



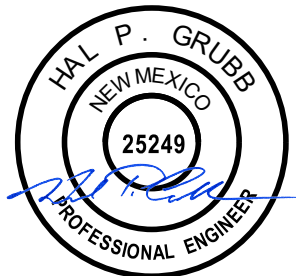
BARGHAUSEN

STORMWATER CONTROL PLAN

Take 5 Oil Change

1125 Snow Vista Boulevard SW
Albuquerque, NM 87121

Prepared for:
Durban Development
C/O Phillip Spence
106 Foster Avenue
Charlotte, NC 28203
(704) 319-8330



09/19/2023

September 2023

BCE Job No. 23007

BARGHAUSEN CONSULTING ENGINEERS, INC.

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BRANCH OFFICES: CHEHALIS, WA KLAMATH FALLS, OR LONG BEACH, CA RICHLAND, WA ROSEVILLE, CA

barghausen.com

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- A. ALTA Survey
- B. Exhibits
 - Pre-developed Drainage Exhibit
 - Post-Condition Drainage Management Area Exhibit

1. Introduction and Background:

The following stormwater control plan has been prepared for the proposed commercial development project located on Lot 1C of the overall development at 1125 Snow Vista Boulevard in the City of Albuquerque, New Mexico. The proposed design has been developed in conformance with the City of Albuquerque and Bernalillo County Standards. The proposed development will consist of a 1,672 square feet Take 5 Oil Change facility building, along with vehicular parking and maneuvering areas, amenities for pedestrians and landscaped areas.

2. Existing Conditions:

The project site is located within a 1.26-acre parcel that is bounded to the North, South, and West by future developments, and to the east by Snow Vista Boulevard. The site is zoned for MX-L – Mixed-Use. The existing site is currently undeveloped and consists of shrubs and off-road vehicle trails.

The proposed uses are approved within the development per the City of Albuquerque. Existing topographic features and current land use including all existing utilities, roads, and easements are depicted on the ALTA Survey – Appendix A.

