

CITY OF ALBUQUERQUE

Planning Department
Brennon Williams, Director



Mayor Timothy M. Keller

November 18, 2019

Jesus Lopez
Respec
5971 Jefferson St. NE
Albuquerque, NM 87109

**RE: Guardian Storage- Juan Tabo
4909 Juan Tabo NE
Conceptual Grading and Drainage Plan Stamp Date: none
Hydrology File: F21D081**

Dear Mr. Lopez:

Based on the submittal received on 11/12/19, the Conceptual Grading and Drainage Plan cannot be approved until the following are corrected:

PO Box 1293

Prior to Site Plan:

Albuquerque

NM 87103

www.cabq.gov

1. Please provide an engineer's stamp with a signature and date.
2. Provide written and signed permission for the proposed cross lot drainage onto the adjoining property to the west. If there's a cross-lot drainage easement for this discharge, please provide it.
3. The discharge to Bear Canyon Arroyo shall be by City Work Order using an RCP pipe penetration into the standard concrete portion of the channel, per AMAFCA Standard Detail 103 or 104. This work needs to be included on the infrastructure list.
4. Provide slope easements (3:1) from the edge of ROW/PL down to the proposed grade along Juan Tabo, Osuna, and the arroyo.
5. Provide slope protection anywhere slopes exceed 3:1.
6. Provide an emergency spillway (or 2x capacity on the outfall), sized for the 100-yr peak inflow on the proposed pond. The spillway must be directed to the arroyo easement, not the property to the west.
7. Provide a waterblock, 0.87' high at the drive entrance. Alternatively, provide flow depth (and EGL) calculations along Osuna to justify a lesser waterblock.

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8. Provide sections through all external boundaries, especially the retaining wall adjacent to the arroyo, showing proposed retaining walls, garden walls, property/ROW lines, existing and proposed grades. In accordance with DPM Ch.22, section 5 part B, grading and wall construction near the property line may not endanger adjacent property or constrain its use.
9. Only one paper copy (plus the pdf) is required for Hydrology submittals.

If you have any questions, please contact me at 924-3695 or dpeterson@cabq.gov.

Sincerely,



Dana Peterson, P.E.
Senior Engineer, Planning Dept.
Development Review Services

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 11/2018)

Project Title: _____ **Building Permit #:** _____ **Hydrology File #:** _____

DRB#: _____ **EPC#:** _____ **Work Order#:** _____

Legal Description: _____

City Address: _____

Applicant: _____ **Contact:** _____

Address: _____

Phone#: _____ **Fax#:** _____ **E-mail:** _____

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:

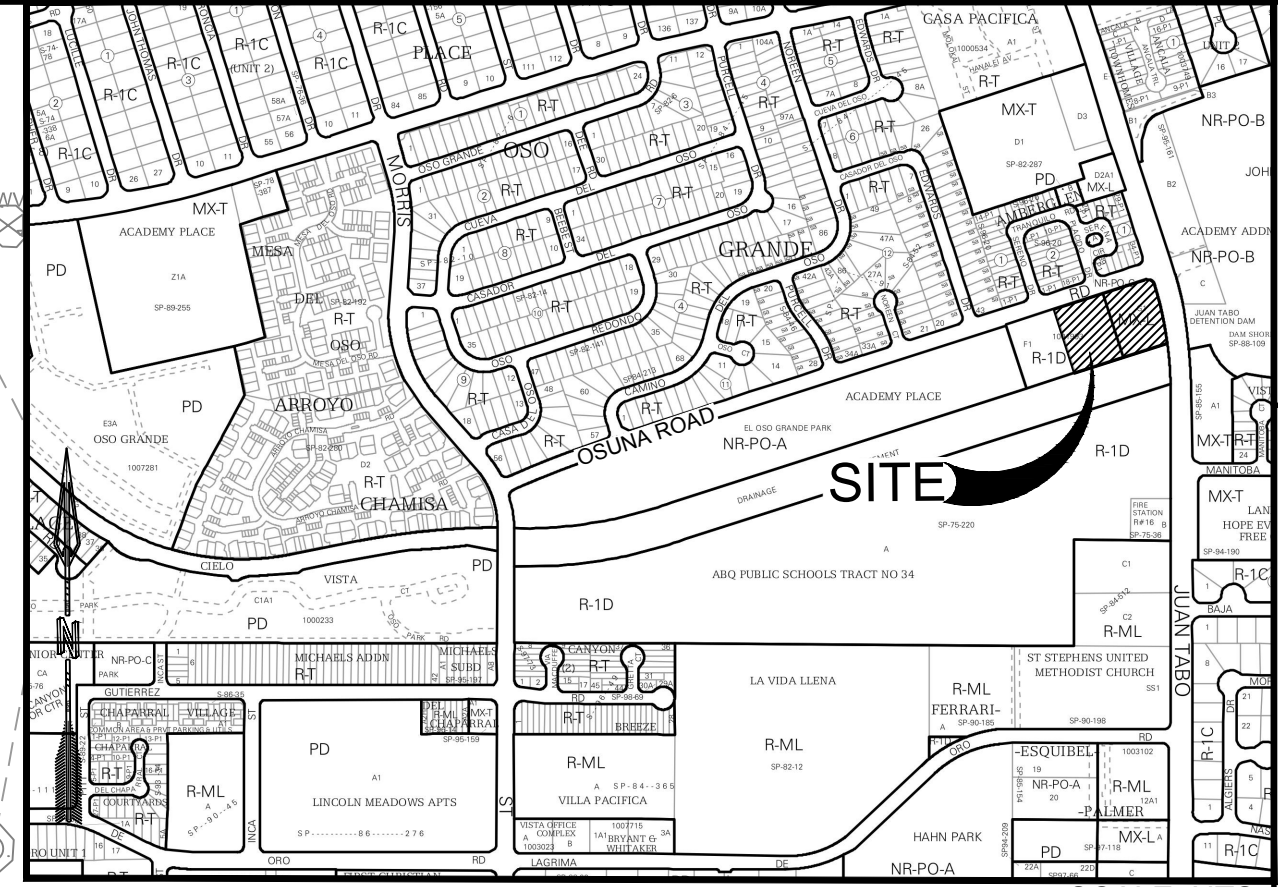
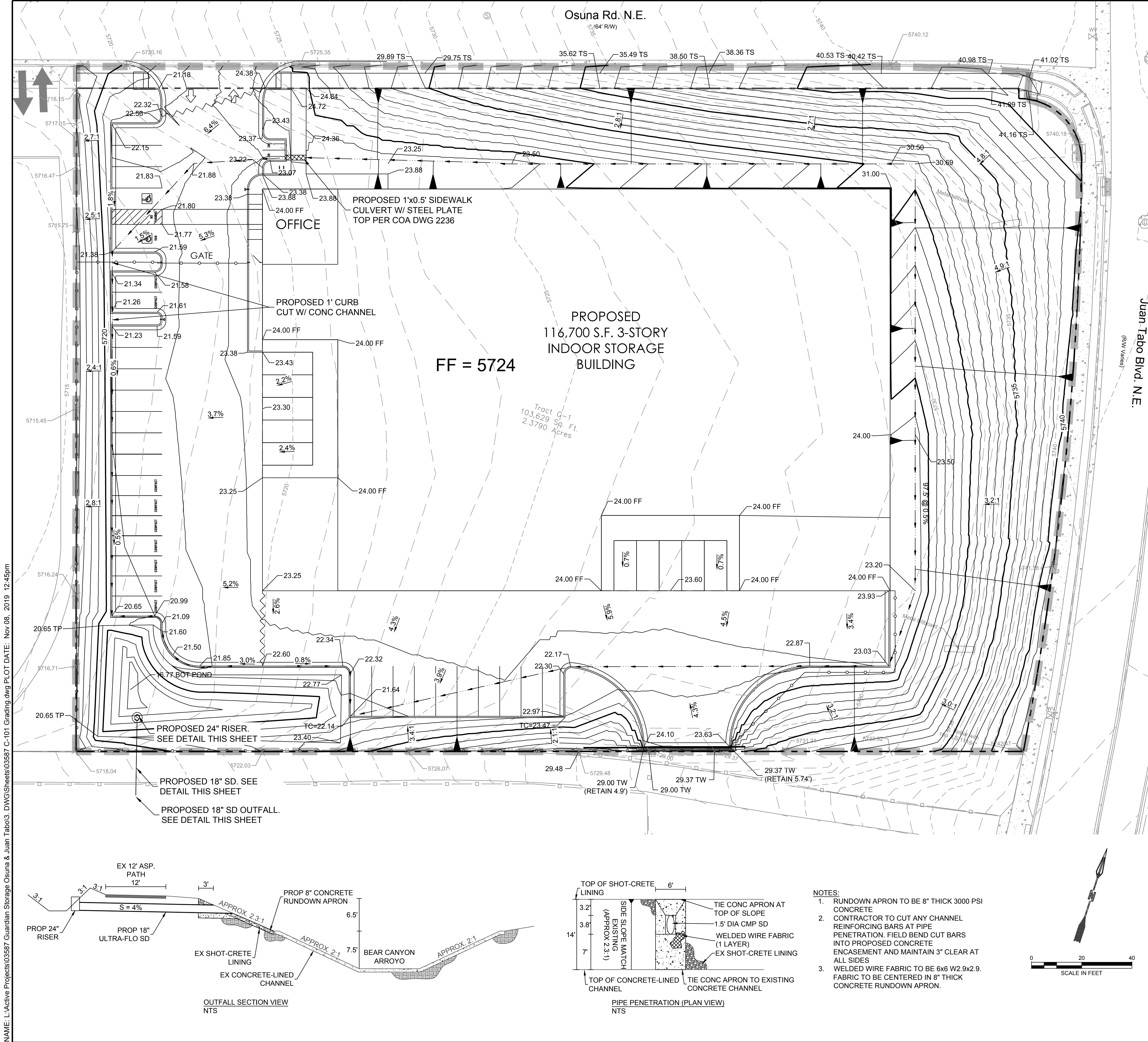
- _____ BUILDING PERMIT APPROVAL
- _____ CERTIFICATE OF OCCUPANCY
- _____ PRELIMINARY PLAT APPROVAL
- _____ SITE PLAN FOR SUB'D APPROVAL
- _____ SITE PLAN FOR BLDG. PERMIT APPROVAL
- _____ FINAL PLAT APPROVAL
- _____ SIA/ RELEASE OF FINANCIAL GUARANTEE
- _____ FOUNDATION PERMIT APPROVAL
- _____ GRADING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

