

CITY OF ALBUQUERQUE

Planning Department
Alan Varela, Director



Mayor Timothy M. Keller

January 3, 2024

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

**RE: Autozone - Universe
Revised Grading and Drainage Plans
Engineer's Stamp Date: 11/15/23
Hydrology File: B10D003C3A**

Dear Mr. Bohannon:

Based upon the information provided in your submittal received 12/07/2023, the Revised Grading & Drainage Plans are approved for Building Permit, Grading Permit, and for action by the Development Facilitation Team (DFT) on Site Plan 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.

PO Box 1293

Albuquerque

PRIOR TO CERTIFICATE OF OCCUPANCY:

NM 87103

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.

www.cabq.gov

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.

CITY OF ALBUQUERQUE

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Mayor Timothy M. Keller

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 (DTIS)

Project Title: _____ Hydrology File # _____

Legal Description: _____

City Address, UPC, OR Parcel: _____

Applicant/Agent: _____ Contact: _____

Address: _____ Phone: _____

Email: _____

Applicant/Owner: _____ Contact: _____

Address: _____ Phone: _____

Email: _____

(Please note that a DFT SITE is one that needs Site Plan Approval & ADMIN SITE is one that does not need it.)

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

RE-SUBMITTAL: YES NO

DEPARTMENT: TRANSPORTATION HYDROLOGY/DRAINAGE

Check all that apply under Both the Type of Submittal and the Type of Approval Sought:

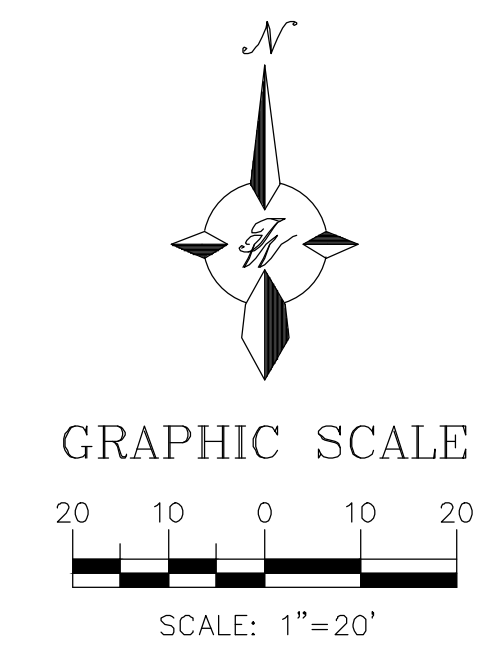
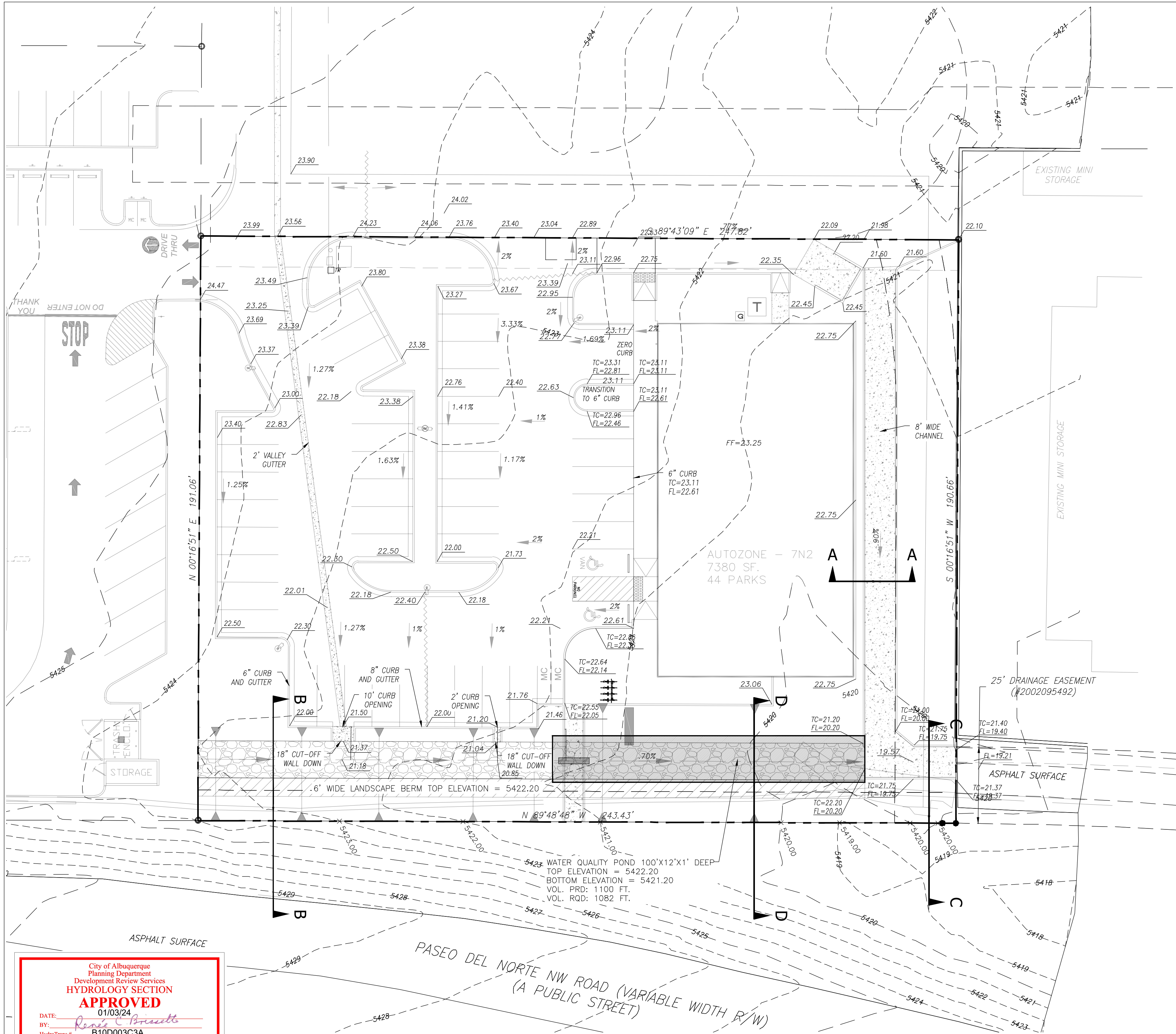
TYPE OF SUBMITTAL:

- ENGINEER/ARCHITECT CERTIFICATION
- PAD CERTIFICATION
- CONCEPTUAL G&D PLAN
- GRADING & DRAINAGE PLAN
- DRAINAGE REPORT
- DRAINAGE MASTER PLAN
- CLOMR/LOMR
- TRAFFIC CIRCULATION LAYOUT (TCL)
ADMINISTRATIVE
- TRAFFIC CIRCULATION LAYOUT FOR DFT
APPROVAL
- TRAFFIC IMPACT STUDY (TIS)
- STREET LIGHT LAYOUT
- OTHER (SPECIFY) _____

TYPE OF APPROVAL SOUGHT:

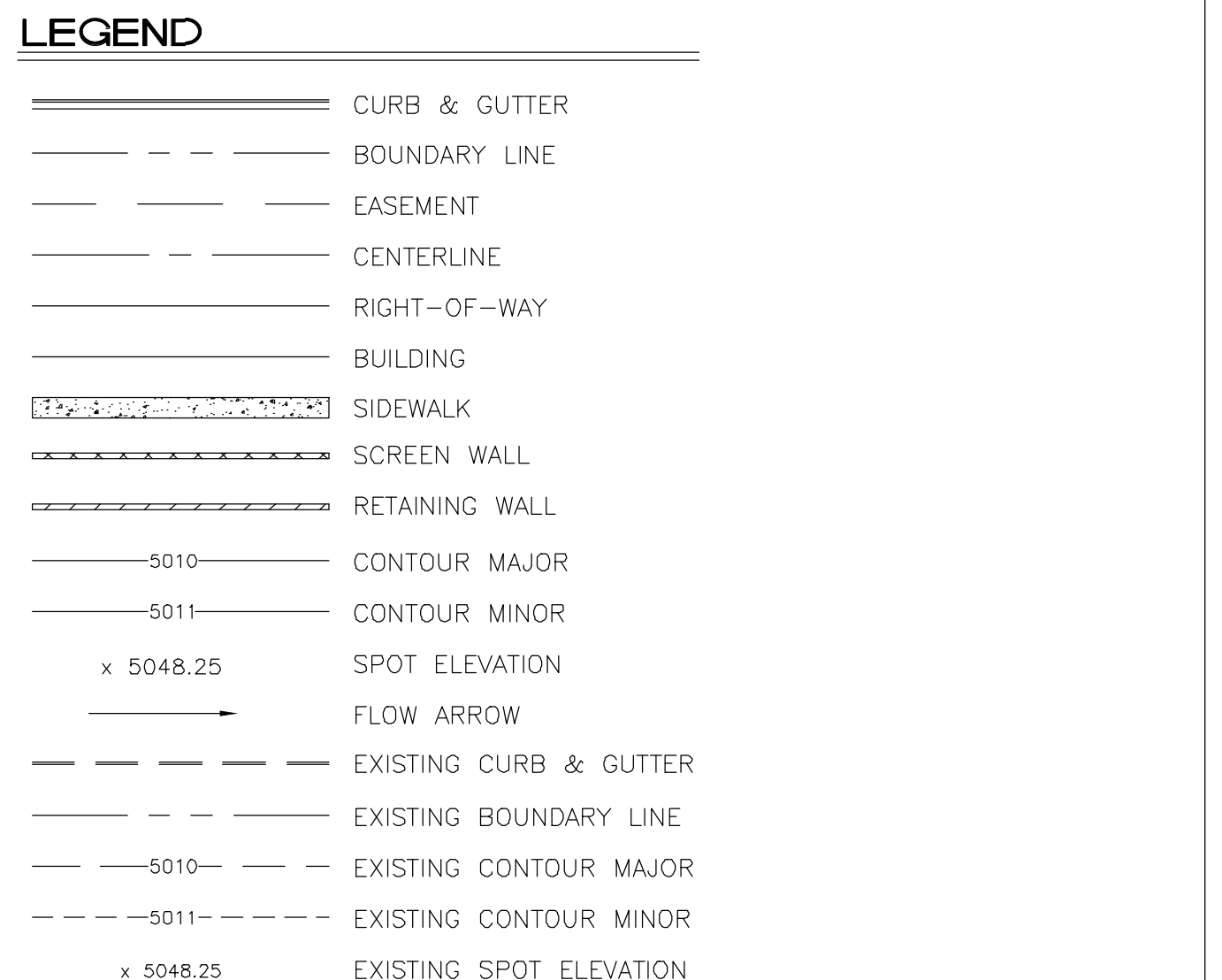
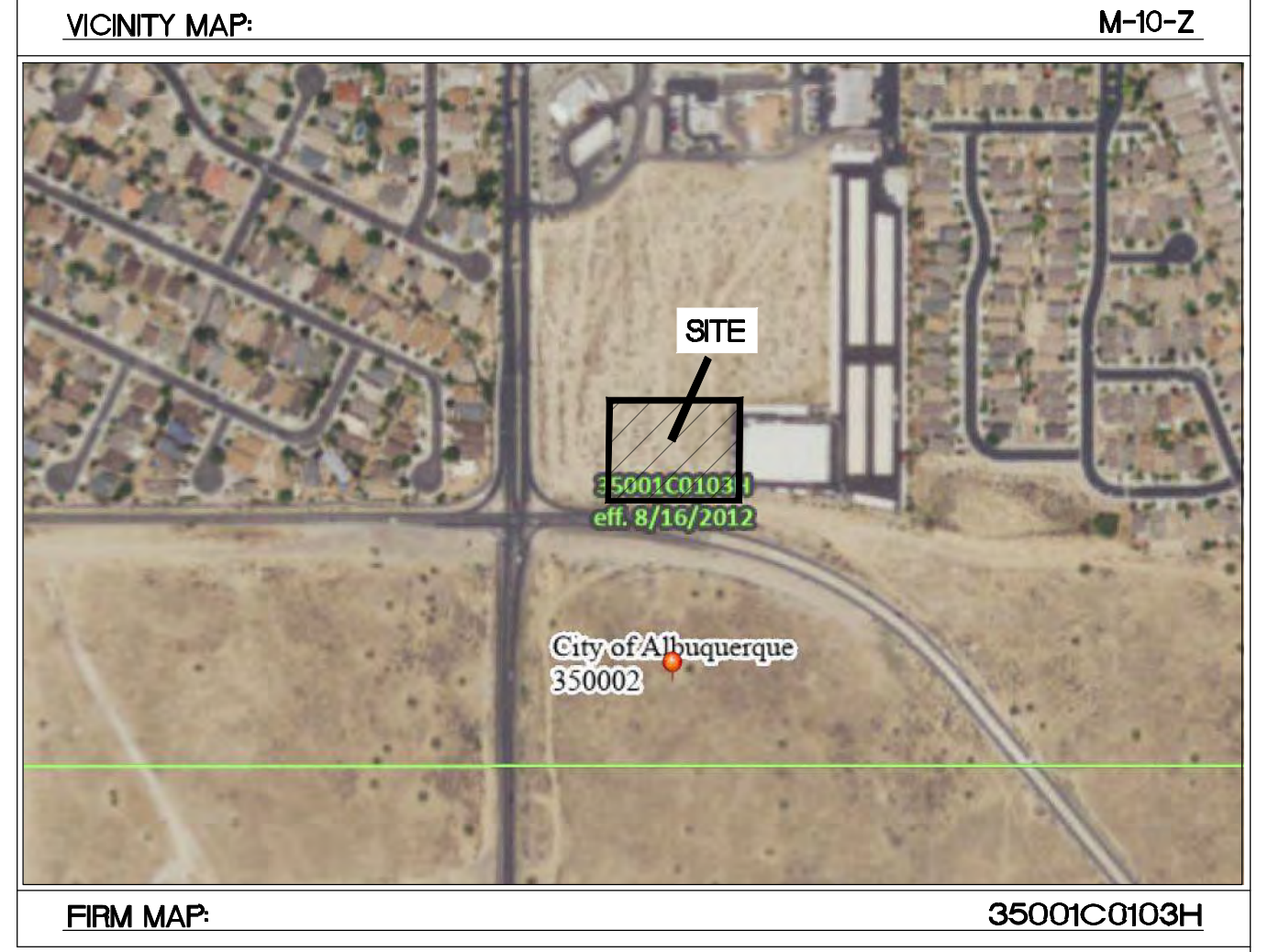