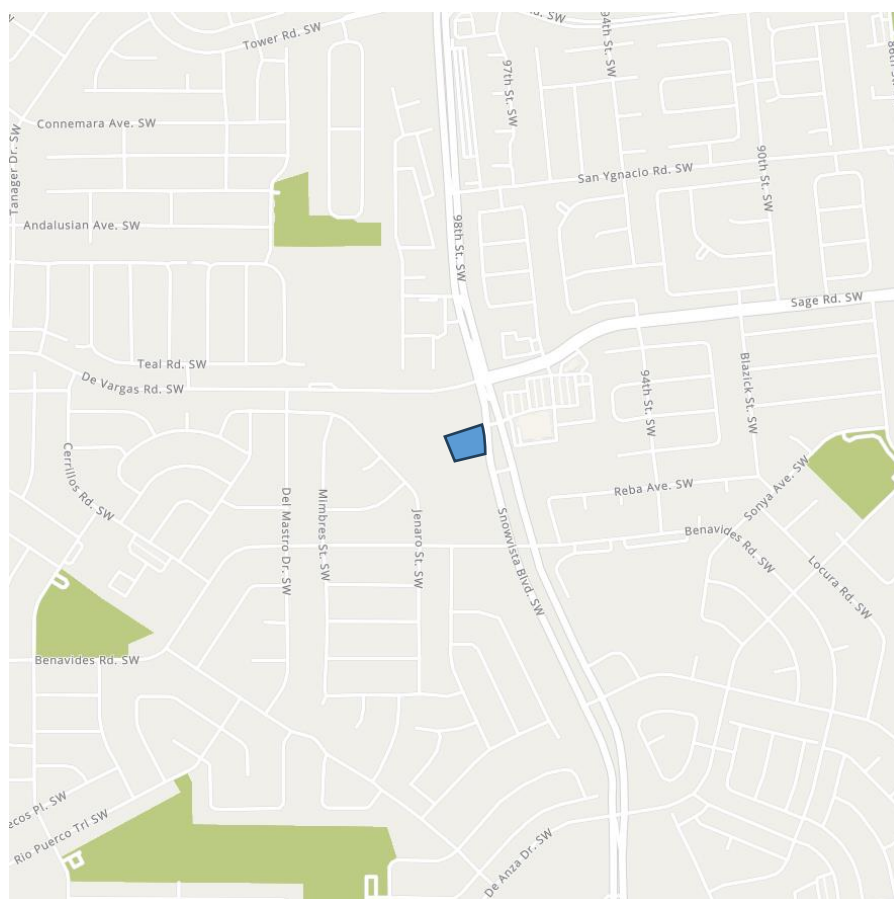


Figure 1: Site Location Map

3. Proposed Conditions:

The project proposes an approximately 1.01-acre development consisting of a Take 5 Oil Change commercial building with a 1,672 square-foot footprint. The project proposes to utilize a shared driveway onto Snow Vista Boulevard that provides direct access to Lot 1C. The project proposes to construct an access roadway for access to future development to the south of the project. The continuation of the shared roadway beyond the property line will be completed by others. Site improvements will include vehicular parking and drive areas with interior and exterior landscaping. The proposed conditions focus on minimizing impervious areas to the maximum extent feasible, while proposing pervious areas to reduce generated stormwater runoff. The proposed development contains one drainage area.

The building roof is designed to drain to downspouts, then to splash blocks, which dissipate the flow, which then sheet flows into the nearest catch basin. Runoff from the DMA will be conveyed to an onsite detention pond. Stormwater volumes in excess of the SWQV will pass through the BMP and bypass into a stormwater pipe as designed in the overall development.

4. Design Assumptions:

The following assumptions were utilized as part of the hydraulic analysis for the project:

- Hydromodification requirements do not apply to the developed site.
- Low Impact Development (LID) requirements do apply to the developed site. The development will implement the following BMP measures: Detention Pond

5. Hydrologic and Hydraulic Methods:

The hydrologic and hydraulic methods utilized for this analysis include:

- The Weighted E method was used to determine the peak flow rate for 100-year storm per section 6.2 of the Development Process Manual for City of Albuquerque.
- A design storm depth of 0.42 inches for new development was used to determine minimum storage capacity for the above ground detention system.

5.1. Proposed Peak Flow and Volume Calculations (Weighted E Method)

DMA#1

Weighted E Method (PROPOSED)																
											100-Year			10-Year		
DMA	Area (sf)	Area (ac)	Treatment A		Treatment B		Treatment C		Treatment D		Weighted E	Volume	Flow	Weighted E	Volume	Flow
			%	acreas	%	acreas	%	acreas	%	acreas	(in)	(ac-ft)	(cfs)	(in)	(ac-ft)	(cfs)
1	55,016	1.26	0	0	0	0	61.0%	0.77	38.8%	0.49	1.45	1.83	4.23	0.82	1.03	2.38

Weighted E = Ea*Aa + Eb*Ab + Ec*Ac + Ed*Ad / Total Area

Volume = Weighted E * Total Area

Flow = Qa*Aa + Qb*Ab + Qc*Ac + Qd*Ad

Excess Precipitation, E (in)		
Zone 1	100-Year	10-Year
Ea	0.55	0.11
Eb	0.73	0.26
Ec	0.95	0.43
Ed	2.24	1.43

Peak Discharge (cfs/acre)		
Zone 1	100-Year	10-Year
Qa	1.54	0.3
Qb	2.16	0.81
Qc	2.87	1.46
Qd	4.12	2.57

Water Quality Calculations *Note: For new developement site, SWQV = 0.42 in*

DMA	Impervious Area (sf)	SWQV (in)	Storm Water Quality Vol (cf)	Storm Water Quality Vol (ac-ft)
1	21,344	0.42	747	0.017

