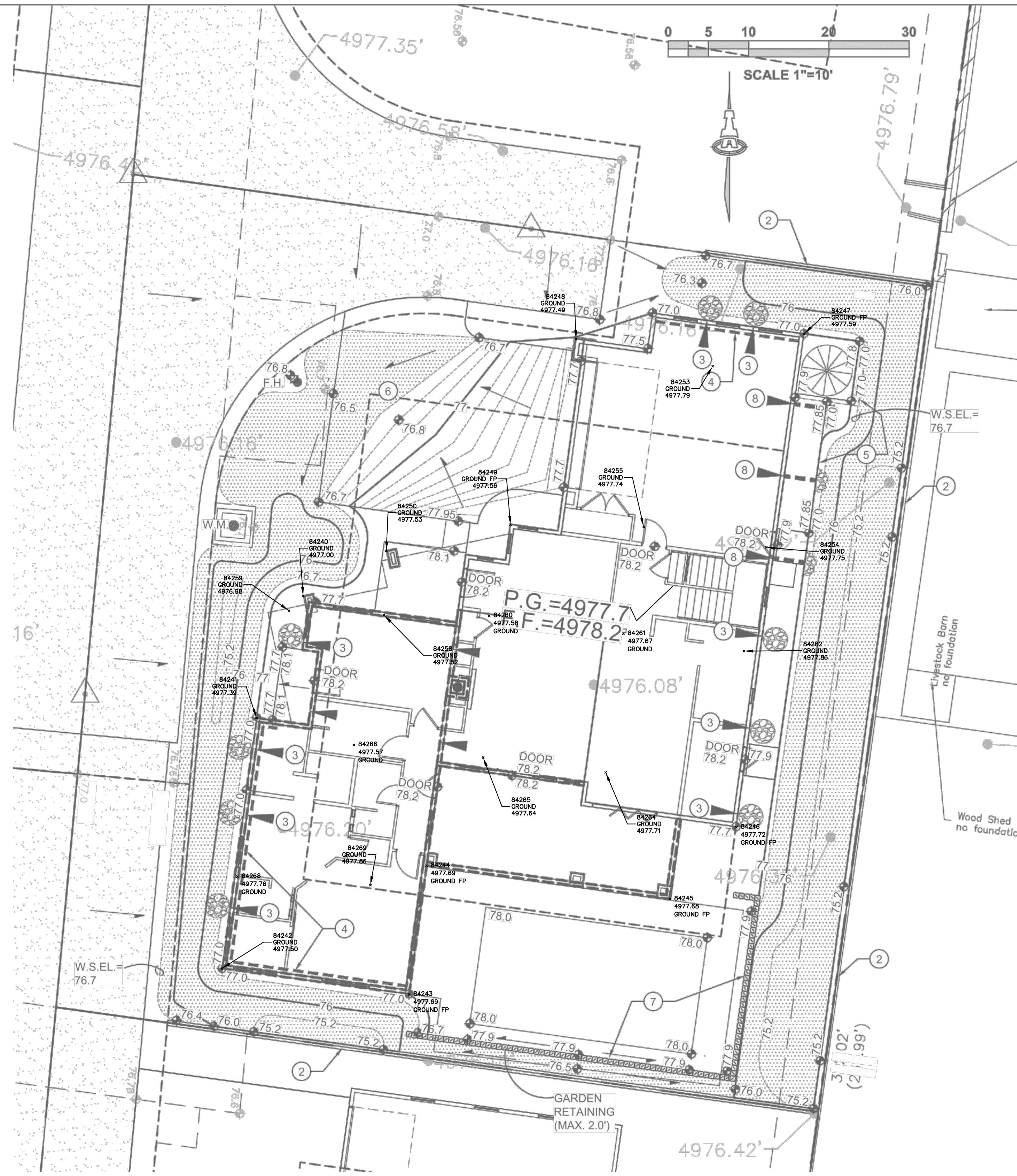
_X_BUILDING PERMIT APPROVAL
___CERTIFICATE OF OCCUPANCY
___CONCEPTUAL TCL DRB APPROVAL
___PRELIMINARY PLAT APPROVAL
___SITE PLAN FOR SUB'D APPROVAL
___SITE PLAN FOR BLDG PERMIT APPROVAL
___FINAL PLAT APPROVAL
___SIA/RELEASE OF FINANCIAL GUARANTEE
___FOUNDATION PERMIT APPROVAL
___GRADING PERMIT APPROVAL
___SO-19 APPROVAL
___PAVING PERMIT APPROVAL
___GRADING PAD CERTIFICATION
___WORK ORDER APPROVAL
___CLOMR/LOMR
___FLOOD PLAN DEVELOPMENT PERMIT
___OTHER (SPECIFY)_____

