CITY OF ALBUQUERQUE

Planning Department
David Campbell, Director



March 5, 2019

Richard Dourte, P.E. RHD Engineering LLC 4305 Purple Sage Ave. NW Albuquerque, New Mexico 87120

RE: Lot 32 Block 6 SAD 227

8000 Kibo NW

Unser Cliffs Subdivision Grading and Drainage Plan

Engineers Stamp Date 2/26/19 (E10D058)

Dear Mr. Dourte,

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

Based upon the information provided in your submittal received 2/26/19, this plan is approved for Grading Permit. Please inform the builder/owner to attach a copy of this approved plan and letter into the construction sets in the permitting process prior to sign-off by Hydrology.

Reiterate to the Owner/Contractor that a separate permit for a garden/retaining wall must be obtained, with the approved G&D plan. Also inform the contractor to use lumber, asphalt millings or any type of material other than dirt, to ramp over the curb stone.

Prior to building permit approval a pad certification will be required.

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

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

Sincerely,

James D. Hughes, P.E./ Principal Engineer, Hydrology

Planning Department

RR/JDH C: File E10D058



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 6/2018)

Project Title: 8000 Kibo dr. NW	Building Permit #:	Hydrology File #:
DRB#:	EPC#:	Work Order#:
Legal Description: Lot 32, Block 6, Volc	ano Cliffs No. 2	
City Address: 8000 Kibo Dr. NW		
Applicant: RHD Engineering, LLC		Contact: Richard Dourte
Address: 4305 Purple Sage Ave. N	W, Alb. NM, 87120	
Phone#: 505.288.1621	Fax#:	E-mail: rhdengineering@outlook.com
Other Contact: Simons Architecture PC		Contact: Joe Simons
Address:		
Phone#:	Fax#:	E-mail: joe@simonsarchitecture.co
TYPE OF DEVELOPMENT: PL	AT (# of lots) X RESIDEN	ICE DRB SITE ADMIN SITE
IS THIS A RESUBMITTAL?Y	es X No	
DEPARTMENT TRANSPORTATIO	N X HYDROLOGY/DI	RAINAGE
Check all that Apply:		F APPROVAL/ACCEPTANCE SOUGHT:
TYPE OF SUBMITTAL:		ILDING PERMIT APPROVAL
ENGINEER/ARCHITECT CERTIFICAT	TIONCEI	RTIFICATE OF OCCUPANCY
PAD CERTIFICATION	DDI	ELIMINARY PLAT APPROVAL
CONCEPTUAL G & D PLAN		E PLAN FOR SUB'D APPROVAL
X GRADING PLAN		E PLAN FOR BLDG. PERMIT APPROVAL
DRAINAGE REPORT		AL PLAT APPROVAL
DRAINAGE MASTER PLAN	111	AL LEM MIKO VIE
FLOODPLAIN DEVELOPMENT PERM	IT APPLIC SIA	/ RELEASE OF FINANCIAL GUARANTEE
ELEVATION CERTIFICATE		UNDATION PERMIT APPROVAL
CLOMR/LOMR	· · · · · · · · · · · · · · · · · · ·	ADING PERMIT APPROVAL
TRAFFIC CIRCULATION LAYOUT (7	TCI)	-19 APPROVAL
TRAFFIC IMPACT STUDY (TIS)		VING PERMIT APPROVAL
STREET LIGHT LAYOUT		ADING/ PAD CERTIFICATION
OTHER (SPECIFY)	WC	ORK ORDER APPROVAL
no PRE-DESIGN MEETING?	CL0	OMR/LOMR
	FLO	OODPLAIN DEVELOPMENT PERMIT
	OT	HER (SPECIFY)
DATE SUBMITTED: Feb. 26, 2019	By: Richard	Dourte
COA STAFF:	ELECTRONIC SUBMITTAL RE	ECEIVED:

FEE PAID:

DRAINAGE NARRATIVE:

- 1. THIS SITE IS LOCATED WITHIN THE SAD 227 DRAINAGE MASTER PLAN AREA.
- 2. THIS SITE, AS IT EXISTS, DRAIN IN A NORTHLY DIRECTION.
- 3. THE ALLOWABLE 100YR, 6HR FLOWS FROM THIS SITE IS 0.98CFS, THE FLOWS GENERATED BY THIS SITE IS 1.04CFS.
- THE VOLUME OF THE FIRST FLUSH POND IS 128CF,
- THE REQUIRED PONDING IS THIS IS 100YR 24HR VOLUME FOR THE SAD ALLOWABLE DESIGN
- VOLUME SUBTACTED FROM THE PROPOSED 100YR 24HR STORM EVENT VOLUME. THUS, 1643CF-1484CF= 159CF, SINCE THIS IS GREATER THAN THE STORM WATER QUALITY
- PONDING REQUIRMENT, 159CF IS REQUIRED TO BE PONDED. PONDING PROVIDED IS 175CF. 4. WEIR EQUATION FOR EACH CELL OF A 8" CMU BLOCK:
- Q=CL(H)1.5
- C=3.21
- L= 5"
- THUS Q=0.36CFS, OR .72CFS PER BLOCK.

