

CITY OF ALBUQUERQUE

Planning Department
Alan Varela, Interim Director



Mayor Timothy M. Keller

August 19, 2021

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

**RE: Auto Nation
Grading & Drainage Plan
Engineer's Stamp Date: 07/29/21
Hydrology File: B18D027**

Dear Mr. Bohannon:

Based upon the information provided in your submittal received 07/29/2021, the Grading and Drainage Plan is approved for Building 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 approval in support of Permanent Release of Occupancy by Hydrology, Engineer Certification per the DPM checklist will be required.

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, 924-3420) 14 days prior to any earth disturbance.

Please provide Two Drainage Covenants (one for the stormwater quality ponds and one for the temporary desilting ponds) per Article 6-15(C) of the DPM prior to Permanent Release of Occupancy. Please submit an electronic file of the Covenant and Exhibit for completeness to Marion G. Velasquez at mgvelasquez@cabq.gov. Once the electronic file is approved for completeness, please submit the original copies along with the \$ 25.00 recording fee check made payable to Bernalillo County for each Drainage Covenants to Marion on the 4th floor of Plaza de Sol. Please note that Hydrology will need a pdf copy of the recorded Drainage Covenants prior to Hydrology's approval of Permanent Release of Occupancy.

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

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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



City of Albuquerque

Planning Department
Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 6/2018)

Project Title: Autonation **Building Permit #:** _____ **Hydrology File #:** _____
DRB#: _____ **EPC#:** _____ **Work Order#:** _____
Legal Description: Lot 13,14,15, 18, 19, 20, 21 North Albuquerque Acres
City Address: _____

Applicant: Tierra West, LLC **Contact:** Jonathan Niski
Address: 5571 Midway Park Place NE Albuquerque NM 87109
Phone#: 505-858-3100 **Fax#:** 505-858-1118 **E-mail:** jniski@tierrawestllc.com

Other Contact: _____ **Contact:** _____
Address: _____
Phone#: _____ **Fax#:** _____ **E-mail:** _____

TYPE OF DEVELOPMENT: _____ PLAT (# of lots) _____ RESIDENCE _____ DRB SITE ☒ ADMIN SITE

IS THIS A RESUBMITTAL? _____ Yes ☒ No

DEPARTMENT _____ TRANSPORTATION ☒ HYDROLOGY/DRAINAGE

Check all that Apply:

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?

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

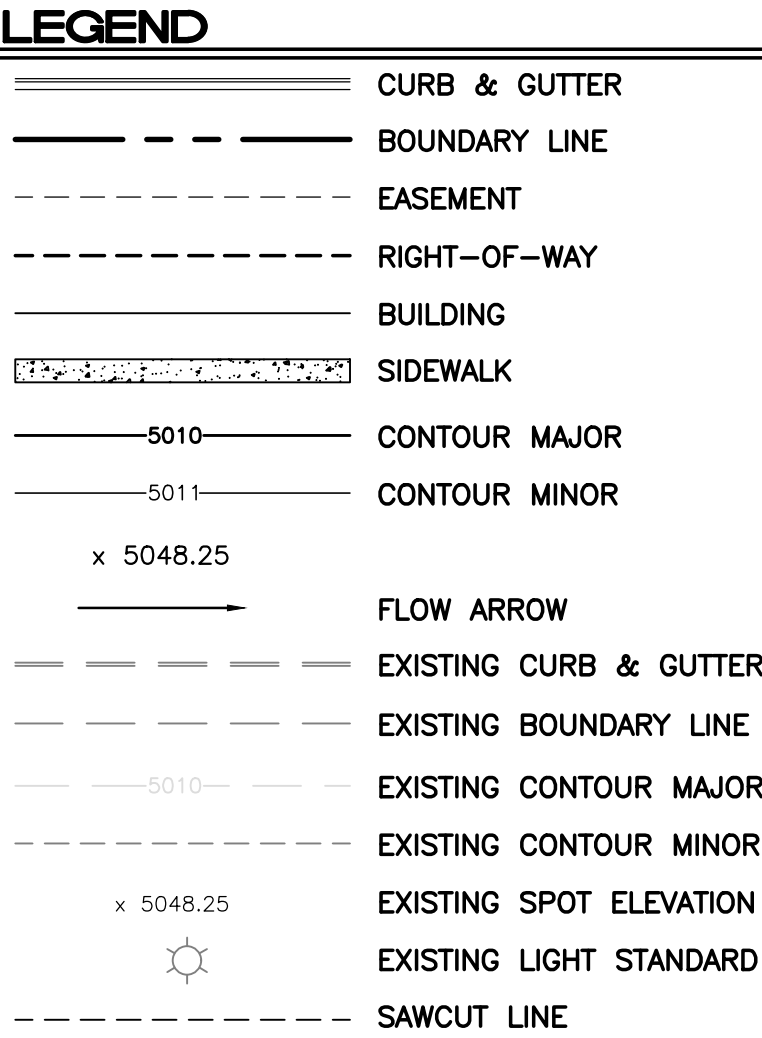
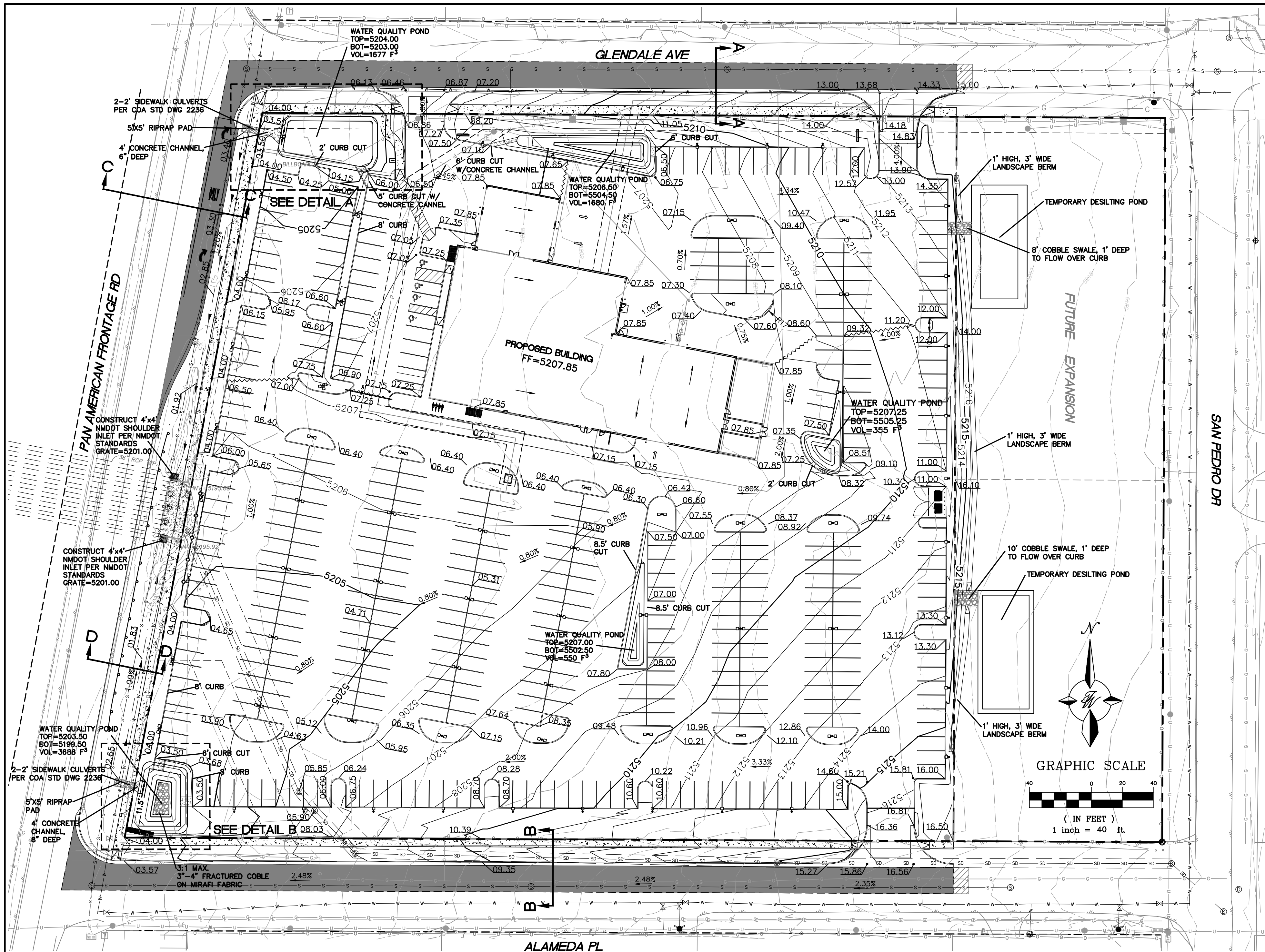
☐ BUILDING PERMIT APPROVAL
☐ CERTIFICATE OF OCCUPANCY
☐ PRELIMINARY PLAT APPROVAL
☐ SITE PLAN FOR SUB'D APPROVAL
☒ SITE PLAN FOR BLDG. PERMIT APPROVAL
☐ FINAL PLAT APPROVAL
☐ SIA/ RELEASE OF FINANCIAL GUARANTEE
☐ FOUNDATION PERMIT APPROVAL
☐ GRADING PERMIT APPROVAL
☐ SO-19 APPROVAL
☐ PAVING PERMIT APPROVAL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

