

CITY OF ALBUQUERQUE

Planning Department
Brennon Williams, Director



Mayor Timothy M. Keller

September 10, 2020

Jake Bordenave, P.E.
Bordenave Designs
PO Box 91194
Albuquerque, New Mexico 87109

RE: **Worthan Residence**
7908 Shiprock NW
Lot 21, Block 7 Volcano Cliffs Unit 5
Grading and Drainage Plan
Engineers Stamp Date 9/10/2020 (E10D046)

Mr. Bordenave,

PO Box 1293

Based upon the information provided in your submittal received 9/10/2020 the above referenced Grading and Drainage Plan is acceptable for grading permit. Attach a copy of this approved plan to the construction sets in the permitting process prior to sign-off by Hydrology.

Albuquerque

Advise the owner if a pool is added, the grading plan will need to be resubmitted with changes to the land treatments.

NM 87103

Prior to acceptance of building permit a pad certification will be required.

www.cabq.gov

Prior to Certificate of Occupancy release, Engineer Certification per the DPM checklist will be required.

If you have any questions you can contact me at 924-3986 or Rudy Rael at 924-3977.

Sincerely,

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



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 10/2015)

Project Title: Worthington Residence Building Permit #: _____ Hydrology File #: E10/D046
DRB#: _____ EPC#: _____ Work Order#: _____
Legal Description: Lot 21, Block 7, Volcano Cliffs, Unit 5
City Address: 7908 Shiprock Ct, NW

Applicant: Bordenave Designs Contact: JAKE
Address: P.O. Box 91194, Alb. NM 87199
Phone#: 505-823-1344 Fax#: _____ E-mail: jake.bordenave@comcast.net
Other Contact: _____ Contact: _____
Address: _____
Phone#: _____ Fax#: _____ E-mail: _____

Check all that Apply:

DEPARTMENT:

- ☒ HYDROLOGY/ DRAINAGE
☐ TRAFFIC/ TRANSPORTATION
☐ MS4/ EROSION & SEDIMENT CONTROL

TYPE OF SUBMITTAL:

- ☐ ENGINEER/ARCHITECT CERTIFICATION
☐ CONCEPTUAL G & D PLAN
☒ GRADING PLAN
☐ DRAINAGE MASTER PLAN
☐ DRAINAGE REPORT
☐ CLOMR/LOMR
☐ TRAFFIC CIRCULATION LAYOUT (TCL)
☐ TRAFFIC IMPACT STUDY (TIS)
☐ EROSION & SEDIMENT CONTROL PLAN (ESC)
☐ OTHER (SPECIFY) _____

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
☐ PRE-DESIGN MEETING?
☐ OTHER (SPECIFY) _____

IS THIS A RESUBMITTAL?: ☒ Yes ☐ No

DATE SUBMITTED: 08/03/20 By: [Signature]

COA STAFF: _____ ELECTRONIC SUBMITTAL RECEIVED: _____

SHIPROCK CT. NW

FF 5321.00

PETROGLYPH NATIONAL PARK

NOTE:
A PERMIT FOR YARD WALLS AND/OR
RETAINING WALLS IS REQUIRED TO
CONSTRUCT THIS PROJECT. SEE
SHEET 13 OF THE ARCHITECTURAL
PLANS FOR YARD/WALL DETAILS.

