

CITY OF ALBUQUERQUE

Planning Department
Alan Varela, Interim Director



Mayor Timothy M. Keller

October 1, 2021

Fred C. Arfman, P.E.
Isaacson & Arfman, P.A.
128 Monroe St. N.E.
Albuquerque, NM 87108

**RE: Baca Residence
10th St. SW
Grading and Drainage Plan
Engineer's Stamp Date: 09/20/21
Hydrology File: K13D081**

Dear Mr. Arfman:

PO Box 1293

Based upon the information provided in your submittal received 09/21/2021, the Grading and Drainage Plan is approved for Grading Permit (earthwork can get started for the earth pad on the house).

Albuquerque

Once the grading is complete, a pad certification (meaning that the earthwork is complete) will be required prior to release from Hydrology during the Building Permit process. Also, at the time of pad certification approval, Hydrology will concurrently approve the Grading & Drainage Plan for Building Permit. Please supply a photo of the site at the time of submittal of the pad certification. Also at the time of the next submittal, please provide a physical address for the property.

NM 87103

www.cabq.gov

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: Baca Residence 10th Street SW **Building Permit #:** _____ **Hydrology File #:** K13
DRB#: _____ **EPC#:** _____ **Work Order#:** _____
Legal Description: Lot 6, Block 3, T.G. Apodaca Addition
City Address: _____

Applicant: Isaacson & Arfman, Inc. **Contact:** Fred C. Arfman or
Bryan J. Bobrick
Address: 128 Monroe Street NE - Albuquerque, NM 87108
Phone#: (505) 268-8828 **Fax#:** _____ **E-mail:** freda@iacivil.com
bryanb@iacivil.com
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:

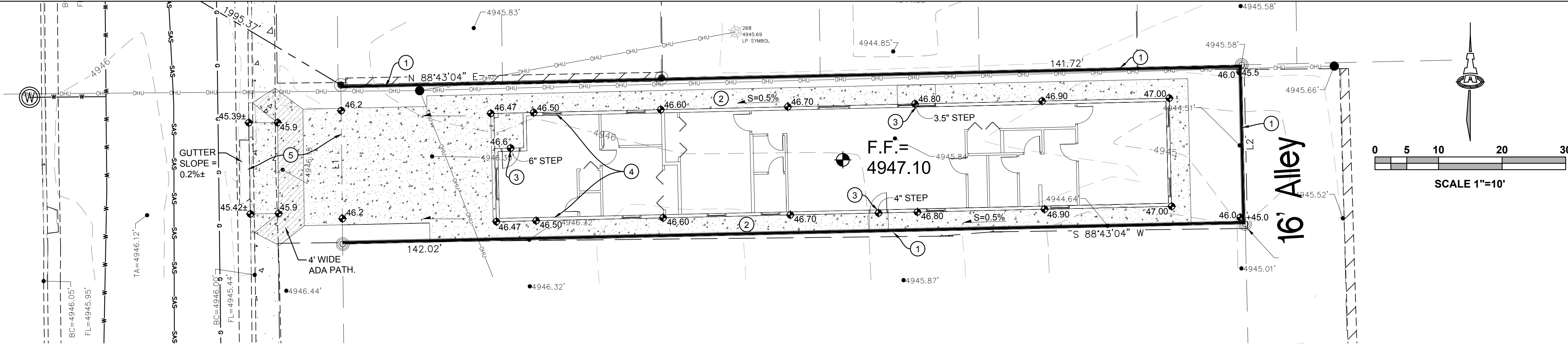
☒ BUILDING PERMIT APPROVAL
_____ CERTIFICATE OF OCCUPANCY
_____ PRELIMINARY PLAT APPROVAL
_____ SITE PLAN FOR SUB'D APPROVAL
_____ SITE PLAN FOR BLDG. PERMIT APPROVAL
_____ FINAL PLAT APPROVAL
_____ SIA/ RELEASE OF FINANCIAL GUARANTEE
_____ FOUNDATION PERMIT APPROVAL
_____ GRADING PERMIT APPROVAL
_____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

DATE SUBMITTED: September 20, 2021 **By:** Fred C. Arfman

COA STAFF:

ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____



CIVIL NOTES

- A. STANDARDS AND SPECIFICATIONS** - THE CITY OF ALBUQUERQUE PUBLIC WORKS REGULATIONS SHALL TAKE PRECEDENT FOR ALL PRIVATE IMPROVEMENTS WHERE APPLICABLE.
- B. SUBSURFACE INVESTIGATION**: SUBSURFACE EXPLORATION TO ASCERTAIN THE NATURE OF SOILS IS THE RESPONSIBILITY OF THE CONTRACTOR. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE SUCH SUBSURFACE INVESTIGATIONS AS HE DEEMS NECESSARY TO DETERMINE THE NATURE OF THE MATERIAL TO BE ENCOUNTERED.
- C. TOPOGRAPHIC SURVEY**: TOPOGRAPHIC SURVEY INFORMATION SHOWN WAS PROVIDED BY THE OWNER AND IS INCLUDED FOR INFORMATIONAL PURPOSES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT THE INFORMATION SHOWN IS CORRECT.
- D. COMPLIANCE WITH LAWS**: THE CONTRACTOR SHALL FULLY COMPLY WITH ALL LOCAL, STATE AND FEDERAL LAWS, INCLUDING ALL CODES, ORDINANCES AND REGULATIONS APPLICABLE TO THE WORK TO BE DONE
- E. EXISTING STRUCTURES**: THE SURVEY, PROVIDED BY THE PROPERTY OWNER, SHOWS THE LOCATION OF KNOWN SURFACE AND SUBSURFACE STRUCTURES, HOWEVER, THE ENGINEER ASSUMES NO RESPONSIBILITY FOR FAILURE TO SHOW ANY OR ALL OF THESE STRUCTURES ON THE PLANS, OR TO SHOW THEM IN THEIR EXACT LOCATION.
- F. PROTECTION OF EXISTING UTILITIES**: NEW MEXICO ONE CALL (NM811 PHONE: 1-800-321-2537) SYSTEM MUST BE CONTACTED AT LEAST TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION OPERATIONS BEING PERFORMED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT NM811 SYSTEM. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS IN ORDER TO PROTECT ALL EXISTING UTILITIES, SERVICES AND STRUCTURES ENCOUNTERED, WHETHER OR NOT THEY ARE INDICATED ON THE PLANS. ANY DAMAGE TO UTILITIES RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED AT HIS/HER EXPENSE.
- G. ALL SITE PREPARATION, GRADING OPERATIONS, FOUNDATION CONSTRUCTION, AND PAVEMENT INSTALLATION WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT. IF ONE IS PROVIDED BY THE OWNER OR ARCHITECT. ALL OTHER WORK SHALL, UNLESS OTHERWISE NOTED IN THE PLANS, BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT SPECIFICATION (FIRST PRIORITY), AND/OR NMDOT STANDARD SPECIFICATIONS FOR PUBLIC WORK (SECOND PRIORITY.)**
- H. VIBRATORY COMPACTION SHALL NOT BE USED OVER IN-PLACE UTILITIES.**
- I. STRIPPING AND DEBRIS REMOVAL**: ALL WASTE PRODUCTS FROM THE CONSTRUCTION SITE SHALL BE APPROPRIATELY DISPOSED OF OFF-SITE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN PERMITS REQUIRED TO HAUL OR DISPOSE OF WASTE PRODUCTS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE WASTE DISPOSAL SITE COMPLIES WITH GOVERNMENT REGULATIONS.
- J. EARTHWORK QUANTITIES**: THE CONTRACTOR SHALL BE RESPONSIBLE FOR CALCULATING THE EARTHWORK QUANTITIES BASED ON THE EXISTING CONTOURS SHOWN ON THE SURVEY. PROPOSED SPOT AND CONTOUR ELEVATIONS SHOWN REPRESENT TOP OF FINISH MATERIAL (I.E. TOP OF CONCRETE, TOP OF CONCRETE BUILDING PAD, TOP OF PAVEMENT MATERIAL, TOP OF LANDSCAPING MATERIAL, ETC.). CONTRACTOR SHALL GRADE, COMPACT SUBGRADE AND DETERMINE EARTHWORK ESTIMATES BASED ON PROPOSED ELEVATIONS SHOWN MINUS FINISH MATERIAL THICKNESSES.
- K. TRANSITION TO EXISTING**: WHERE GRADES BETWEEN NEW AND EXISTING ARE SHOWN AS 'MATCH' OR '±', TRANSITIONS SHALL BE SMOOTH.
- L. STRIPPING AND DEBRIS REMOVAL**: THE BUILDING PAD SITES, AREAS TO BE PAVED, AND ALL AREAS THAT ARE TO RECEIVE FILL MATERIAL SHALL BE STRIPPED OF VEGETATION, TREES, ROOTS, STUMPS, DEBRIS, AND OTHER ORGANIC MATERIAL.
- M. ELECTRONIC FILES**: UPON WRITTEN REQUEST COORDINATED THROUGH THE PROJECT ARCHITECT, THE ELECTRONIC FILE OF THE GRADING AND DRAINAGE PLAN MAY BE PROVIDED TO THE CONTRACTOR FOR VERTICAL CONTROL. DO NOT USE GRADING & DRAINAGE PLAN FOR PROJECT STAKING AS THERE IS NO CERTAINTY THAT IT IS USING THE MOST CURRENT SITE BASE. SITE CONSTRUCTION LAYOUT / STAKING SHALL BE COORDINATED WITH THE ARCHITECT USING THE ARCHITECTS SITE PLAN.
- N. EROSION AND SEDIMENT CONTROL**: IF THE SITE IS SMALL ENOUGH NOT TO REQUIRE AN eNOI, THE CONTRACTOR SHALL BE RESPONSIBLE FOR USING EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs) TO ENSURE THAT NO SOIL ERODES FROM THE SITE ONTO ADJACENT PUBLIC RIGHT-OF-WAY. MEASURES REQUIRED FOR EROSION AND SEDIMENT CONTROL SHALL BE INCIDENTAL TO THE PROJECT COST.
- O. ANY AREAS DISTURBED BY CONSTRUCTION AND NOT COVERED BY LANDSCAPING OR AN IMPERVIOUS SURFACE SHALL BE RE-VEGETATED WITH NATIVE GRASS SEEDING IN ACCORDANCE WITH SECTION 1012 OF THE NEW MEXICO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, APWA NM CHAPTER, CURRENT EDITION.**
- P. THE CONTRACTOR SHALL CONFORM TO ALL CITY, COUNTY, STATE AND FEDERAL DUST AND EROSION CONTROL REGULATIONS. THE CONTRACTOR SHALL PREPARE AND OBTAIN ANY NECESSARY DUST OR EROSION CONTROL PERMITS FROM THE REGULATORY AGENCIES.**
- Q. ADJUST ALL RIMS OR COVERS OF UTILITY FEATURES (EXISTING AND NEW) AS NECESSARY TO MATCH NEW GRADES. RIMS AND COVERS IN PAVED AREAS SHALL BE HS-25 TRAFFIC RATED.**