		,			no Cilffs no. 2 culations - Zon		,	<u> </u>		
			Di	amage Care	Culations - Zon	C 1				
						Exce	ss Preci	piation,	E(inches) - 6 HR
	Dept	h (inches) a	t 100yr Sto	rm					atment	,
Zone	P60	P360	P1440	P _{4days}	P10days	Zone	Α	В	С	D
1	1.87	2.20	2.66	3.12	3.67	1	0.44	0.67	0.99	1.97
2	2.01	2.35	2.75	3.30	3.95	2	0.53	0.78	1.13	2.12
3	2.14	2.60	3.10	3.95	4.90	3	0.66	0.92	1.29	2.36
4	2.23	2.90	3.65	4.70	5.95	4	0.80	1.08	1.46	2.64
,										
Weighted E	= ((EA*AA)+(I	Ев ∗А в) +(Е с∗А	c)+(ED*AD))	/(AA+AB+A	c+Ad)	Peal	Discha	arge (CF	S/ACRE) :	L00 YR
V ₃₆₀ =(Weig	hted E *P360)/12 in/ft						Tre	atment	
V1440= V360-	+AD*(P1440-P	з60)/12in/f t				Zone	Α	В	С	D
V4days=V360	+AD*(P4day-P	з60)/12in/ft				1	1.29	2.03	2.87	4.37
V _{10days} =V ₃₆₀	V _{10days} =V ₃₆₀ +A _D *(P _{10days} -P ₃₆₀)/12in/ft					2	1.56	2.28	3.14	4.70
						3	1.87	2.60	3.45	5.02
						4	2.20	2.92	3.73	5.25

Area	SQ.	FT	Acres	% Total
A=	C)	0.000	0%
B=	C)	0.000	0%
C=	96	42	0.221	74%
D=	34	00	0.078	26%
Total	130)42	0.299	100%
Weigh	nted E=	1.2	245	

_							
	Design Flows (CFS)						
Α	rea	SQ. FT	Acres	Peak Discharge (100 YR)			
	4=	0	0.000	0.00			
	3=	0	0.000	0.00			
	C=	9642	0.221	0.64			
Ī)=	3400	0.078	0.34			
	Total (CFS)			0.98			

	V360	V1440	V4days	V10days
Cubic feet	1353.6	1484.0	1614.3	1770.1
Acre-ft	0.03	0.03	0.04	0.04

*******************************PROPOSED	CONDITIONS***

Area	SQ.	FT	Acres	% Total		
A=	C)	0.000	0%		Α
B=	50	00	0.011	4%		1
C=	77	06	0.177	59%		E
D=	48	36	0.111	37%		(
Total	13042		0.299	100%		[
Weigh	nted E=	1.3	41			
					•	

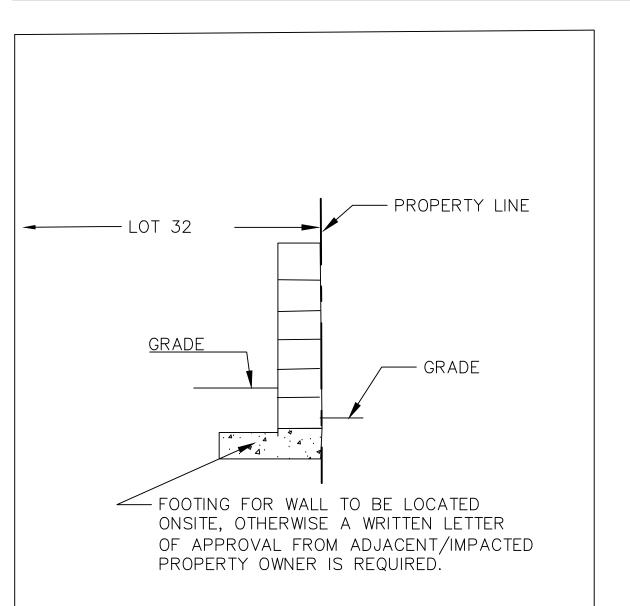
	Design Flows (CFS)						
Area	Area SQ. FT Acres Peak Discharge (100 YR)						
A=	0	0.000	0.00				
B=	500	0.011	0.02				
C=	7706	0.177	0.51				
D=	4836	0.111	0.49				
П	otal (CES	3)	1.02				

	V360	V 1440	V4days	V10days
Cubic feet	1457.6	1643.0	1828.3	2050.0
\cre-ft	0.03	0.04	0.04	0.05

The 100 year peak flows for this developed site is 1 CFS and the design flows are 1 CFS for an increase of 0

CFS. The 100 year 24 hr volume increase is 1643-1484 = 159CF.

