CITY OF ALBUQUERQUE

Planning Department
Alan Varela, Interim Director

Mayor Timothy M. Keller

June 9, 2022

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

RE: Lot 2 Executive Hills 2
700 Winterwood Pl. SE
Grading and Drainage Plan - Approved
Engineers Stamp Date 6/6/22
File Number (L23D038)

Mr. Fierro,

Based upon the information provided in your submittal received 6/8/22, this plan is approved for grading permit by Hydrology.

This submittal does not follow the requirements provided in the DPM Chapter 6. Please access this on the City website and make sure subsequent submittals follow these requirements. Below are listed items that can be seen to need addressing. Further comments may be provided on future submittals.

An Engineer's Certification of the compacted pad and grading (Pad Certification), per the DPM Chapter 6-13(A)(6): *Engineer's Certification Checklist for Non-Subdivision,* is required prior to issuing Building Permit.

Please place a Drainage Easement over the arroyo to ensure this does not get filled in the future. This can take place at a later date so long as it occurs prior to CO. A final (as-built) elevation certificate must be submitted and approved by Hydrology prior to issuing approval for Certificate of Occupancy.

If you have any questions, please contact me at 924-3986 or earmijo@cabq.gov.

Sincerely,

Ernest Armijo, P.E.
Principal Engineer, Planning Dept.
Development Review Services

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 11/2018)

Project Title: Chaparro Residence Building Permit #: _____ Hydrology File #: _____

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

Legal Description: Lot 2 of the Executive Hills Subdivision, Unit 4

City Address: 700 Winterwood PL SE, Albuquerque, NM

Applicant: Fierro & Company, LLC Contact: Robert Fierro

Address: 3201 4th Street, Suite B, Albuquerque, NM 87017

Phone#: (505) 503-9546 Fax#: _____ E-mail: robertfierro@fierrocompany.com

Owner: _____ Contact: _____

Address: _____

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

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

IS THIS A RESUBMITTAL?: X Yes _____ No

DEPARTMENT: _____ TRAFFIC/ TRANSPORTATION X HYDROLOGY/ DRAINAGE

Check all that Apply:

TYPE OF SUBMITTAL:

____ ENGINEER/ARCHITECT CERTIFICATION
____ PAD CERTIFICATION
____ CONCEPTUAL G & D PLAN
X 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?

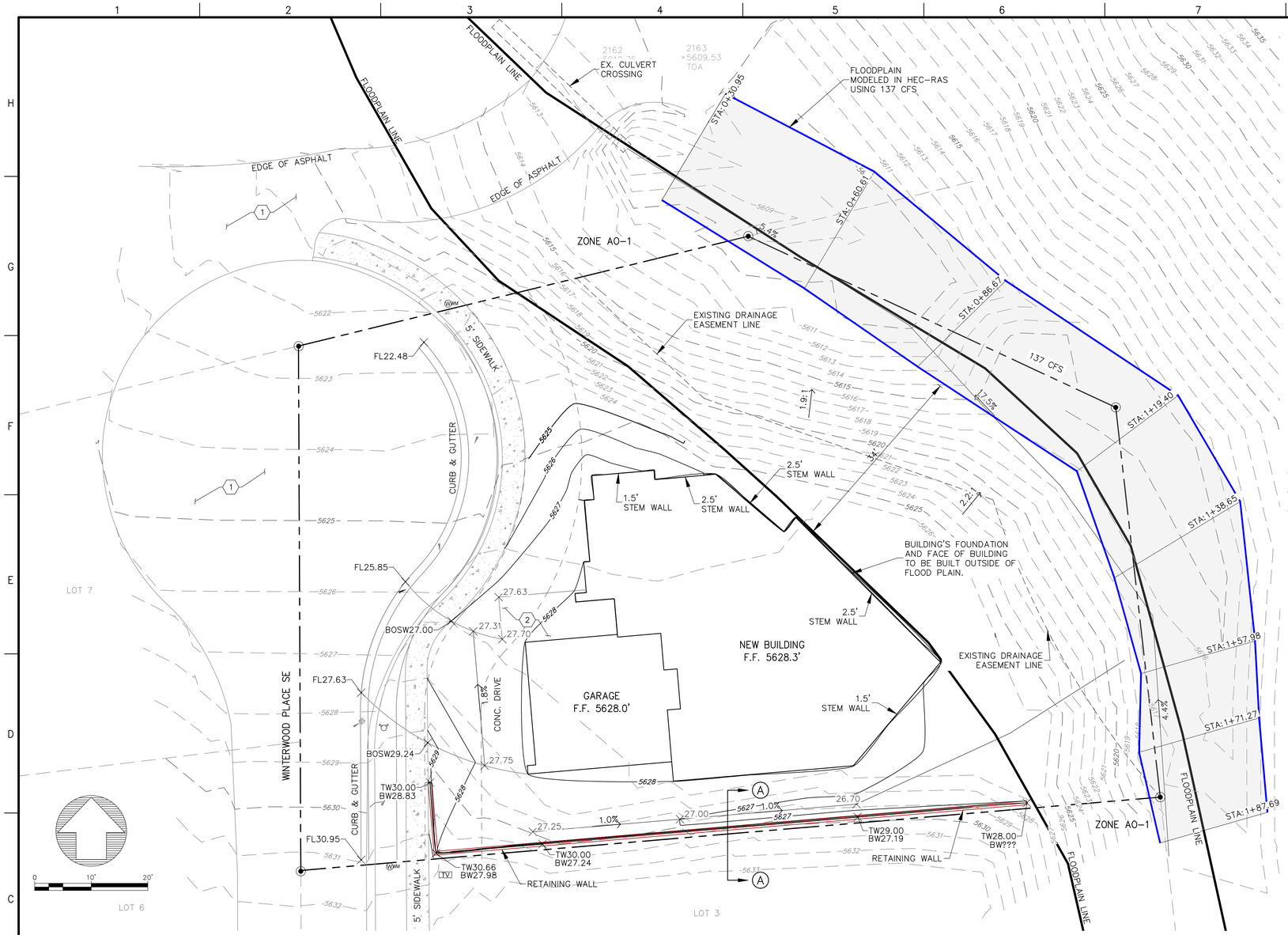
TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