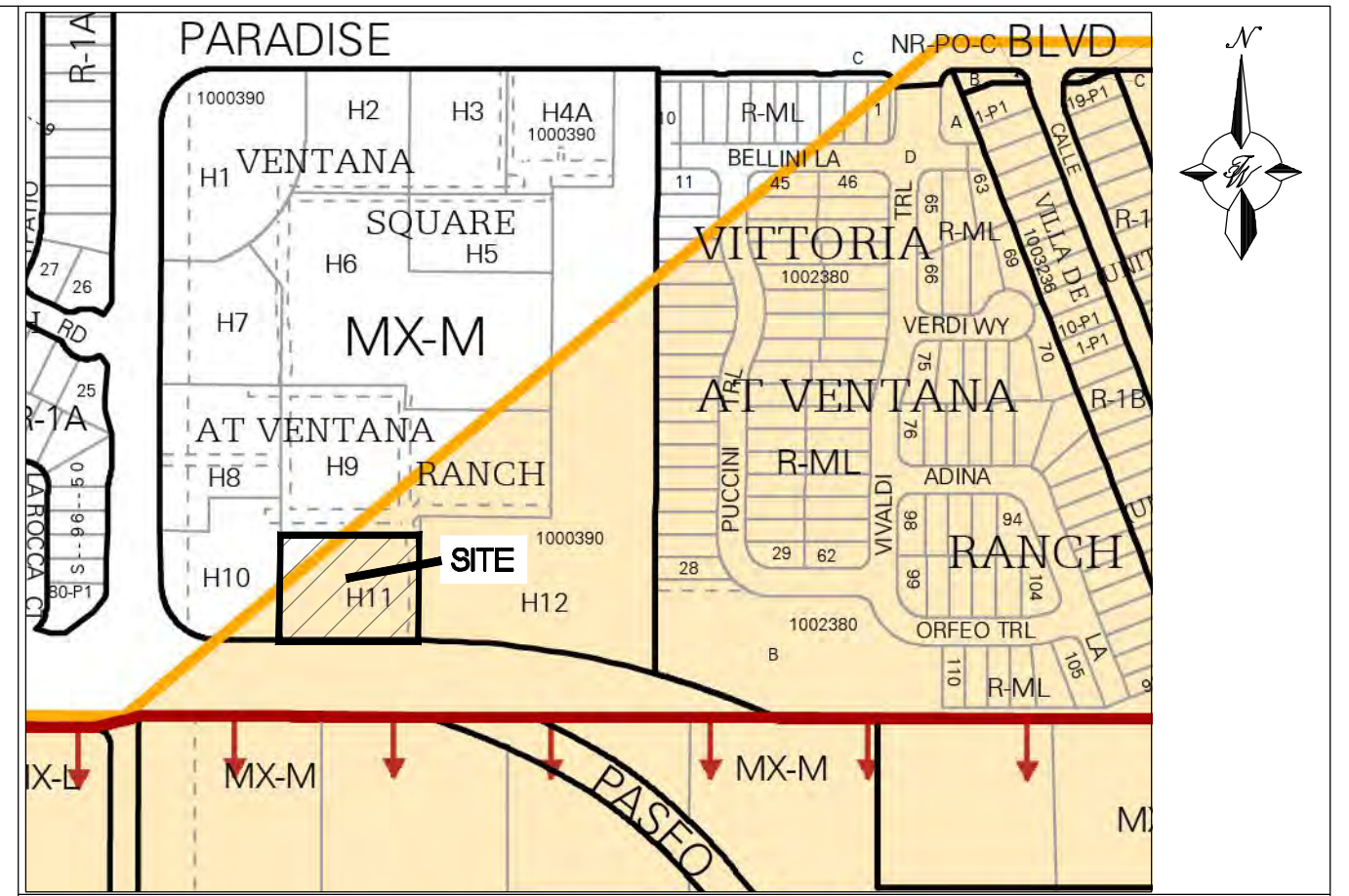
- BUILDING PERMIT APPROVAL
- CERTIFICATE OF OCCUPANCY
- CONCEPTUAL TCL DFT APPROVAL
- PRELIMINARY PLAT APPROVAL
- FINAL PLAT APPROVAL
- SITE PLAN FOR BLDG PERMIT DFT
APPROVAL
- SIA/RELEASE OF FINANCIAL GUARANTEE
- FOUNDATION PERMIT APPROVAL
- GRADING PERMIT APPROVAL
- SO-19 APPROVAL
- PAVING PERMIT APPROVAL
- GRADING PAD CERTIFICATION
- WORK ORDER APPROVAL
- CLOMR/LOMR
- OTHER (SPECIFY) _____