DATE SUBMITTED: 02/13/2023



NEW PROPERTY LINE WALLS

SCALE: N.T.S.



BUILDING PAD CERTIFICATION WITH SURVEY WORK BY PROFESSIONAL SURVEYOR:

I, Åsa Nilsson-Weber, NMPE 17631 of the firm Isaacson & Arfman, Inc., hereby certify that the building pad has been graded in substantial compliance with and in accordance with the design intent of the approved Grading & Drainage Plan dated December 7, 2022. The record information edited onto the original design document has been obtained by Brian Martinez, NMRPS 18374, of the firm Cartesian Surveys, Inc.

Photographs are provided with this certification showing the graded pad and confirming that the information provided by the surveyor is representative of actual field conditions and is true and correct to the best of my knowledge and belief.

This certification is submitted in support of a pad certification requesting building permit approval.

Åsa Nilsson-Weber, NMPE 17631 — 02/13/2023 — Date

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

City of Albuquerque
Planning Department
Development Review Services
HYDROLOGY SECTION
APPROVED
DATE: 02/22/23
BY: Renée C Brissette
HydroTrans #: F14D076E

THE APPROVAL OF THESE PLANS/REPORT SHALL NOT BE CONSTRUED TO PERMIT VIOLATIONS OF ANY CITY ORDINANCE OR STATE LAW, AND SHALL NOT PREVENT THE CITY OF ALBUQUERQUE FROM REQUIRING CORRECTION, OR ERASURE OF ERRORS IN PLANS, SPECIFICATIONS, OR CONSTRUCTIONS. SUCH APPROVED PLANS SHALL NOT BE CHANGED, MODIFIED OR ALTERED WITHOUT AUTHORIZATION.

GENERAL NOTES

- PROPOSED SPOT AND CONTOUR ELEVATIONS SHOWN REPRESENT TOP OF FINISH MATERIAL (I.E. TOP OF PAVEMENT, TOP OF LANDSCAPING, ETC.). CONTRACTOR SHALL GRADE AND COMPACT SUBGRADE BASED ON ELEVATIONS SHOWN MINUS FINISH MATERIAL THICKNESSES.
- POND DESIGN PARAMETERS AND STORMWATER CONTROL MEASURES SHOWN ON THIS PLAN SHALL BE STRICKTLY ADHERED TO FOR CERTIFICATION PURPOSES.
- POST-CONSTRUCTION MAINTENANCE FOR PRIVATE STORMWATER FACILITIES WILL BE THE RESPONSIBILITY OF THE FACILITIES OWNER. ENGINEER RECOMMENDS THAT OWNER INSPECT THE SITE YEARLY AND AFTER EACH RAINFALL TO IDENTIFY AREAS OF EROSION. ADD ADDITIONAL EROSION PROTECTION AS NEEDED.
- CONTRACTOR SHALL PROTECT THE ON-SITE INFILTRATION TRENCHES ('IT').
- PER THE SUBDIVISION GRADING AND DRAINAGE PLAN, THE PROPOSED RESIDENCE SHALL POND STORMWATER WITHIN 10' OF THE RESIDENCE. OWNER SHALL COORDINATE WITH STRUCTURAL DESIGNER WITH REGARDS TO THE BUILDING & FOUNDATION REQUIREMENTS RELATING TO THE ADJACENT PONDING.
- FOR ENGINEER'S CERTIFICATION OF SUBSTANTIAL COMPLIANCE, CONTRACTOR SHALL PROVIDE AN AUTOCAD FORMAT AS-BUILT SURVEY PREPARED BY A LICENSED SURVEYOR WHICH INCLUDES THE FOLLOWING AS-BUILT INFORMATION:
  - FINISH FLOOR ELEVATION
  - SPOT ELEVATIONS AT EACH SPOT ELEVATION SHOWN ON THE APPROVED PLAN
  - TOP AND TOE LIMITS AND ELEVATIONS FOR PONDS TO ENSURE REQUIRED CAPACITY IS PROVIDED. NOTE: POND ELEVATIONS PROVIDED ON THIS PLAN ARE BASED ON FINISHED LANDSCAPE CONDITION. CONTRACTOR TO GRADE SITE TO ELEVATIONS SHOWN MINUS MATERIAL THICKNESSES.