X 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) _____

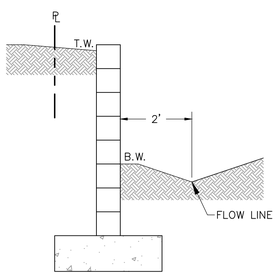
DATE SUBMITTED: 6/7/2022 By: Robert Fierro

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____



GRADING PLAN

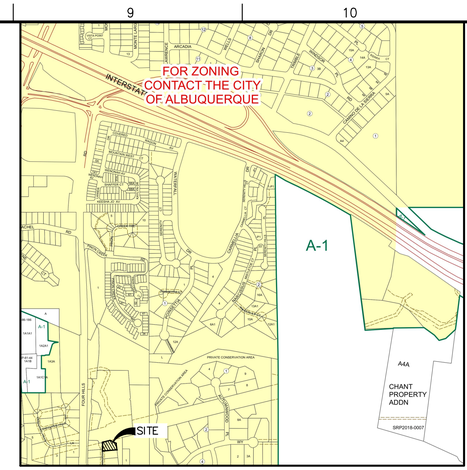


NOTES:
1 REFER TO THIS SHEET FOR TW AND BW ELEVATIONS.
2 ENTIRE FOOTING AND WALL TO BE INSIDE PROPERTY.

1 SECTION A–A (TYPICAL RETAINING WALL NOMENCLATURE)
SCALE: NTS

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 ALBUQUERQUE, 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. 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.



LOCATION MAP
ZONE ATLAS MAP: L–23–Z

NTS

KEYED NOTES:

1. EXISTING ASPHALT.
2. NEW CONCRETE.
3. CONSTRUCT RETAINING WALL BY OTHERS. REFER TO TYPICAL SECTION THIS SHEET.

PROJECT INFORMATION

BENCHMARK
CITY OF ALBUQUERQUE SURVEY MONUMENT: ACS BM, 4–N10
NORTHING: 1469296.943 (NM SPC, CENTRAL ZONE, NAD 1983)
EASTING: 1499594.947 (NM SPC, CENTRAL ZONE, NAD 1983)
ELEVATION: 5003.719' (NAVD 1988, U.S. SURVEY FOOT)

DESCRIPTION
LOT NUMBERED TWO (2) OF THE EXECUTIVE HILLS SUBDIVISION, UNIT 4.

FLOOD NOTE:
A PORTION OF THIS PROPERTY IS LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA PER FEMA FIRM 35001C0386G DATED 9/26/2008. THE PROTION OF THE PROPERTY LYING IN A FLOOD HAZARD AREA IS IN A ZONE AO, DEPTH 1', THE REMAINDER OF THE LOT IS IN ZONE X.