Storm Water Quality Ponding Requirement = Ap *0.34 in/12in/ft = 137 CF



GARDEN WALL/RETAINING WALL DETAIL

- I. ANY GARDEN WALL/RETAINING WALL IS TO BE BUILT ON-SITE (DESIGN OF
- THE GARDEN WALL/RETAINING WALL IS BY OTHERS).
- 2. A PERMIT IS REQUIRED FOR THE CONSTRUCTION OF THE RETAINING WALL AND ANY FUTURE GARDEN WALL. THIS IS THE PLAN TO FOLLOW WHEN APPLYING FOR A PERIMETER BLOCK WALL.

GENERAL NOTES:

- 1. THIS SITE IS NOT LOCATED IN A FEMA FLOOD HAZARD ZONE (REFER TO THE FIRM MAP 35001C0113G, EFFECTIVE DATE 9-26-2008, EXCERPT ATTACHED).
- 2. RHD ENGINEERING, LLC RECOMMENDS THAT THE OWNER OBTAIN A GEOTECHNICAL REPORT PRIOR TO DESIGN OF BUILDING FOOTING/FOUNDATION.
- 3. SLOPE STABILAZATION SHALL BE USED ON SLOPES GREATER THAN A 3:1 SLOPE, PER MANUFACTURER RECOMMENDATIONS.
- 4. MODIFICATIONS OR ADJUSTMENTS TO EXISTING DRAINAGE STRUCTURES/EROSION MITIGIATION IMPROVEMENTS SHALL BE DONE IN THE SAME MANNER AS THE ORIGINAL IMPROVEMENT.

5. ALL SWPPP REQUIREMENTS SHALL BE ADHERED TO.

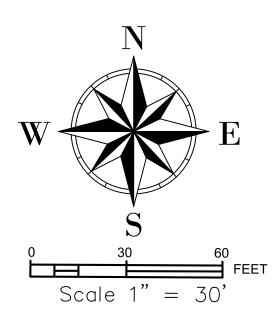
- 6. ALL WORK ON THIS PLAN SHALL BE DONE IN ACCORDANCE WITH CITY OF ALBUQUERQUE STANDARDS. ALL APPLICABLE PERMITS SHALL BE OBTAINED PRIOR TO WORK COMMENCING.
- 7. ALL WORK IN THE RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH CITY OF ALBUQUERQUE STANDARDS.
- 8. THIS GRADING PLAN IS TO BE UTILIZED AND A COPY PROVIDED TO THE CITY WHEN APPLYING FOR THE CONSTRUCTION OF ANY GARDEN OR RETAINING WALLS, WITH RESPECT TO THIS SITE.
- 9. THE SURVEY INFORMATION WAS PROVIDED BY CONSTRUCTION SURVEYS TECHNOLOGIES,
- 10. FOR SITE DIMENSIONS, BUILDING AND INFRASTRUCTURE LOCATION REFER TO THE SITE PLAN.
- 11. DO NOT PLACE ADDITIONAL FILL OR LOADING ON ADJACENT WALLS WITHOUT APPROVAL OF A STRUCTURAL ENGINEER. CONTACT A STRUCTURAL ENGINEER FOR ADEQUACY OF THE EXISTING PERIMETER WALLS W/RESPECT TO THIS GRADING PLAN.

