

CITY OF ALBUQUERQUE

Planning Department
Alan Varela, Director



Mayor Timothy M. Keller

January 2, 2024

Ronald Bohannon, P.E.
Tierra West, LLC
5571 Midway Park Place NE
Albuquerque, NM, 87109

**RE: Sandia Labs Federal Credit Union – St Joseph’s NW
Grading and Drainage Plan
Engineer’s Stamp Date: 12/19/23
Hydrology File: G11D067B**

Dear Mr. Bohannon:

Based upon the information provided in your submittal received 12/19/2023, the Grading & Drainage Plans are approved for Building Permit, and Grading Permit. Please attach a copy of this approved plan in the construction sets for Building Permit processing along with a copy of this letter.

PRIOR TO CERTIFICATE OF OCCUPANCY:

1. Engineer’s Certification, per the DPM Part 6-14 (F): *Engineer's Certification Checklist For Non-Subdivision* is required.
2. Please provide the executed paper Drainage Covenant (latest revision) printed on one-side only with Exhibit A and a check for **\$25.00** made out to “**Bernalillo County**” for the stormwater quality pond per Article 6-15(C) of the DPM to Hydrology for review at Plaza de Sol.
3. The Southern Oxbow Center’s (overall development) Owner will have to substantially completed the following:
 - a. The Work Order for all improvements within the R.O.W. of St. Joseph as outlined in the Infrastructure List (PR-2021-005597).
 - b. All private access drives and private drainage structures to convey the storm discharge from this site to the ultimate outfall point for Southern Oxbow Center which is the existing 36-inch storm sewer stub on Coors Blvd.

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

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Engineer (Doug Hughes, PE, jhughes@cabq.gov, 924-3420) 14 days prior to any earth disturbance.

If you have any questions, please contact me at 924-3995 or rbrissette@cabq.gov.

Sincerely,

Renée C. Brissette

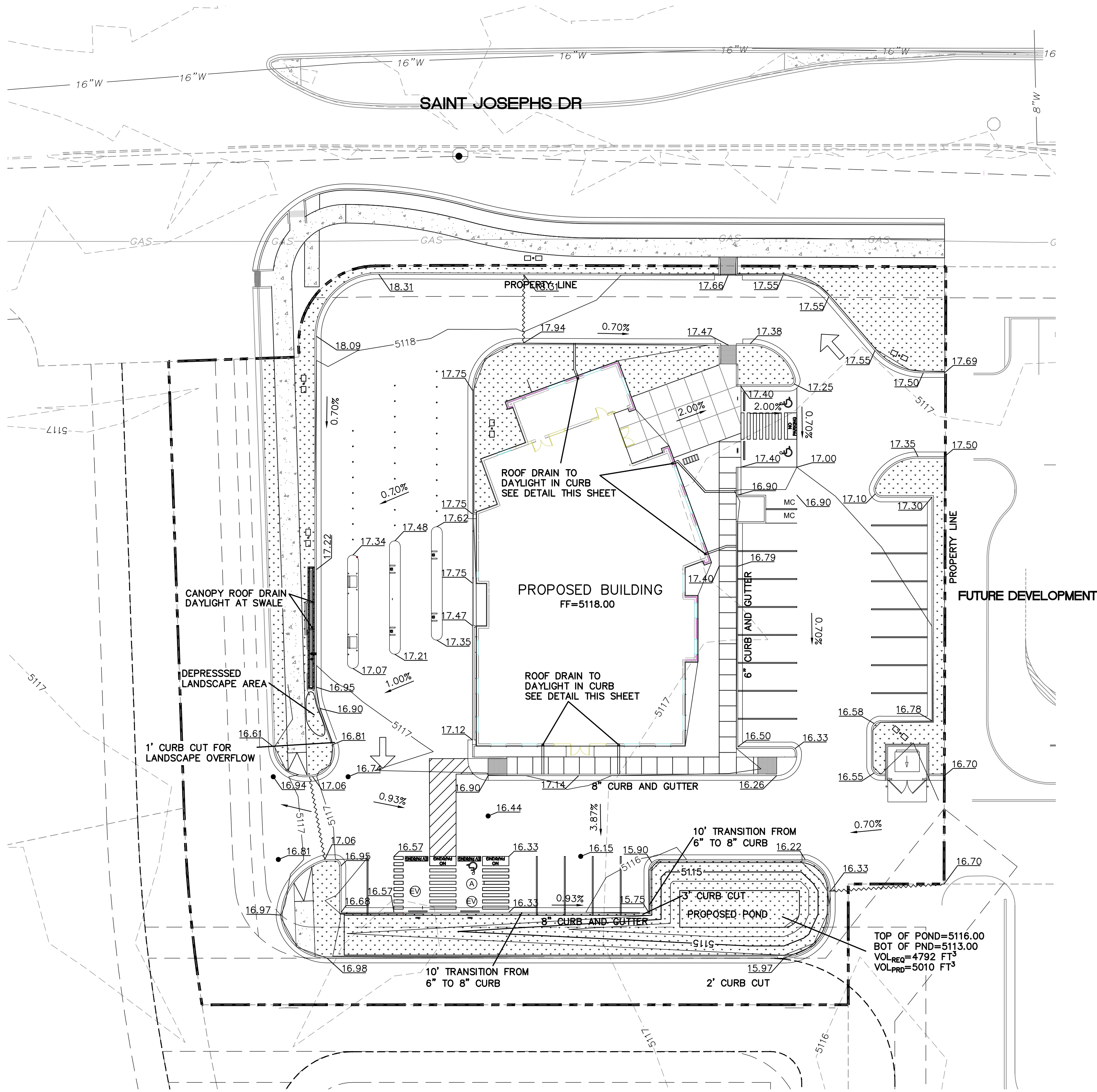
Renée C. Brissette, P.E. CFM
Senior Engineer, Hydrology
Planning Department