VICINITY MAP F-14

KEYED NOTES

1. NOT USED.
2. NEW PRIVACY WALL. FINAL GRADES SHOWN AT BASE OF WALL ARE REQUIRED TO PROVIDE THE NECESSARY POND VOLUME AND TO PERMIT ON-SITE PONDING TO EQUALIZE. SEE SECTION THIS SHEET.
3. ROOF DRAIN DISCHARGE: INSTALL EROSION PROTECTION (3' DIA ROCK SPLASHPAD, PRECAST CONCRETE SPLASHPAD, OR EQUAL) AT ALL CONCENTRATED ROOF DRAIN LOCATIONS.
   3.1. ENGINEER RECOMMENDS INSTALLING 2' WIDE X 8" THICK 4" AVG. DIA. ANGULAR ROCK SWALES TO PASS CONCENTRATED ROOF FLOW FROM SPLASHPADS TO POND BOTTOMS (OWNER'S OPTION). COORDINATE WITH LANDSCAPERS.
4. EXTENDED STEMWALL TO ACHIEVE GRADES THIS AREA.
5. TURNED DOWN CONCRETE EDGE TO ACHIEVE GRADES THIS AREA. COORDINATE WITH OWNER FOR GUARDRAIL (OWNER'S OPTION).
6. GRADE DRIVEWAY PER PLAN TO DRAIN AS SHOWN. 1/10TH-FOOT CONTOURS SHOWN DASHED.
7. GARDEN RETAINING WALL (RETAINING < 2.0') TO ACHIEVE GRADES SHOWN.
8. ROOF DRAIN PIPED THROUGH CONCRETE WALK. INSTALL EROSION PROTECTION (3' X 1.5') SPLASHPAD, OR EQUAL.

PROJECT INFORMATION:

PROPERTY: THE SITE IS AN UNDEVELOPED RESIDENTIAL LOT AND IS BOUNDED TO THE WEST BY AN ACCESS ROAD, THE EAST BY A DEVELOPED RESIDENTIAL LOT, AND TO THE NORTH AND SOUTH BY AN UNDEVELOPED RESIDENTIAL LOT.

PROPOSED IMPROVEMENTS: THE PROPOSED IMPROVEMENTS INCLUDE A SINGLE FAMILY RESIDENCE WITH ACCESS DRIVE AND ASSOCIATED LANDSCAPING AND PONDING.

LEGAL: LOT 7 OF BOSQUE ESCONDIDO, BERNALILLO COUNTY, NM

AREA: 0.2344 ACRES

BENCHMARK: ACS MONUMENT DOUGLAS*. ELEVATION = 4975.078 (NAVD 1988)

OFF-SITE: NO OFF-SITE DRAINAGE AFFECTS THIS PROPERTY.

FLOOD HAZARD: PER FEMA FIRM MAP #35001C0119G, EFFECTIVE DATE 09/26/2008, THE SITE IS LOCATED WITHIN FLOODZONE 'X' SHADED WHICH IS DEFINED AS AREAS WITH REDUCED FLOOD RISK DUE TO LEVEE.

DRAINAGE PLAN CONCEPT:

THE SITE IS PART OF THE BOSQUE ESCONDIDO SUBDIVISION APPROVED BY HYDROLOGY WITH A FLAT GRADING SCHEME AS FOLLOWS:

- PAD GRADE = 4977.7 (MIN). OVERFLOW ELEVATION 4976.67.
- EACH LOT IS REQUIRED TO STORE THE 100-YEAR 10-DAY VOLUME.
- ALL ROOF FLOW WILL BE DIRECTED TO THE STORMWATER RETENTION PONDS.
- WALLS WILL BE CONSTRUCTED ON THE PROPERTY LINES TO CONTAIN THE 100-YEAR 10-DAY MAXIMUM RETENTION VOLUME.
- SINCE ALL STORMWATER IS RETAINED ON THE PROPERTY, NO SEPARATE STORM WATER QUALITY VOLUME IS REQUIRED.