SCALE 1 INCH = 20 FEET

20 10 0 10 20 40 60

CONDITION	BASIN RETURN PERIOD	TREATMENT TYPE	TREATMENT AREA	EXCESS PRECIPITATION	PEAK RUNOFF	RUNOFF VOLUME	RUNOFF RATE
-	- year	(table 4)	sq. ft.	(table 8) in.	(table 9) cfs/acre	cu. ft.	cfs
EXISTING	10	A	13500	0.08	0.24	90	0.07
		B	0	0.22	0.76	0	0.00
		C	0	0.44	1.49	0	0.00
		D	0	1.24	2.89	0	0.00
		TOTAL	13500			90	0.07
	100	A	13500	0.44	1.29	495	0.40
		B	0	0.67	2.03	0	0.00
		C	0	0.99	2.87	0	0.00
		D	0	1.97	4.37	0	0.00
		TOTAL	13500			495	0.40
DEVELOPED	10	A	0	0.08	0.24	0	0.00
		B	5616	0.22	0.76	103	0.10
		C	0	0.44	1.49	0	0.00
		D	7884	1.24	2.89	815	0.52
		TOTAL	13500			918	0.62
	100	A	0	0.44	1.29	0	0.00
		B	5616	0.67	2.03	314	0.26
		C	0	0.99	2.87	0	0.00
		D	7884	1.97	4.37	1294	0.79
		TOTAL	13500			1608	1.05
	A 100	B	1381	0.67	2.03	77	0.06
		D	2898	1.97	4.37	476	0.29
		TOTAL	4279			553	0.36
	B 100	B	1476	0.67	2.03	82	0.07
		D	949	1.97	4.37	156	0.10
		TOTAL	2425			238	0.16
	C 100	B	1707	0.67	2.03	95	0.08
		D	1966	1.97	4.37	323	0.20
		TOTAL	3673			418	0.28
	D 100	B	1052	0.67	2.03	59	0.05
		D	2071	1.97	4.37	340	0.21
		TOTAL	3123			399	0.26

WATER HARVESTING PONDS

BASIN A

REQ'D. VOLUME = (2898)(0.44-0.10)/12 = 82 CF

PROVIDED VOLUME
TOP 400 SF, BOTTOM 137 SF
DEPTH 0.30 FT. VOL. = 53 CF

OVERFLOW TO B

BASIN B

REQ'D. VOLUME = (949)(0.44-0.10)/12 = 27 C.F.

PROVIDED VOLUME
TOP 670 SF, BOTTOM 454 SF
DEPTH 0.3 FT. VOL. = 112 CF

BASIN C

REQ'D. VOLUME = (1966)(0.44-0.10)/12 = 56 C.F.

PROVIDED VOLUME;
TOP 306 SF, BOTTOM 124 SF
DEPTH 0.30 FT., VOLUME = 64 CF

BASIN D

REQ'D. VOLUME = (2071)(0.44-0.10)/12 = 59 C.F.

PROVIDED VOLUME;
TOP 293 SF, BOTTOM 131 SF
DEPTH 0.30 FT., VOLUME = 63 CF

POND OVERFLOW OUTLETS

(SEE SKETCH BELOW LEFT)

SET CMU SO THAT PEAK FLOW IS 2" DEEP.
THEREFORE EACH CMU WILL DISCHARGE A MAXIMUM
OF Q = CLH^{3/2} = 0.17 CFS WHERE WEIR C=2.8
AND L= 0.906 FT.

BASIN A

PEAK FLOW = 0.36 CFS,
USE 2 CMU'S ON EDGE

BASIN B



BASIN A

PROVIDED VOLUME
TOP 400 SF, BOTTOM 137 SF
DEPTH 0.30 FT. VOL. = 53 CF

OVERFLOW TO B

BASIN B
$$\text{REQ'D. VOLUME} = (949)(0.44-0.10)/12 = 27 \text{ C.F.}$$

TOP 670 SF, BOTTOM 454 SF
DEPTH 0.3 FT VOL = 113 CF

BASIN C

$$\text{REQ'D. VOLUME} = (1966)(0.44-0.10)/12 = 56 \text{ C.F.}$$

PROVIDED VOLUME;
TOP 306 SF, BOTTOM 124 SF

DEPTH 0.30 FT., VOLUME = 64 CF

$$\text{REQ'D. VOLUME} = (2071)(0.44-0.10)/12 = 59 \text{ C.F.}$$

PROVIDED VOLUME; _____

DEPTH 0.30 FT., VOLUME = 63 CF

POND OVERFLOW OUTLETS

SET CMU SO THAT PEAK FLOW IS 2" DEEP.
THEREFORE EACH CMU WILL DISCHARGE A MAXIMUM
OF $Q = CLH^{3/2} = 0.17$ CFS WHERE WEIR $C = 2.8$
AND $L = 0.906$ FT.