DATE SUBMITTED: _____ **By:** _____

COA STAFF:

ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____



GRADING NOTES

1. CONTRACTOR TO FIELD VERIFY LOCATION AND ELEVATION OF ALL EXISTING DRY AND WET UTILITIES PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY ISSUES. UTILITY RELOCATION MAY BE REQUIRED.
2. PARKING LOT STRIPING HAS BEEN SCREENED BACK FOR VISUAL CLARITY
3. GRADES SHOWN ARE FINAL SURFACE GRADES AFTER COMPLETION OF SURFACE IMPROVEMENTS.
4. GRADE AREAS AT SITE PERIMETER TO MATCH GRADES OF ADJACENT PARCELS.
5. REMOVE EXCESS SOIL FROM SITE AND DISPOSE OF PROPERLY IN ACCORDANCE WITH APPLICABLE REGULATIONS.
6. PROVIDE TEMPORARY GRADING FEATURES SUCH AS BERMS, SWALES, SUMPS AND BASINS TO MANAGE INTERIM STORM WATER RUNOFF DURING CONSTRUCTION PROCESS. STORM WATER RUNOFF LEAVING THE SITE SHALL MEET ALL FEDERAL, STATE AND LOCAL QUALITY REQUIREMENTS.
7. ALL DISTURBED AREAS TO BE RE-SEEDDED PER LANDSCAPE PLAN PROVIDED BY OTHERS.