SURVEYOR INFORMATION
TOPOGRAPHIC SURVEY PERFORMED BY BSN SANTA FE AND FIERRO & COMPANY SUPPLEMENTED BY SURVEYING IN WINTERWOOD CURB & GUTTER.

EST. UNADJUSTED EARTHWORK VOLUMES
(EXCLUDING SUB EXCAVATIONS)
CUT = 59 C.Y.
FILL = 245 C.Y.

LEGEND

- APPARENT PROPERTY BOUNDARY
- APPARENT ADJOINING PROPERTY LINE
- EXISTING FENCE
- APPARENT PRIVATE DRAINAGE EASEMENT
- APPARENT PROPERTY CORNER
- ROOF FLOW DIRECTION
- 3905 EXISTING MAJOR CONTOUR
- 05 EXISTING MINOR CONTOUR
- 3905 PROPOSED MAJOR CONTOUR
- 3904 PROPOSED MINOR CONTOUR
- 26.29 FINISHED GRADE
- FL26.29 FLOW LINE
- BOSW26.29 BACK OF SIDEWALK
- FLOODPLAIN LINE
- CALCULATED FLOOD PLAIN
- RETAINING WALL

Fierro&Company
ENGINEERING | SURVEYING
3201 4th. STREET NW
ALBUQUERQUE, NEW MEXICO 87107
PH (505) 352-8930
www.fierrocompany.com