BASIN A

PEAK FLOW = 0.36 CFS,
USE 2 CMU'S ON EDGE

BASIN B

PEAK FLOW = 0.52 CFS
USE 4 CMU'S ON EDGE

BASIN A

PEAK FLOW = 0.28 CFS
USE 2 CMU'S ON EDGE

BASIN A

PEAK FLOW = 0.26 CFS

The diagram is a site plan for a water harvesting pond. It features a central building complex with multiple interconnected structures. Surrounding this central area are four distinct basins, labeled BASIN A, BASIN B, BASIN C, and BASIN D. BASIN A is located to the left of the central complex, BASIN B is to the top, BASIN C is to the right, and BASIN D is to the bottom. A north arrow is positioned to the left of the plan, pointing upwards. Below the north arrow, a scale is provided: SCALE 1 INCH = 30 FEET. To the left of the basins, there is a curved line representing a road or path, with a dashed line indicating a specific route or boundary.

Diagram illustrating a detail of a dry stream and pond area. The diagram shows a cross-section of a stone pad (6" thick) extending from a dry stream into a pond. The stone pad is shown with a 3' radius. The dry stream is labeled "DRY STREAM" and "FLOW". The pond area is labeled "TOP OF POND. SEE GRADING PLAN FOR ELEVATION" and "BOTTOM OF POND. SEE GRADING PLAN FOR ELEVATION". A note at the bottom states: "6\" THICK STONE PAD. EXTENT AS SHOWN ON GRADING PLAN. SEE GRADATION IN DRY STREAM DETAIL THIS SHEET. DO NOT PLACE STONE ON BANKS OR BOTTOM OF POND EXCEPT AS SHOWN."

DRY STREAM

CONSTRUCTION NOTES:
 BOTTOM AND BANK WIDTHS SHALL
 VARY TO SIMULATE A NATURAL
 STREAM. STONES GREATER THAN
 6" SHALL BE LIMITED TO BANK AREA.

PERCENT BY VOL.	PERCENT BY VOL.
> 6"	0-5
3"-6"	40-60
1"-3"	10-30
3/8"-1"	10-15
< 3/8"	0-5

KEYED NOTES

1. NEW RESIDENCE
2. CONCRETE DRIVE.
3. CONCRETE PATIO/PORCH.
4. CONCRETE WALK.
5. 4'x4' CONCRETE A/C PAD.
6. CMU YARD WALL.
7. WROUGHT IRON FENCE.
8. 2-3" PVC PIPES THRU WALL FOR DRAINAGE.
9. DRY STREAM w/ EROSION CONTROL PAD. SEE DETAIL THIS SHEET
10. INSTALL 2-CMU's ON EDGE TO PROVIDE DRAINAGE THRU WALL. BOTTOM OF CELL OPENING AT ELEVATION 19.8 IN PONDS A AND B. BOTTOM OF CELL OPENING AT ELEVATION 20.1 IN POND C AND 20.3 IN POND D.
11. WATER HARVESTING POND.
12. SEE SHEET 13 OF ARCHITECTURAL PLANS FOR YARD WALL DETAILS. PROVIDE 2" PVC PIPE THRU PERIMETER YARD WALLS AT 4' ON CENTER AT 3" ABOVE FINISHED GRADE.