LEGEND

- EXISTING PROPERTY LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- LIMITS OF GRADING
- PROPOSED WATER BLOCK
- PROPOSED SWALE
- PROPOSED SWALE

RIP RAP SPECIFICATIONS / NOTES

RIP RAP SHALL BE OVER FILTER MATERIAL AND CONSIST OF RIP RAP AND CRUSHED ROCK MEETING THE FOLLOWING GRADATION OR ENGINEER-APPROVED EQUAL:

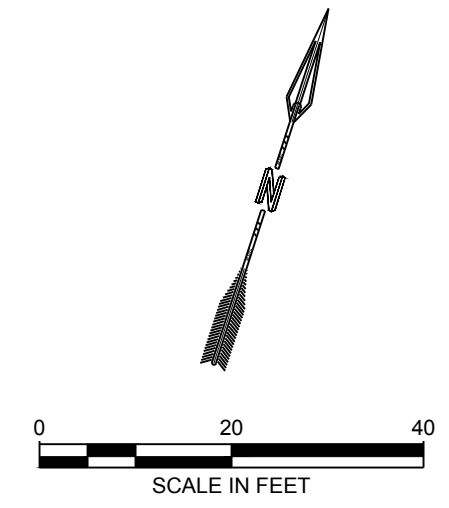
MAX DIMENSION	% SMALLER
12"	100
9"	50-60
6"	35-45
3"	10

FILTER MATERIAL SHALL CONSIST OF CRUSHED ROCK MEETING THE FOLLOWING GRADATION OR ENGINEER-APPROVED EQUAL:

U.S. STANDARD SIEVE SIZE	% PASS BY WT
1"	100
3/4"	45-65
#4	25-45
#40	0-20
#200	0-5

FILTER MATERIAL SHALL BE PLACED UNDER THE RIP RAP CHANNEL AND COMPACTED INTO SURFACE VOIDS OF THE RIP RAP. THE SUBGRADE SHALL BE PROCESSED TO A 12" MIN. DEPTH AND COMPACTED TO 95% MIN. RELATIVE DENSITY PER ASTM D 1557. THE FILTER MATERIAL SHALL BE TAMPED AND SHAPED TO FORM A SMOOTH, EVEN, AND FIRM FOUNDATION FOR THE OVERLAYING RIP RAP. THE CONTRACTOR'S OPERATIONS AND METHODS OF PLACING SHALL PREVENT SEGREGATION OF THE MATERIALS. THE FILTER MATERIAL SHALL BE PLACED AND TAMPED IN THE VOIDS OF THE RIP RAP.

- NOTES:
1. RUNDOWN APRON TO BE 8" THICK 3000 PSI CONCRETE
 2. CONTRACTOR TO CUT ANY CHANNEL REINFORCING BARS AT PIPE PENETRATION. FIELD BEND CUT BARS INTO PROPOSED CONCRETE ENCASEMENT AND MAINTAIN 3" CLEAR AT ALL SIDES
 3. WELDED WIRE FABRIC TO BE 6x6 W2.9x2.9. FABRIC TO BE CENTERED IN 8" THICK CONCRETE RUNDOWN APRON.



NAME: L:\Active Projects\03587 Guardian Storage Osuna & Juan Tabo\3. DWG\Sheets\03587 C-101 Grading.dwg PLOT DATE: Nov. 08, 2019 12:45pm

DESIGNED: JL
DRAWN: JMT
CHECKED: SEG
DATE: 11.08.2019

5971 Jefferson Street Suite 101
Albuquerque, NM 87110
Water and Natural Resources
respec.com 505.253.9718

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Know what's below.
Call before you dig.

PROJECT NAME: GUARDIAN STORAGE

SHEET TITLE: CONCEPTUAL GRADING PLAN

SUBMITTED FOR: DRB REVIEW

SHEET NUMBER: C-101

DRAINAGE SUMMARY

Background

Tract G-1 contains approximately 2.38 acres. The site is located on the south west corner of Osuna Rd- and Juan Tabo Blvd in Albuquerque, New Mexico. The site does not receive any offsite runoff from developed areas and, in general, surface drains from east to west. The existing site is currently an undeveloped lot. A 120,000 SF self-storage facility is proposed to be installed with an asphalt paved parking lot. The site is proposed to free discharge into the Bear Canyon Arroyo.

Methodology

The development assumptions and criteria including land treatment types and impervious areas, as well as the hydrologic analyses for the site were performed in accordance with the City of Albuquerque Development Process Manual (DPM). AHYMO-S4 (April 2018) was used to develop peak flow rates for the 100-year 24-hour design storm in accordance with Section 22.2 of the DPM. Hydraulic calculations were performed using Section 22.3 of the DPM.