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

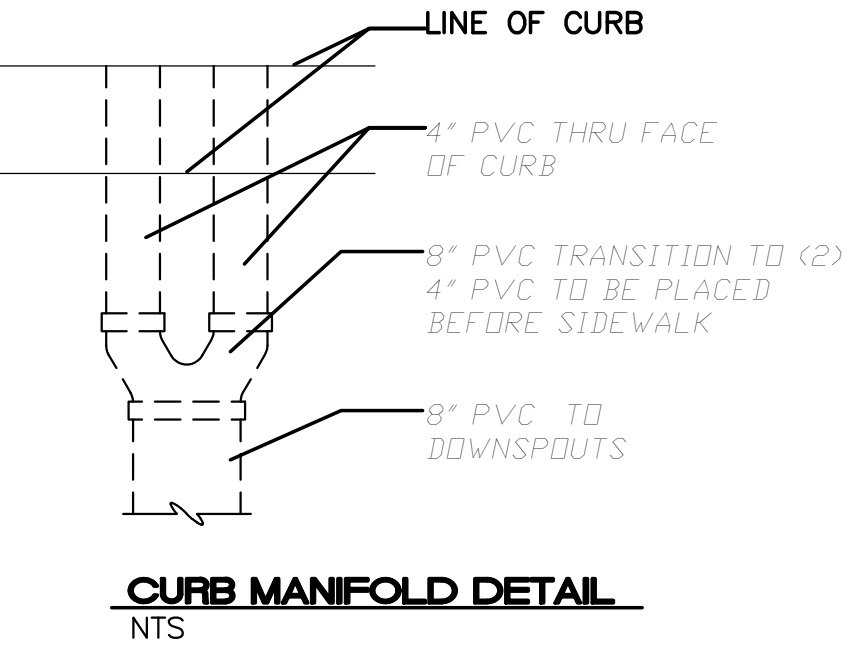


- LEGEND**
- CURB & GUTTER
 - BOUNDARY LINE
 - - - RIGHT-OF-WAY
 - BUILDING
 - SIDEWALK
 - 5010 — CONTOUR MAJOR
 - 5011 — CONTOUR MINOR
 - x 5048.25 SPOT ELEVATION
 - FLOW ARROW
 - EXISTING CURB & GUTTER
 - EXISTING BOUNDARY LINE
 - 5010 --- EXISTING CONTOUR MAJOR
 - EXISTING CONTOUR MINOR
 - EASEMENT
 - CENTERLINE
 - PROPOSED SIDEWALK
 - WATER BLOCK
 - LANDSCAPING
 - PROPOSED INDEX CONTOUR
 - PROPOSED CONTOUR