DATE SUBMITTED: 5/4/2021 **By:** Jonathan Niski

COA STAFF:

ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____

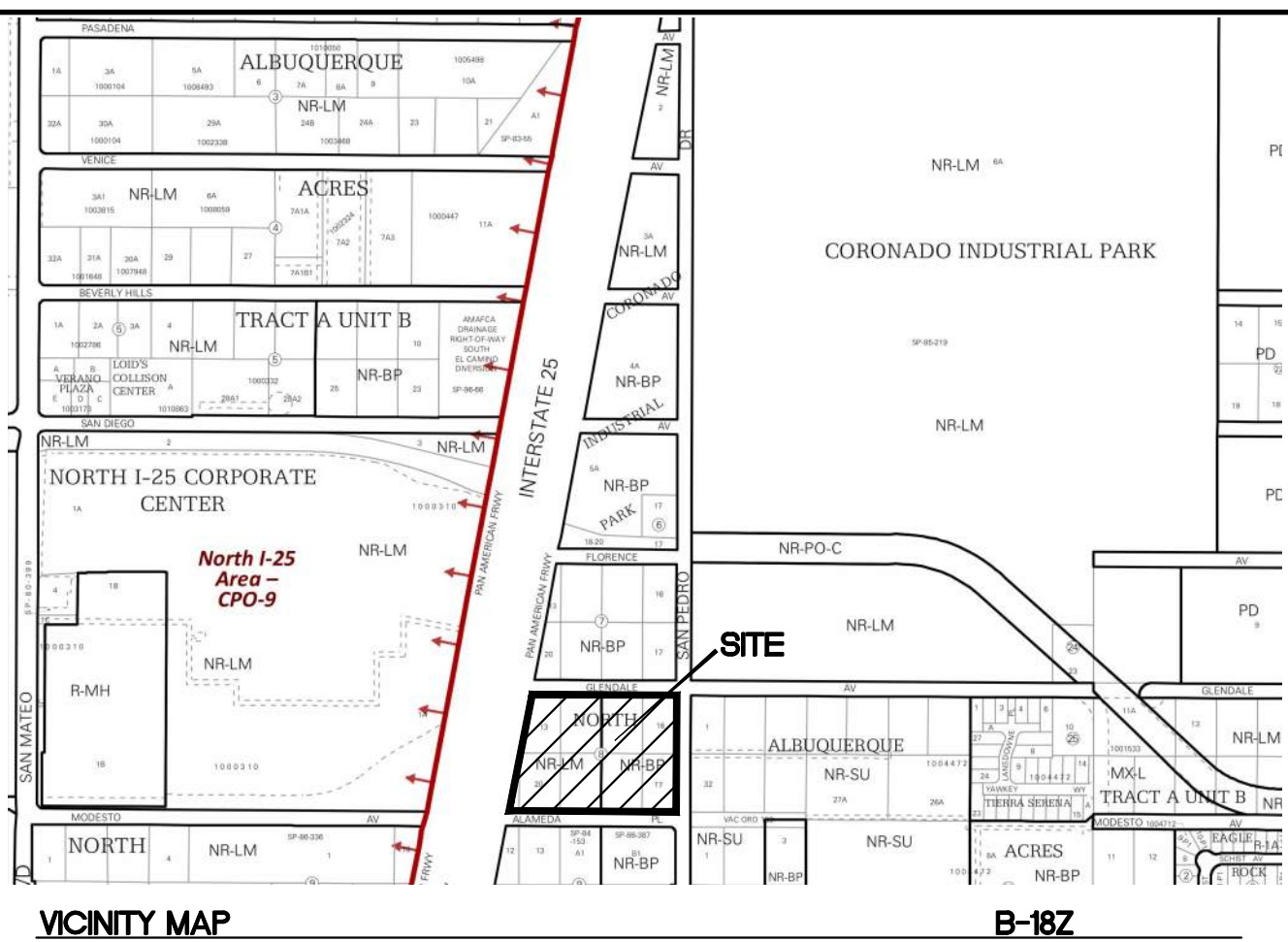


NOTICE TO CONTRACTORS

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, 765-1234, 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.

