

CITY OF ALBUQUERQUE

Planning Department
Alan Varela, Director



Mayor Timothy M. Keller

February 23, 2022

Robert Fierro, P.E.
Fierro & Company
6300 Montano Rd. NW
Albuquerque, NM 87120

**RE: Luna Residence
9115 Riverdale Lane NW
Grading and Drainage Plan
Engineer's Stamp Date: 11/18/21
Engineer's Certification Date: 02/22/22
Hydrology File: C13D027G**

Dear Mr. Luehring:

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

Based upon the information provided in your submittal received 02/23/2022, the Grading and Drainage Plan is approved for Building Permit and Building Pad Certification for 9115 Riverdale 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, P.E. CFM
Senior Engineer, Hydrology
Planning Department



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 11/2018)

Project Title: _____ **Building Permit #:** _____ **Hydrology File #:** _____

DRB#: _____ **EPC#:** _____ **Work Order#:** _____

Legal Description: _____

City Address: _____

Applicant: _____ **Contact:** _____

Address: _____

Phone#: _____ **Fax#:** _____ **E-mail:** _____

Owner: _____ **Contact:** _____

Address: _____

Phone#: _____ **Fax#:** _____ **E-mail:** _____

TYPE OF SUBMITTAL: _____ PLAT (___# OF LOTS) _____ RESIDENCE _____ DRB SITE _____ ADMIN SITE

IS THIS A RESUBMITTAL?: _____ Yes _____ No

DEPARTMENT: _____ TRAFFIC/ TRANSPORTATION _____ HYDROLOGY/ DRAINAGE

Check all that Apply:

TYPE OF SUBMITTAL:

- _____ ENGINEER/ARCHITECT CERTIFICATION
- _____ PAD CERTIFICATION
- _____ CONCEPTUAL G & D PLAN
- _____ GRADING PLAN
- _____ DRAINAGE MASTER PLAN
- _____ DRAINAGE REPORT
- _____ FLOODPLAIN DEVELOPMENT PERMIT APPLIC
- _____ ELEVATION CERTIFICATE
- _____ CLOMR/LOMR
- _____ TRAFFIC CIRCULATION LAYOUT (TCL)
- _____ TRAFFIC IMPACT STUDY (TIS)
- _____ OTHER (SPECIFY) _____
- _____ PRE-DESIGN MEETING?