- NOTICE TO CONTRACTORS**
1. AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY.
 2. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED, EXCEPT AS OTHERWISE STATED OR PROVIDED HERON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF ALBUQUERQUE INTERIM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1985.
 3. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE, 785-1234, FOR LOCATION OF EXISTING UTILITIES.
 4. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL CONNECTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
 5. BACKFILL COMPACTION SHALL BE ACCORDING TO TRAFFIC/STREET USE.
 6. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
 7. WORK ON ARTERIAL STREETS SHALL BE PERFORMED ON A 24-HOUR BASIS.

- 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.
 6. ALL SLOPES NOT STABILIZED AT THE END OF THE PROJECT SHALL BE STABILIZED IN ACCORDANCE WITH COA SPECS OR 3" GRAVEL.

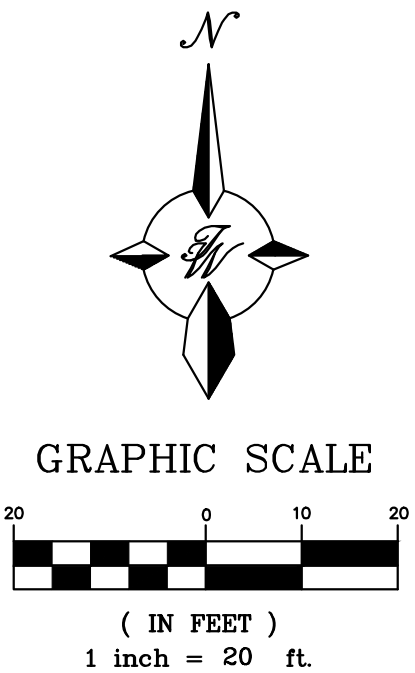
- NOTES:**
1. ADD 5100 TO ALL SPOT ELEVATIONS.
 2. ALL ELEVATIONS SHOWN ARE FLOW LINE UNLESS OTHERWISE STATED.
 3. ALL CURB AND GUTTER IS 6" HIGH UNLESS OTHERWISE NOTED



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Planning Department
Development Review Services
HYDROLOGY SECTION
APPROVED
DATE: 01/02/23
BY: *Ronald R. Bohannan*
HydroTrans # G11D067B

