# Weighted E Method

	100-Year, 6-hr.												
Basin	Area	Area	Treatment A		Treatment B		Treatment C		Treatment D		Weighted E	Volume	Flow
	(sf)	(acres)	%	(acres)	%	(acres)	%	(acres)	%	(acres)	(ac-ft)	(ac-ft)	cfs
existing	15400.00	0.354	80%	0.2828	20%	0.071	0%	0	0%	0.000	0.486	0.014	0.51
ALLOWED	15400.00	0.354	0%	0	10%	0.035	40%	0.14141	50%	0.177	1.448	0.043	1.25
PROPOSED	15400.00	0.354	0%	0	23%	0.081	38%	0.13434	39%	0.138	1.299	0.038	1.15
COMPARISON				-0.2828		0.0106		0.13434		0.138		0.02394	
total						0.09		0.27		0.28		0.06	1.15

Qb= 2.03 Qc= 2.87 Qd= 4.37

Weighted E = Ea\*Aa + Eb\*Ab + Ec\*Ac + Ed\*Ad / (Total Area)

Volume = Weighted D \* Total Area

Flow = Qa \* Aa + Qb \* Ab + Qc \* Ac + Qd \* Ad

Where for 100-year, 6-hour storm- zone 1 Eb= 0.67 Ec= 0.99

ONSITE Conditons