Appendix A

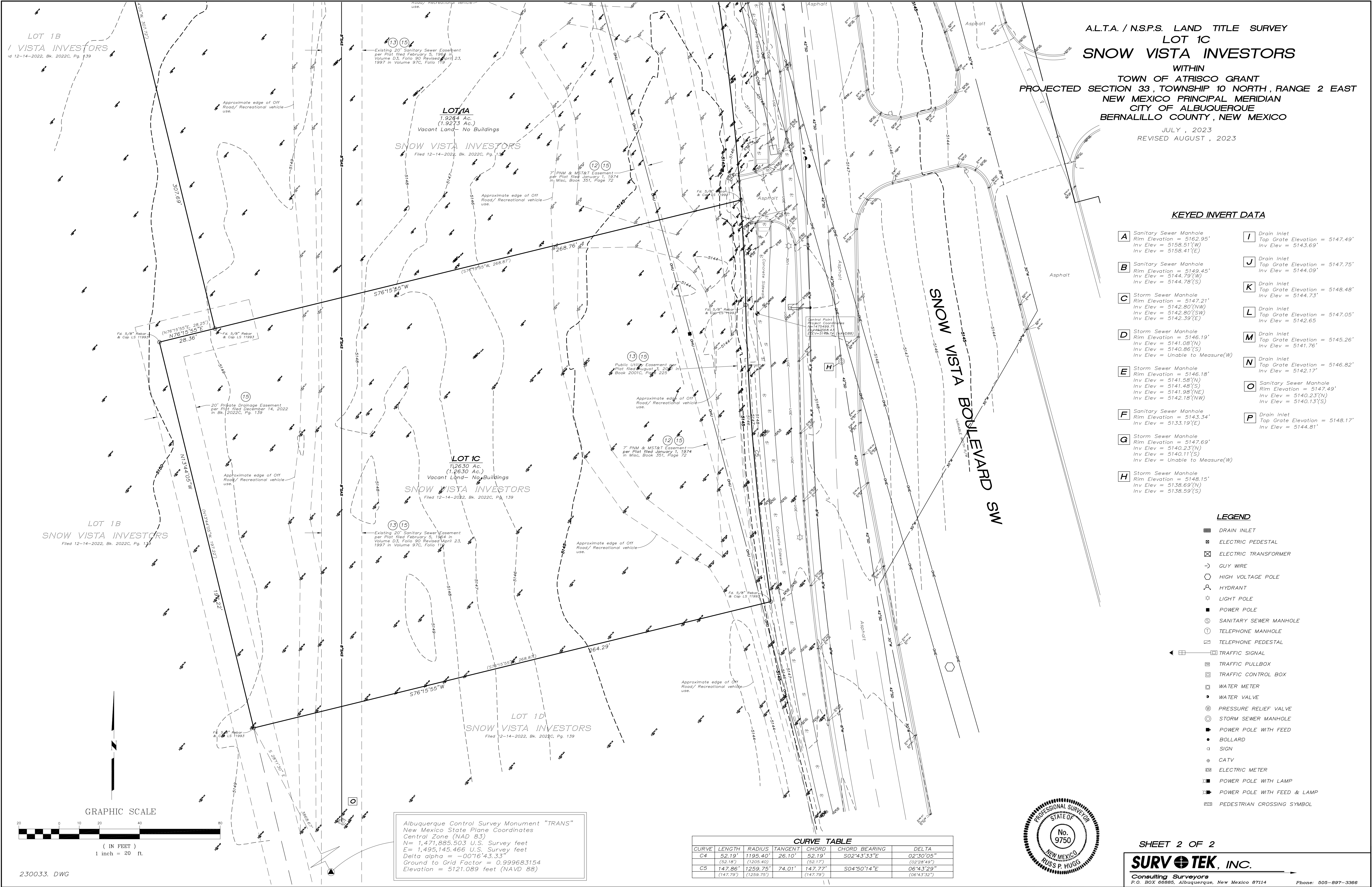
Alta Survey



1. Bearings are read based on New Mexico State Coordinate System, Central Zone (NAD 83).
2. Distances are ground.
3. Distances along curved lines are arc lengths.
4. Record Plat or Deed bearings and distances, where they differ from those established by this field survey, are shown in parentheses ().
5. All corners found in place and held were tagged with a brass disk stamped "HUGG L.S. 9750" unless otherwise indicated hereon.
6. All corners that were set are either a 5/8" rebar with cap stamped "HUGG L.S. 9750" or a concrete nail with brass disk stamped "HUGG L.S. 9750" unless otherwise indicated hereon.
7. Field surveys were performed during the month of June, 2023.
8. Vertical Datum is based upon Albuquerque Control Survey Monument "ACS BM 7-M9", Elevation = 5146.25 feet (NAVD 88).
9. Contour interval is one foot.