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

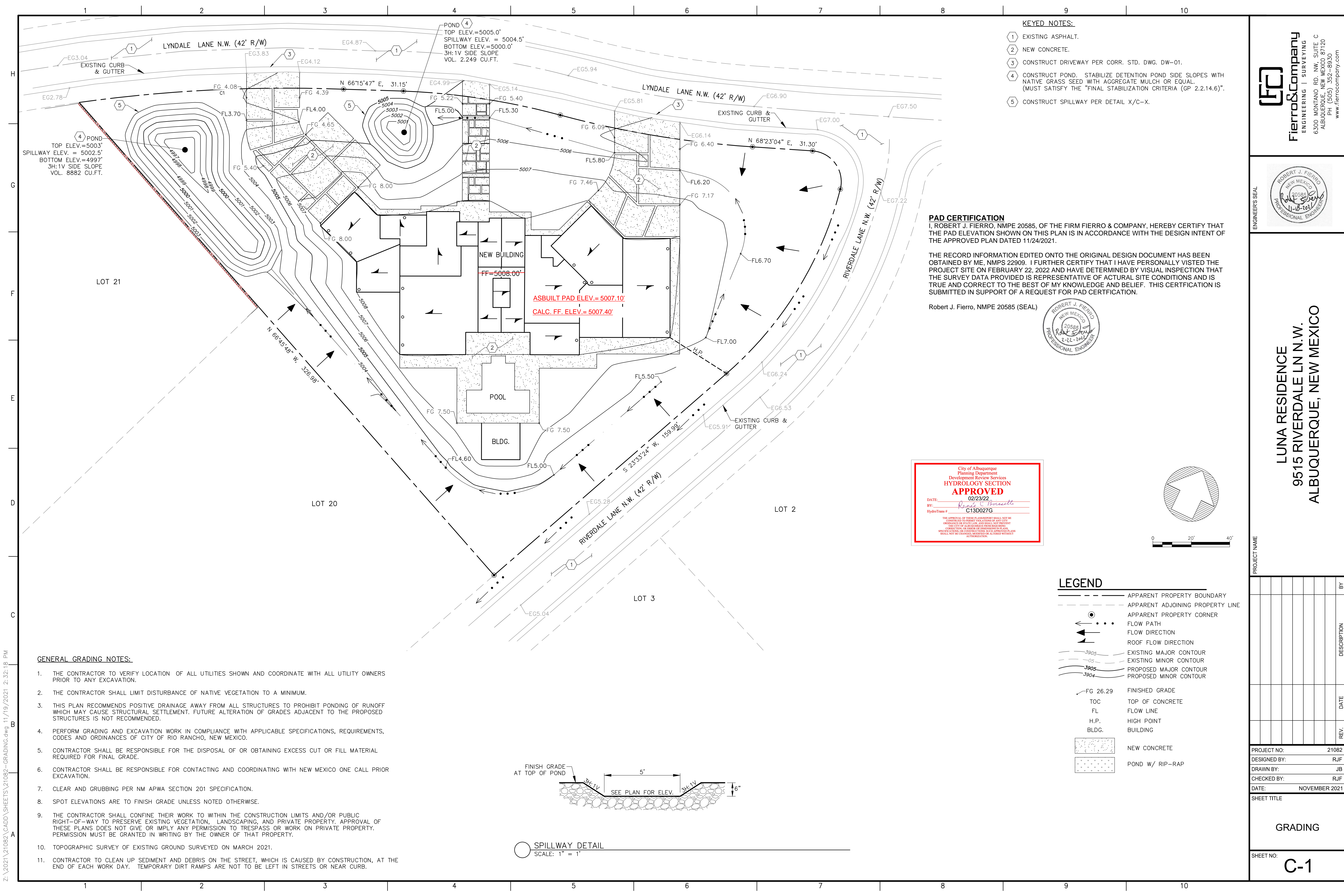
- _____ BUILDING PERMIT APPROVAL
- _____ CERTIFICATE OF OCCUPANCY
- _____ PRELIMINARY PLAT APPROVAL
- _____ SITE PLAN FOR SUB'D APPROVAL
- _____ SITE PLAN FOR BLDG. PERMIT APPROVAL
- _____ FINAL PLAT APPROVAL
- _____ SIA/ RELEASE OF FINANCIAL GUARANTEE
- _____ FOUNDATION PERMIT APPROVAL
- _____ GRADING PERMIT APPROVAL
- _____ SO-19 APPROVAL
- _____ PAVING PERMIT APPROVAL
- _____ GRADING/ PAD CERTIFICATION
- _____ WORK ORDER APPROVAL
- _____ CLOMR/LOMR
- _____ FLOODPLAIN DEVELOPMENT PERMIT
- _____ OTHER (SPECIFY) _____

DATE SUBMITTED: _____ **By:** _____

COA STAFF:

ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____



KEYED NOTES:

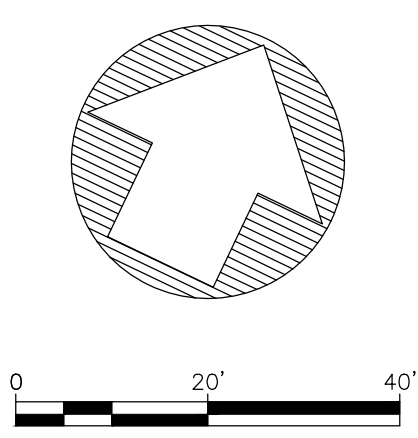
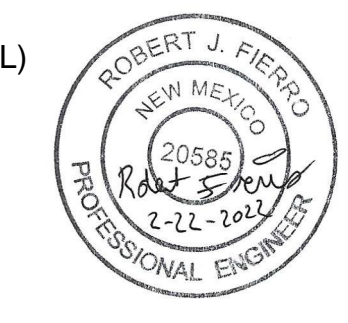
- ① EXISTING ASPHALT.
- ② NEW CONCRETE.
- ③ CONSTRUCT DRIVEWAY PER CORR. STD. DWG. DW-01.
- ④ CONSTRUCT POND. STABILIZE DETENTION POND SIDE SLOPES WITH NATIVE GRASS SEED WITH AGGREGATE MULCH OR EQUAL. (MUST SATISFY THE "FINAL STABILIZATION CRITERIA (GP 2.2.14.6)").
- ⑤ CONSTRUCT SPILLWAY PER DETAIL X/C-X.