FIRST FLUSH WATER QUALITY VOLUME

WATER QUALITY

INCREASE IN FLOW

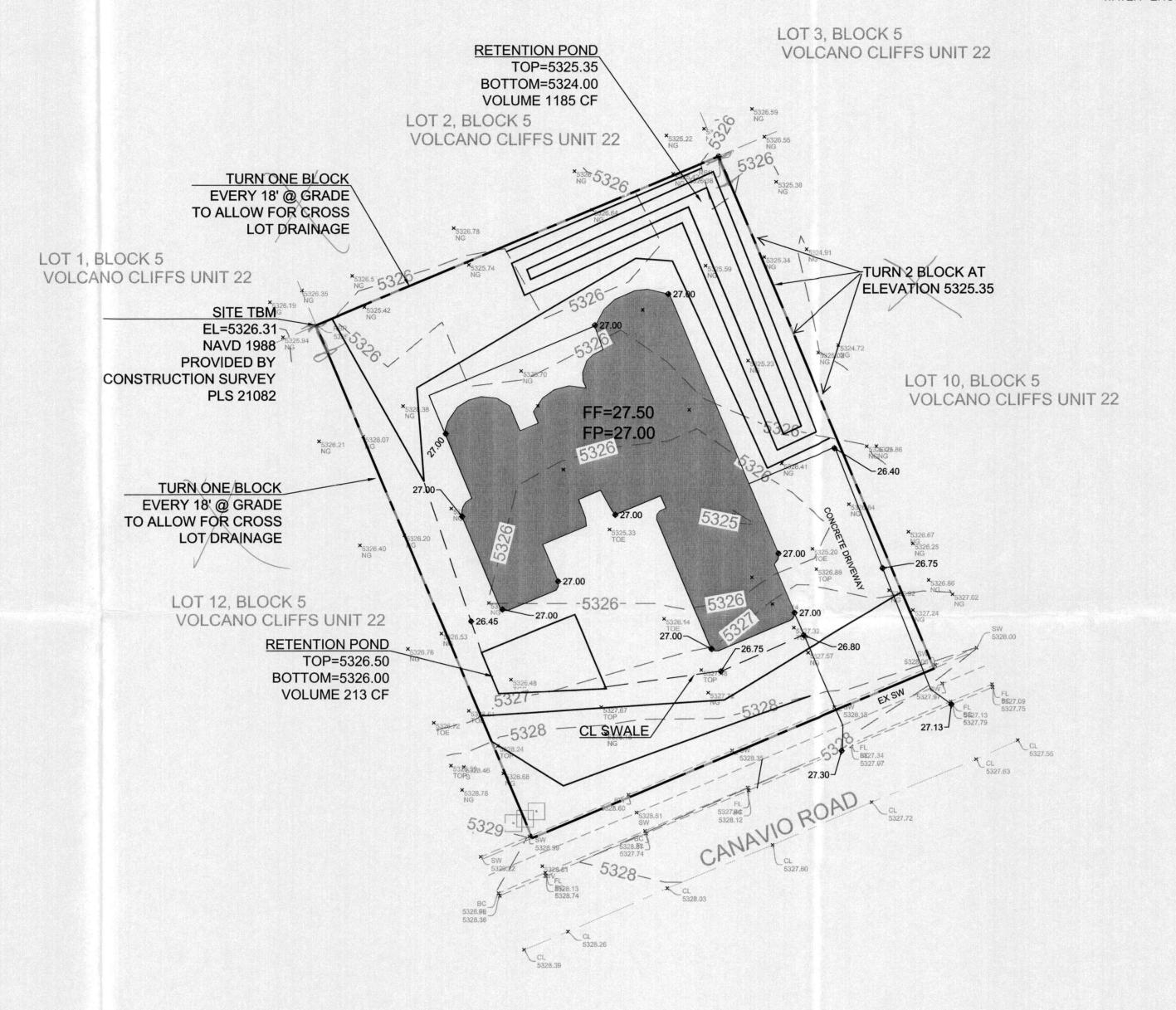
Narrative

This site is within the SAD 228 Master Drainage plan boundaries. This site is located witin basin 204 and 207. The site drain to the the adjacent lot per the master drainage plan. We are ponding the increase in flow generated by the develo of this site, allowing upland flow to pass thru. This plan has a shallow water harvest pond per the new city drainage req This plan is in conformance to the masterplan

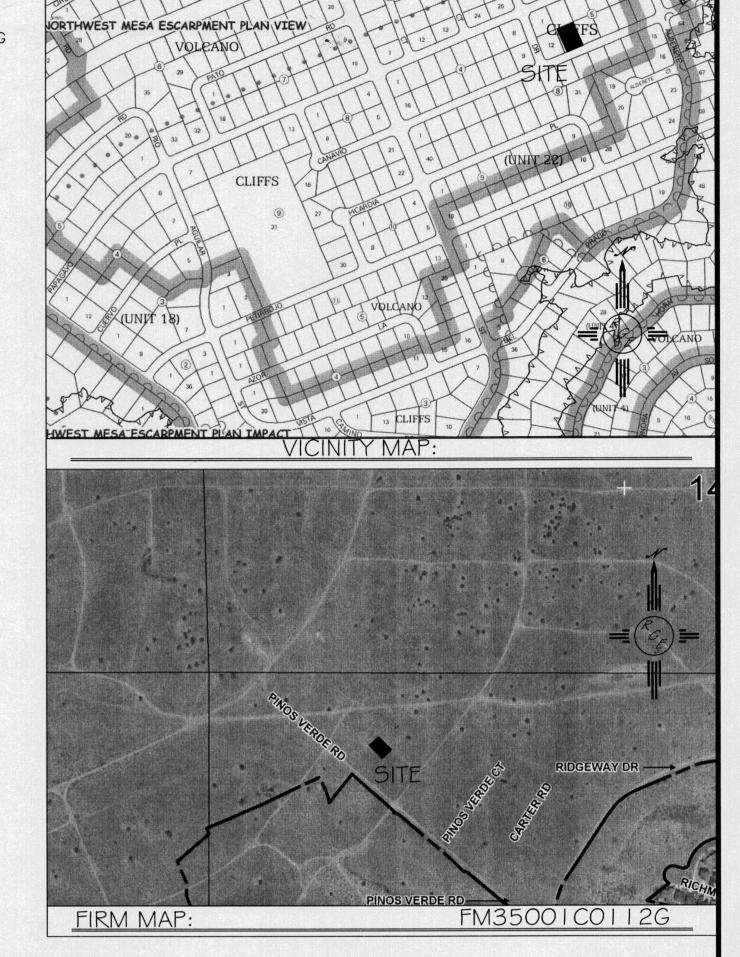
1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TOPSOIL DISTURBANCE PERMIT PRIOR TO BEGINNING WORK.

**EROSION CONTROL NOTES:** 

- 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 (CITY) ACCEPTANCE OF ANY PROJECT.