DATE SUBMITTED: _____



- KEYED NOTES**
- 1 ACCESSIBLE PARKING PER ADA STANDARDS WITH SIGN (SEE DETAIL SHT. C10)
 - 2 6" HEADER CURB (SEE DETAIL SHT. C9)
 - 3 8" CURB & GUTTER (SEE DETAIL SHT. C9)
 - 4 6" TURNDOWN CURB (SEE DETAIL SHT. C9)
 - 5 ZERO CURB (SEE DETAIL SHT. C9)
 - 6 CONCRETE SIDEWALK AT BUILDING (SEE DETAIL SHT. C9)
 - 7 DUMPSTER (SEE DETAIL SHT. C10)
 - 8 BICYCLE RACKS (SEE DETAIL SHT. C10)
 - 9 CURB HC RAMP (SEE DETAIL SHT C10)
 - 10 UNIDIRECTIONAL HC RAMP (SEE DETAIL SHT C10)
 - 11 TRANSFORMER
 - 12 CONCRETE RUNDOWN 2' WIDE X 8" DEEP (SEE DETAIL SHT C7)
 - 13 CONCRETE RUNDOWN 7' WIDE X 8" DEEP (SEE DETAIL SHT C7)
 - 14 CONCRETE CHANNEL 10' WIDE X 8" DEEP (SEE DETAIL SHT C10)
 - 15 COBBLE SWALE 12' WIDE X (PER PLAN) DEEP
 - 16 WHEEL STOP (SEE DETAIL SHT C10)
 - 17 8" HEADER CURB (SEE DETAIL SHT. C9)
 - 18 REMOVABLE BOLLARD (SEE DETAIL SHT. C10)
 - 19 MOTORCYCLE PARKING WITH SIGN (SEE DETAIL SHT. C10)
 - 20 SWALE SIDES TO BE STABILIZED WITH GRASS SEED WITH AGGREGATE MULCH OR EQUAL. (MUST SATISFY THE FINAL STABILIZATION CRITERIA CGP 2.2.14.B)