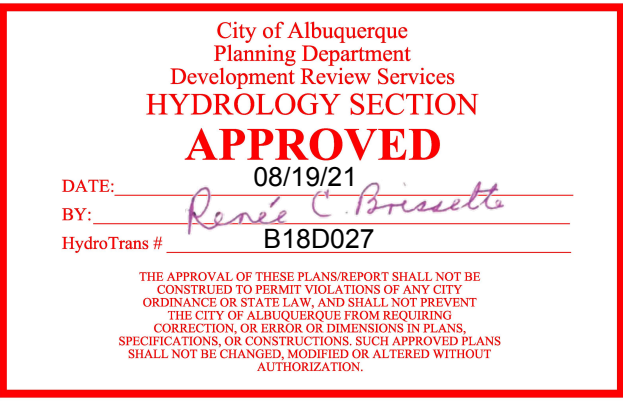
EROSION CONTROL NOTES:

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 2" GRAVEL.



**PRIVATE DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY
NOTICE TO CONTRACTOR
(SPECIAL ORDER 19-80-19)**

1. BUILD SIDEWALK CULVERT PER COA STD DWG 2236.
2. CONTACT STORM DRAIN MAINTENANCE AT (505) 857-8033 TO SCHEDULE A MEETING PRIOR TO FORMING.
3. AN EXCAVATION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY.
4. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
5. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL, DIAL 811 [OR (505) 260-1990] FOR THE LOCATION OF EXISTING UTILITIES.
6. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE LOCATIONS OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
7. BACKFILL COMPACTION SHALL BE ACCORDING TO TRAFFIC/STREET USE.
8. MAINTENANCE OF THE FACILITY SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY BEING SERVED.
9. WORK ON ARTERIAL STREETS MAY BE REQUIRED ON A 24-HOUR BASIS.
10. CONTRACTOR MUST CONTACT STORM DRAIN MAINTENANCE AT (505) 857-8033 TO SCHEDULE A CONSTRUCTION INSPECTION. FOR EXCAVATING AND BARRICADING INSPECTIONS, CONTACT CONSTRUCTION COORDINATION AT (505) 924-3416.



EXISTING DRAINAGE:

THIS SITE IS CURRENTLY VACANT AND IS LOCATED ON THE WEST SIDE OF SAN PEDRO BETWEEN GLENDALE AVENUE AND ALAMEDA PLACE. THE SITE IS BOUNDED BY ROADS ON ALL FOUR SIDES AND CONTAINS APPROXIMATELY 5.29 ACRES. THE SITE DRAINS FROM EAST TO WEST AND INTO A DRAINAGE SWALE ALONG THE EAST SIDE OF PAN AMERICAN FREEWAY. THE SWALE THEN DRAINS TO TWO EXISTING 36" RCP PIPES THAT DRAIN TO THE WEST UNDER INTERSTATE 25 AND INTO AN ARROYO. ACCORDING TO AN APPROVED DRAINAGE PLAN FOR THE SAN PEDRO STORM DRAIN PROJECT (CITY PROJECT NO. 5304.91) COMPLETED BY THOMPSON ENGINEERING IN JANUARY OF 2010, THIS SITE IS CONTAINED WITHIN BASIN 116.21. THAT BASIN ALSO INCLUDES 2 LOTS TO THE EAST OF THIS PROJECT THAT ARE OWNED BY THIS SAME LAND OWNER. THAT BASIN WAS DESIGNED TO DRAIN 30.0 CFS TO THE SAN PEDRO STORM SEWER. THE SITE IS NOT LOCATED WITHIN A FLOOD PLAIN AS SHOWN ON THE FIRM MAP. THIS PROJECT DOES RECEIVE OFFSITE FLOW FROM THE 2 LOTS TO THE EAST ALONG SAN PEDRO.

NOTE

POND SIDE SLOPES NEED TO BE STABILIZED WITH NATIVE GRASS SEED WITH AGGREGATE MULCH OR EQUAL (MUST SATISFY THE FINAL STABILIZATION CRITERIA CGP 2.2.14.B.)

PROPOSED DRAINAGE:

THE SITE WILL CONTINUE TO DRAIN FROM EAST TO WEST INTO THE EXISTING DRAINAGE SWALE ALONG PAN AMERICAN FREEWAY AND IS DIVIDED INTO THREE BASINS. THE OFFSITE LOTS TO THE EAST WILL CONTINUE TO DRAIN THROUGH THIS SITE VIA TEMPORARY DESILTING PONDS LOCATED ALONG THE PROPERTY LINE. BASIN OF-1 WILL DRAIN A 100YR, 6-HR FLOW OF 1.67 CFS TO BASIN "B" WHILE BASIN OF-2 WILL DRAIN A 100YR, 6-HR FLOW OF 4.10 CFS TO BASIN "C".