COORDINATES SYSTEM IS NEW MEXICO STATE PLANE CENTRAL ZONE NAD1983/NAVD 1988 AND ARE REFERENCED TO THE ALBUQUERQUE GEODETIC REFERENCE SYSTEM AS DETERMINED BY GPS OBSERVATIONS OBTAINED USING THE ALBUQUERQUE REAL TIME GNSS NETWORK (ARTGN). DISTANCES ARE GROUND. THESE VALUES WERE PROVIDED BY CONSTRUCTION SURVEY TECHNOLOGIES NMPLS 21082



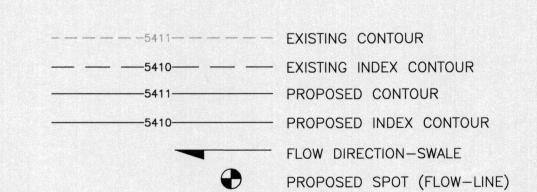
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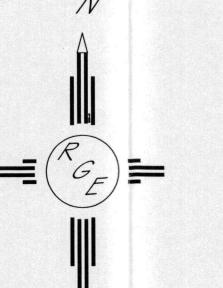
LOT 11, BLOCK 5 UNIT 22, VOLCANO CLIFFS

## NOTES:

1. ALL SPOT ELEVATIONS REPRESENT FLOWLINE ELEVATION UNLESS OTHERWISE NOTED. 2. TOPOGRAPHIC SURVEY INFORMATION SHOWN ON THIS PLAN WAS OBTAINED BY CONSTRUCTION SURVEY TECHNOLOGIES, DAVID ACOSTA PLS 2081, DATED JUNE 2015

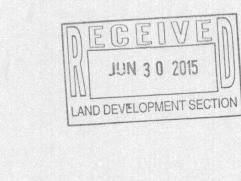
# LEGEND

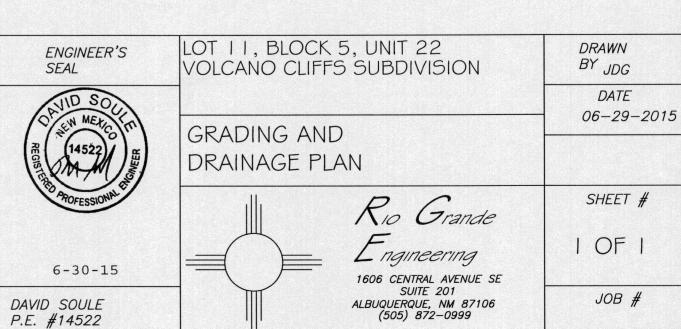




GRAPHIC SCALE

SCALE: 1"=20'





#### Weighted E Method

F												100	- Year, o-n	ſ
ŀ	Basin	Area	Area	Treat	ment A	Treat	ment B	Treatr	nent C	Treatm		Weighted E	Volume	Flow cfs
- 1		(sf)	(acres)	%	(acres)	%	(acres)	%	(acres)		(acres)	(ac-ft)	(ac-ft)	
ŀ	existing	15400.00	0.354	80%	0.2828	20%	0.071	0%	0	0%	0.000	0.486	0.014	0.51
1	ALLOWED	15400.00	0.354	0%	0	10%	0.035	40%	0.14141	50%	0.177	1.448	0.043	1.25
- 1				0%		23%	0.081	38%	0.13434	39%	0.138	1.299	0.038	1.15
- 1	PROPOSED	15400.00	0.354	0%				3070	0.13434		0.138		0.02394	
- 1	COMPARISON				-0.2828		0.0106		0.13434		0.130			
- 1	total						0.09		0.27		0.28		0.06	1.15

Equations:

Weighted E = Ea\*Aa + Eb\*Ab + Ec\*Ac + Ed\*Ad / (Total Area)