PROJECT INFORMATION

PROPERTY: THE SITE IS A DEVELOPED RESIDENTIAL PROPERTY LOCATED WITHIN C.O.A. VICINITY MAP K-13. THE SITE IS BOUND TO THE NORTH, SOUTH AND EAST BY DEVELOPED RESIDENTIAL PROPERTIES AND TO THE WEST BY 10TH STREET.

PROPOSED IMPROVEMENTS: THE PROPOSED IMPROVEMENTS INCLUDE A RESIDENCE WITH ASSOCIATED PAVED ACCESS DRIVE.

LEGAL: LOT NUMBERED SIX (6) IN BLOCK NUMBERED THREE (3) OF THE T.G. APODACA ADDITION, ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO.

BENCHMARK: ACS MONUMENT "5-K13" HAVING AN ELEVATION OF 4956.896' (NAVD 1988)

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

FLOOD HAZARD: PER BERNALILLO COUNTY FIRM MAP #35001C0333H, EFFECTIVE DATE AUGUST 16, 2012, THE SITE IS LOCATED WITHIN FLOODZONE 'X' SHADED WHICH IS DEFINED AS AREAS WITH REDUCED FLOOD RISK DUE TO LEVEE

DRAINAGE PLAN CONCEPT: DEVELOPED STORMWATER WILL FREE DISCHARGE TO 10TH STREET.