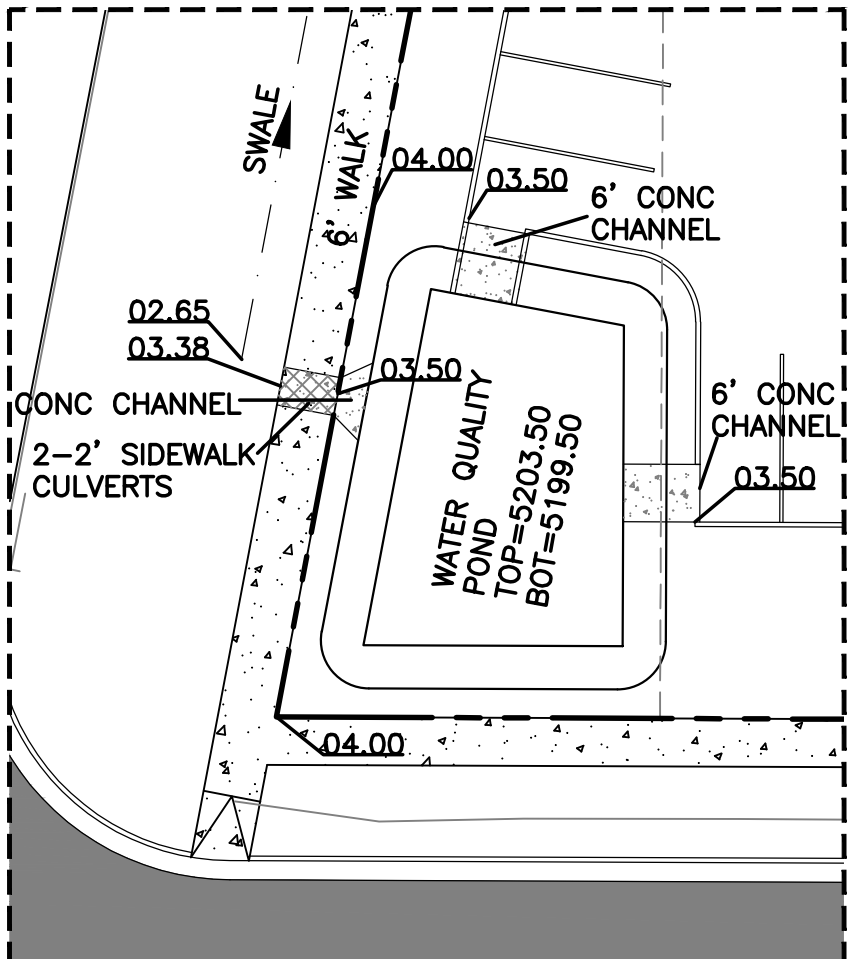
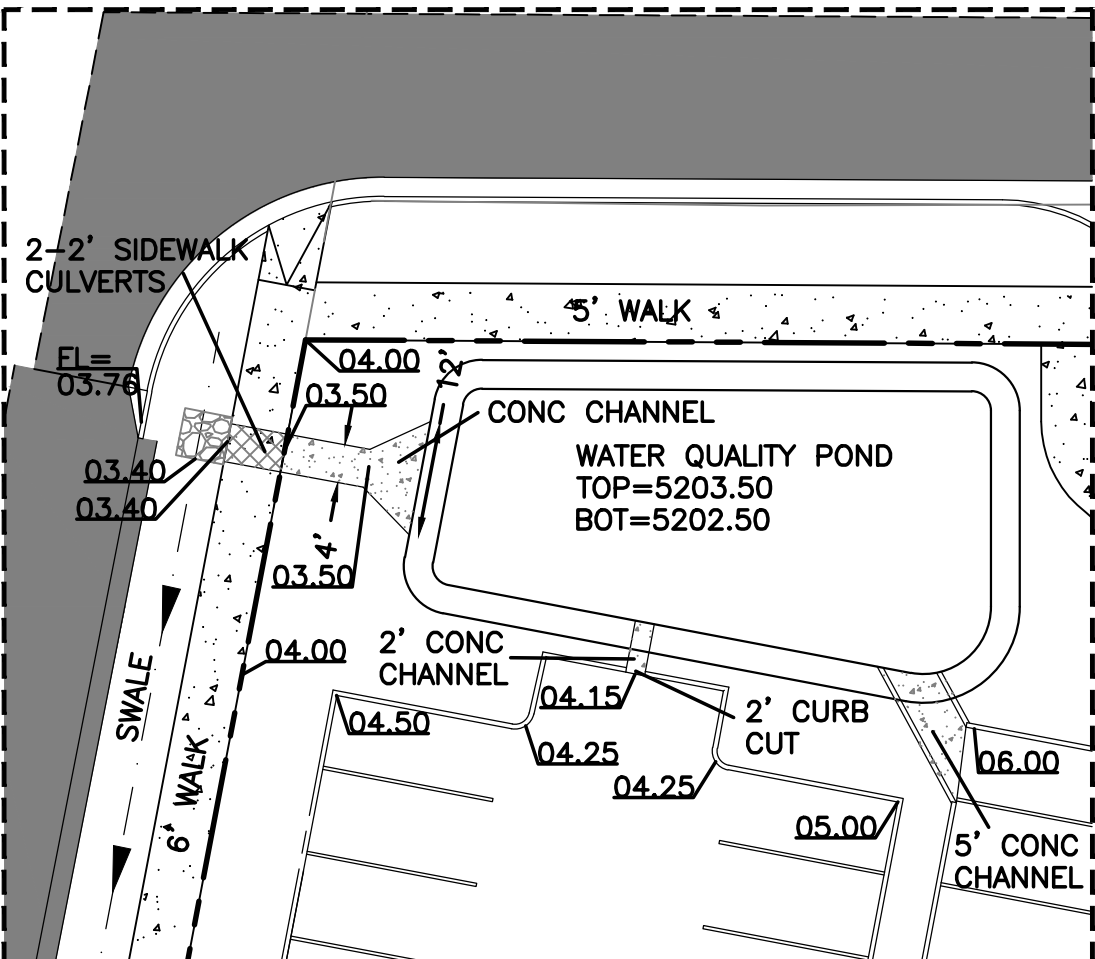
BASIN "B" WILL GENERATE A 100YR, 6-HR FLOW OF 4.47 CFS WHICH WILL BE DIRECTED TO A WATER QUALITY POND. BASIN "B" WILL PASS THROUGH THE OFFSITE FLOWS FROM BASIN OF-1. THE POND WILL CONTAIN THE REQUIRED WATER QUALITY VOLUME AND THEN OVERFLOW TO BASIN "A".

BASIN "A" WILL GENERATE A 100YR, 6-HR FLOW OF 2.36 CFS WHICH WILL BE DIRECTED TO A WATER QUALITY POND. BASIN "B" WILL PASS THROUGH THE FLOWS FROM BASIN OF-2. THE COMBINED VOLUME OF THE PONDS CONTAIN THE REQUIRED WATER QUALITY VOLUME. ALL FLOWS EVENTUALLY WILL PASS THROUGH THE WATER QUALITY POND LOCATED IN THE SOUTHWEST CORNER OF THE PROPERTY AND OVERFLOW INTO THE EXISTING DRAINAGE SWALE ALONG PAN AMERICAN FREEWAY AS IT DOES IN THE EXISTING CONDITION.

BASIN "C" WILL GENERATE A 100YR, 6-HR FLOW OF 14.26 CFS WHICH WILL BE DIRECTED TO TWO WATER QUALITY PONDS. BASIN "C" WILL PASS THROUGH THE FLOWS FROM BASIN OF-2. THE COMBINED VOLUME OF THE PONDS CONTAIN THE REQUIRED WATER QUALITY VOLUME. ALL FLOWS EVENTUALLY WILL PASS THROUGH THE WATER QUALITY POND LOCATED IN THE SOUTHWEST CORNER OF THE PROPERTY AND OVERFLOW INTO THE EXISTING DRAINAGE SWALE ALONG PAN AMERICAN FREEWAY AS IT DOES IN THE EXISTING CONDITION.