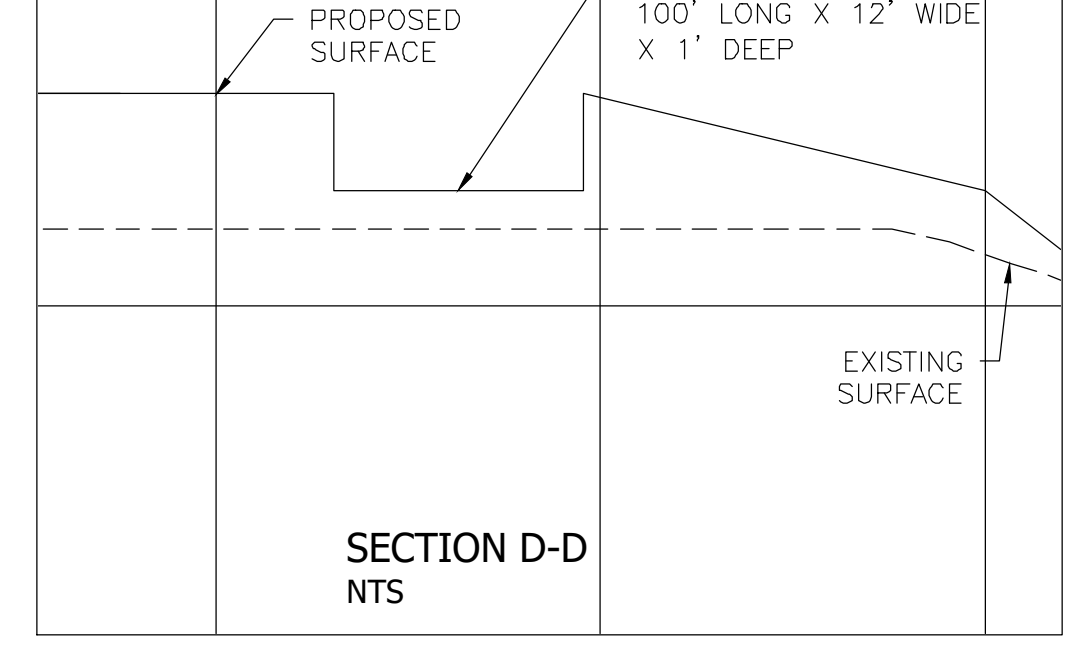
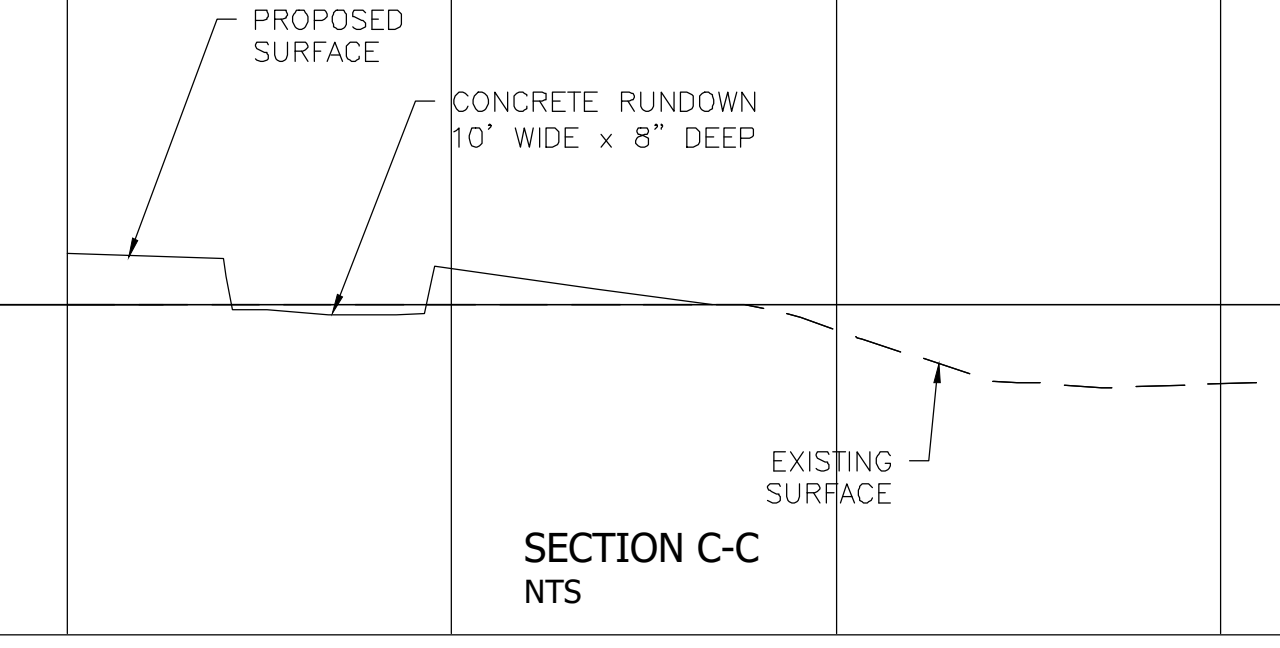
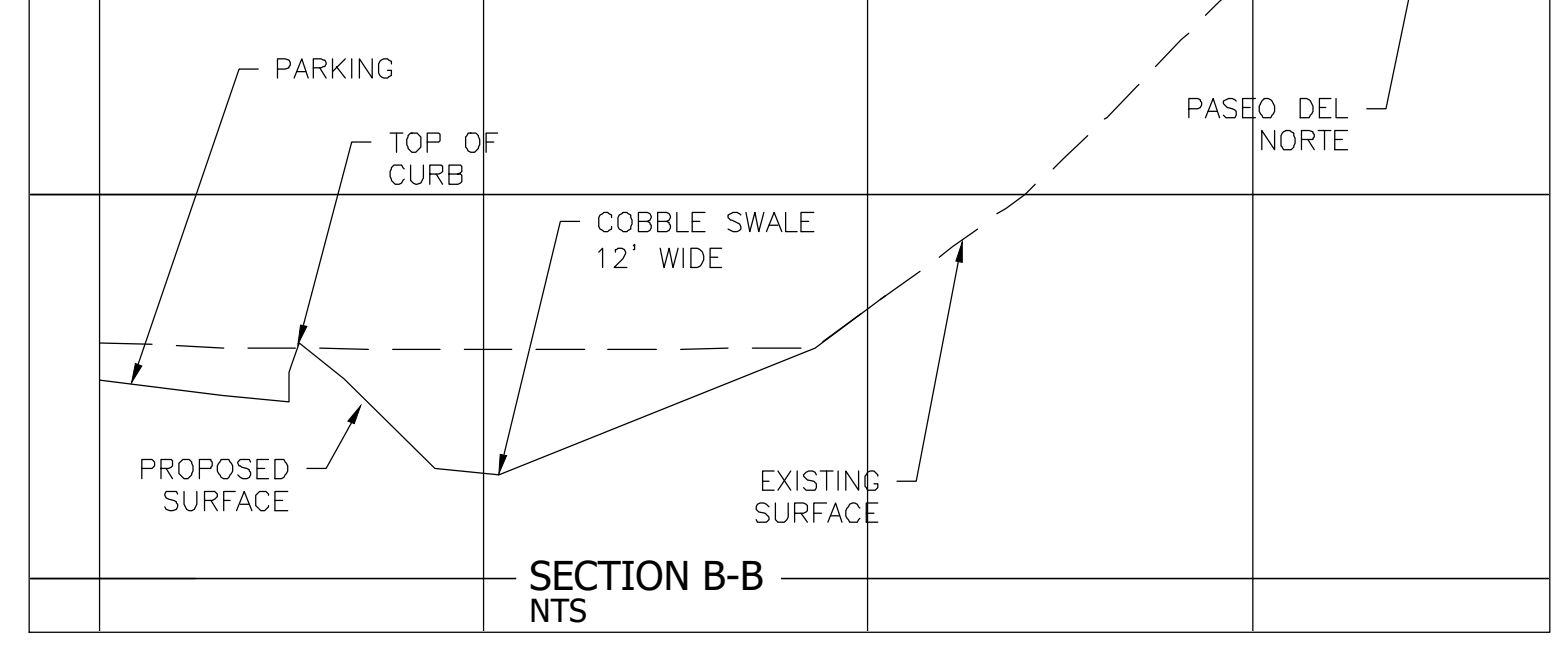
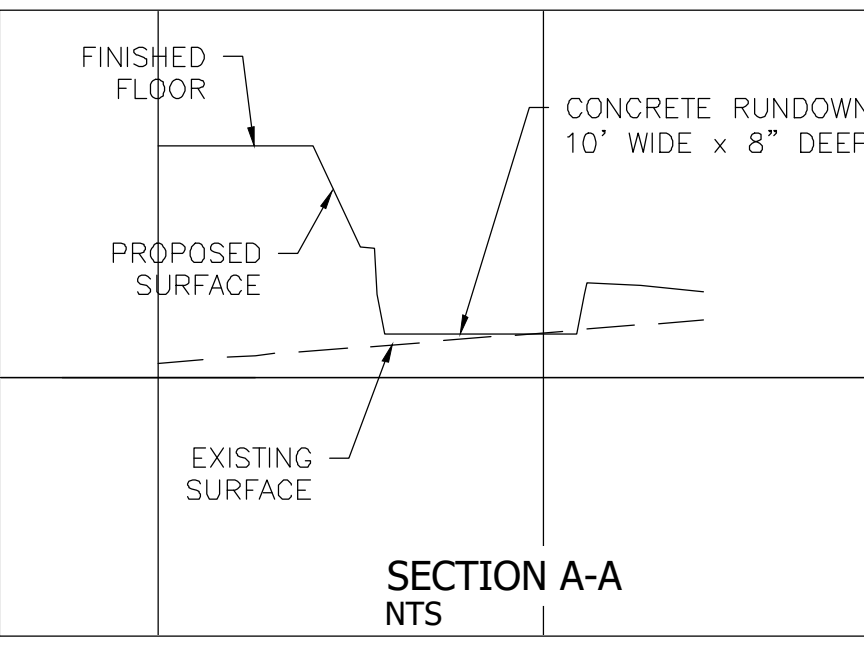
- NOTICE TO CONTRACTORS**
1. AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY.
 2. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED, EXCEPT AS OTHERWISE STATED OR PROVIDED HERON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF ALBUQUERQUE INTERIM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1985.
 3. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL DIAL "811" (OR (505) 260-1990) FOR THE 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. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
 6. WORK ON ARTERIAL STREETS SHALL BE PERFORMED ON A 24-HOUR BASIS.
 7. CONTRACTOR MUST CONTACT JASON RODRIGUEZ AT 235-8016 AND CONSTRUCTION COORDINATION AT 924-3416 TO SCHEDULE AN INSPECTION.