10. This property is subject to all exceptions pertaining to this property as listed in the Title Commitment prepared for this property by Old Republic National Title Insurance Company Commitment Number 2300816, Effective Date: February 23, 2023.
11. The above described Title Commitment was used in defining easements as shown hereon. Numbers in circles by the easements description correspond to the Title Commitments SCHEDULE B, SECTION II item number. Where possible, said easements have been plotted.
12. Subject property is currently Vacant Land and contains no existing pointed parking spaces.
13. The word Certify or Certification as used herein is understood to be an expression of professional opinion by the surveyor, based upon his best knowledge, information and belief, as such, and does not constitute a guarantee, nor a warranty, expressed or implied.
14. There is observed current earth moving work, construction of underground utilities and new curb and gutter being constructed at the time of this field survey.
15. Apparent changes in street line right of way is shown hereon and has been indicated by replat filed December 14, 2022 in Book 2022C, Page 139.
16. With regard to Table A, item 11, source information from Plans and markings will be combined with observed evidence of utilities to develop a view of those underground utilities. However, lacking excavation, the exact location of underground features cannot be accurately, completely and reliably depicted. Where additional or more detailed information is required, the client is advised that excavation may be necessary.

NM 811 LOCATE REQUEST TICKET NUMBER 23JN070468, CREATION
DATE: 6/7/2023.

17. The subject properties are currently Zoned MX-L as shown and designated on the City of Albuquerque GIS Zone Atlas Page M-9, dated May 17, 2018.



Appendix B

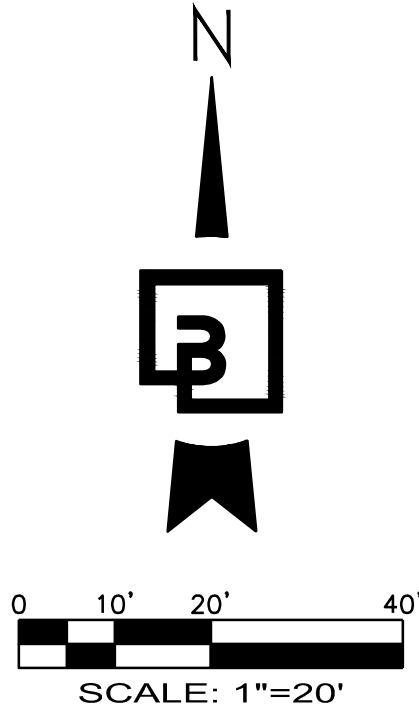
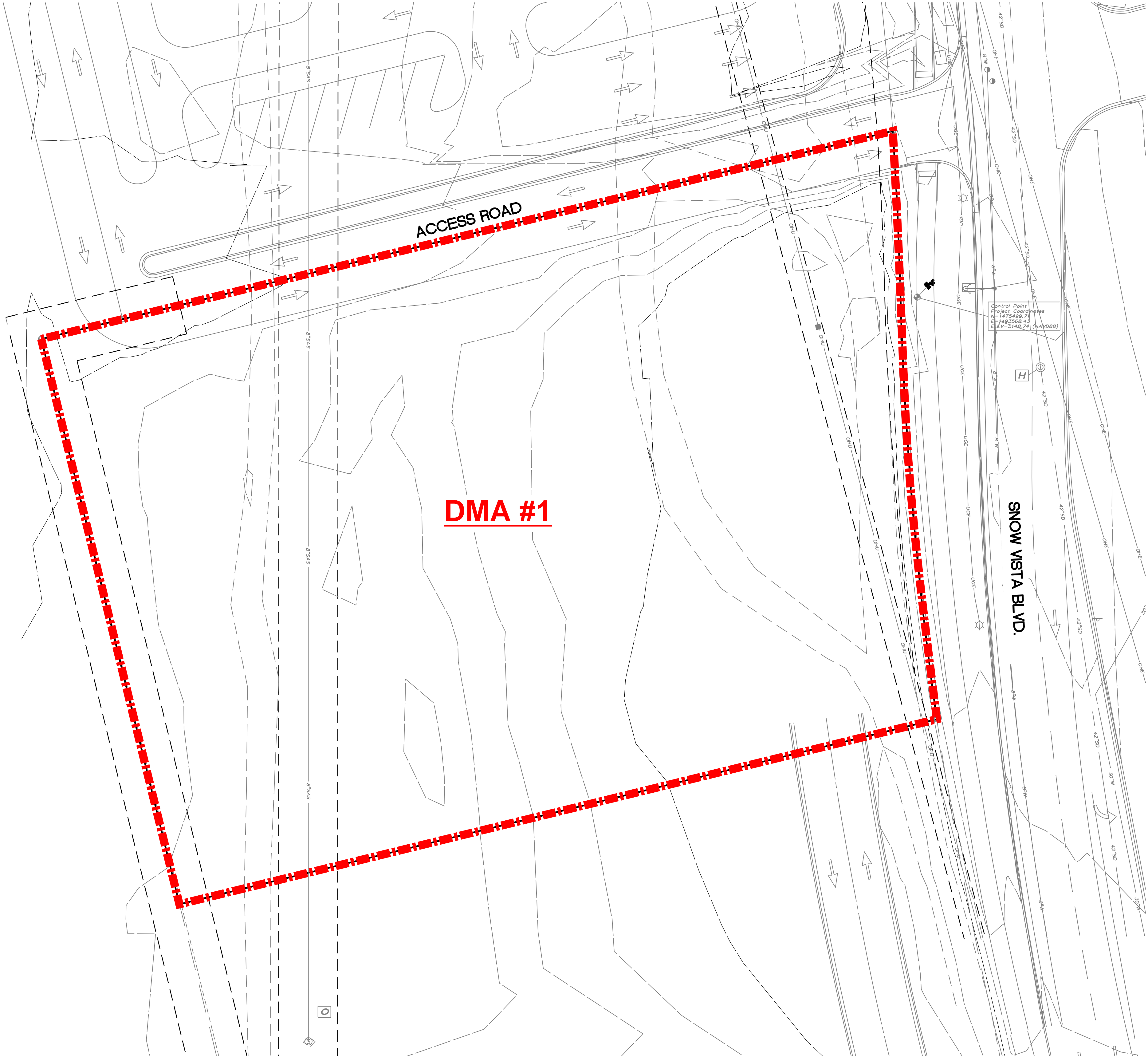
Pre-Developed Drainage Exhibit Proposed Drainage Management Areas Exhibit

