

# CITY OF ALBUQUERQUE

Planning Department  
Alan Varela, Director



Mayor Timothy M. Keller

April 4, 2023

David Soule, P.E.  
Rio Grande Engineering  
PO Box 93924  
Albuquerque, New Mexico 87199

RE: **Kairos Power Storage Building**  
**5201 Hawking Dr. SE**  
**Grading and Drainage Plan**  
**Engineers Stamp Date: 3/14/2023**  
**Hydrology File: Q16DA5000B**

Mr. Soule,

Based upon the information provided in your submittal received 3/15/2023, this plan is approved for Building Permit. Please place this stamp approved Grading & Drainage Plan to the Grading and Building Permitting set of construction drawings.

As a reminder, if the project total area of disturbance (including the staging area and any work within the adjacent Right-of-Way) is 1 acre or more, then an Erosion and Sediment Control (ESC) Plan and Owner's certified Notice of Intent (NOI) is required to be submitted to the Stormwater Quality Engineer (Doug Hughes, PE, [jhughes@cabq.gov](mailto:jhughes@cabq.gov), 924-3420) 14 days prior to any earth disturbance.

If you have any questions, please contact me at 505-924-3695 or [tchen@cabq.gov](mailto:tchen@cabq.gov).

Sincerely,

Tiequan Chen, P.E.  
Principal Engineer, Hydrology  
Planning Department, Development Review Services



# City of Albuquerque

Planning Department  
Development & Building Services Division

## DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 6/2018)

**Project Title:** KAIROS POWER STORAGE **Building Permit #:** \_\_\_\_\_ **Hydrology File #:** \_\_\_\_\_  
**DRB#:** \_\_\_\_\_ **EPC#:** \_\_\_\_\_ **Work Order#:** \_\_\_\_\_  
**Legal Description:** TRACT D3- MESA DEL SOL  
**City Address:** 5201 HAWKINGS DR SE

**Applicant:** \_\_\_\_\_ **Contact:** \_\_\_\_\_  
**Address:** \_\_\_\_\_  
**Phone#:** \_\_\_\_\_ **Fax#:** \_\_\_\_\_ **E-mail:** \_\_\_\_\_

**Other Contact:** RIO GRANDE ENGINEERING **Contact:** DAVID SOULE  
**Address:** PO BOX 93924 ALB NM 87199  
**Phone#:** 505.321.9099 **Fax#:** 505.872.0999 **E-mail:** david@riograndeengineering.com

**TYPE OF DEVELOPMENT:** \_\_\_\_\_ PLAT \_\_\_\_\_ RESIDENCE \_\_\_\_\_ DRB SITE ☒ ADMIN SITE

Check all that Apply:

**DEPARTMENT:**  
☒ HYDROLOGY/ DRAINAGE  
\_\_\_\_\_ TRAFFIC/ TRANSPORTATION

**TYPE OF SUBMITTAL:**  
\_\_\_\_\_ ENGINEER/ARCHITECT CERTIFICATION  
\_\_\_\_\_ PAD CERTIFICATION  
\_\_\_\_\_ CONCEPTUAL G & D PLAN  
☒ GRADING PLAN  
\_\_\_\_\_ DRAINAGE REPORT  
\_\_\_\_\_ DRAINAGE MASTER PLAN  
\_\_\_\_\_ FLOODPLAIN DEVELOPMENT PERMIT APPLIC  
\_\_\_\_\_ ELEVATION CERTIFICATE  
\_\_\_\_\_ CLOMR/LOMR  
\_\_\_\_\_ TRAFFIC CIRCULATION LAYOUT (TCL)  
\_\_\_\_\_ TRAFFIC IMPACT STUDY (TIS)  
\_\_\_\_\_ STREET LIGHT LAYOUT  
\_\_\_\_\_ OTHER (SPECIFY) \_\_\_\_\_  
\_\_\_\_\_ PRE-DESIGN MEETING?