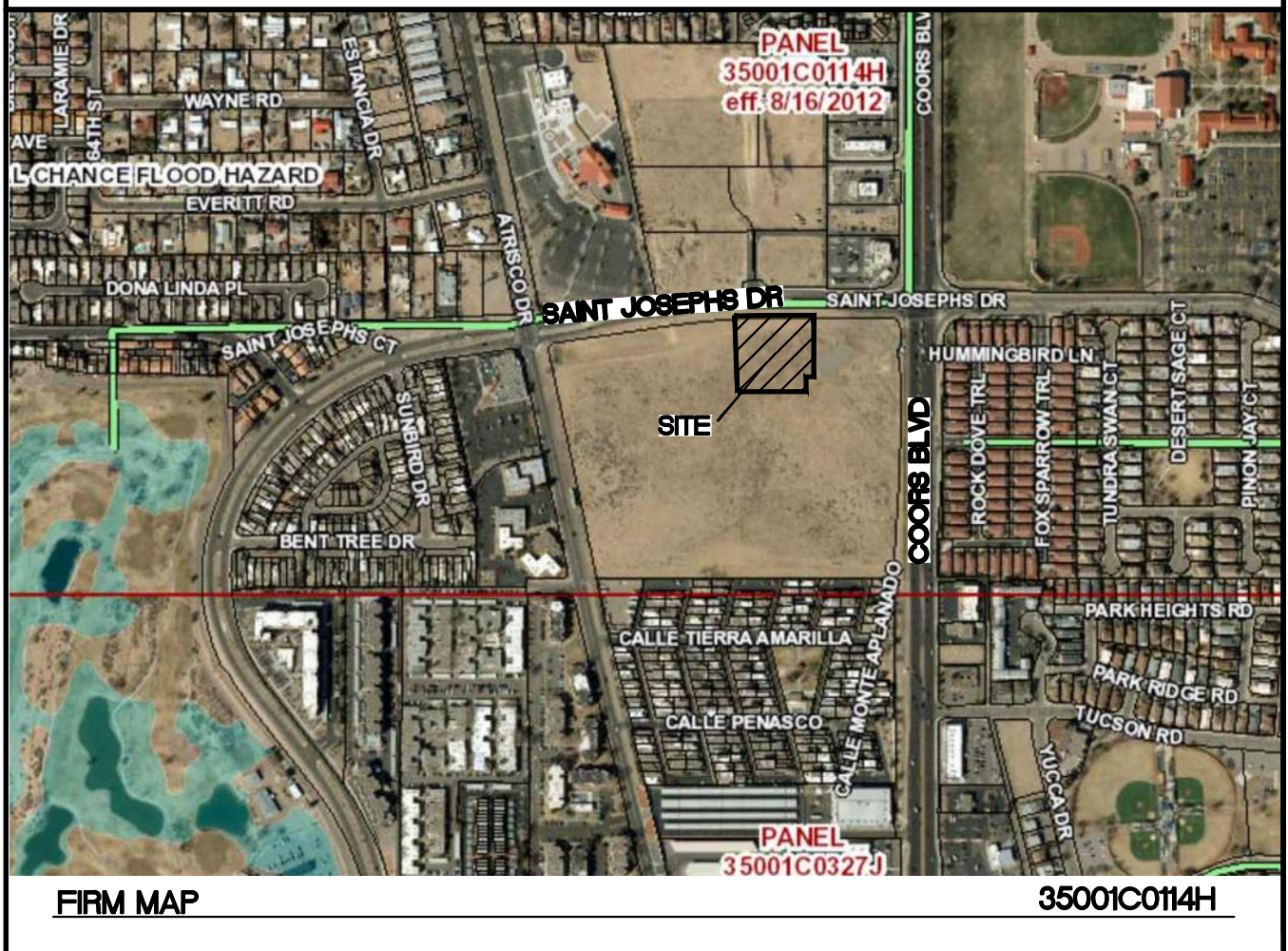
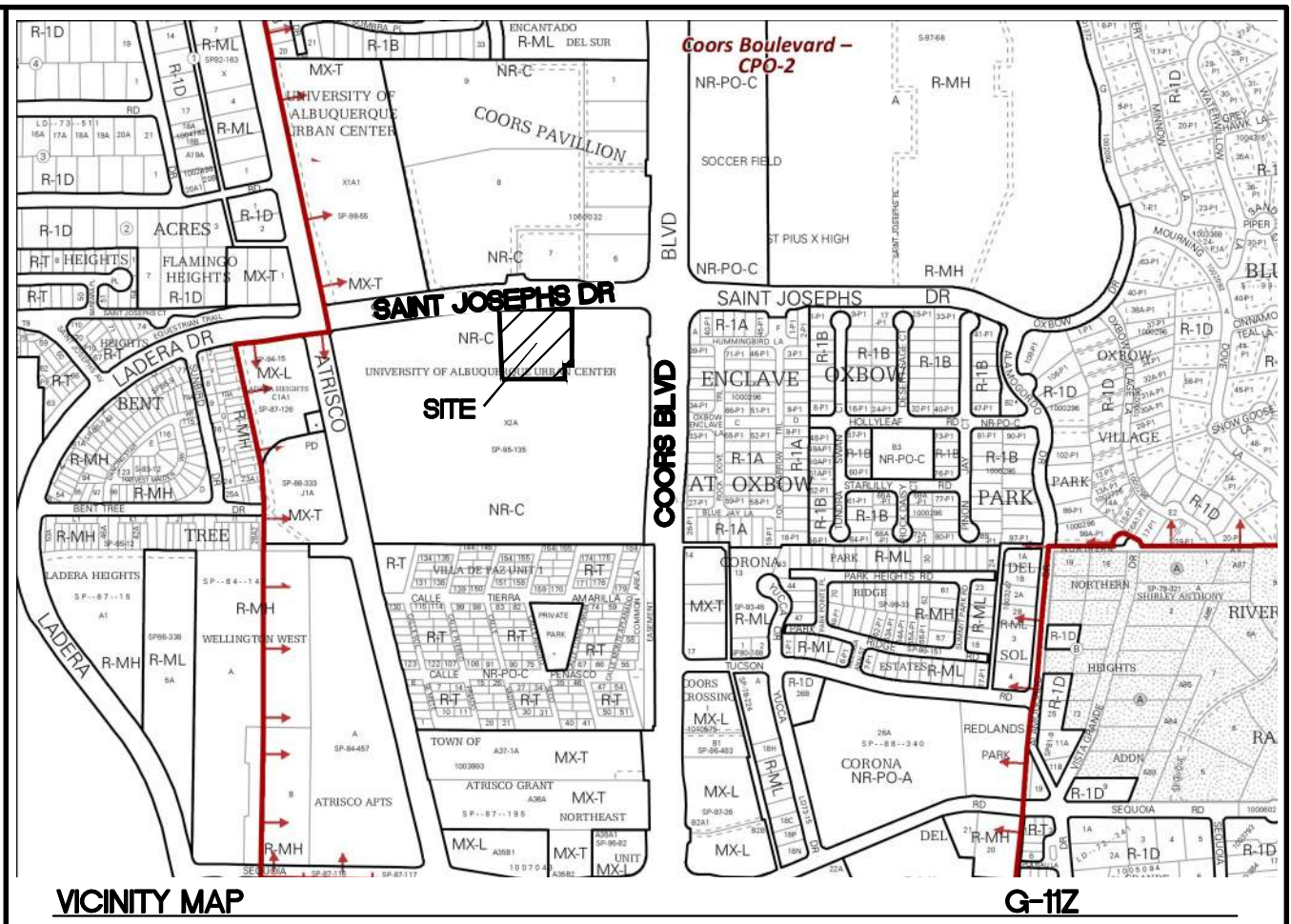
THE APPROVAL OF THESE PLANS DOES NOT CONSTITUTE A GUARANTEE OF THE ACCURACY OF THE INFORMATION PROVIDED HEREON. THE CITY OF ALBUQUERQUE DOES NOT ASSUME ANY LIABILITY FOR DAMAGES, INCLUDING ATTORNEY'S FEES, ARISING FROM THE USE OF THESE PLANS. THE CITY OF ALBUQUERQUE DOES NOT ASSUME ANY LIABILITY FOR DAMAGES, INCLUDING ATTORNEY'S FEES, ARISING FROM THE USE OF THESE PLANS.