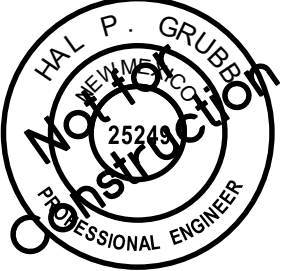
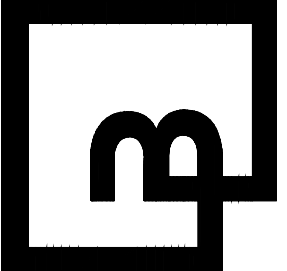


Know what's below.
Call before you dig.
Dial 811

TAKE 5 OIL CHANGE - ALBUQUERQUE, NM

EXISTING DRAINAGE CONDITIONS



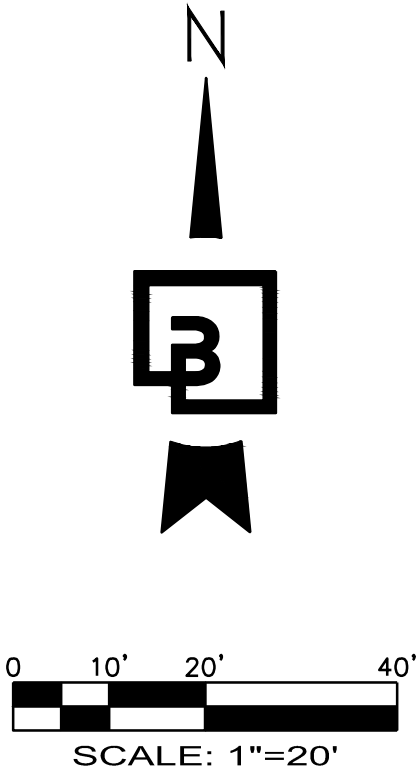
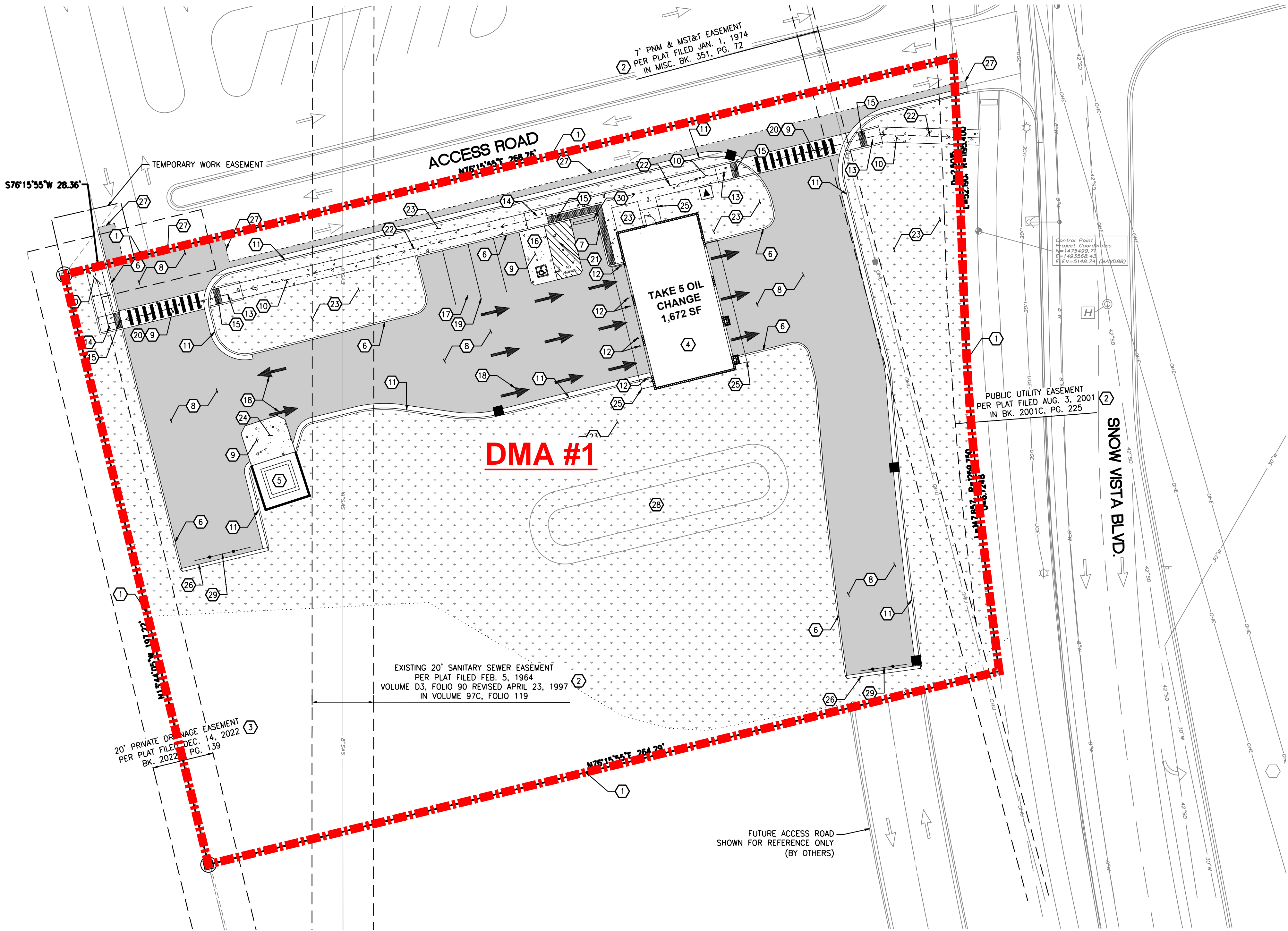
Job Number 23007	Revision				
	No.	Date	By	Chd.	Appr.
Sheet 1 OF 1	Title: EXISTING DRAINAGE CONDITIONS 1125 SNOW VISTA BOULEVARD SW ALBUQUERQUE, NM				
For: TAKE 5 OIL CHANGE DURBAN DEVELOPMENT		Scale: Horizontal 1" = 20' Vertical N/A			
Designed Drawn Checked Approved Date 9/15/23					
 Barghausen Consulting Engineers, Inc. 18215 72nd Avenue South Kent, WA 98032 425.251.6222 barghausen.com		P:\23000a\23007\engineering\EXISTING_DRAINAGE_COND.dwg 9/15/2023 3:58 PM NNAZARCHUK			