BUILDING DESIGN NOTE

THE BUILDING PAD AREA SHALL BE PREPARED AND COMPACTED PER THE GEOTECHNICAL REPORT.

THE BUILDING AND SITE IMPROVEMENT DESIGN SHALL INCLUDE MEASURES TO ADDRESS PONDED STORM WATER WITHIN TEN FEET.

POND VOLUME CALCULATIONS

SITE SURFACE PONDING		
Contour	Area	Volume
76.7	2270	
76.0	1228	1224 CF
75.2	505	693 CF
POND VOLUME =		1918 CF

Volume of 100-yr, 10-day ponding required = 1,868 CF

TOTAL VOLUME PROVIDED = 1918 CF

PROPOSED IMPERVIOUS AREA

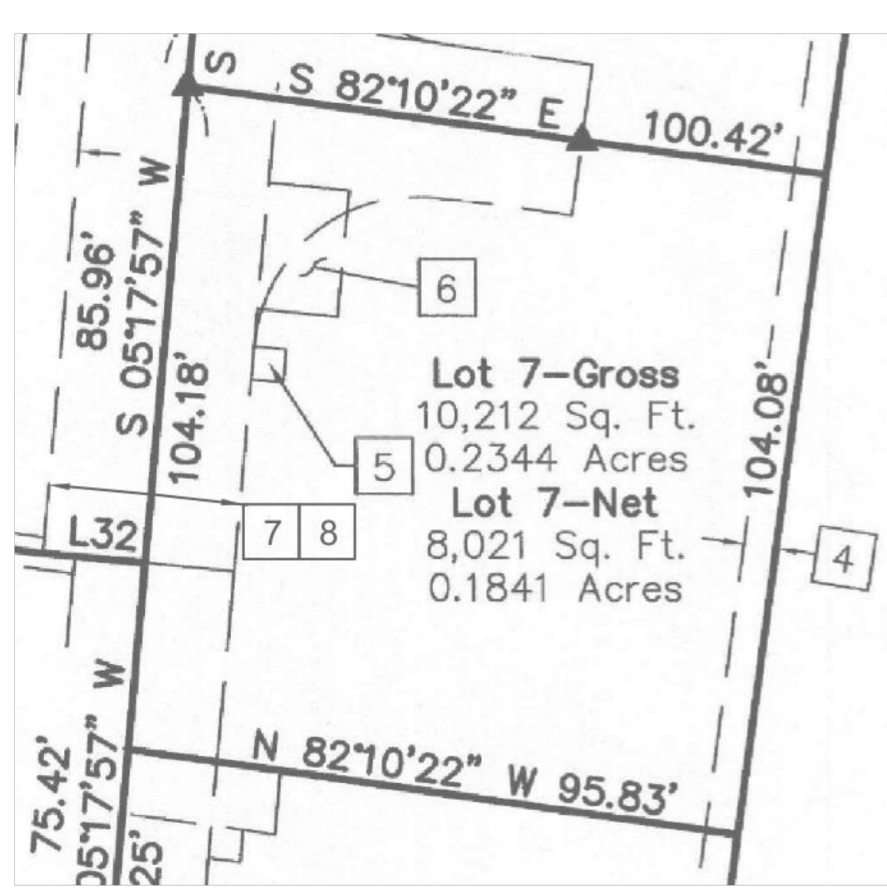
THE PROPOSED IMPERVIOUS AREA (SHOWN SHADED) = 5,044 SF INCLUDING PATIOS, WALKS, AND DRIVEWAY. THE STREET IS PERVIOUS WITH AGGREGATE BASE COURSE PAVING.

THE PROPOSED IMPERVIOUS AREA IS APPROXIMATELY 49% OF THE TOTAL PROPERTY AREA.

