

# CITY OF ALBUQUERQUE

Planning Department  
Alan Varela, Director



Mayor Timothy M. Keller

July 27, 2023

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

**RE: Starbucks - Tramway  
Grading and Drainage Plans  
Engineer's Stamp Date: 07/19/23  
Hydrology File: L23D015A**

Dear Mr. Bohannon:

Based upon the information provided in your submittal received 07/19/2023, the Grading & Drainage Plans are approved for Building Permit, Grading Permit, and for action by the Development Hearing Officer (DHO) on Preliminary/Final Plat. 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 ponds per Article 6-15(C) of the DPM to Hydrology for review at Plaza de Sol.

As a reminder, 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](mailto:jhughes@cabq.gov), 924-3420) 14 days prior to any earth disturbance.

# CITY OF ALBUQUERQUE

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Alan Varela, Director



*Mayor Timothy M. Keller*

If you have any questions, please contact me at 924-3995 or [rbrissette@cabq.gov](mailto:rbrissette@cabq.gov).

Sincerely,

*Renée C. Brissette*

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

PO Box 1293

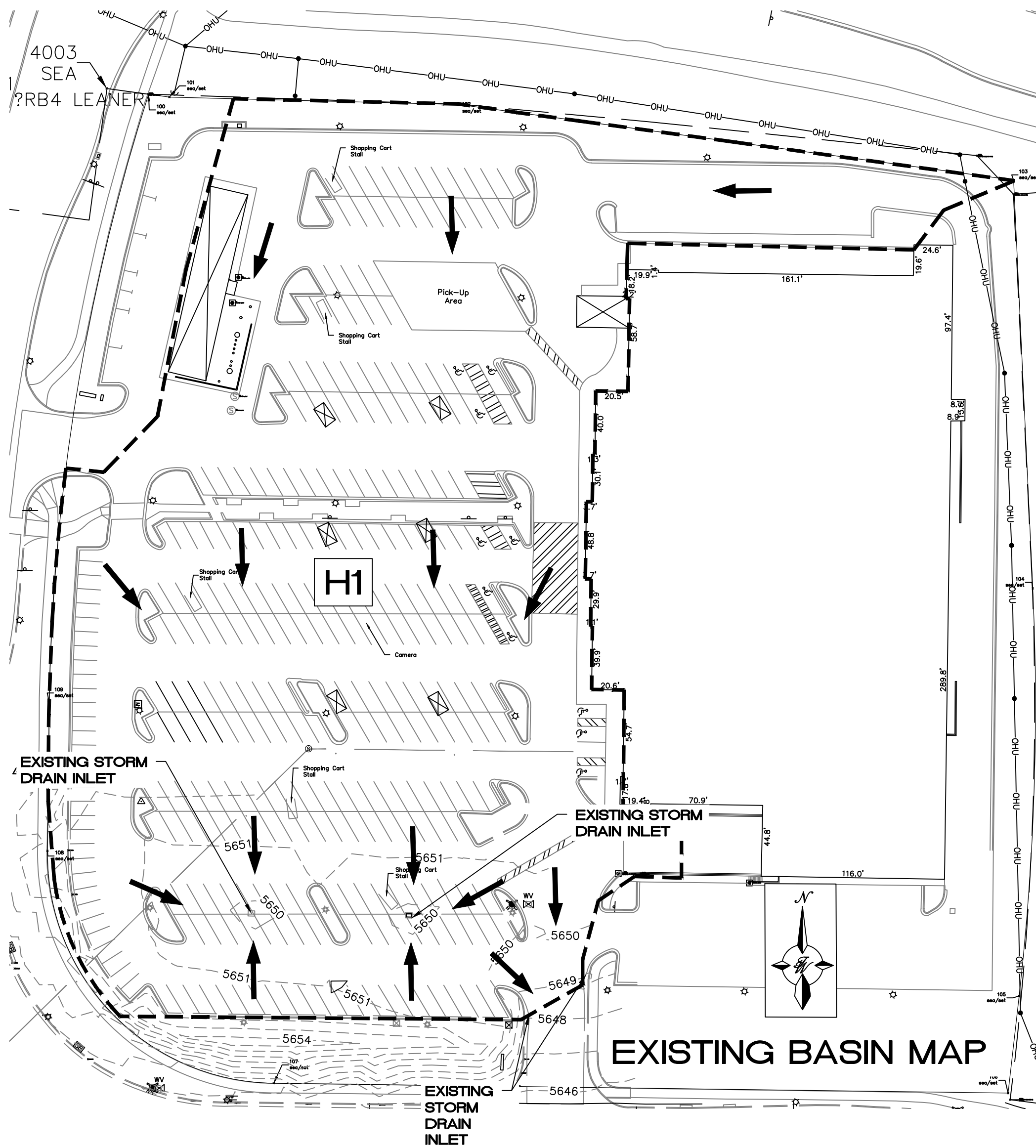
Albuquerque

NM 87103

[www.cabq.gov](http://www.cabq.gov)