Know what's below.
Call before you dig.
Dial 811

TAKE 5 OIL CHANGE - ALBUQUERQUE, NM

SITE PLAN



CONSTRUCTION NOTES:

- EXISTING PROPERTY LINE, TYPICAL.
- EXISTING PUBLIC UTILITY EASEMENT, TYPICAL.
- EXISTING PRIVATE UTILITY EASEMENT, TYPICAL.
- LOCATION OF BUILDING AS NOTED; CONFIRM ALL DIMENSIONS AND REQUIREMENTS WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS.
- LOCATION OF TRASH ENCLOSURE WITH CONCRETE PAD; REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR ADDITIONAL INFORMATION.
- CONSTRUCT CONCRETE BARRIER CURB PER DETAIL 6/C5.2.
- CONSTRUCT CONCRETE FLUSH CURB.
- CONSTRUCT ASPHALT PAVING, SECTION PER DETAIL 1/C5.2, TYPICAL.
- CONSTRUCT CONCRETE PAVING, SECTION PER DETAIL 2/C5.2, TYPICAL.
- CONSTRUCT CONCRETE SIDEWALK, WIDTH VARIES. SECTION PER DETAIL 3 AND 5/C5.2, TYPICAL.
- CONSTRUCT CONCRETE CURB AND GUTTER, PER DETAIL 7/C5.2, TYPICAL.
- INSTALL GUARD POST. REFER TO ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION.
- CONSTRUCT ACCESSIBILITY-COMPLIANT PERPENDICULAR CURB RAMP PER CITY OF ALBUQUERQUE STANDARD DRAWING NO. 2442/SHEET C6.0.
- CONSTRUCT ACCESSIBILITY-COMPLIANT PARALLEL CURB RAMP PER CITY OF ALBUQUERQUE STANDARD DRAWING NO. 2443/SHEET C6.0.
- INSTALL DETECTABLE WARNING PER CITY OF ALBUQUERQUE STANDARD DRAWING NO. 2446/SHEET C6.0. CONTRACTOR TO FIELD VERIFY SLOPES DO NOT EXCEED 1.5% CROSS SLOPE.
- INSTALL VAN ACCESSIBLE PARKING STALL AND SIGNAGE PER DETAIL 1/C5.0. REFER TO DETAIL FOR 4/C5.0 FOR INTERNATIONAL SYMBOL OF ACCESSIBILITY. REFER TO DETAIL 5/C5.0 FOR SIGN FOOTINGS. ADA SIGNAGE TO INCLUDE LANGUAGE "VIOLATORS ARE SUBJECT TO A FINE AND/OR TOWING" PER 66-7-352.4C NMSA.
- STANDARD PARKING SPACE, TYPICAL.
- PAINT DIRECTIONAL ARROWS WHERE SHOWN PER DETAIL 3/C5.2, TYPICAL.
- PAINT 4" WIDE WHITE REFLECTIVE PAINT PARKING STALL STRIPES, TYPICAL; ALL STRIPING TO CONFORM WITH AUTHORITY HAVING JURISDICTION REQUIREMENTS.
- PAINT CONTINENTAL STYLE PEDESTRIAN CROSSWALK STRIPING; 1 FOOT WIDE STRIPES AT 2 1/2' FEET ON CENTER.
- PAINT 4" WIDE STRIPED AREA AS SHOWN, 24" O.C. SAFETY WHITE, TYPICAL.
- ACCESSIBLE ROUTE. SEE ACCESSIBLE PATH NOTE THIS SHEET.
- LANDSCAPING AREA; REFER TO LANDSCAPE PLANS FOR ADDITIONAL INFORMATION.
- PROPOSED TRASH LOADING ZONE, COORDINATE APPROACH AND ORIENTATION OF TRASH ENCLOSURE W/ LOCAL REFUSE SERVICE PROVIDER.
- INSTALL CANOPY. SEE ARCHITECTURAL PLANS FOR DETAILS. CONFIRM ALL DIMENSIONS AND REQUIREMENTS WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS.
- CONSTRUCT ASPHALT RAISED EDGE CURB PER DETAIL 10/C5.0.
- APPROXIMATE LOCATION OF NEAT SAW CUT LINE. PROVIDE HOT TAR SEAL AT ALL JOINTS.
- LOCATION OF STORMWATER QUALITY POND. REFER TO SHEET C3.0 FOR ADDITIONAL INFORMATION.
- INSTALL TEMPORARY TYPE III BARRICADES PER DETAIL 3/C5.0.
- CONSTRUCT CONCRETE WHEEL STOP PER DETAIL 9/C5.2.