PAD CERTIFICATION

I, ROBERT J. FIERRO, NMPE 20585, OF THE FIRM FIERRO & COMPANY, HEREBY CERTIFY THAT THE PAD ELEVATION SHOWN ON THIS PLAN IS IN ACCORDANCE WITH THE DESIGN INTENT OF THE APPROVED PLAN DATED 11/24/2021.

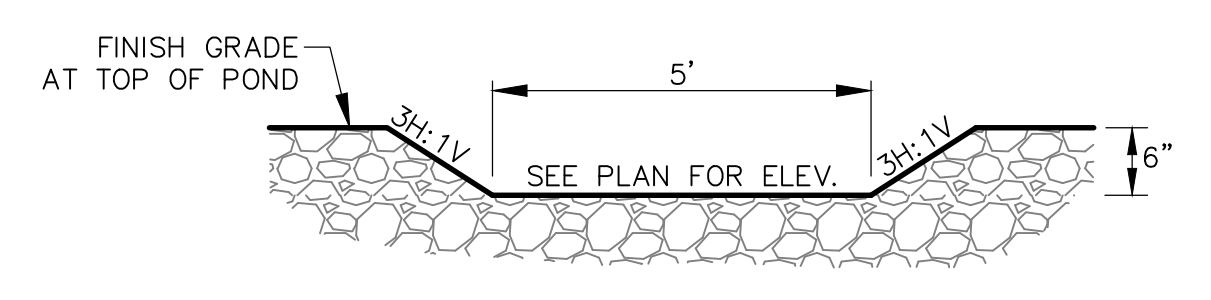
THE RECORD INFORMATION EDITED ONTO THE ORIGINAL DESIGN DOCUMENT HAS BEEN OBTAINED BY ME, NMPS 22909. I FURTHER CERTIFY THAT I HAVE PERSONALLY VISITED THE PROJECT SITE ON FEBRUARY 22, 2022 AND HAVE DETERMINED BY VISUAL INSPECTION THAT THE SURVEY DATA PROVIDED IS REPRESENTATIVE OF ACTUAL SITE CONDITIONS AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS CERTIFICATION IS SUBMITTED IN SUPPORT OF A REQUEST FOR PAD CERTIFICATION.

Robert J. Fierro, NMPE 20585 (SEAL)



GENERAL GRADING NOTES:

1. THE CONTRACTOR TO VERIFY LOCATION OF ALL UTILITIES SHOWN AND COORDINATE WITH ALL UTILITY OWNERS PRIOR TO ANY EXCAVATION.
2. THE CONTRACTOR SHALL LIMIT DISTURBANCE OF NATIVE VEGETATION TO A MINIMUM.
3. THIS PLAN RECOMMENDS POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES TO PROHIBIT PONDING OF RUNOFF WHICH MAY CAUSE STRUCTURAL SETTLEMENT. FUTURE ALTERATION OF GRADES ADJACENT TO THE PROPOSED STRUCTURES IS NOT RECOMMENDED.
4. PERFORM GRADING AND EXCAVATION WORK IN COMPLIANCE WITH APPLICABLE SPECIFICATIONS, REQUIREMENTS, CODES AND ORDINANCES OF CITY OF RIO RANCHO, NEW MEXICO.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISPOSAL OF OR OBTAINING EXCESS CUT OR FILL MATERIAL REQUIRED FOR FINAL GRADE.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING AND COORDINATING WITH NEW MEXICO ONE CALL PRIOR EXCAVATION.
7. CLEAR AND GRUBBING PER NM APWA SECTION 201 SPECIFICATION.
8. SPOT ELEVATIONS ARE TO FINISH GRADE UNLESS NOTED OTHERWISE.
9. THE CONTRACTOR SHALL CONFINE THEIR WORK TO WITHIN THE CONSTRUCTION LIMITS AND/OR PUBLIC RIGHT-OF-WAY TO PRESERVE EXISTING VEGETATION, LANDSCAPING, AND PRIVATE PROPERTY. APPROVAL OF THESE PLANS DOES NOT GIVE OR IMPLY ANY PERMISSION TO TRESPASS OR WORK ON PRIVATE PROPERTY. PERMISSION MUST BE GRANTED IN WRITING BY THE OWNER OF THAT PROPERTY.
10. TOPOGRAPHIC SURVEY OF EXISTING GROUND SURVEYED ON MARCH 2021.
11. CONTRACTOR TO CLEAN UP SEDIMENT AND DEBRIS ON THE STREET, WHICH IS CAUSED BY CONSTRUCTION, AT THE END OF EACH WORK DAY. TEMPORARY DIRT RAMPS ARE NOT TO BE LEFT IN STREETS OR NEAR CURB.

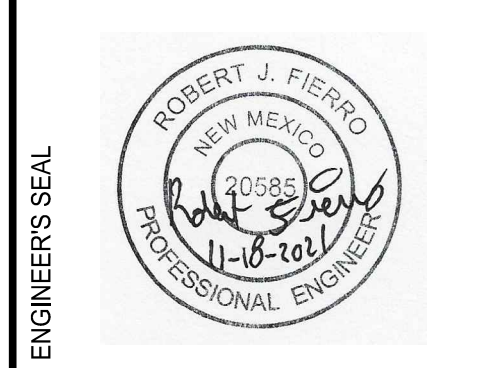


○ SPILLWAY DETAIL
SCALE: 1" = 1'

LEGEND

- APPARENT PROPERTY BOUNDARY
- - - APPARENT ADJOINING PROPERTY LINE
- APPARENT PROPERTY CORNER
- FLOW PATH
- ← FLOW DIRECTION
- ▲ ROOF FLOW DIRECTION
- 3905 EXISTING MAJOR CONTOUR
- 05 EXISTING MINOR CONTOUR
- 3905 PROPOSED MAJOR CONTOUR
- 3904 PROPOSED MINOR CONTOUR
- FG 26.29 FINISHED GRADE
- TOC TOP OF CONCRETE
- FL FLOW LINE
- H.P. HIGH POINT
- BLDG. BUILDING
- NEW CONCRETE
- POND W/ RIP-RAP

Fierro & Company
ENGINEERING | SURVEYING
6300 MONTANO RD. NW, SUITE C
ALBUQUERQUE, NEW MEXICO 87120
PH (505) 352-8930
www.fierrocompany.com