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.

City of Albuquerque
Planning Department
Development Review Services
HYDROLOGY SECTION
APPROVED
DATE: 01/03/24
BY: *Ronald R. Bohannan*
HydroTrans # B10D003C3A

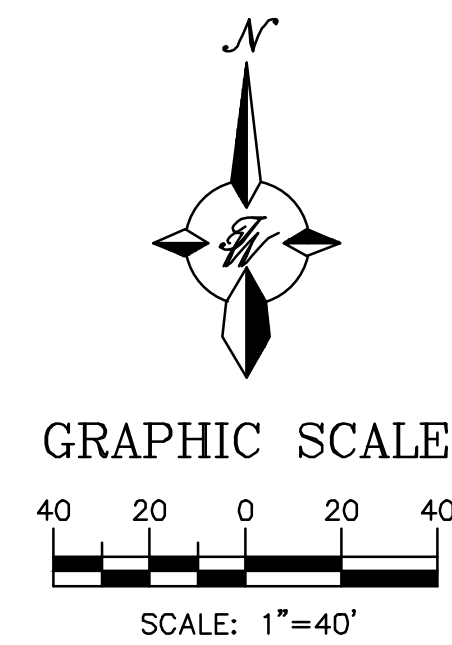
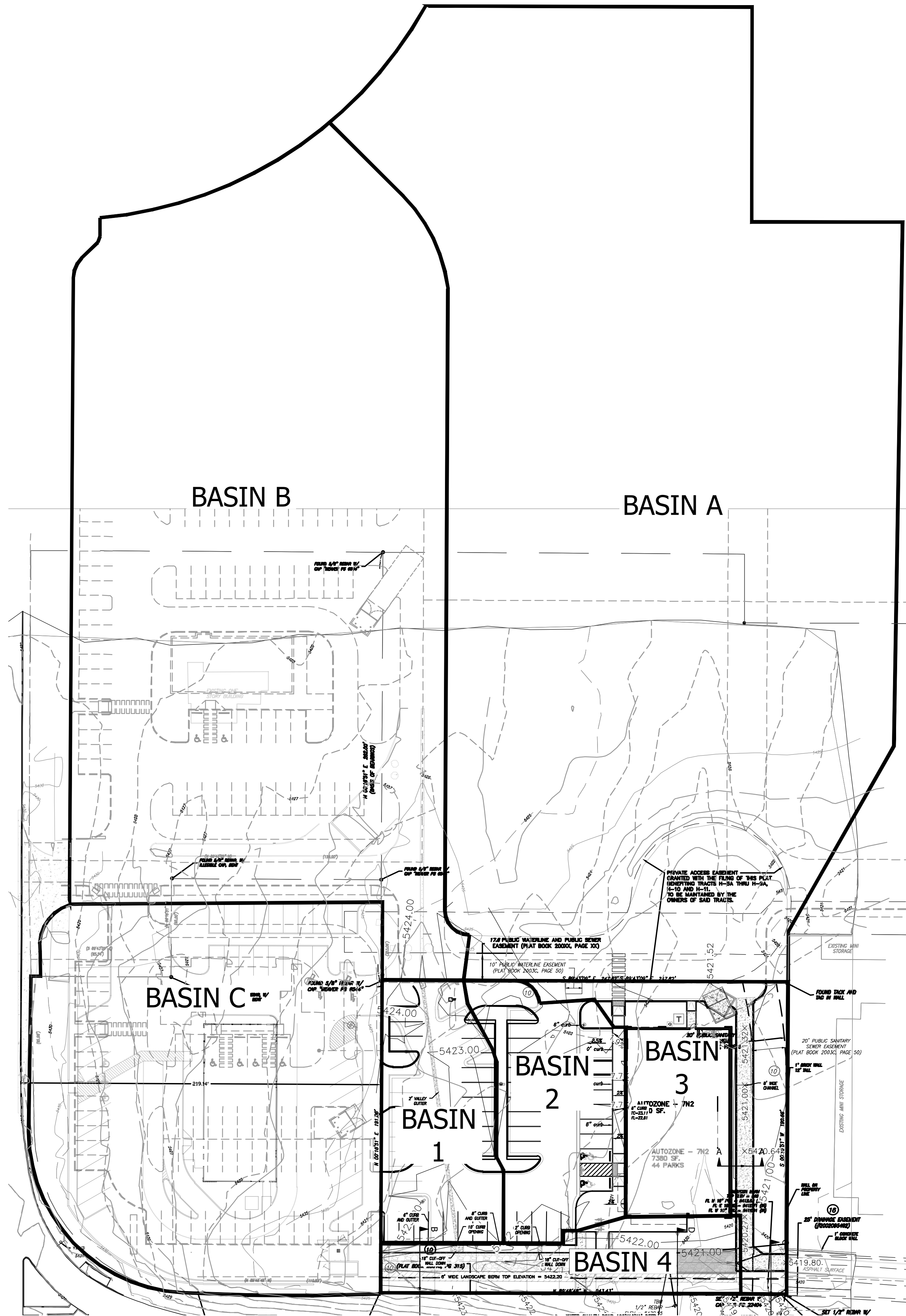
APPROVAL OF GRADING & DRAINAGE PLANS SHALL EXPIRE TWO (2) YEARS AFTER THE APPROVAL DATE BY THE CITY IF NO BUILDING PERMIT HAS BEEN PULLED ON THE DEVELOPMENT.



	AUTOZONE #9260 PASEO DEL NORTE & UNIVERSE BLVD	DRAWN BY RMG
	GRADING PLAN	DATE 11/15/2023
	SHEET # C4	JOB # 2020074

Z:\2020\2020074 Autozone - Universe & Paseo\dwg\EPCC\2020074_GRE.dwg Jun 03, 2024 - 7:10pm

Z:\2020\2020074 AutoZone - Universe & Paseo\dwg\EPIC\2020074_GRE.dwg Jan 03, 2024 - 7:10am



Weighted E Method

Basin	Area (sf)	Area (acres)	Treatment A				Treatment B				Treatment C				Treatment D				100-Year			10-Year		
			%	(acres)	%	(acres)	%	(acres)	%	(acres)	%	(acres)	Weighted E (in)	Volume (ac-ft)	Flow cfs	Weighted E (in)	Volume (ac-ft)	Flow cfs						
A	150,847	3.46	Values for the off-site Basins taken from Approved Grading and Drainage Plan for Ventana Square completed by Thompson Engineering dated 07/30/21. (Hydrology # B10D003C3)																14.08					
B	112,080	2.57																9.48						
C	51,885	1.19																4.48						
1	10,923	0.25	0%	0	23%	0.06	0%	0.00	77%	0.19	1.893	0.040	0.92	1.161	0.024	0.54								
2	11,657	0.27	0%	0	15%	0.04	0%	0.00	85%	0.23	2.014	0.045	1.02	1.255	0.028	0.62								
3	16,530	0.38	0%	0	27%	0.10	0%	0.00	73%	0.28	1.832	0.058	1.36	1.114	0.035	0.79								
4	8,186	0.19	0%	0	0%	0.00	95%	0.18	5%	0.01	1.015	0.016	0.55	0.480	0.008	0.28								
											0.71		31.35											

Equations:

Weighted E = $E_a \cdot A_a + E_b \cdot A_b + E_c \cdot A_c + E_d \cdot A_d$ / (Total Area)

Volume = Weighted D * Total Area

Flow = $Q_a \cdot A_a + Q_b \cdot A_b + Q_c \cdot A_c + Q_d \cdot A_d$

Water Quality Calculation: $0.42'' \times 0.71 \text{ ac} = 1,082 \text{ cubic feet (0.025 ac-ft)}$

Excess Precipitation, E (inches)

Zone	100-Year	10-Year
E _a	0.55	0.11
E _b	0.73	0.26
E _c	0.95	0.43
E _d	2.24	1.43

Peak Discharge (cfs/acre)

Zone	100-Year	10-Year
Q _a	1.54	0.3
Q _b	2.16	0.81
Q _c	2.87	1.46
Q _d	4.12	2.57

Cobble Swale Capacity

	Top Width (ft)	Bottom Width (ft)	Depth (ft)	Area (ft ²)	W/P (ft)	R	Slope (%)	Q Provided (cfs)	Q Required (cfs)	Velocity (ft/s)
Channel	12	0	1.5	9.00	12.37	0.7276	0.7	25.93	16.45	1.83