KEYED NOTES

- RETAINING CURB/GARDEN WALL ON NORTH / EAST AND SOUTH SIDES REQUIRED TO ACHIEVE GRADES AND ACCOMMODATE FILL REQUIRED (MAX. 18" RETAINING). STORMWATER MUST BE CONTAINED WITHIN THE PROPERTY AND CANNOT FLOW TO OTHER PRIVATE PROPERTIES. SEE ARCHITECTURAL DESIGN BY OTHERS.
- PROPOSED WALK SLOPED TO DRAIN AT 0.5% FROM EAST END OF RESIDENCE TO 10TH STREET. NOTE: WALKS AS PROVIDED VARY IN WIDTH FROM 2.5' TO 3'. COORDINATE WITH ARCHITECT.
- STEP AT DOOR (VARIES BASED ON ELEVATION OF ADJACENT WALK)
- ENGINEER RECOMMENDS COLLECTING ROOF FLOW WITHIN A GUTTER SYSTEM RELEASED AT THE WEST END. OWNER'S OPTION.
- CONSTRUCTION WITHIN THE R.O.W. INCLUDING ENTRANCE DRIVE, AND ADA COMPLIANT PUBLIC SIDEWALK, ETC. TO BE CONSTRUCTED PER CITY OF ALBUQUERQUE REQUIREMENTS. NO WORK SHALL BE PERFORMED IN THE PUBLIC ROW WITHOUT AN APPROVED WORK ORDER OR EXCAVATION PERMIT.

LEGEND

- 4945 — EXISTING CONTOUR
- 4946.32' EXISTING SPOT ELEVATION
- 65 — PROPOSED 1.0' CONTOUR
- ◆ 65.4 PROPOSED SPOT ELEVATION
- FLOW DIRECTION
- FF = 4947.10 FINISH FLOOR ELEVATION

CALCULATIONS

CALCULATIONS: Baca Residence : 20-Sep-21

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

100-YEAR, 6-HOUR CALCULATIONS

AREA OF SITE: 3547 SF = 0.08 ACRE

HISTORIC FLOWS:				DEVELOPED FLOWS:				EXCESS PRECIP:	
	Treatment	SF	%		Treatment	SF	%	Precip.	Zone
Area A	=	0	0%	Area A	=	0	0%	E _A	= 0.62
Area B	=	3547	100%	Area B	=	532	15%	E _B	= 0.80
Area C	=	0	0%	Area C	=	0	0%	E _C	= 1.03
Area D	=	0	0%	Area D	=	3015	85%	E _D	= 2.33
Total Area	=	3547	100%	Total Area	=	3547	100%		

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

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

Historic E = 0.80 in. Developed E = 2.10 in.

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

Historic V₃₆₀ = 236 CF Developed V₃₆₀ = 621 CF

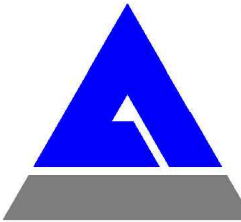
On-Site Peak Discharge Rate: Q_p = Q_{pA}A_A+Q_{pB}A_B+Q_{pC}A_C+Q_{pD}A_D / 43,560

For Precipitation Zone 2

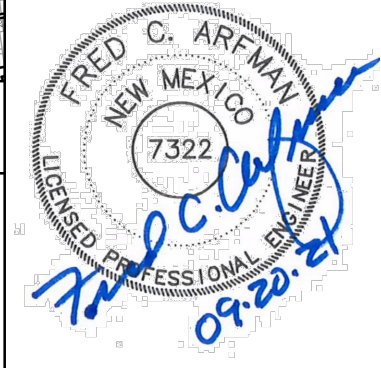
Q_{pA} = 1.71 Q_{pC} = 3.05

Q_{pB} = 2.36 Q_{pD} = 4.34

Historic Q_p = 0.2 CFS Developed Q_p = 0.3 CFS



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Engineer

BACA RESIDENCE
10TH ST. S.W.

DESIGN	ISSUE	DATE
DEVELOPMENT		
PROJECT NUMBER:	IA 2436	
FILE:		
DRAWN BY:	BJB	
CHECKED BY:	FCA	
DATE:	2021 09-20	

No	Date	Description

SHEET TITLE

GRADING &
DRAINAGE
PLAN

SHEET NUMBER

CG-101