Existing Conditions

The existing site is currently undeveloped with moderate vegetation and no impervious area. The site has mild to steep slopes from east to west. The eastern side of the property has 3:1 down slopes setting the property approximately 12 feet lower than Juan Tabo Blvd. The remainder of the property contains east-west slopes ranging from 3% to 7%. The site appears to surface sheet flow to its western property line and discharges to the adjacent property to the west. The site does not appear to receive any offsite flows. There is a concrete arroyo to the south called Bear Canyon. The 100-year 24-hour peak runoff discharge is 4.54 cfs.

Proposed Conditions

The proposed site development will consist of asphalt and concrete paving for parking and driving surfaces and an indoor self-storage building. The site will contain approximately 62% impervious area with the remaining portion to be landscaped. The site drainage will include surface sheet flows and swales concentrating flows to a low point south west of the storage facility that will discharge into a water quality pond located at the south west corner of the property.

Subbasin A is 2.291 acres and generates 10.02 cfs. This subbasin consists of the majority of the site including the proposed building and asphalt parking lot. The site drainage will include surface sheet flow and swales concentrating flows to low spots on the southwest side of the parking lot. A water quality pond will be installed at the southwest side of the site, where two (2) curb openings will allow the surface flows from Subbasin A to enter the water quality pond. An 18" overflow storm drain will convey any additional flow above the water quality pond volume and discharge into the Black Canyon Arroyo to the south.

Subbasin B is 0.089 acres and generates 0.29 cfs. This subbasin consists primarily of landscaping. The drainage from this subbasin will flow west in the direction of the neighboring property as it has historically. The existing site discharged 4.54 cfs into the neighboring property, so we will reduce the existing drainage impacting the neighboring property by 4.25 cfs.

Hydrology calculations are shown on this sheet to the right of this summary. The water quality ponding table summarizes the water quality volumes required and provided. Sufficient ponding has been provided.

HYDROLOGY CALCULATIONS

Subbasin	Area (ac)	AHYMO INPUT: EXISTING CONDITIONS							
		Treatment Type Area (ac)				Treatment Type Area (%)			
		A	B	C	D	A	B	C	D
Existing	2.380	2.38	0	0	0	100.00%	0.00%	0.00%	0.00%

Subbasin	Area (ac)	AHYMO INPUT: PROPOSED CONDITIONS							
		Treatment Type Area (ac)				Treatment Type Area (%)			
		A	B	C	D	A	B	C	D
Subbasin A	2.291	0.000	0.405	0.405	1.481	0.0%	17.7%	17.7%	64.6%
Subbasin B	0.089	0.000	0.045	0.045	0.000	0.0%	50.0%	50.0%	0.0%

AHYMO OUTPUT: EXISTING CONDITIONS				
Subbasin	A (ac)	Q (cfs)	V (acft)	Q/A (cfs/ac)
Existing	2.38	4.54	0.13	1.9

AHYMO OUTPUT: PROPOSED CONDITIONS				
Subbasin	A (ac)	Q (cfs)	V (acft)	Q/A (cfs/ac)
Subbasin A	2.291	10.02	2.23	4.4
Subbasin B	0.089	0.29	0.01	3.3

WATER QUALITY PONDING					
Area (ac)	% Imp.	Imp. Area (ac)	WQ Depth (in)	Required WQ Vol (cu ft)	Provided WQ Vol (cu ft)
2.381	62.2%	1.481	0.34	1828	2516

Orifice Flow Calcs: 24" SD w/ Grate

$Q_o = .6A\sqrt{2gh}$

A = Open area of grate (sq. ft)

2.1

g = 32.2 (ft/s²)

h = Head (ft)