ENGINEER'S SEAL
ROBERT J. FIERRO
NEW MEXICO
20589
6-6-2022
PROFESSIONAL ENGINEER

PROJECT NAME
CHAPARRO RESIDENCE
700 WINTERWOOD PL SE
ALBUQUERQUE, NM

REV.	DATE	DESCRIPTION	BY

PROJECT NO:	22029
DESIGNED BY:	RJF
DRAWN BY:	JB
CHECKED BY:	RJF
DATE:	JUNE 2022

SHEET TITLE
GRADING PLAN

SHEET NO: C-1

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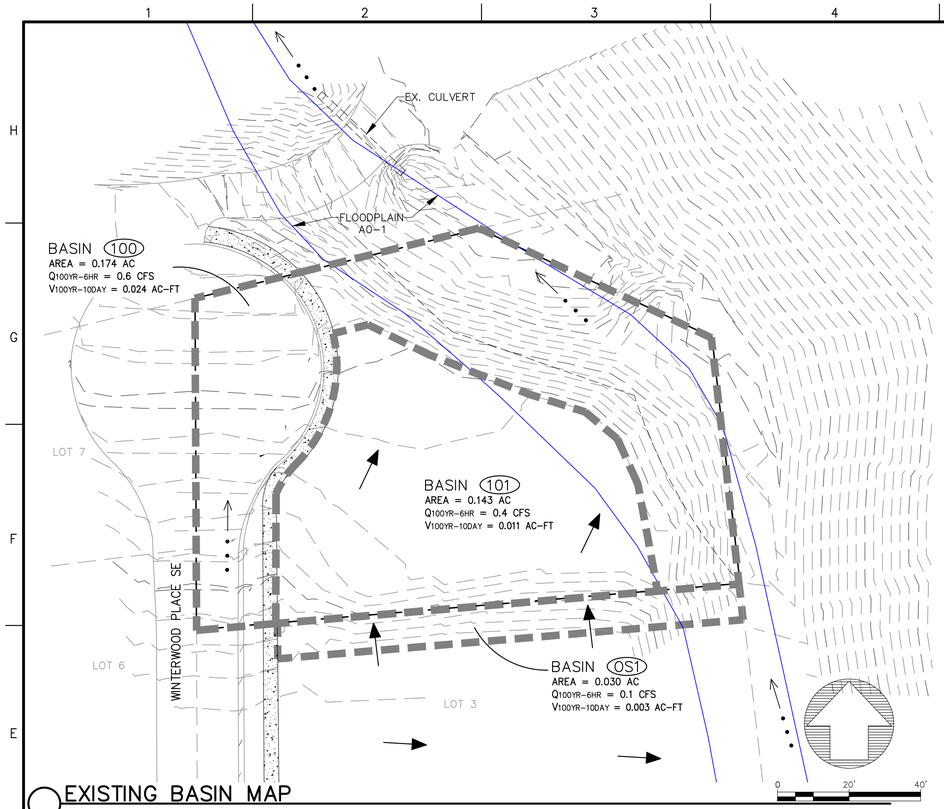
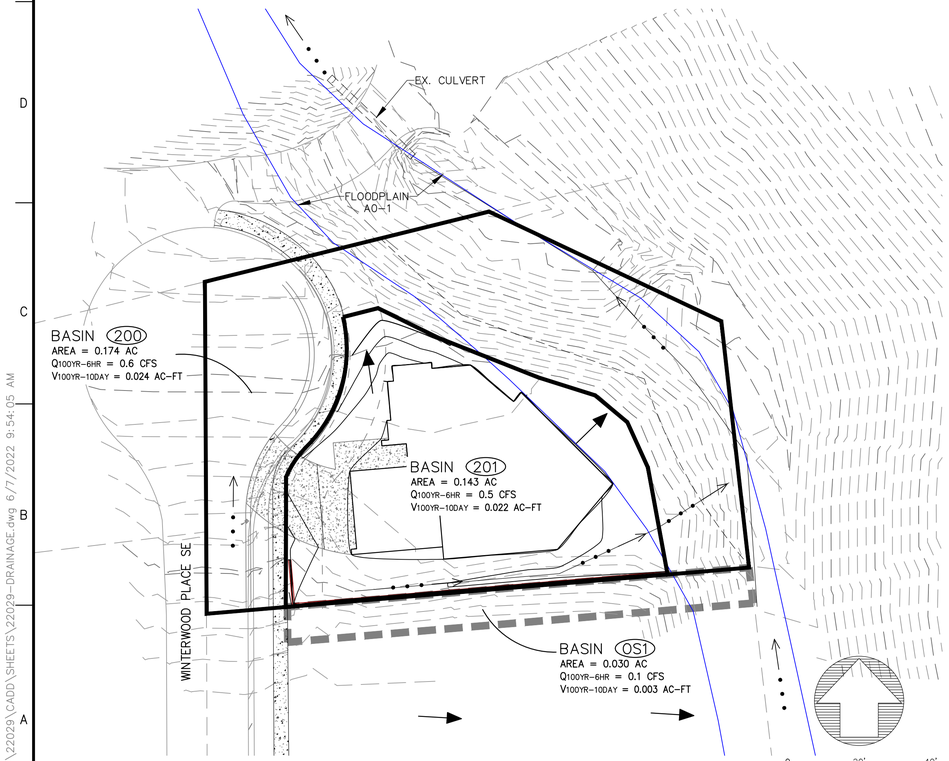


EXISTING BASIN MAP



PROPOSED BASIN MAP

FLOOD INSURANCE RATE MAP
MAP NO. 35001C0386G
EFFECTIVE DATE: 09/26/2008

Introduction

The site is located at 700 Winterwood PL SE, being Lot Two (2) of the Executive Hills Subdivision, Unit 4, and is 0.30 acres. The site's developable area is only 0.14 acres due to it being encumbered with a floodplain and roadway easement. The purpose of this Grading & Drainage Plan is to 1) provide hydrologic and hydraulic analysis of the existing and proposed condition, and 2) seek approval for building permit.

Methodology

Hydrologic procedures presented in the Hydrology Section of the DMP, Article 6-2(a), approved June 8, 2020 were followed. Precipitation Zone 2 data was used in the hydrologic computations. HEC-RAS was used to model the flood plain.

Existing Condition

The site slopes from the southwest to the northeast from an elevation of 5627' to 5610'. Floodplain designation A0-1 is along the westerly portion of the property. There is a steep slope within this floodplain which appears to be stable. There is a relatively flat area that appears to have been graded for the purpose of a house pad. The property encompasses half of the Winterwood Road. Runoff within Winterwood road discharges to said floodplain. FEMA designated floodplain AO-1 is shown on Sheet 1.

Proposed Condition

A residential building containing a footprint of approximately 2,800 sq.ft. and driveway is proposed. The development of this lot will not alter the drainage pattern. The peak discharge from the existing to proposed increase by 0.1 cfs. Attenuating runoff via detention is not necessary due to the following reasons: 1) 0.1 cfs is negligible and will not adversely impact downstream capacities, and 2) there is no room for a pond due to the developable area of the lot which is relatively smaller than the developable areas in this residential community. The site will continue to accept offsite runoff from Basin OS1. The Storm Water Quality Volume is not required to be treated on this site, since the DPM states that single family subdivisions are not allowed on individual lots.