APPROVAL OF GRADING & DRAINAGE PLANS SHALL EXPIRE TWO (2) YEARS AFTER THE APPROVAL DATE BY THE CITY IF NO BUILDING PERMIT HAS BEEN PULLED ON THE DEVELOPMENT.



CAUTION

ALL EXISTING UTILITIES SHOWN WERE OBTAINED FROM RESEARCH, AS-BUILTS, SURVEYS OR INFORMATION PROVIDED BY OTHERS. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO AND INCLUDING ANY EXCAVATION, TO DETERMINE THE ACTUAL LOCATION OF UTILITIES AND OTHER IMPROVEMENTS, PRIOR TO STARTING THE WORK. ANY CHANGES FROM THIS PLAN SHALL BE COORDINATED WITH AND APPROVED BY THE ENGINEER.



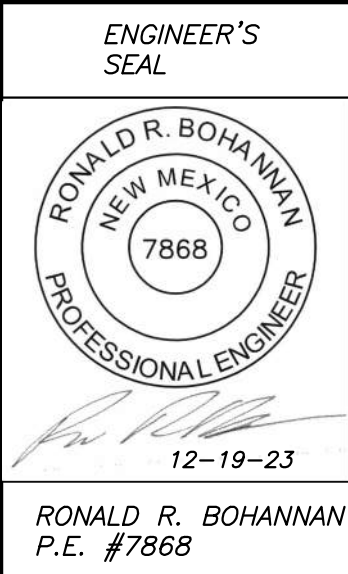

EXISTING DRAINAGE:

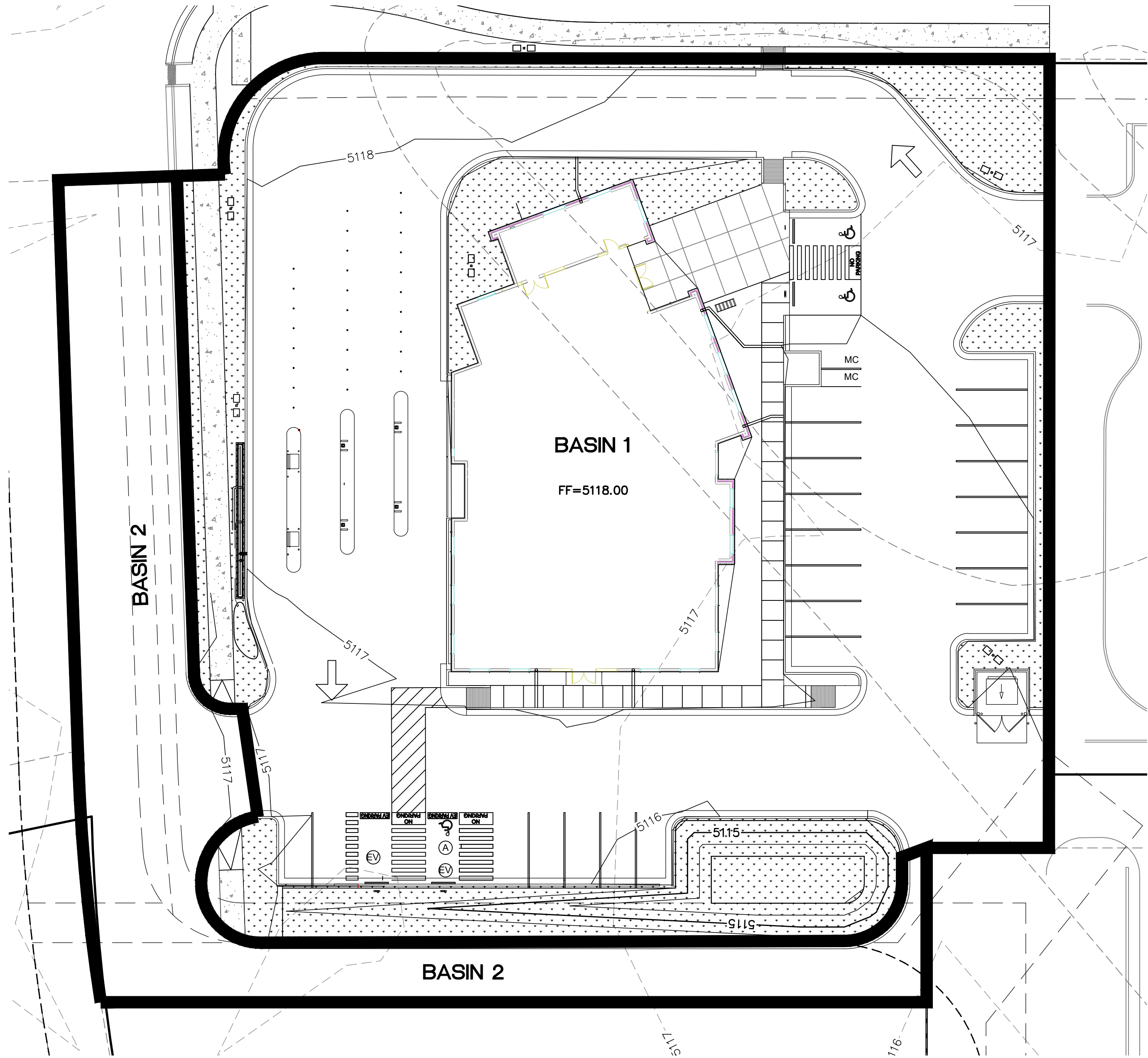
THIS SITE IS CURRENTLY VACANT AND IS PART OF THE OXBOW TOWN CENTER DEVELOPMENT LOCATED ON THE SOUTHWEST CORNER OF COORS BOULEVARD AND ST. JOSEPHS DRIVE. THIS PORTION OF THE PROPERTY CURRENTLY SHEET FLOWS TO COORS BOULEVARD WHERE IT IS CAPTURED IN A STORM SEWER. THE SITE IS LOCATED ON FIRM MAP 35001C0114H AS SHOWN ABOVE. THE MAP SHOWS THAT THE SITE DOES NOT LIE WITHIN ANY 100 YEAR FLOOD PLAIN.