\\TINAS\Z\_Drive\2023\2023047\_Starbucks at Tramway.dwg (PC\2023047\_BASINS.dwg Jul 19, 2023 -- 8:38am



EXISTING BASIN MAP

DPM Weighted E Method CH 6

Precipitation Zone 3  
STARBUCKS ON TRAMWAY

TWLLC Date 5/24/2023

Equations:

Weighted E = Ea\*Aa + Eb\*Ab + Ec\*Ac + Ed  
Volume = Weighted E \* Total Area  
Flow = Qa\*Aa + Qb\*Ab + Qc\*Ac + Qd\*Ad

HYDROLOGY CALCULATION TABLES

Existing Conditions

Basin ID	Tract	Area (sf)	Area (acres)	Area (sq miles)	Basin Descriptions								100-Year, 6-Hr		
					Treatment A		Treatment B		Treatment C		Treatment D		Weighted E (in)	Volume (ac-ft)	Flow cfs
					%	(acres)	%	(acres)	%	(acres)	%	(acres)			
H1		195,800	4.49	0.00702	0%	0.000	0%	0.000	10%	0.449	90%	4.045	2.431	0.911	19.59
Total		195,800	4.49	0.00702		0.000		0.000		0.000		4.045		0.911	19.589

Proposed Conditions

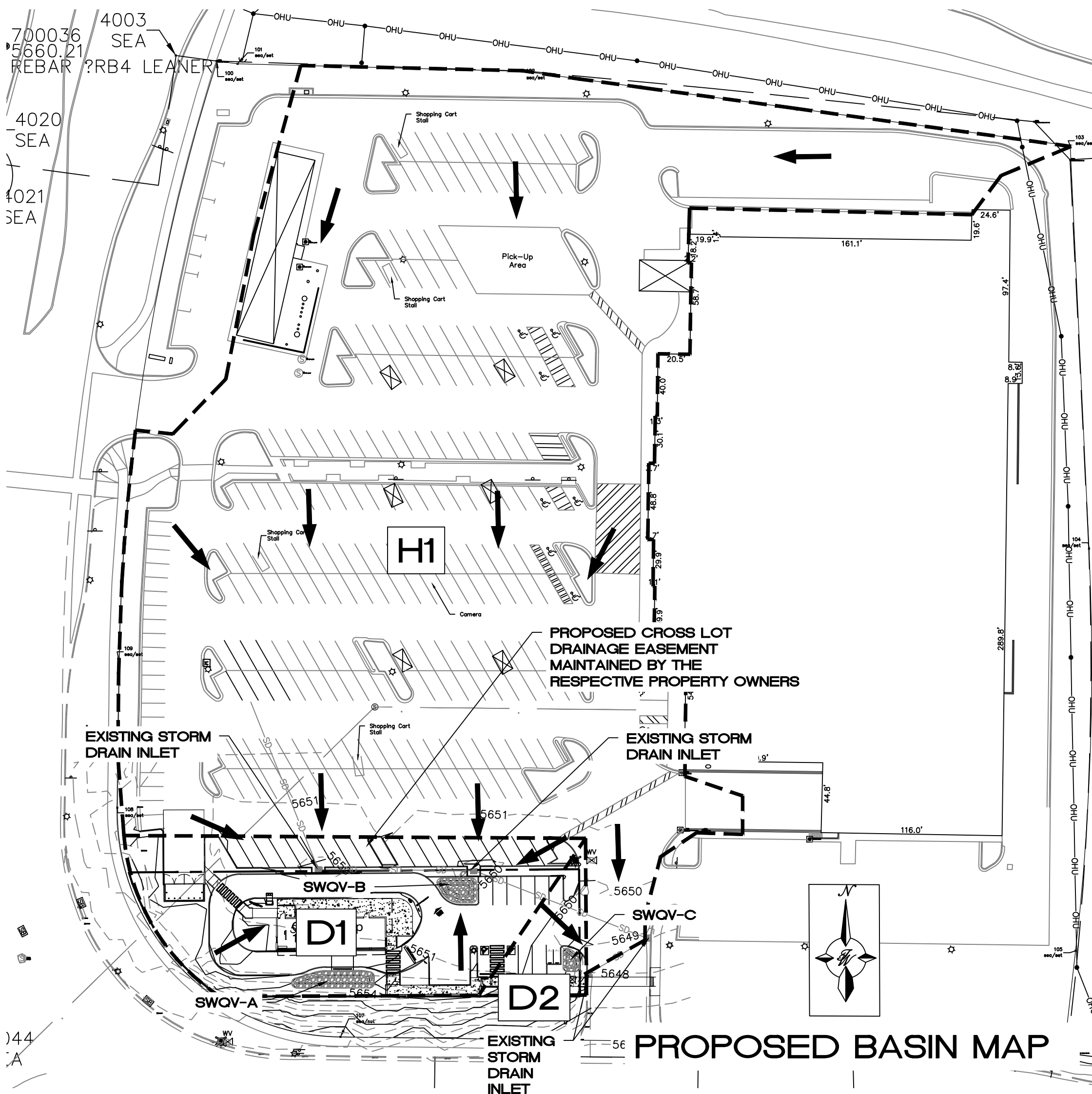
Basin ID	Tract	Area (sf)	Area (acres)	Area (sq miles)	Basin Descriptions								100-Year, 6-Hr		
					Treatment A		Treatment B		Treatment C		Treatment D		Weighted E (in)	Volume (ac-ft)	Flow cfs
					%	(acres)	%	(acres)	%	(acres)	%	(acres)			
H1		171,000	3.93	0.00613	0%	0.000	0%	0.000	10%	0.393	90%	3.533	2.431	0.795	17.11
D1		23,640	0.54	0.00085	0%	0.000	0%	0.000	30%	0.163	70%	0.3799	2.133	0.096	2.22
D2		3,135	0.07	0.00011	0%	0.000	0%	0.000	30%	0.022	70%	0.0504	2.133	0.013	0.29
Total		197,775	4.54	0.00709		0.000		0.000		0.577		3.963		0.905	19.624