MASTER DRAINAGE PLAN CALCULATED 100-YEAR 10-DAY VOLUME FOR THIS LOT = 1,815 CF (BASED ON IMPERVIOUS AREA OF 4,595 SF).

THE REQUIRED 100-YEAR 10-DAY VOLUME INCREASES TO 1,902 CF BASED ON THE PROPOSED IMPERVIOUS AREA.

SEE POND VOLUME CALCULATIONS AT LEFT.



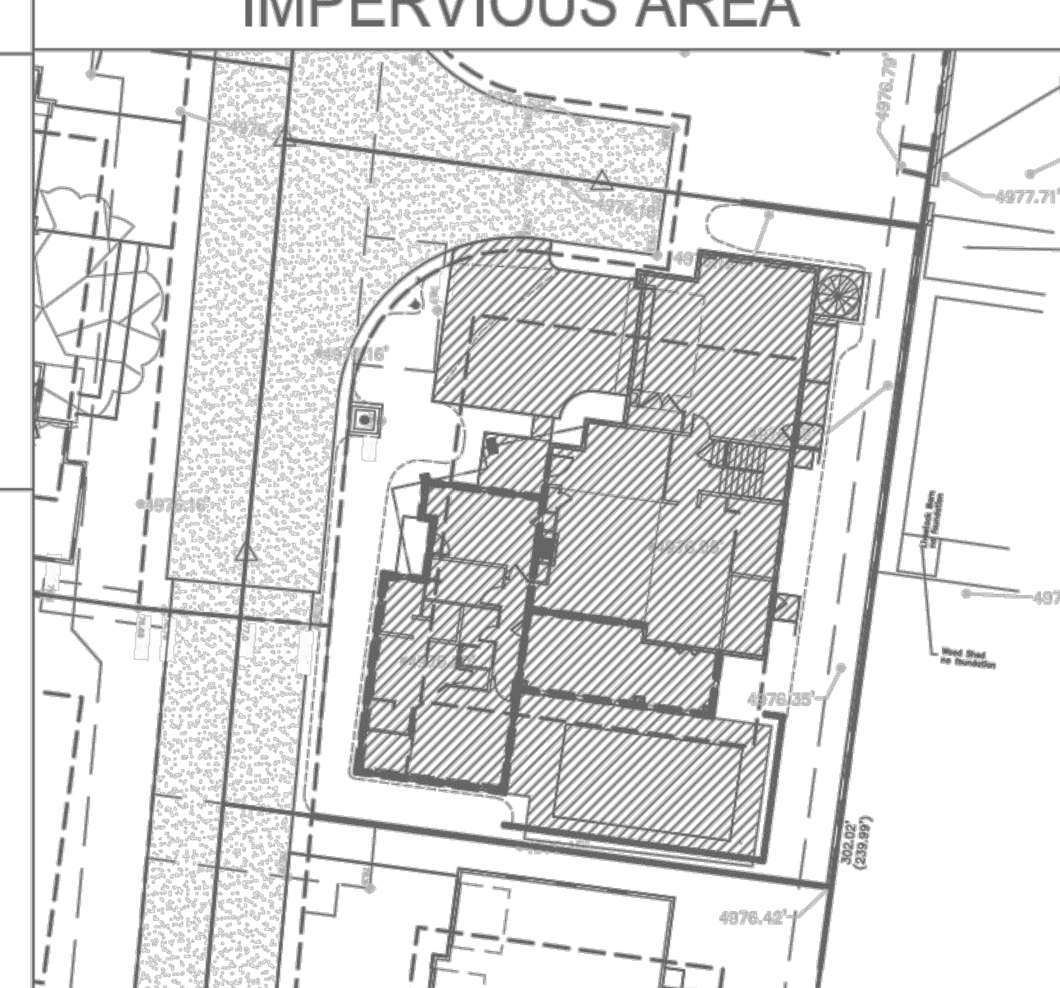
Easement Notes

1. EXISTING 7' P.U.E. (1/7/2000, 2000C–7)
2. EXISTING PRIVATE ACCESS EASEMENT FOR THE BENEFIT OF LOT 6–A–1 (1/7/2000, 2000C–7) SHOWN HEREON AS [hatched]
3. EXISTING 10' PNM JOINT ELECTRIC AND GAS EASEMENT (9/25/2002, PG. 2644, DOC. NO. 2002122989)
4. PRIVATE 5' IRRIGATION LINE EASEMENT, BENEFITING LOTS 1–8 AND MAINTAINED BY THE UNDERLYING OWNER GRANTED WITH THE FILING OF THIS PLAT
5. WATER METER EASEMENT GRANTED TO ABCWUA WITH THE FILING OF THIS PLAT
6. FIRE HYDRANT EASEMENT GRANTED TO ABCWUA WITH THE FILING OF THIS PLAT
7. PRIVATE ACCESS EASEMENT, BENEFITING LOTS 1–8 AND MAINTAINED BY THE UNDERLYING OWNER GRANTED WITH THE FILING OF THIS PLAT
8. PUBLIC WATER AND SEWER EASEMENT GRANTED TO ABCWUA WITH THE FILING OF THIS PLAT
9. 10' P.U.E. GRANTED WITH THE FILING OF THIS PLAT
10. 20' PUBLIC WATERLINE EASEMENT GRANTED TO ABCWUA WITH THE FILING OF THIS PLAT

LEGEND

Symbol	Description
—77—	PROPOSED CONTOUR
76.6	PROPOSED SPOT ELEVATION
→	FLOW DIRECTION
F.F. = 4978.2	FINISH FLOOR ELEVATION
P.G. = 4977.7	PAD GRADE ELEVATION
(shaded)	RETENTION POND LIMITS

IMPERVIOUS AREA



HYDROLOGY CALCULATIONS

CALCULATIONS: Lot 7, Bosque Escondido : May 11, 2022

Based on City of Albuquerque DMP, Article 6-2 Hydrology dated June 26, 2020