PROJECT NAME
LUNA RESIDENCE
9515 RIVERDALE LN N.W.
ALBUQUERQUE, NEW MEXICO

PROJECT NAME	PROJECT NO.	DATE	DESCRIPTION	BY
LUNA RESIDENCE	21082	NOVEMBER 2021	GRADING	RJF

PROJECT NO.	DESIGNED BY	DRAWN BY	CHECKED BY	DATE	REVISION
21082	RJF	JB	RJF	NOVEMBER 2021	

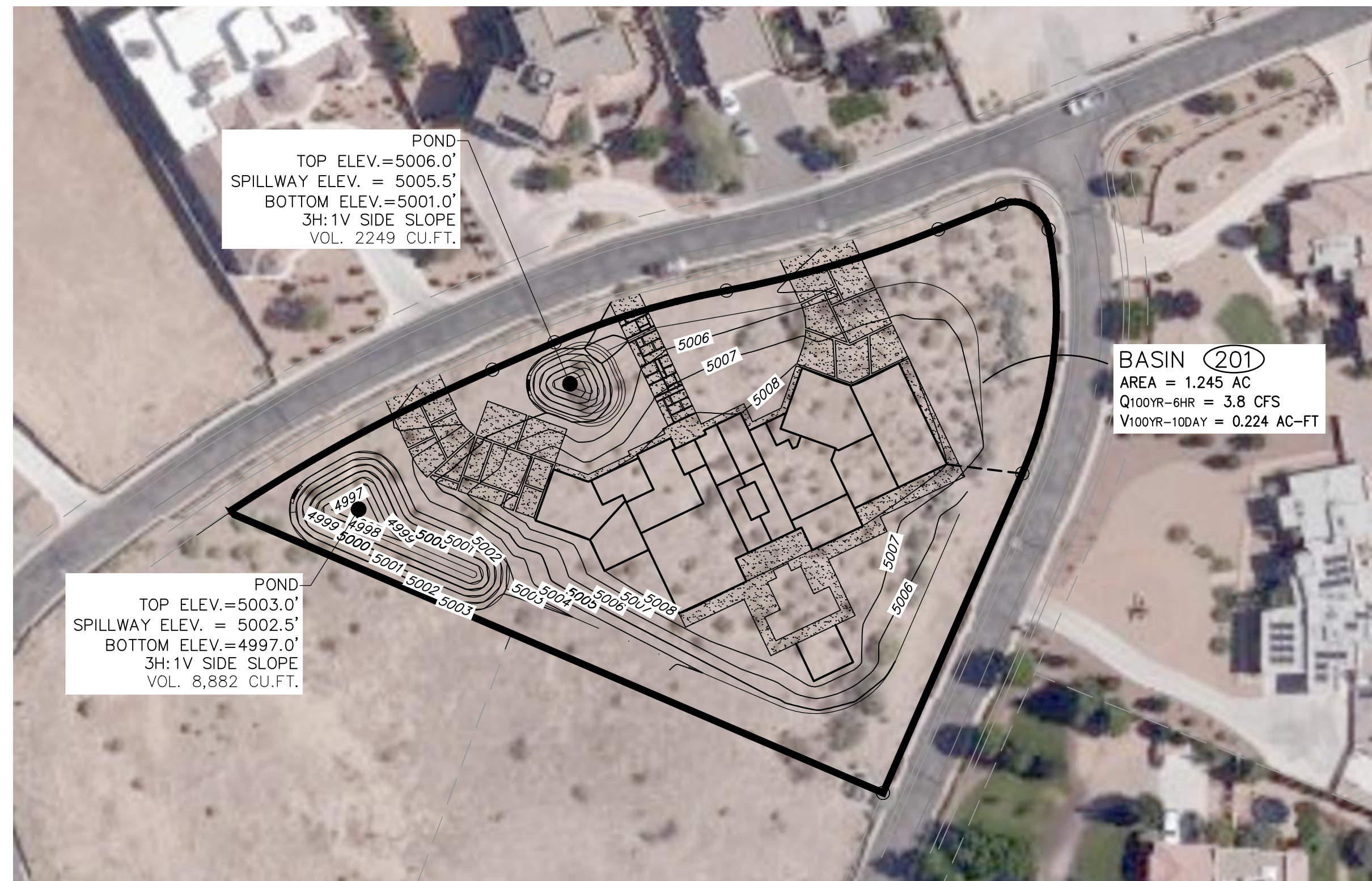
SHEET TITLE
GRADING

SHEET NO.
C-1

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EXISTING BASIN MAP



PROPOSED BASIN MAP



HYDROLOGY SUMMARY										
Basin	Total Area (acres)	Land Treatment (%)				Q ₁₀₀ (cfs)	V _{100yr-6hr} (ac-ft)	V _{100yr-24hr} (ac-ft)	V _{100yr-4day} (ac-ft)	V _{100yr-10day} (ac-ft)
		A	B	C	D					
100	1.245	90.0	0.0	10.0	0.0	2.1	0.061	0.061	0.061	0.061
200	1.245	0.0	55.0	0.0	45.0	3.8	0.146	0.161	0.191	0.227

HYDROLOGY SUMMARY

TOTAL NEW LAND TREATMENT "D" AREA = 2,700 SQ.FT.
 WATER QUALITY STORAGE REQ. (NEW DEVELOPMENT)=24,412 SQ.FT.*(0.42)*(1'/12")=854 CU.FT.=0.0196 AC.FT.