Volume = Weighted D \* Total Area

Flow = Qa \* Aa + Qb \* Ab + Qc \* Ac + Qd \* Ad

Where for 100-year, 6-hour storm- zone 1

Ea= 0.44 Qa= 1.29
Eb= 0.67 Qb= 2.03
Ec= 0.99 Qc= 2.87
Ed= 1.97 Qd= 4.37

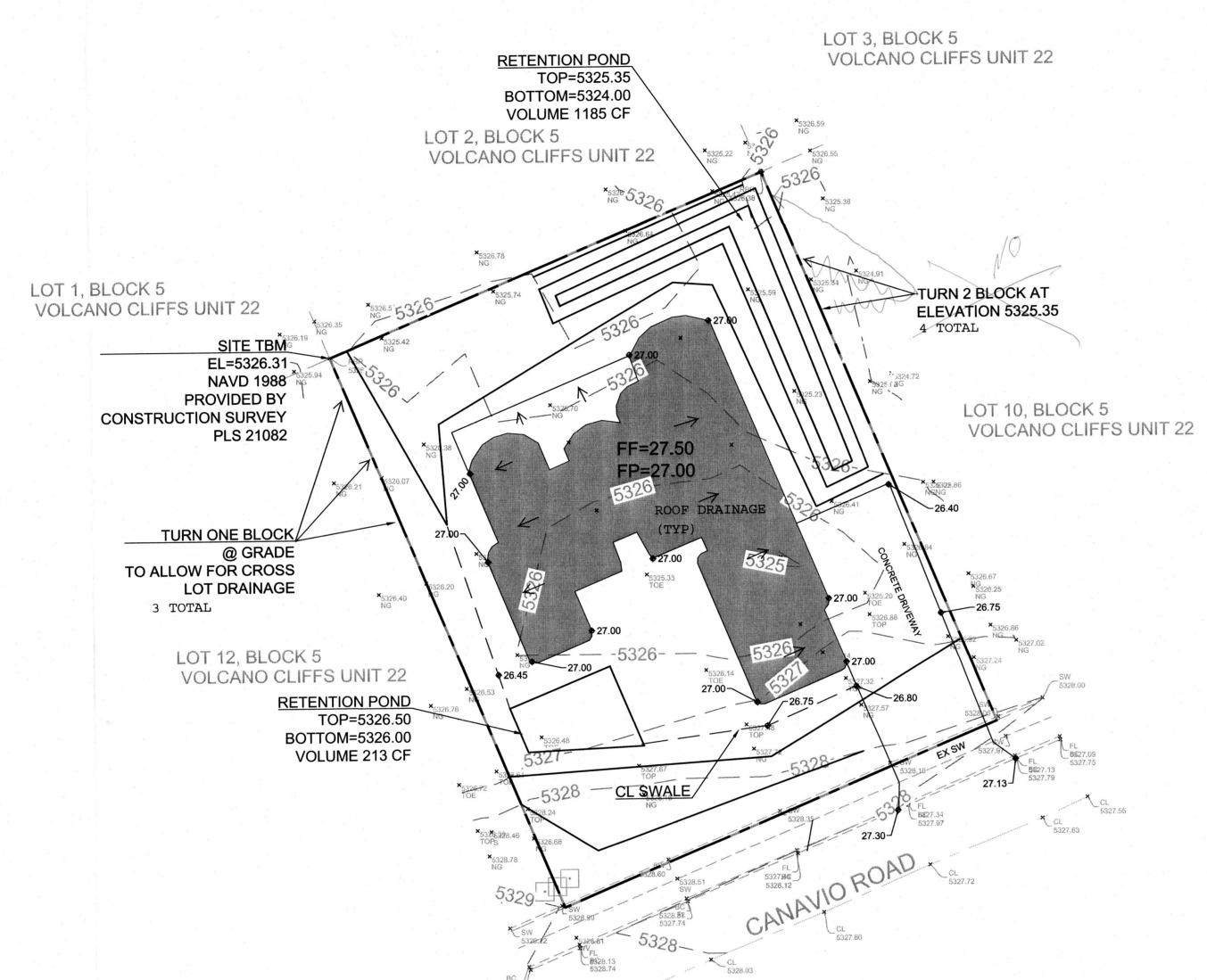
ONSITE Conditons
FIRST FLUSH WATER QUALITY VOLUME