IS THIS A RESUBMITTAL?: \_\_\_\_\_ Yes ☒ No

**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:** \_\_\_\_\_ **By:** \_\_\_\_\_

COA STAFF:

ELECTRONIC SUBMITTAL RECEIVED: \_\_\_\_\_

FEE PAID: \_\_\_\_\_



### Weighted E Method

Existing Developed Basins- not accounting for detention basin								100-Year, 6-hr.	10-day				
Basin	Area (sf)	Area (acres)	Treatment A % (acres)	Treatment B % (acres)	Treatment C % (acres)	Treatment D % (acres)	Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs	Volume (ac-ft)			
DEVELOPMENT AREA EX	23930	0.549	100%	0.54936	0.0%	0.000	0	0.000	0.670	0.031	1.01	0.031	
DEVELOPMENT AREA PROP	23930	0.549	0%	0	0.0%	0.000	70.0%	0.38455	30%	1.537	0.070	1.96	0.092
COMPARISON	0	0.000	-100%	-0.5494	0%	0	70%	0.38455	30%	0.164807	0.040	0.95	0.062

Equations:

$$\text{Weighted E} = E_a \cdot A_a + E_b \cdot A_b + E_c \cdot A_c + E_d \cdot A_d / (\text{Total Area})$$
$$\text{Volume} = \text{Weighted D} * \text{Total Area}$$
$$\text{Flow} = Q_a * A_a + Q_b * A_b + Q_c * A_c + Q_d * A_d$$

Where for 100-year, 6-hour storm (zone 3)

$E_b = 0.86$   
 $E_c = 1.09$   
 $E_d = 2.58$

Qa= 1.84  
Qb= 2.49  
Qc= 3.17  
Qd= 4.49

FLOOD CONTROL VOLUME	
REQUIRED	2686 CF
PROVIDED	3000 CF

FIRST FLUSH VOLUME  
(0.34" PER SF OF IMPERVIOUS)  
203 CF  
3000 CF

NARRATIVE

THIS SITE IS TO RETAIN ITS 100-YEAR 10-DAY VOLUME. THE SITE IS LOCATED WITHIN THE DRAINAGE BASIN THAT DRAINS TO AN EXISTING RETENTION POND. ALL THE PRIVATE STORMDRAIN IS IN PLACE AND DESIGNED WITHIN Q16DA5000A. THE INCREASE IN DISCHARGE OF .95 CFS AND 2686 CF WILL BE ACCOUNTED FOR BY INCREASING VOLUME OF EXISTING POND.

City of Albuquerque  
Planning Department  
Development Review Services  
**HYDROLOGY SECTION**  
**APPROVED**

DATE: 4/4/2023  
BY: Wagner Chen  
HydroTrans # Q16DA5000B

THE APPROVAL OF THESE PLANS/REPORT SHALL NOT BE  
CONSTRUED TO PERMIT VIOLATIONS OF ANY CITY  
ORDINANCE OR STATE LAW, AND SHALL NOT PREVENT  
THE CITY OF ALBUQUERQUE FROM REQUESTING  
CORRECTIONS, OR EDITORS OR COMMENTARS IN PLANS,  
SPECIFICATIONS, OR CONSTRUCTION, SUCH APPROVED PLANS  
SHALL NOT BE CHANGED, MODIFIED OR ALTERED WITHOUT  
AUTHORIZATION.

EROSION CONTROL NOTES:

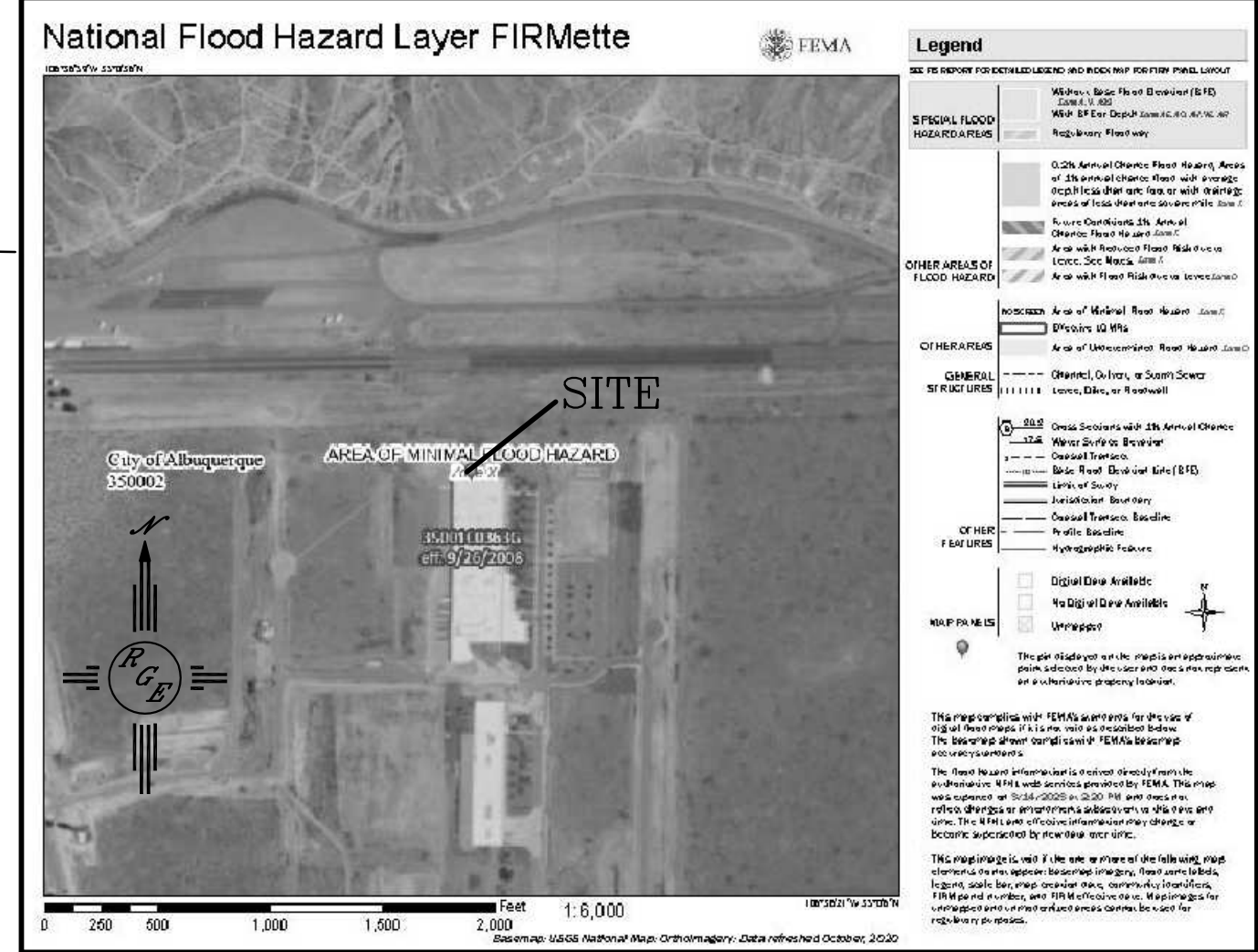
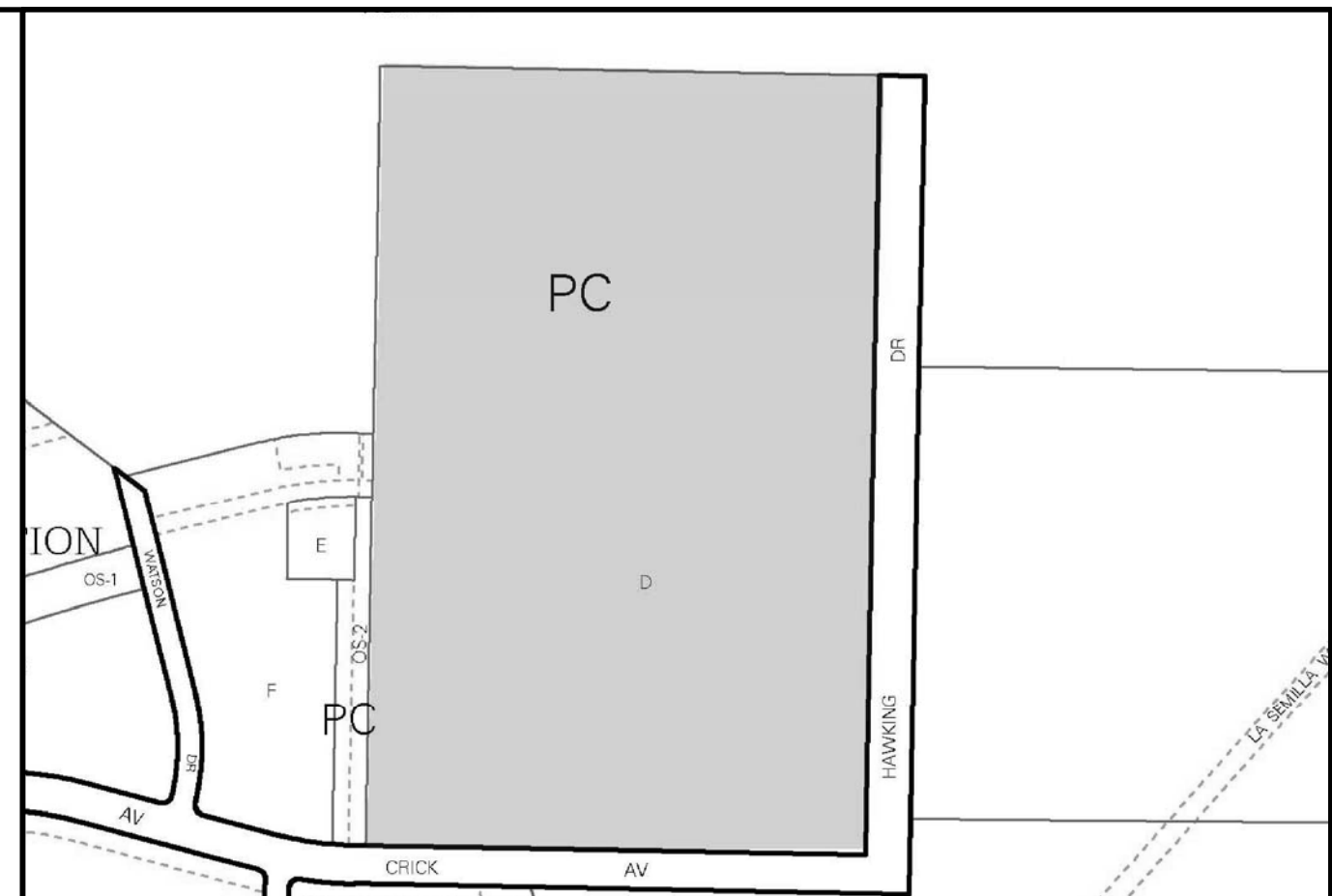
1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TOPSOIL DISTURBANCE PERMIT PRIOR TO BEGINNING WORK.