STORMWATER QUALITY VOLUME POND (0.62" STORM)

TOTAL RETENTION POND VOL. REQUIRED = SWQV + ΔV_{100-yr-10-day}
 = 854 CU.FT. + 9892 CU.FT = 10,746 CU.FT.

TOTAL DETENTION POND VOL. PROVIDED = POND 1(VOL.) + POND 2(VOL.)
 = 8882 + 2249 = 11,131 CU.FT.

PROVIDED VOL. EXCEEDS REQUIRED RETENTION VOLUME.

DETENTION POND SUMMARY

POND No. 1 WSEL = 5002.5'
 POND NO. 2 WSEL = 5005.5'

WATER SURFACE ELEVATION

Introduction

The site is 1.25 acres and is Lot 19 of Black Farm Estates. Lot 19 is located at the intersection of Lyndale Lane and Riverdale Lane. Proposed improvements include a residential building with a footprint of 10,000 sq.ft., two driveways with connections to Lyndale Lane, and two ponds. The purpose of this Grading & Drainage Plan is to 1) provide hydrologic and hydraulic analysis of the existing and proposed condition, 2) satisfy the requirements from the approved Black Farms Drainage Report, 3) satisfy the Stormwater Quality Volume requirement, and 3) seek approval from City of Albuquerque's Hydrology Department.

Methodology

Hydrologic procedures presented in Chapter 6 of City of Albuquerque's the Development Process Manual, effective as of June 8, 2020 were followed.

Existing Condition

Lot 19 is vacant. The lot isn't flat and has a slope of approximately 1% from the high point at the northeast corner to the lowest elevation at the most westerly corner of the site, which is caused by Riverdale being higher in elevation than Lyndale Road. Due to the flat grading scheme of Black Farms runoff from the road may enter the site during the 100-year, 10-day storm.

Proposed Condition

Proposed improvements include a residential building with a footprint of 10,000 sq.ft., two driveways with connections to Lyndale Lane, and two ponds. The site will retain the combined runoff volume from the 100-year, 10-day storm and storm water quality volume within two ponds located along Lyndale Lane. Runoff from the backyard will flow to the front yard to one of the two ponds. The flat grading scheme does not work on Lot 19, since Riverdale is higher in elevation than Lyndale Road. Due to the difference in road elevations, runoff from the front yard cannot drain to the back yard. The ponds are located as designated in Black Farms master drainage plan. The proposed impervious improvement is approximately 35%; however, the site will retain the site's 100-year, 10-day storm with the impervious cover at 45%. Runoff from Pond 2 will overtop and flow to Pond 1. Runoff from precipitation greater than the 100-year, 10-day storm will overtop Pond 1 and flow to Lyndale Lane.