LEGEND

BUILDING LINE	
EXISTING CURB TO REMAIN	
PROPOSED CURB	
PROPOSED LANDSCAPING	
PROPOSED ASPHALT	
PROPOSED CONCRETE	

PARKING NOTE

NO CONTRACTOR OR EMPLOYEE MAY STORE, OR PERMIT TO BE STORED, A COMMERCIAL OR CONSTRUCTION VEHICLE/TRUCK; OR PERSONAL VEHICLE, TRUCK, OR OTHER PERSONAL PROPERTY ON PUBLIC-RIGHT-OF-WAY OR OTHER PUBLIC PROPERTY WITHOUT PERMISSION OF THE CITY ENGINEER.

TEMPORARY WORK EASEMENT NOTE:

CLIENT TO OBTAIN TEMPORARY WORK EASEMENT AGREEMENT; COORDINATE WITH ADJACENT PROPERTY OWNER, PRIOR TO CONSTRUCTION OF ANY OFF-SITE WORK.

ACCESSIBLE SITE REQUIREMENTS:

WALKING SURFACES SHALL BE CONTINUOUSLY ACCESSIBLE. ALL WALKWAYS MUST BE A MINIMUM 36" IN WIDTH, HAVE A MAXIMUM 1.5% CROSS SLOPE, AND SHALL HAVE RAMPS COMPLYING WITH ACCESSIBILITY STANDARDS (SECTION 402) WHERE NECESSARY TO CHANGE ELEVATION AT A LONGITUDINAL SLOPE EXCEEDING 5% (1:20). RAMPS WHERE PROVIDED SHALL COMPLY WITH ACCESSIBILITY REQUIREMENTS (SECTION 405) AND BE PROVIDED WITH A MINIMUM 24" WIDE DETECTABLE WARNING STRIP MEETING ACCESSIBILITY REQUIREMENTS (SECTION 406) SHALL BE PLACED WHERE A WALK CROSSES OR ADJOINS A VEHICULAR WAY AND IS NOT SEPARATED BY A CURB, RAILING, OR OTHER ELEMENT MEETING ACCESSIBILITY STANDARDS.

Revision	No.	Date	By	Chd.	Appr.
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Title:

SITE PLAN
1125 SNOW VISTA BOULEVARD SW
ALBUQUERQUE, NM

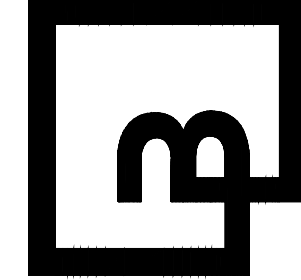
For:

TAKE 5 OIL CHANGE
DURBAN DEVELOPMENT



Scale:	Horizontal	Vertical
	1" = 20'	N/A
Designed	NRN	NRN
Drawn	MTL	MTL
Checked	HFG	HFG
Approved	HFG	HFG
Date	9/15/23	

Barghausen Consulting Engineers, Inc.
18215 72nd Avenue South
Kent, WA 98032
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Job Number

23007

Sheet

C2.0