Manning's Equation:

$Q = 1.49/n \cdot A \cdot R^{2/3} \cdot S^{1/2}$

- A = Area
- R = D/4
- S = Slope
- n = 0.035

Channel Capacity

Weir Equation:

$Q = CLH^{3/2}$

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

AutoZone Basin 1 Curb Opening

$Q = 2.95 \cdot 10 \cdot 0.67^{3/2}$

$Q = 16.18 \text{ cfs} < Q = 14.88 \text{ cfs}$

AutoZone Basin 2 Curb Opening

$Q = 2.95 \cdot 2 \cdot 0.67^{3/2}$

$Q = 3.24 \text{ cfs} < Q = 1.02 \text{ cfs}$

AutoZone Basin 3 Concrete Channel

$Q = 2.95 \cdot 10 \cdot 0.67^{3/2}$

$Q = 16.18 \text{ cfs} < Q = 15.44 \text{ cfs}$

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City of Albuquerque
Planning Department
Development Review Services
HYDROLOGY SECTION
APPROVED

DATE: 01/03/24
BY: *Ronald R. Bohannan*
Hydrology # B10D003C3A

THE APPROVAL OF THESE DRAWINGS SHALL NOT BE CONSIDERED TO PERMIT VIOLATIONS OF ANY CITY ORDINANCES OR STATE LAWS AND SHALL NOT PREVENT THE CITY OR AIAA FROM ENFORCEING ANY SUCH ORDINANCES OR LAWS OR FROM ENFORCEING ANY SUCH APPROVALS. THESE DRAWINGS OR CONDITIONS SHALL NOT BE CHANGED, MODIFIED OR ALTERED WITHOUT APPROVAL.

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.

EXISTING DRAINAGE:

THIS SITE IS CURRENTLY VACANT AND LOCATED NEAR THE NORTHEAST CORNER OF PASEO DEL NORTE AND UNIVERSE BOULEVARD. THE PARCEL IS TRACT 11 OF THE VENTANA SQUARE AT VENTANA RANCH SUBDIVISION. THE SITE IS BOUNDED BY VACANT LOTS ON THE NORTH AND WEST SIDE AND A SELF-STORAGE DEVELOPMENT ON THE EAST AND PASEO DEL NORTE ON THE SOUTH AND CONTAINS APPROXIMATELY 1.09 ACRES. THE SITE DRAINS FROM NORTH TO SOUTH ENTERING A SWALE ALONG PASEO DEL NORTE AND EVENTUALLY INTO AN EXISTING RETENTION POND.

THIS PARCEL IS INCLUDED IN THE OVERALL DRAINAGE REPORT FOR VENTANA SQUARE TRACTS H-5-A THRU H-11 PREPARED BY THOMPSON ENGINEERING CONSULTANTS, INC. (B10D003C3) APPROVED ON 01/21/21. THIS PARCEL IS INCLUDED WITHIN DRAINAGE BASIN 400 WHICH DISCHARGES 32.55 CFS THRU THE AUTOZONE PARCEL AND TO THE EXISTING RETENTION POND.

THE SITE IS NOT LOCATED WITHIN A FLOOD PLAIN AS SHOWN ON THE FIRM MAP. THERE ARE NO OFFSITE FLOWS THAT ENTER THE SITE.

PROPOSED DRAINAGE:

SINCE ALL OF THE DRAINAGE FROM BASIN 400 DRAINS THROUGH THE AUTOZONE PARCEL THAT LARGE BASIN WAS BROKEN UP INTO 6 BASINS TO SPLIT THE FLOWS AROUND THE AUTOZONE BUILDING. BASIN "A" WILL DISCHARGE 13.43 CFS TO A CONCRETE CHANNEL LOCATED BEHIND THE AUTOZONE BUILDING. BASIN "B" WILL DISCHARGE 9.98 CFS THROUGH THE PARKING LOT OF THE AUTOZONE AND BE COLLECTED IN A PROPOSED COBBLE SWALE ALONG THE SOUTH PROPERTY LINE. BASIN "C" WILL DRAIN DIRECTLY TO THE PROPOSED COBBLE SWALE.

THE AUTOZONE SITE IS DIVIDED INTO 3 BASINS. BASIN 1 WILL ACCEPT THE 9.98 CFS FROM OFF-SITE AND DRAIN THROUGH A CURB OPENING SIZED FOR THE FLOWS TO THE COBBLE SWALE. BASIN 2 WILL DRAIN THROUGH A CURB OPENING TO THE COBBLE SWALE. BASIN 3 CONSISTS OF THE CONCRETE CHANNEL AND COBBLE SWALE.

THE COBBLE SWALE AND CONCRETE CHANNEL WILL CONNECT TO THE CONCRETE CHANNEL THAT WAS PROPOSED IN THE THOMPSON DRAINAGE REPORT TO BE BUILT BY OTHERS. THE TOTAL DISCHARGE TO THAT CHANNEL IS 32.04 CFS WHICH IS SLIGHTLY LESS THAN WHAT THE THOMPSON REPORT HAD CALCULATED.

THE WATER QUALITY VOLUME WILL BE CONTAINED WITHIN A POND INLINE WITH THE COBBLE SWALE PRIOR TO DISCHARGING TO THE EXISTING CONCRETE CHANNEL.

	ENGINEER'S SEAL AUTOZONE #9260 PASEO DEL NORTE & UNIVERSE BLVD	DRAWN BY RMG DATE 11/15/2023
	DEVELOPED DRAINAGE PLAN	2020074_GRE
	SHEET # C5	JOB # 2020074
RONALD R. BOHANNAN P.E. #7868	TERRA WEST, LLC 5571 MIDWAY PARK PLACE NE ALBUQUERQUE, NM 87109 (505) 858-3100 www.tierrawestllc.com	