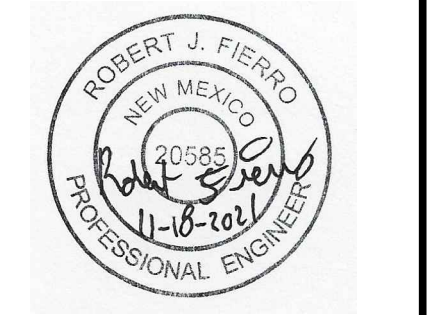
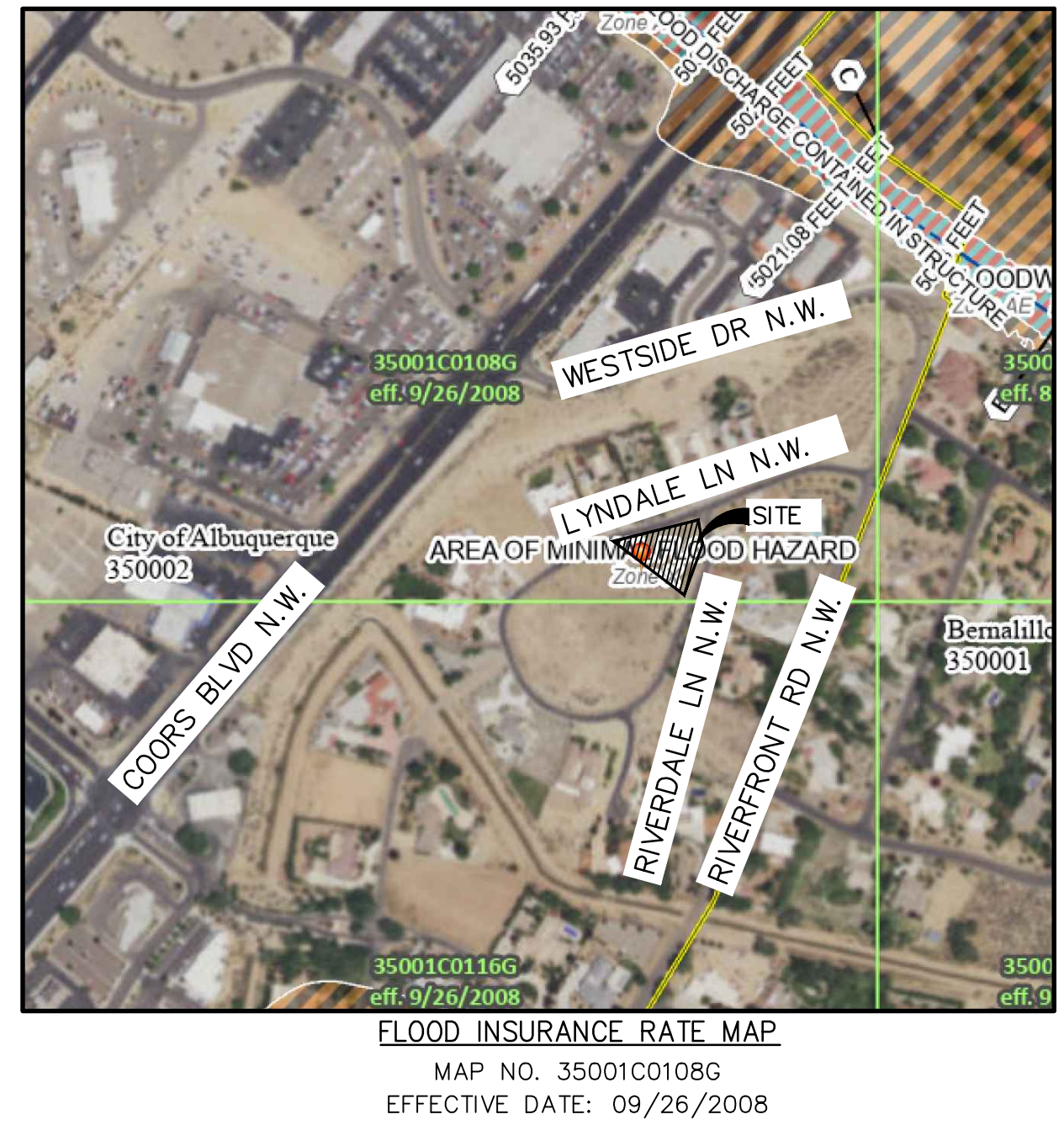
Conclusion

The proposed development meets the drainage requirements from Black Farms Drainage Master Plan and the City's Stormwater Quality Volume. This drainage report seeks COA's Hydrology and approval.

DRAINAGE REPORT

LEGEND

- PROPERTY BOUNDARY
- FLOW PATH
- ROOF FLOW
- SURFACE DRAINAGE
- - - UTILITY EASEMENT LINE
- FLOWLINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED BASIN
- EXISTING BASIN



LUNA RESIDENCE
 9515 RIVERDALE LN N.W.
 ALBUQUERQUE, NEW MEXICO

PROJECT NAME

REV.	DATE	DESCRIPTION	BY

PROJECT NO: 21082
 DESIGNED BY: R/JF
 DRAWN BY: JB
 CHECKED BY: R/JF
 DATE: NOVEMBER 2021
 SHEET TITLE

DRAINAGE PLAN

SHEET NO:
C-2