R (0 WATER QUALITY

WATER QUALITY INCREASE IN FLOW

Narrative

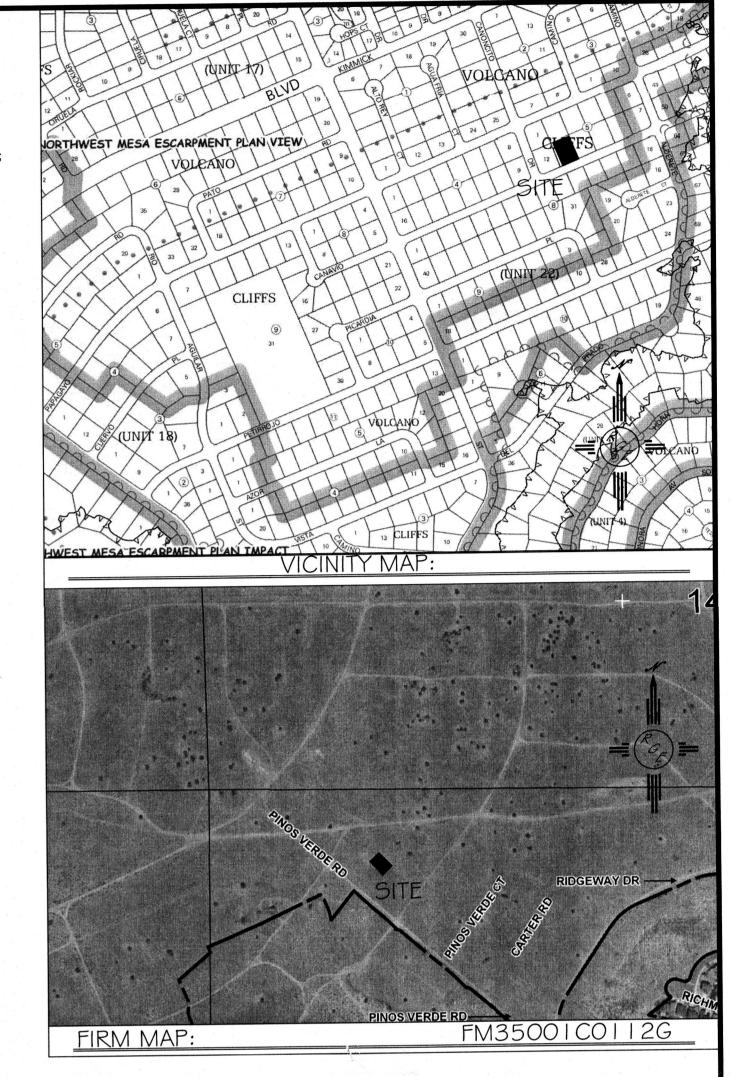
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COORDINATES SYSTEM IS NEW MEXICO
STATE PLANE CENTRAL ZONE NAD1983/NAVD 1988
AND ARE REFERENCED TO THE ALBUQUERQUE
GEODETIC REFERENCE SYSTEM AS DETERMINED BY
GPS OBSERVATIONS OBTAINED USING THE
ALBUQUERQUE REAL TIME GNSS NETWORK (ARTGN).
DISTANCES ARE GROUND. THESE VALUES WERE
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NMPLS 21082

## **EROSION CONTROL NOTES:**

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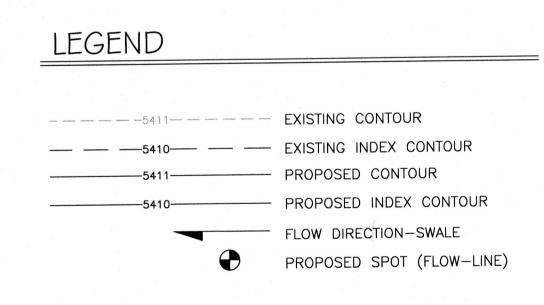


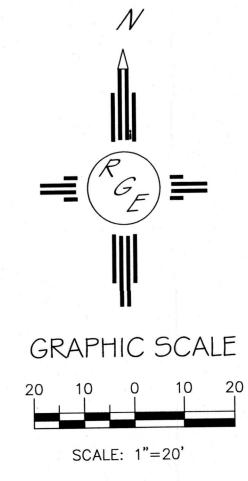
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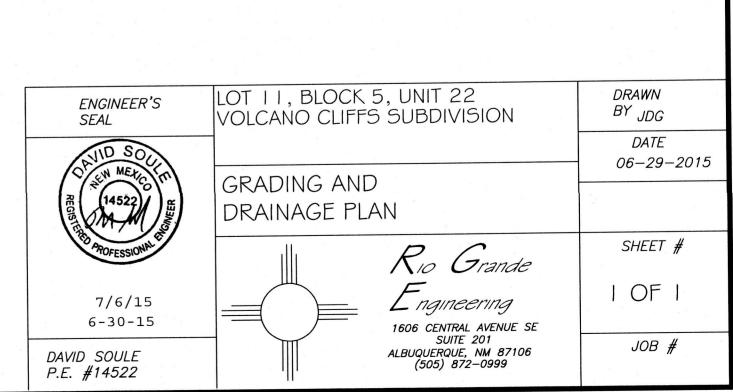
LOT 11, BLOCK 5 UNIT 22, VOLCANO CLIFFS