PROPOSED DRAINAGE:

PER THE SOUTHER OXBOW CENTER MASTER DRAINAGE PLAN COMPLETED BY RESPEC, INC. AND APPROVED BY THE CITY APRIL 28, 2022 (G11-D067) THIS PARCEL IS TO SURFACE DRAIN TO THE SOUTHEAST TO A INTERNAL ACCESS ROAD AT A RATE OF 1.84 CFS PER ACRE.

THIS PROJECT FALLS WITHIN BASIN P8 OF THAT PLAN WITH A PORTION FALLING WITHIN BASIN P10. THE PORTION THAT FALLS WITHIN P10 IS PART OF THE INTERNAL ROADWAY AND WAS NOT FACTORED INTO THE DISCHARGE FROM THE CREDIT UNION AS IT IS ALREADY BEING ACCOUNTED FOR. THE FLOWS FROM THE CREDIT UNION WILL BE ROUTED TO A POND ALONG SOUTHERN BOUNDARY ADJACENT TO THE INTERNAL ACCESS ROAD. THE POND IS SIZED TO CAPTURE THE 100YR, 6-HR DEVELOPED FLOWS. ANY FLOWS ABOVE THAT WILL PASS THROUGH THE POND THROUGH A WEIR SIZED TO RELEASE 1.91 CFS WHICH IS LESS THAN THE 1.96 CFS ALLOWED PER THE APPROVED MASTER DRAINAGE PLAN. THIS POND WILL ALSO RETAIN THE WATER QUALITY VOLUME PER THE DPM.

 <p>ENGINEER'S SEAL</p> <p>RONALD R. BOHANNAN P.E. #7868</p>	SANDIA LABS FEDERAL CREDIT UNION 5700 ST JOSEPHS DR NW ALBUQUERQUE, NM	DRAWN BY pm
	GRADING AND DRAINAGE PLAN	DATE 12-19-23
		DRAWING 2023076-GR
		SHEET # GR-1 JOB # 2023076



Weighted E Method																																		
											100-Year			10-Year																				
Basin	Area (sf)	Area (acres)	Treatment A		Treatment B		Treatment C		Treatment D		Weighted E (in)	Volume (ac-ft)	Flow cfs	Weighted E (in)	Volume (ac-ft)	Flow cfs																		
			%	(acres)	%	(acres)	%	(acres)	%	(acres)																								
Pre	46,452	1.07	0%	0	100%	1.07	0%	0.00	0%	0.00	0.730	0.065	2.30	0.260	0.023	0.86																		
1	46,452	1.07	0%	0	18%	0.19	0%	0.00	82%	0.87	1.968	0.175	4.02	1.219	0.108	2.40																		
2	9,579	0.22	0%	0	0%	0.00	0%	0.00	100%	0.22	2.240	0.041	0.91	1.430	0.026	0.57																		
0.110 Required Ponding																																		
Equations:																																		
Weighted E = Ea*Aa + Eb*Ab + Ec*Ac + Ed*Ad / (Total Area)			<table><tr><th colspan="3">Excess Precipitation, E (inches)</th></tr><tr><th>Zone 1</th><th>100-Year</th><th>10 - Year</th></tr><tr><td>Ea</td><td>0.55</td><td>0.11</td></tr></table>								Excess Precipitation, E (inches)			Zone 1	100-Year	10 - Year	Ea	0.55	0.11	<table><tr><th colspan="3">Peak Discharge (cfs/acre)</th></tr><tr><th>Zone 1</th><th>100-Year</th><th>10 - Year</th></tr><tr><td>Qa</td><td>1.54</td><td>0.3</td></tr></table>						Peak Discharge (cfs/acre)			Zone 1	100-Year	10 - Year	Qa	1.54	0.3
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Volume = Weighted D * Total Area			<table><tr><td>Eb</td><td>0.73</td><td>0.26</td></tr><tr><td>Ec</td><td>0.95</td><td>0.43</td></tr></table>								Eb	0.73	0.26	Ec	0.95	0.43	<table><tr><td>Qb</td><td>2.16</td><td>0.81</td></tr><tr><td>Qc</td><td>2.87</td><td>1.46</td></tr></table>						Qb	2.16	0.81	Qc	2.87	1.46						
Eb	0.73	0.26																																
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Qb	2.16	0.81																																
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Flow = Qa * Aa + Qb * Ab + Qc * Ac + Qd * Ad			<table><tr><td>Ed</td><td>2.24</td><td>1.43</td></tr></table>								Ed	2.24	1.43	<table><tr><td>Qd</td><td>4.12</td><td>2.57</td></tr></table>						Qd	4.12	2.57												
Ed	2.24	1.43																																
Qd	4.12	2.57																																
Water Quality Calculation: 0.42" x 0.87 ac = 1,326 cubic feet (0.030 ac-ft)																																		