THE EXISTING DRAINAGE SWALE ALONG PAN AMERICAN FREEWAY WILL BE CLEANED AND LINED WITH COBBLE TO PREVENT EROSION. THE TOTAL DISCHARGE TO THE SWALE IS 26.86 CFS WHICH IS WELL BELOW THE 30.0 CFS ALLOWED PER THE APPROVED DRAINAGE ANALYSIS.

SEE SHEET GR-3 FOR ROAD CROSS SECTIONS



Weighted E Method (Developed)

On-Site Basins

Basin	Area (sf)	Area (acres)	Treatment A		Treatment B		Treatment C		Treatment D		100-Year			10-Year		
			%	(acres)	%	(acres)	%	(acres)	%	(acres)	Weighted E (in)	Volume (ac-ft)	Flow cfs	Weighted E (in)	Volume (ac-ft)	Flow cfs
A	26,610	0.61	0%	0	24%	0.15	0%	0.00	76%	0.46	1.963	0.100	2.36	1.220	0.062	1.40
B	49,337	1.13	0%	0	20%	0.23	0%	0.00	80%	0.91	2.024	0.191	4.47	1.268	0.120	2.67
C	154,430	3.55	0%	0	16%	0.57	0%	0.00	84%	2.98	2.085	0.616	14.26	1.316	0.389	8.61
Total													21.09			

Off-Site Basins

Basin	Area (sf)	Area (acres)	Treatment A		Treatment B		Treatment C		Treatment D		100-Year			10-Year		
			%	(acres)	%	(acres)	%	(acres)	%	(acres)	Weighted E (in)	Volume (ac-ft)	Flow cfs	Weighted E (in)	Volume (ac-ft)	Flow cfs
OF-1	17,982	0.41	0%	0	15%	0.06	0%	0.00	85%	0.35	2.101	0.072	1.67	1.329	0.046	1.01
OF-2	44,159	1.01	0%	0	15%	0.15	0%	0.00	85%	0.86	2.101	0.177	4.10	1.329	0.112	2.48
Total													5.77			

Equations:

Excess Precipitation, E (inches)

Zone 2	100-Year	10 - Year
E _a	0.62	0.15
E _b	0.80	0.30
E _c	1.03	0.48
E _d	2.33	1.51

Peak Discharge (cfs/acre)

Zone 2	100-Year	10 - Year
Q _a	1.71	0.41
Q _b	2.36	0.95
Q _c	3.05	1.59
Q _d	4.34	2.71

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

Water Quality Calculations

Basin	Impervious Area (sf)	SWQV (in)	Storm Water Quality Vol. (ft ³)	Storm Water Quality Vol. (ac-ft)
A	20,224	0.42	708	0.016
B	39,470	0.42	1381	0.032
C	129,721	0.42	4540	0.104
OF-1	15,285	0.42	535	0.012
OF-2	37,535	0.42	1314	0.030

Channel Capacity										
	Top Width	Bottom Width	Depth	Area	WP	R	Slope	Q Provided	Q Required	Velocity
	(ft)	(ft)	(ft)	(ft^2)	(ft)		(%)	(cfs)	(cfs)	(ft/s)
Channel	3	3	0.67	2.01	4.34	0.4631	1	13.79	8.50	4.23
Channel	4	4	0.67	2.68	5.34	0.5019	1	19.40	18.36	6.85
Manning's Equation:										
Q = 1.49/n * A * R^(2/3) * S^(1/2)										
A = Area										
R = D/4										
S = Slope										
n = 0.013										

Curb Opening Capacity

Weir Equation:

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

Q= Flow

C = 2.95

L= Length of weir

H = Height of Weir

Basin "A" Curb Openings

$$Q = 2.95 * 5.0 * 0.67^{3/2}$$

$$Q = 8.90 \text{ cfs} < Q = 8.50 \text{ cfs}$$

Basin "B" Curb Openings

$$Q = 2.95 * 6 * 0.53^{3/2}$$

$$Q = 6.26 \text{ cfs} < Q = 6.14 \text{ cfs}$$

Upper Basin "C" Curb Openings

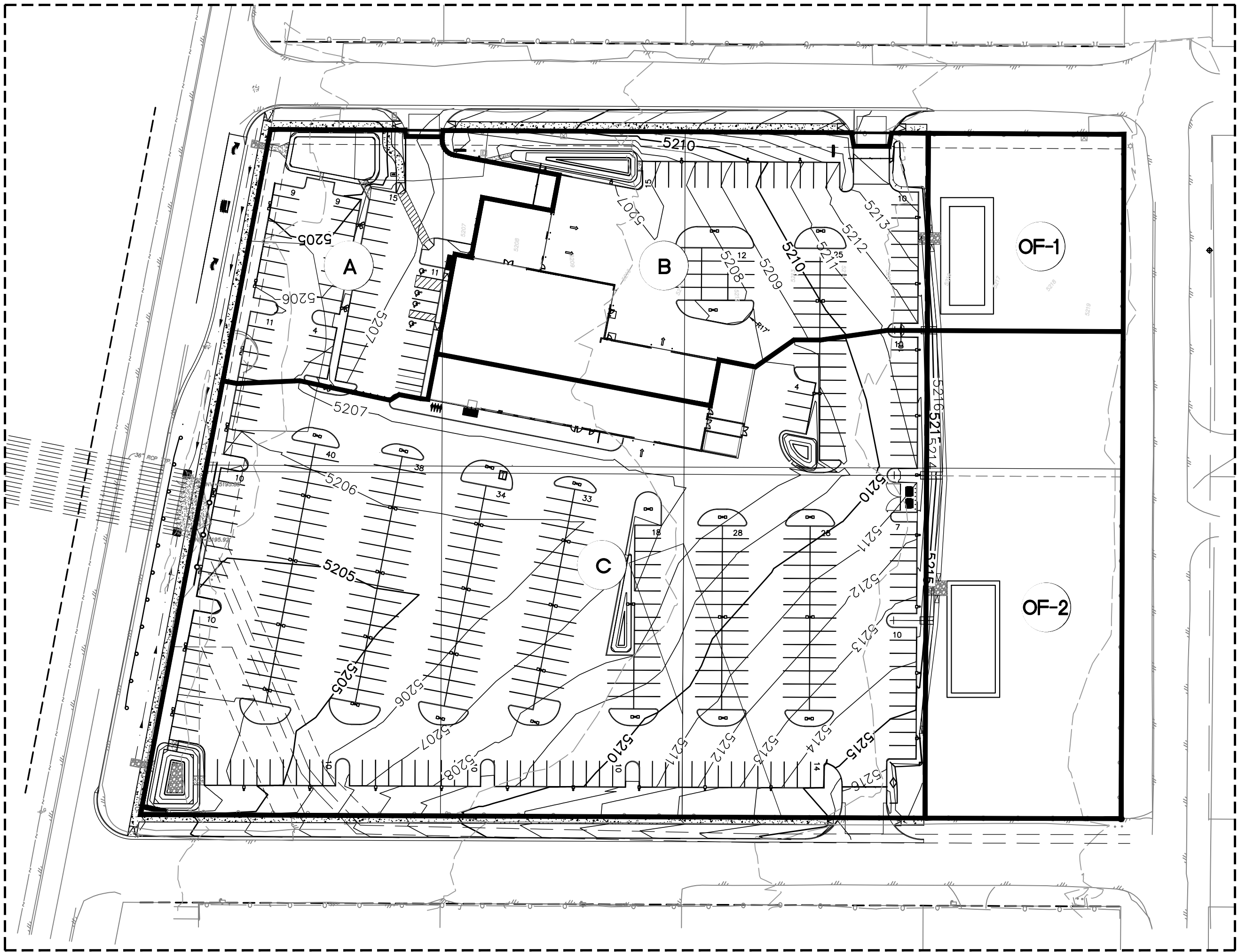
$$Q = 2.95 * 8.5 * .53^{3/2}$$

$$Q = 8.87 \text{ cfs} < Q = 8.85 \text{ cfs}$$

Lower Basin "C" Curb Openings

$$Q = 2.95 * 11.5 * .67^{3/2}$$