The City of Albuquerque's Hydrology Department requested to show a calculated floodplain using HEC-RAS model or move the building 6-8 feet away from the FEMA Floodplain. Therefore, the floodplain was modeled to keep the building just outside of FEMA's Floodplain. Results concluded that FEMA's Floodplain is does not represent the actual floodplain. Please refer to Sheet C-1 for the floodplain delineated by analyzing using HEC-RAS. A flow of 137 cfs was used to model the floodplain and was obtained from Hydrology File L23D019. Cross-sections from the project's topographic survey were imported into HEC-RAS. The floodplain modeled in HEC-RAS is more than 30 feet away from the proposed building location.

Conclusion

The proposed development presented on this Grading & Drainage Plan does not alter the existing drainage patterns and does not adversely impact downstream conveyance nor detention. This drainage report seeks COA Hydrology approval for building permit.

DRAINAGE REPORT

Excess Precipiation (inches)			
A	B	C	D
0.67	0.86	1.09	2.58

Peak Discharge (cfs/acre)			
A	B	C	D
1.84	2.49	3.17	4.49

Precipitation (inches)			
P_{360}(6)	P_{1440}(24)	P_{4days}	P_{10days}
2.43	2.84	3.29	4.10

HYDROLGY SUMMARY

BASIN	Total Area (acres)	Land Treatement (%) A	B	C	D	Q_{100} (cfs)	$V_{100yr-6hr}$ (ac-ft)
OS1	0.0296	0.0	0.0	100.0	0.0	0.1	0.003
100	0.1742	0.0	0.0	62.0	38.0	0.6	0.024
101	0.1431	0.0	80.0	20.0	0.0	0.4	0.011
200	0.1742	0.0	0.0	62.0	38.0	0.6	0.024
201	0.1431	0.0	35.0	10.0	55.0	0.5	0.022

HYDROLOGY SUMMARY

LEGEND

- PROPERTY BOUNDARY
- FLOW PATH
- ROOF FLOW
- SURFACE DRAINAGE
- UTILITY EASEMENT LINE
- FLOWLINE
- 3905 EXISTING MAJOR CONTOUR
- 05 EXISTING MINOR CONTOUR
- 3905 PROPOSED MAJOR CONTOUR
- 3904 PROPOSED MINOR CONTOUR
- PROPOSED BASIN
- EXISTING BASIN

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ENGINEER'S SEAL

ROBERT J. FIERRO NEW MEXICO 20585 6-6-2022 PROFESSIONAL ENGINEER

PROJECT NAME

CHAPARRO RESIDENCE
700 WINTERWOOD PL SE
ALBUQUERQUE, NM

REV.	DATE	DESCRIPTION	BY

PROJECT NO:	22029
DESIGNED BY:	RJF
DRAWN BY:	JB
CHECKED BY:	RJF
DATE:	JUNE 2022

SHEET TITLE

DRAINAGE PLAN

SHEET NO:

C-2

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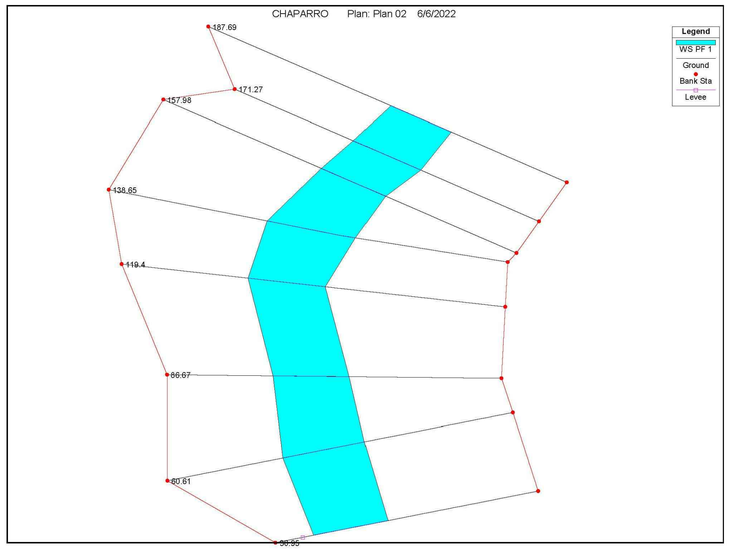