Weir Equation:

$$Q = CLH^{3/2}$$

Q= Flow
C = 2.95
L= Length of weir
H = Height of Weir

Pond Inlet

$$Q = 2.70 \times 3 \times 0.67^{3/2}$$
$$Q = 4.44 \text{ cfs} > Q = 4.02 \text{ cfs}$$

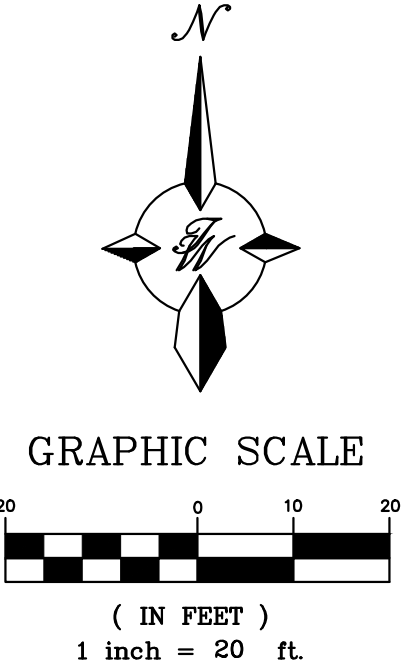
Pond Outlet

$$Q = 2.70 \times 2 \times 0.50^{3/2}$$
$$Q = 1.91 \text{ cfs} < Q = 1.96 \text{ cfs}$$

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THE APPROVAL OF THESE PLANS/REPORT SHALL NOT BE
CONSIDERED TO BE A GUARANTEE OF ANY CITY
ORDINANCE OR STATE LAW, AND SHALL NOT PREVENT
THE CITY OF ALBUQUERQUE FROM
CORRECTING OR AMENDING OR CHANGING ITS PLANS,
SPECIFICATIONS OR CONSTRUCTION, OR ANY APPROVED PLANS
SHALL NOT BE CHANGED, AMENDED OR ALTERED WITHOUT
AUTHORIZATION.

APPROVAL OF GRADING & DRAINAGE PLAN(S) SHALL EXPIRE
TWO (2) YEARS AFTER THE APPROVAL DATE BY THE CITY IF NO
BUILDING PERMIT HAS BEEN PULLED ON THE DEVELOPMENT.



<div>ENGINEER'S SEAL</div> <div></div> <div>RONALD R. BOHANNAN P.E. #7868</div>	SANDIA LABS FEDERAL CREDIT UNION 5700 ST JOSEPH'S DR NW ALBUQUERQUE, NM	DRAWN BY pm
	BASIN MAP	DATE 12-19-23
	<div></div> <div>TIERRA WEST, LLC 5571 MIDWAY PARK PL NE ALBUQUERQUE, NEW MEXICO 87109 (505) 858-3100 www.tierrawestllc.com</div>	DRAWING 2023076-GR
		SHEET # GR-2
		JOB # 2023076