$$Q = 18.61 \text{ cfs} < Q = 18.36 \text{ cfs}$$



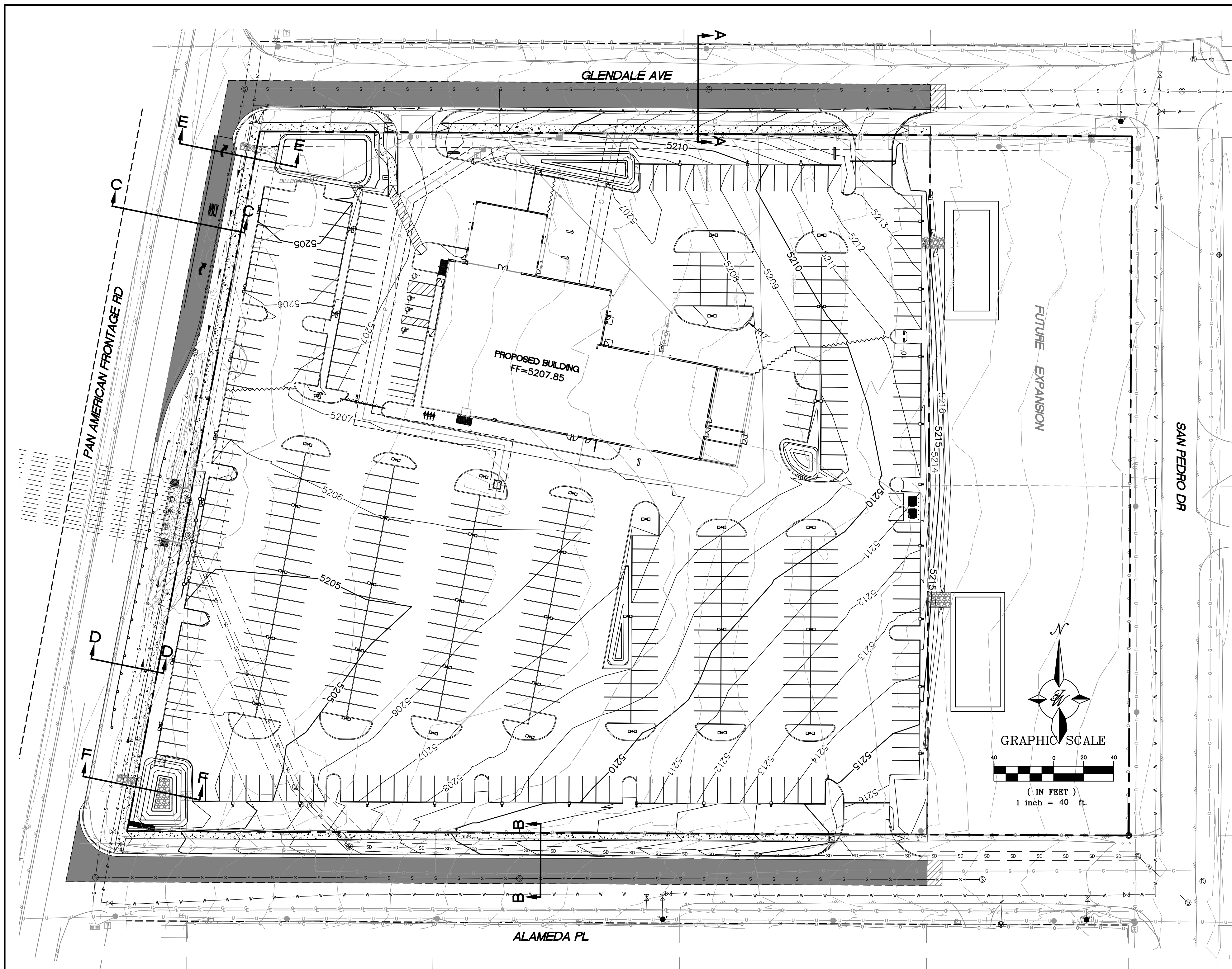
BASIN MAP



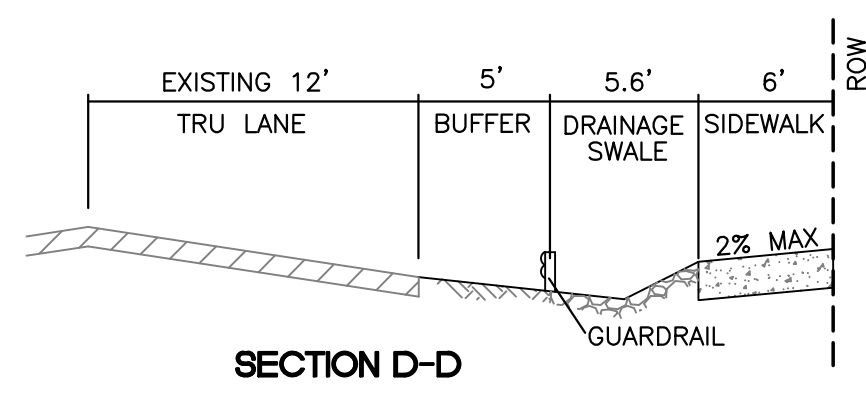
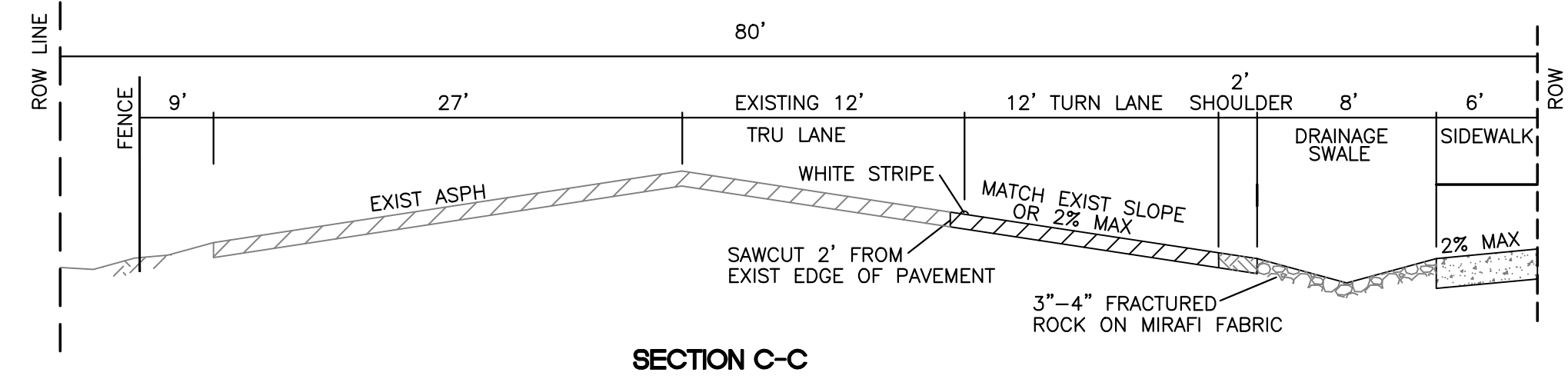
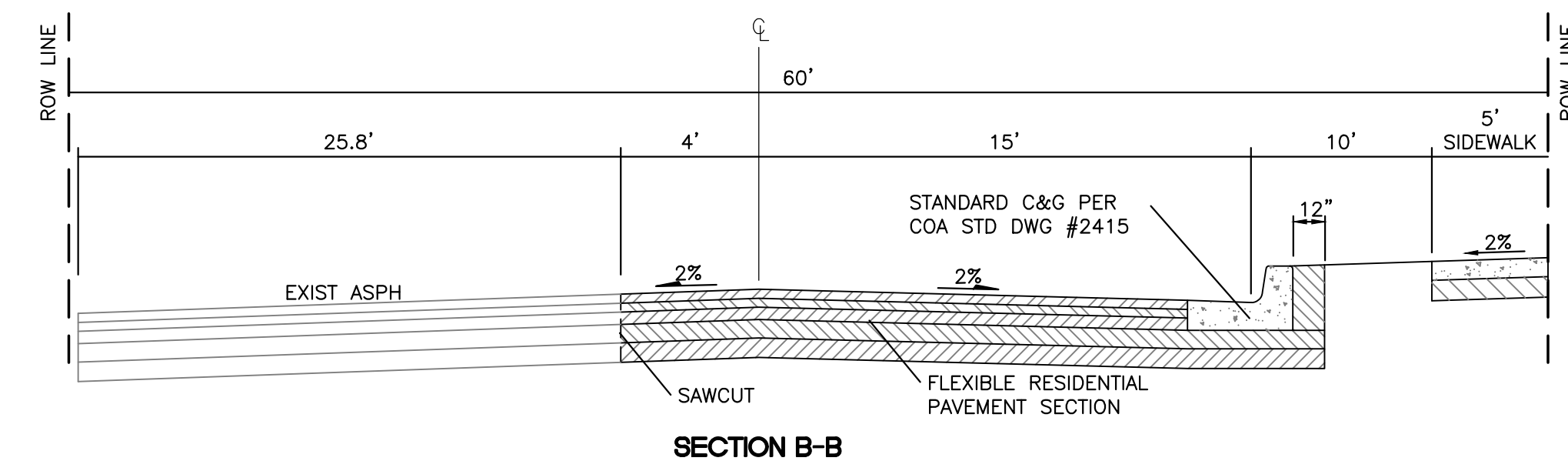
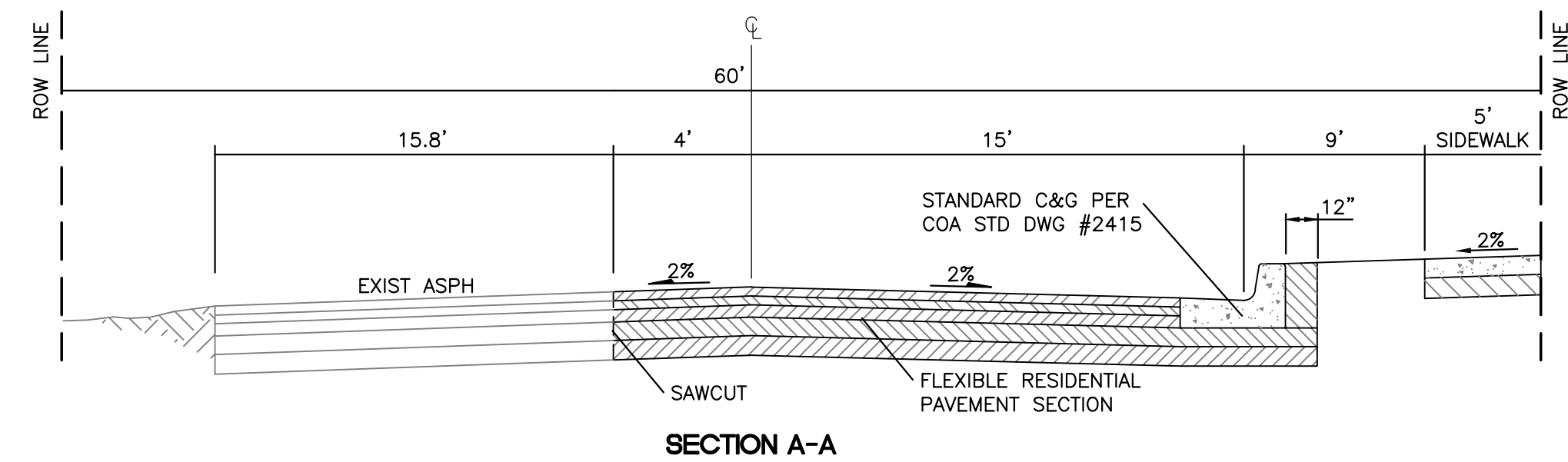
ENGINEER'S SEAL	AUTO NATION ALBUQUERQUE, NM	DRAWN BY pm
		DATE 7-29-21
	GRADING AND DRAINAGE PLAN	DRAWING 2021010-GR
		 <i>TERRA WEST, LLC</i> 5571 MIDWAY PARK PL NE ALBUQUERQUE, NEW MEXICO 87109 (505) 858-3100 www.tierrawestllc.com
 7-29-21	RONALD R. BOHANNAN P.E. #7868	JOB # 2021010