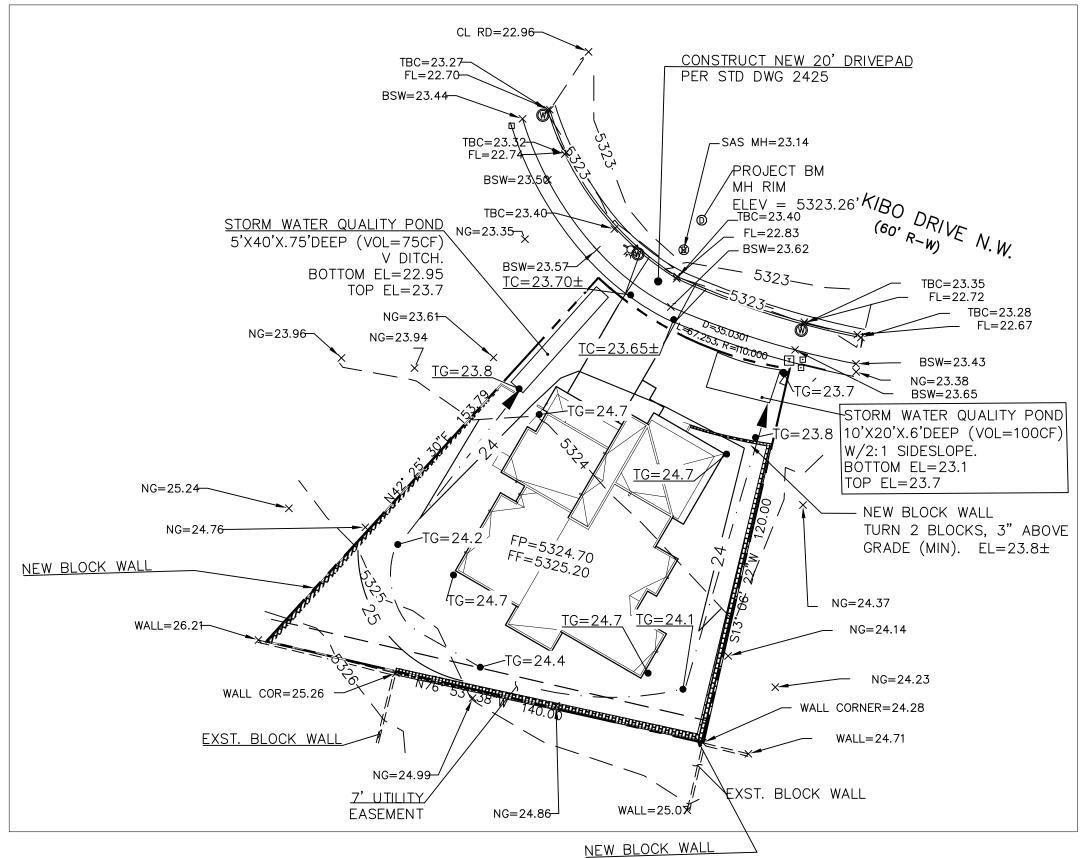
EROSION CONTROL NOTES:

- 1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TOPSOIL DISTURBANCE PERMIT PRIOR TO BEGINNING WORK.
- 2. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING RUN-OFF ON SITE DURING CONSTRUCTION.
- 3. CONTRACTOR IS RESPONSIBLE FOR CLEANING ALL SEDIMENT THAT GETS INTO EXISTING RIGHT-OF-WAY.
- 4. REPAIR OF DAMAGED FACILITIES AND CLEANUP OF SEDIMENT ACCUMULATIONS ON ADJACENT PROPERTIES AND IN PUBLIC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.
- 5. ALL EXPOSED EARTH SURFACES MUST BE PROTECTED FROM WIND AND WATER EROSION PRIOR TO FINAL ACCEPTANCE OF ANY PROJECT.

CAUTION:

EXISTING UTILITIES ARE NOT SHOWN. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO ANY EXCAVATION TO DETERMINE THE ACTUAL LOCATION OF UTILITIES & OTHER IMPROVEMENTS.





I, RICHARD DOURTE HAVE PERSONALLY INSPECTED THE PROPERTY on 2/26/19. NO EARTHWORK HAS BEEN PERFORMED AND THE SITE IS CONSISTEND WITH THE TOPO SHOWN. __

ruchard courte RICHARD DOURTE P.E. #10854

VICINITY MAP:



FIRM MAP:

35001C0113G

LEGAL DESCRIPTION:

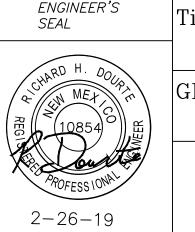
LOT 32, BLOCK 6, VOCANO CLIFFS NO. 2 CITY OF ALBUQUERQUE BERNALILLO COUNTY, NEW MEXICO

NOTES:

- 1. ALL SPOT ELEVATIONS REPRESENT FLOWLINE ELEVATION UNLESS OTHERWISE
- 2. RETAIN THE FIRST .34" OF STORM RUNOFF FROM ENTIRE DEVELOPMENT TO CONFORM TO THE WATER QUALITY REQURIEMENTS

LEGEND

PROPOSED SPOT ELEVATION TW=44.00 TOP OF WALL ELEVATION BOTTOM OF WALL ELEVATION ----- EXISTING CONTOUR ----- EXISTING INDEX CONTOUR —5601————— PROPOSED CONTOUR PROPOSED INDEX CONTOUR _____ _ _ LOT LINE - RIGHT-OF-WAY — PROPOSED GARDEN/RETAINING WALL EXISTING CURB AND GUTTER ----- PROPOSED EDGE OF CONCRETE PROPOSED FLOWLINE Z////// EXISITING WALL PROPOSED BASIN BOUNDARY



8000 KIBO DR. NW

GRADING AND DRAINAGE PLAN

RHD Engineering, LLC 4305 Purple Sage Ave. NW ALBUQUERQUE, NM 87120

(505) 288-1621 Richard Dourte P.E. #10854

JOB #

SHEET #