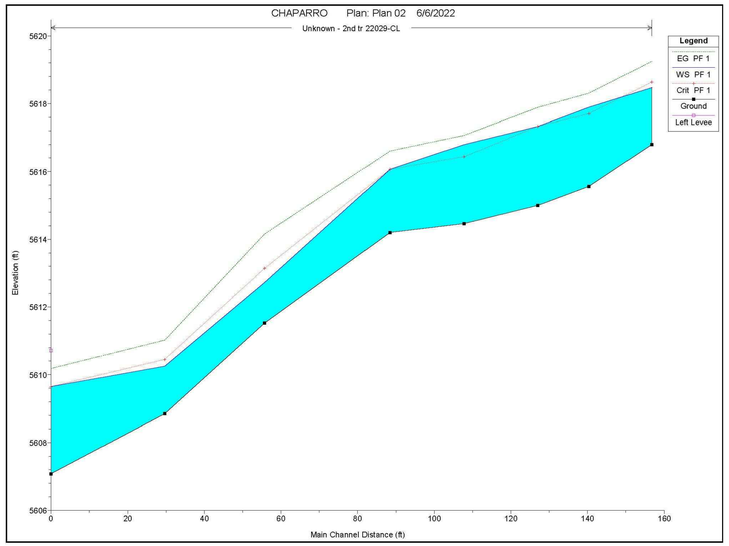

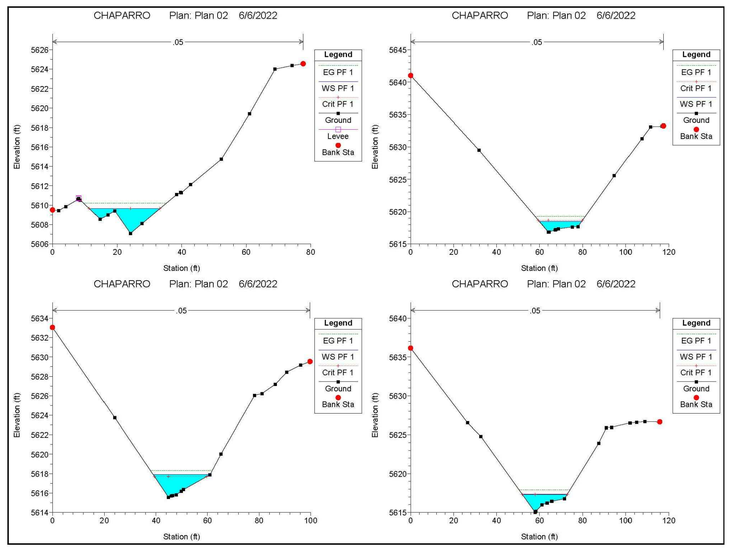

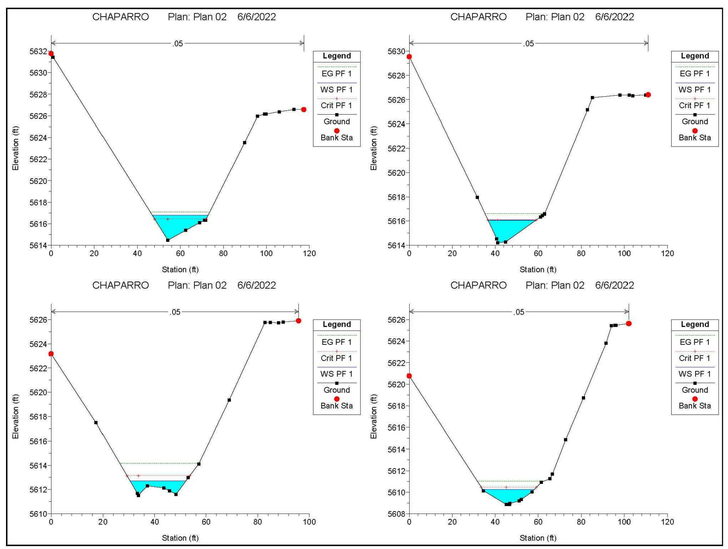

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ALBUQUERQUE, NM

	DESCRIPTION	DATE

PROJECT NO:	22029
DESIGNED BY:	RJF
DRAWN BY:	JB
CHECKED BY:	RJF
DATE:	JUNE 2022

SHEET TITLE

HEC-RAS
RESULTS

SHEET NO:

C-3

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