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 (CITY) ACCEPTANCE OF ANY PROJECT.



FIRM MAP:











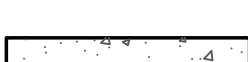


LEGAL DESCRIPTION:


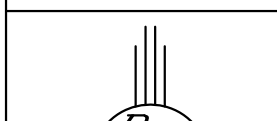
TRACT D-3, MESA DEL SOL

NOTES:

1. ALL SPOT ELEVATIONS REPRESENT FLOWLINE ELEVATION UNLESS OTHERWISE NOTED.
2. ALL SLOPES SHALL BE 3:1 MAX. AND GRAVEL OR NATIVE SEEDING PRIOR TO CO.
3. ANY PERIMETER WALLS MUST BE PERMITTED SEPARATELY ALL RETAINING WALL DESIGN SHALL BE BY OTHERS.
4. SURVEY INFORMATION PROVIDED BY CONSTRUCTION SURVEY TECHNOLOGIES, INC USING NAVD DATUM 1988.

## LEGEND

	EXISTING CONTOUR
	EXISTING INDEX CONTOUR
	PROPOSED CONTOUR
	PROPOSED INDEX CONTOUR
	EXISTING SPOT ELEVATION
	PROPOSED SPOT ELEVATION
	BOUNDARY
	ADJACENT BOUNDARY
	EXISTING CURB AND GUTTER
	PROPOSED EARTHEN SWALE
	PROPOSED CONCRETE
	PROPOSED PONDING
	PROPOSED GRAVEL

<p>ENGINEER'S SEAL</p>  <p>P.E. #14522 DAVID SOULE</p> <p>3/14/23</p>	<p>KAIRO POWER STORAGE BUILDING 5201 HAWKINGS DR SE</p>		<p>DRAWN BY WCUWJ</p>
	<p>GRADING AND DRAINAGE PLAN</p>		<p>DATE 3-14-23</p>
	 <p>PO BOX 93924 ALBUQUERQUE, NM 87199 (505) 321-9099</p>		<p>20230012-14522-3-14-23</p> <p>SHEET # —</p>
			<p>JOB # 20230012</p>