CAUTION

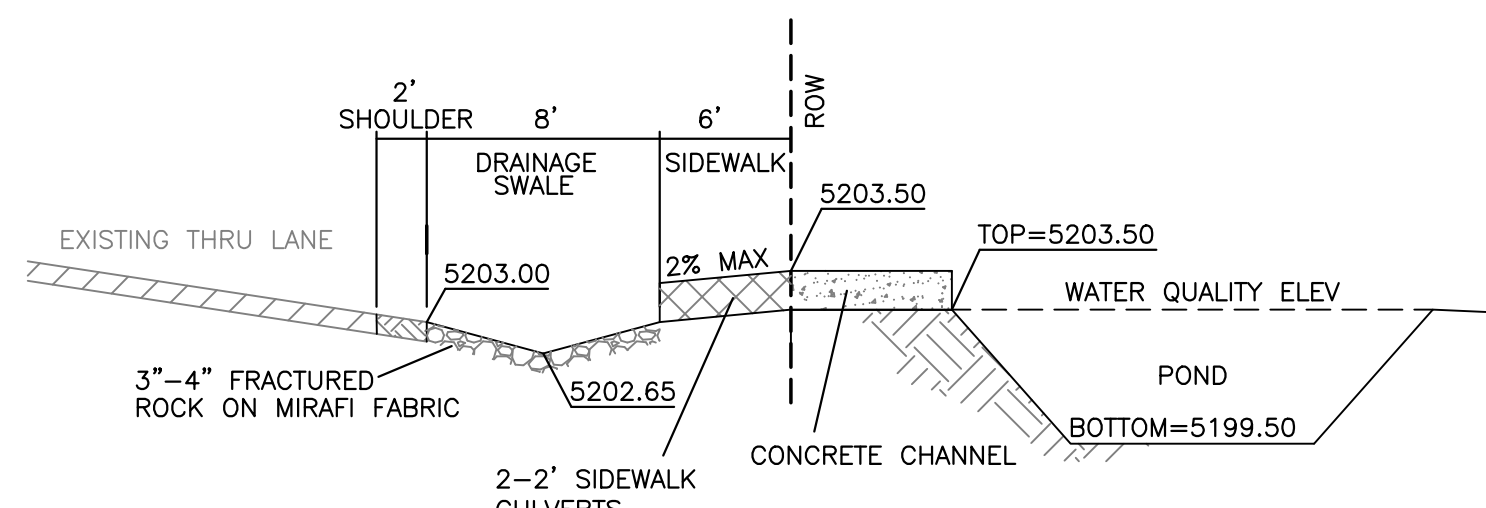
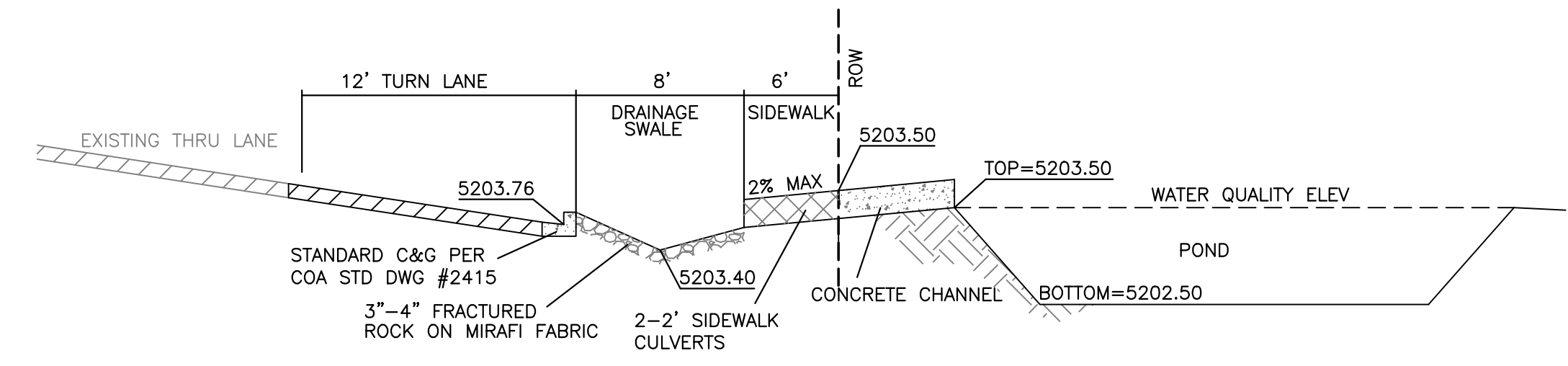
ALL EXISTING UTILITIES SHOWN WERE OBTAINED FROM RESEARCH, AS-BUILTS, SURVEYS OR INFORMATION PROVIDED BY OTHERS. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO AND INCLUDING ANY EXCAVATION, TO DETERMINE THE ACTUAL LOCATION OF UTILITIES AND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



- LEGEND**
- CURB & GUTTER
 - BOUNDARY LINE
 - EASEMENT
 - RIGHT-OF-WAY
 - BUILDING
 - SIDEWALK
 - 5010 CONTOUR MAJOR
 - 5011 CONTOUR MINOR
 - x 5048.25
 - FLOW ARROW
 - EXISTING CURB & GUTTER
 - EXISTING BOUNDARY LINE
 - 5010 EXISTING CONTOUR MAJOR
 - 5011 EXISTING CONTOUR MINOR
 - x 5048.25
 - EXISTING SPOT ELEVATION
 - EXISTING LIGHT STANDARD
 - SAWCUT LINE



City of Albuquerque
Planning Department
Development Review Services
HYDROLOGY SECTION
APPROVED
DATE: 08/19/21
BY: *Ronald R. Bohannan*
HydroTrans # B18D027



THIS SITE FREE DISCHARGES TO THE NMDOT CHANNEL SO THERE IS NO 100 YR WSE

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.

ENGINEER'S SEAL RONALD R. BOHANNAN P.E. #7868	AUTO NATION ALBUQUERQUE, NM		DRAWN BY pm
	GRADING AND DRAINAGE PLAN		DATE 7-29-21
	 TERRA WEST, LLC 5571 MIDWAY PARK PL. NE ALBUQUERQUE, NEW MEXICO 87109 (505) 858-3100 www.tierrawestllc.com		DRAWING 2021010-GR
			SHEET # GR-3
		JOB # 2021010	