### NOTES

I. ALL SPOT ELEVATIONS REPRESENT FLOWLINE ELEVATION UNLESS OTHERWISE NOTED.
2. TOPOGRAPHIC SURVEY INFORMATION SHOWN ON THIS PLAN WAS OBTAINED BY
CONSTRUCTION SURVEY TECHNOLOGIES, DAVID ACOSTA PLS 2081, DATED JUNE 2015







#### Weighted E Method

No.											100	-Year, 6-hr.	
Basin	Area Area		Treatment A		Treatment B		Treatment C		Treatment D		Weighted E	Volume	Flow
	(sf)	(acres)	%	(acres)	%	(acres)	76	(acres)	%	(acres)	(ac-ft)	(ac-ft)	cfs
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COMPARISON				-0.2828		0.0106		0.13434		0.138		0.02394	
total						0.09		0.27		0.28	100	0.06	1.1

#### Equations:

Weighted E = Ea\*Aa + Eb\*Ab + Ec\*Ac + Ed\*Ad / (Total Area)

Volume = Weighted D \* Total Area

Flow = Qa \* Aa + Qb \* Ab + Qc \* Ac + Qd \* Ad

Where for 100-year, 6-hour storm- zone 1 Ea= 0.44 Eb= 0.67

Ec= 0.99 Ed= 1.97

ONSITE Conditions
FIRST FLUSH WATER QUALITY VOLUME
REQUIRED

WATER QUALITY 170
INCREASE IN FLOW 1043

INCREASE IN FLOW

This site is within the SAD 228 Master Drainage plan boundaries. This site is located witin basin 204 and 207. The site drain to the the adjacent lot per the master drainage plan. We are ponding the increase in flow generated by the develor of this site, allowing upland flow to pass thru. This plan has a shallow water harvest pond per the new city drainage reg This plan is in conformance to the masterplan

COORDINATES SYSTEM IS NEW MEXICO

GPS OBSERVATIONS OBTAINED USING THE

NMPLS 21082

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DISTANCES ARE GROUND. THESE VALUES WERE

PROVIDED BY CONSTRUCTION SURVEY TECHNOLOGIES

I <u>David Soule</u>, NMPE 14522, of the firm <u>Rio Grande Engineering</u>, hereby certify that this project has been graded and will drain in substantial compliance with and in accordance with the design intend of the approved plan dated 7/6/15. The record information edited on the original design document has performed by me or under my direct supervision and is true and correct to the best of my knowledge and belief. The asbuilt survey was provided DAVID ACOSTA NMPS 21082. The certification is submitted in support of a request for <u>PERMANENT CERTIFICATE OF OCCUPANCY</u>. The record information presented heron is not necessarily complete and intended only to verify substantial compliance of the grading and drainage aspects of this project. Those relying on this record document are advised to obtain independent verification of its accuracy before using it for any other purpose.