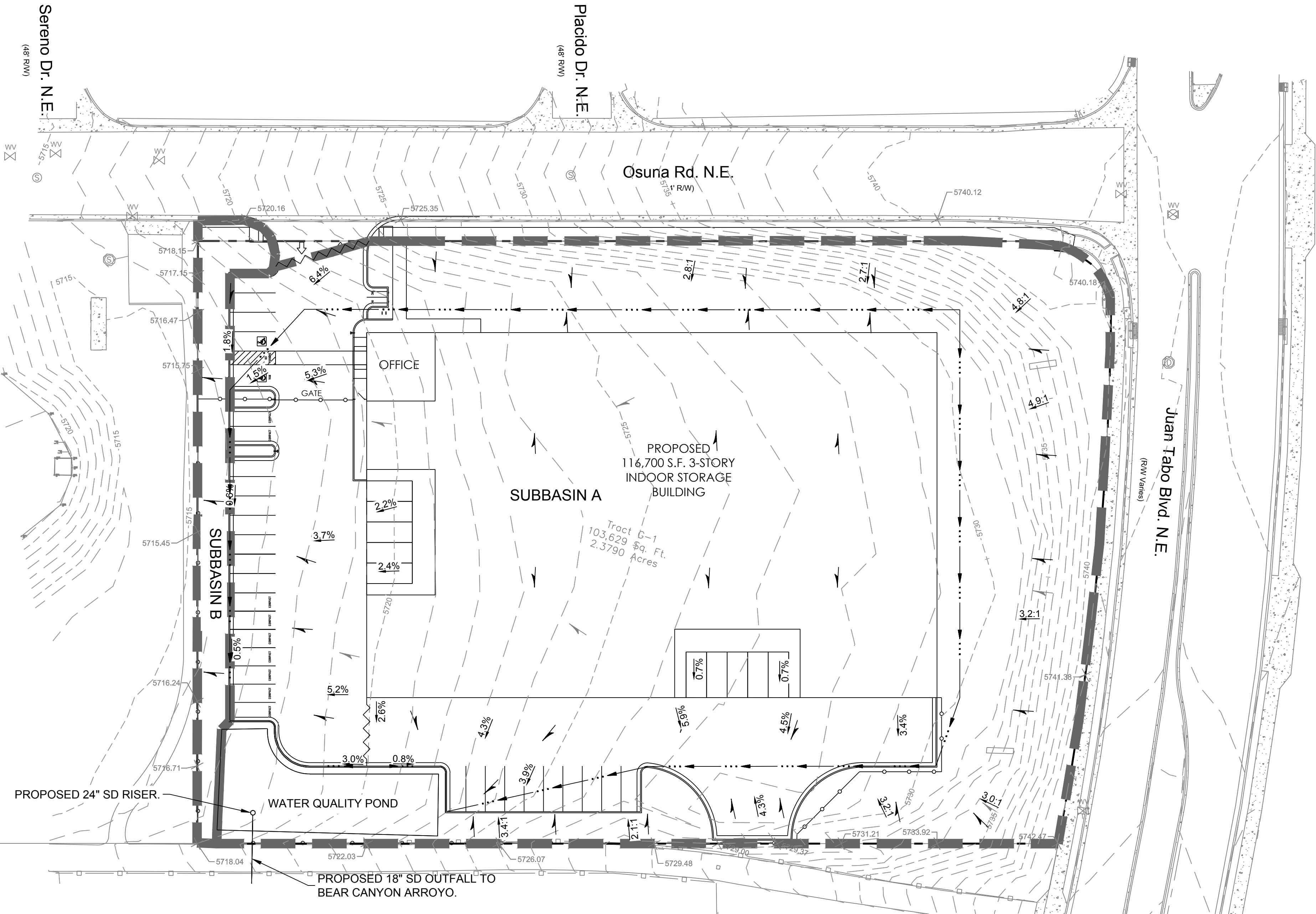
1.5

Q_o = Capacity (cfs)

12.4

LEGEND

- SUBBASIN BOUNDARY
- EXISTING FLOW ARROW
- PROPOSED FLOW ARROW
- PROPOSED HIGH PONT
- PROPOSED SWALE



NAME: L:\Active Projects\03587 Guardian Storage Osuna & Juan Tabo\3. DWG\Sheets\03587 C-102 Drainage.dwg PLOT DATE: Nov 08, 2019 1:04pm

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DESIGNED: JL
DRAWN: JMT
CHECKED: SEG
DATE: 11.08.2019

RESPEC
5971 Jefferson Street Suite 101
Albuquerque, NM 87110
Water and Natural Resources
respec.com 505.253.9718

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