PROPOSED STORM WATER POND VOLUME TABLES

SWQV-A POND VOLUME CALCULATIONS			
ELEVATION (ft)	AREA (sf)	VOLUME (cf)	CUMULATIVE VOLUME (cf)
5650	199	0	0
5651	525	362	362

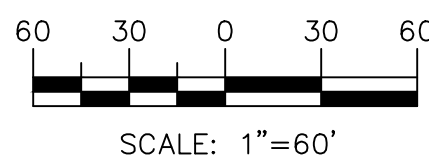
SWQV-B POND VOLUME CALCULATIONS			
ELEVATION (ft)	AREA (sf)	VOLUME (cf)	CUMULATIVE VOLUME (cf)
5648	36	0	0
5649	156	96	96
5650	344	250	346

SWQV-C POND VOLUME CALCULATIONS			
ELEVATION (ft)	AREA (sf)	VOLUME (cf)	CUMULATIVE VOLUME (cf)
5647.5	29	0	0
5648	56	21.25	21
5649	131	93.5	115



PROPOSED BASIN MAP

GRAPHIC SCALE



REQUIRED STORM WATER QUALITY VOLUME CALCULATIONS

Basin D1 Storm Water Quality Volume		
Total Impervious Area =	ΣArea in "Treatment D"	
Retainage depth = 0.42" Per DPM Pg. 272	0.035	FT
Retention Volume =	=0.035 x Area D	
Area D (0.3799 acres)	16548	SF
Required Retention Volume	579	CF
Pond Volume Provided	708	CF

Basin D2 Storm Water Quality Volume		
Total Impervious Area =	ΣArea in "Treatment D"	
Retainage depth = 0.42" Per DPM Pg. 272	0.035	FT
Retention Volume =	=0.035 x Area D	
Area D (0.0504 acres)	2195	SF
Required Retention Volume	77	CF
Pond Volume Provided	115	CF