EXCEPTIONS: HOUSE PLAN WAS MIRROR IMMAGED, ONSITE

WATER QUALITY VOLME MET

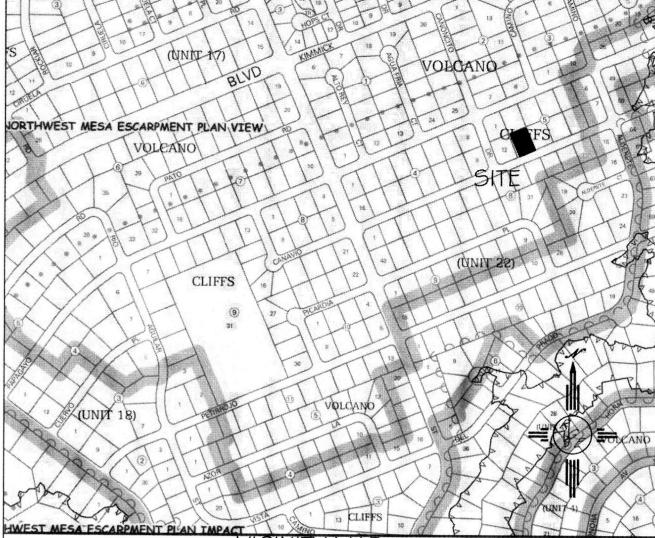


/27/16

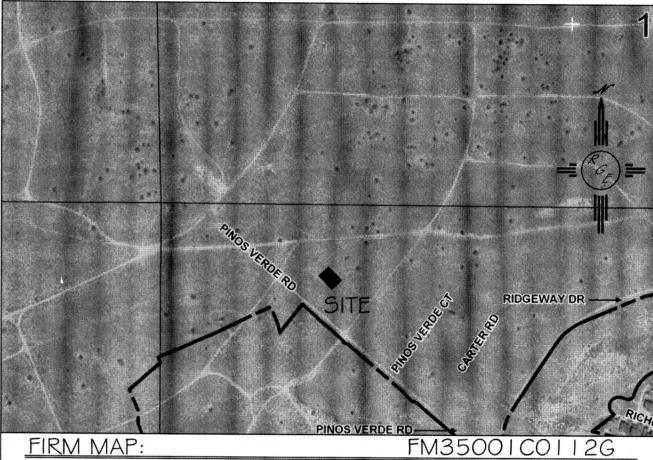
LOT 3, BLOCK 5 RETENTION POND VOLCANO CLIFFS UNIT 22 485 cf - ok for first TOP=5325.35 BOTTOM=5324.00 VOLUME 1185 CF LOT 2, BLOCK 5 VOLCANO CLIFFS UNIT 22 LOT 1, BLOCK 5 **VOLCANO CLIFFS UNIT 22** TURN 2 BLOCK AT ELEVATION 5325.35 V EL=5326.31 NAVD 1988 PROVIDED BY CONSTRUCTION SURVEY LOT 10, BLOCK 5 PLS 21082 VOLCANO CLIFFS UNIT 22 TURN ONE BLOCK @ GRADE pipe@26.75 | **RETENTION POND** TO ALLOW FOR CROSS LOT DRAINAGE V BOTTOM=5326.00 3 TOTAL VOLUME 213 CF LOT 12, BLOCK 5 VOLCANO CLIFFS UNIT 22 RETENTION POND
TOP=5326.50
BOTTOM=5326.00
VOLUME 213 CF top=26.50 bottom=26.00 volume=220 cf

## EROSION CONTROL NOTES:

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VICINITY MAP:



## LEGAL DESCRIPTION:

LOT 11, BLOCK 5 UNIT 22, VOLCANO CLIFFS

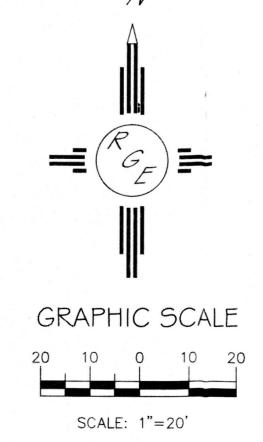
### NOTES

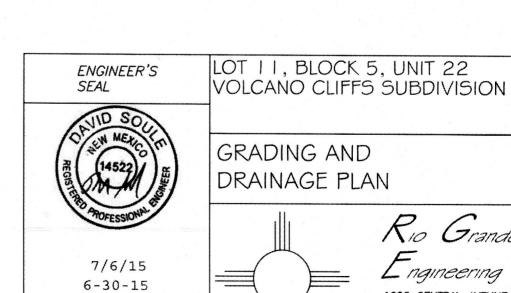
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# LEGEND

JUN 2 7 2016

LAND DEVELOPMENT SECTION





DAVID SOULE P.E. #14522 IO CLIFFS SUBDIVISION

BY JDG

DATE

06-29-2015

NG AND

AGE PLAN

SHEET #

I OF I

1606 CENTRAL AVENUE SE
SUITE 201

ALBUQUERQUE, NM 87106
(505) 872-0999

DATE

06-29-2015

SHEET #

I OF I

JOB #