100-YEAR, 6-HOUR CALCULATIONS

AREA OF SITE: 10210 SF = 0.2344 ACRE

100-year, 6-hour **DEVELOPED FLOWS:**

		Treatment SF	%
Area A	=	0	0%
Area B	=	4145	41%
Area C	=	1021	10%
Area D	=	5044	49%
Total Area	=	10210	100.0%

EXCESS PRECIP: Precip. Zone 2

$E_A = 0.62$, $E_B = 0.80$, $E_C = 1.03$, $E_D = 2.33$

On-Site Weighted Excess Precipitation (100-Year, 6-Hour Storm)

$$\text{Weighted } E = \frac{E_A A_A + E_B A_B + E_C A_C + E_D A_D}{A_A + A_B + A_C + A_D}$$

Developed E = 1.58 in.

On-Site Volume of Runoff: $V360 = E*A / 12$

Developed V_{360} = 1343 CF

On-Site Peak Discharge Rate: $Qp = Q_{pA}A_A + Q_{pB}A_B + Q_{pC}A_C + Q_{pD}A_D / 43{,}560$

For Precipitation Zone 2

$Q_{pA} = 1.71$, $Q_{pB} = 2.36$, $Q_{pC} = 3.05$, $Q_{pD} = 4.34$

Developed Q_p = 0.8 CFS

100-year 10-day Storm Volume

V_{360} (from previous calculation)	1343
Area Treatment D (SF)	5044
Zone	2

For 100-year 10 Day Storms:

$$V_{10day} = V_{360} + (A_D * (P_{10day} - P_{360})/12\text{" per foot})$$

V_{360}	=	1343
A_D (SF)	=	5044
Zone	=	2
P_{10day}	=	3.62
P_{360}	=	2.29
V_{360}	=	1343
+ imp. area	=	559
Total Volume ($V_{10\ day}$)	=	1902

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ÅSA M. NILSSON-WEBER, NEW MEXICO, 17631, LICENSED PROFESSIONAL ENGINEER — 12/07/2022

Engineer

5504 Escondida Lane
Albuquerque NM, 87107

ISSUE:	DESIGN REVIEW
PROJECT NUMBER:	IA 2496
FILE:	-
DRAWN BY:	BJB/ANW
CHECKED BY:	ANW
DATE:	04-2022

No	Date	Description

SHEET TITLE

Grading & Drainage Plan

SHEET NUMBER

CG-101