DRAINAGE NOTES

1. THE SITE IS PRESENTLY IN IT'S NATURAL STATE AND RELATIVELY FLAT. THE SITE ABUTS THE PETROGLYPH NATIONAL PARK AND IS APPROXIMATELY 250 FEET WEST OF THE LAVA ESCARPMENT.
2. THERE IS A FLOW INCREASE OF 0.55 AND 0.65 CFS FOR THE 10 YEAR AND 100 YEAR STORMS RESPECTIVELY AND THE 6 HOUR RUNOFF VOLUMES FOR THE 10 YEAR AND 100 YEAR STORM INCREASE BY 828 AND 1113 CUBIC FEET RESPECTIVELY. THERE ARE NO RUNOFF CONVEYANCE SYSTEMS IN THE AREA. THE SITE IS DESIGNED TO SELF CONTAIN THE STORM WATER GENERATED ONSITE BY THE 90th PERCENTILE STORM.
3. THE SITE IS LOCATED IN A 'ZONE X' PER FEMA FIRM MAP NO. 113-G, DATED FEBRUARY 26, 2008.
4. TOPO SURVEY DATA SHOWN ON THIS DRAWING WAS PREPARED BY HARRIS SURVEYING, INC. DATED MARCH, 2018.

GRADING NOTES

1. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR MUST CONTACT THE NM811 FOR LOCATION OF EXISTING UTILITIES. DIAL 811 TO SUBMIT REQUEST OR 505-260-1165 WITH QUESTIONS.
2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
3. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH THE APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
4. ALL CONSTRUCTION WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES.

EROSION CONTROL NOTES

1. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE ONTO PUBLIC RIGHT-OF-WAY OR PRIVATE PROPERTY. THIS CAN BE ACHIEVED BY THE CONSTRUCTION OF TEMPORARY SOIL BERMS OR SILT FENCES AT PROPERTY LINES AND WETTING SOIL TO PREVENT IT FROM BLOWING.
2. THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY SO THAT THE EXCAVATED MATERIAL IS NOT SUSCEPTIBLE TO BEING TRACKED DOWN THE STREET.

TBM	TEMPORARY BENCHMARK	PP	POWER POLE
FF	FINISH FLOOR	GW	GUY WIRE
FG	FINISH GRADE	PED	ELEC. OR TEL. PEDESTAL
FL	FLOWLINE	RD OR C ▶	ROOF DRAIN OR CANALE
TA	TOP OF ASPHALT	↙	DIRECTION OF FLOW
TC	TOP OF CONCRETE SLAB		
BC	TOP/BACK OF CURB		
TP	TOP OF EARTH PAD		
TS	TOP OF SIDEWALK		
TW	TOP OF WALL		
FH	FIRE HYDRANT		FEMA FLOODPLAIN BOUNDARY
WM	WATER METER		DRAINAGE BASIN BOUNDARY
WV	WATER VALVE		EROSION SETBACK LINE
MH	MANHOLE		EXISTING CONTOUR
CB	CATCH BASIN GRATE		PROPOSED CONTOUR
GM	GAS METER	XX.XX	EXISTING SPOT ELEVATION
GV	GAS VALVE	XX.XX	PROPOSED SPOT ELEVATION
LP	LIGHT POLE	-XX.XX-	RECORD SPOT ELEVATION

[illegible]

LEGAL DESCRIPTION
LOT 21, BLOCK 7, VOLCANO CLIFFS SUBDIVISION, UNIT 5

PERMANENT BENCHMARK			
ACS 22-E10		ELEVATION 5318.435 (NAVD 1988)	
	09/3/20	DRIVEWAY, GARAGE, DRIVEWAY GRADES	JJB
no.	date	remarks	by
REVISIONS			
		project title	
		WORTHEN RESIDENCE 7908 SHIPROCK CT. NW ALBUQUERQUE, NM	
		sheet title	
		GRADING AND DRAINAGE PLAN	
drawn by		design by	project no.
METO		JJB	1802
09/03/20			sheet
BORDENAVE DESIGNS P.O. BOX 91194, ALBUQUERQUE, NM 87199 ph (505)823-1344 cell (505)480-6812 fax(505)821-9105 email jakebordenave@comcast.net			of