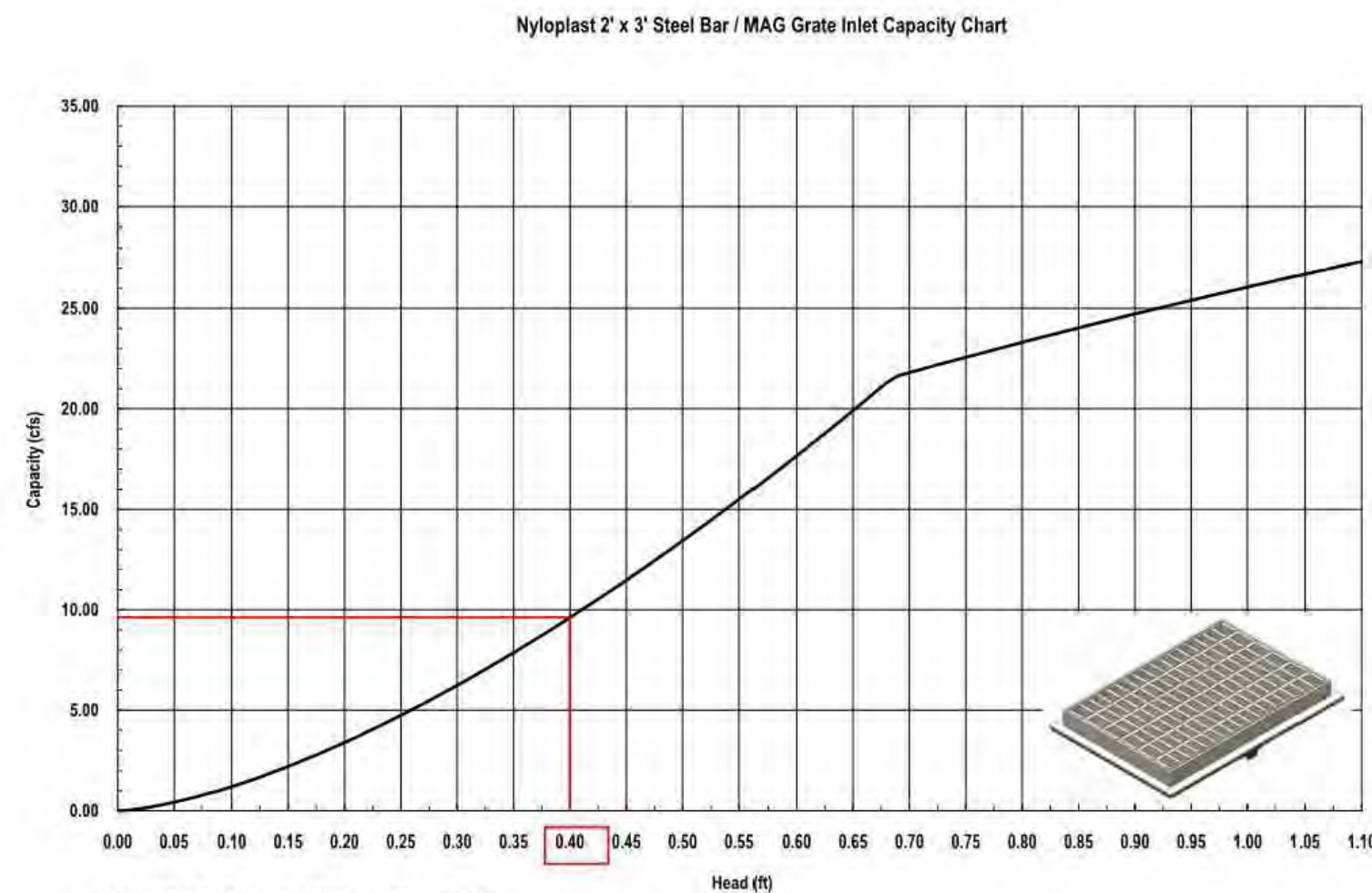
EXISTING CONDITIONS

THE SUBJECT SITE IS LOCATED WITHIN A LARGER BASIN INDICATED AS AREA "B" IN THE DRAINAGE REPORT FOR SMITHS STORE #427 IN HYDRONUM FILE: L23D015. CURRENTLY THE SITE IS PAVED WITH PARKING SPACES AND THE STORM WATER DISCHARGE FREE FLOWS INTO VARIOUS STORM DRAIN INLETS ON THE SOUTHERN PART OF THE SMITHS LARGER TRACT AS SHOWN IN THE EXISTING CONDITIONS.

PROPOSED CONDITIONS

A NEW COFFEE DRIVE THRU SHOP IS PROPOSED TO BE DEVELOPED AND WILL REPLACE EXISTING PARKING SPACES. THE DEVELOPED STORM WATER DISCHARGE SHALL BE ROUTED THROUGH STORM WATER QUALITY PONDS INSTALLED WITHIN PLANTERS PRIOR TO BEING DISCHARGED INTO THE EXISTING STORM DRAIN INLETS AS SHOWN IN THE PROPOSED CONDITIONS BASIN MAP.

EXISTING STORM INLET CAPACITY CHART



100 YR FLOW RATE19.624 CFS  
NUMBER OF INLETS = 2  
FLOW RATE PER INLET = 19.624/2 CFS  
FLOW RATE PER INLET = 9.812 CFS

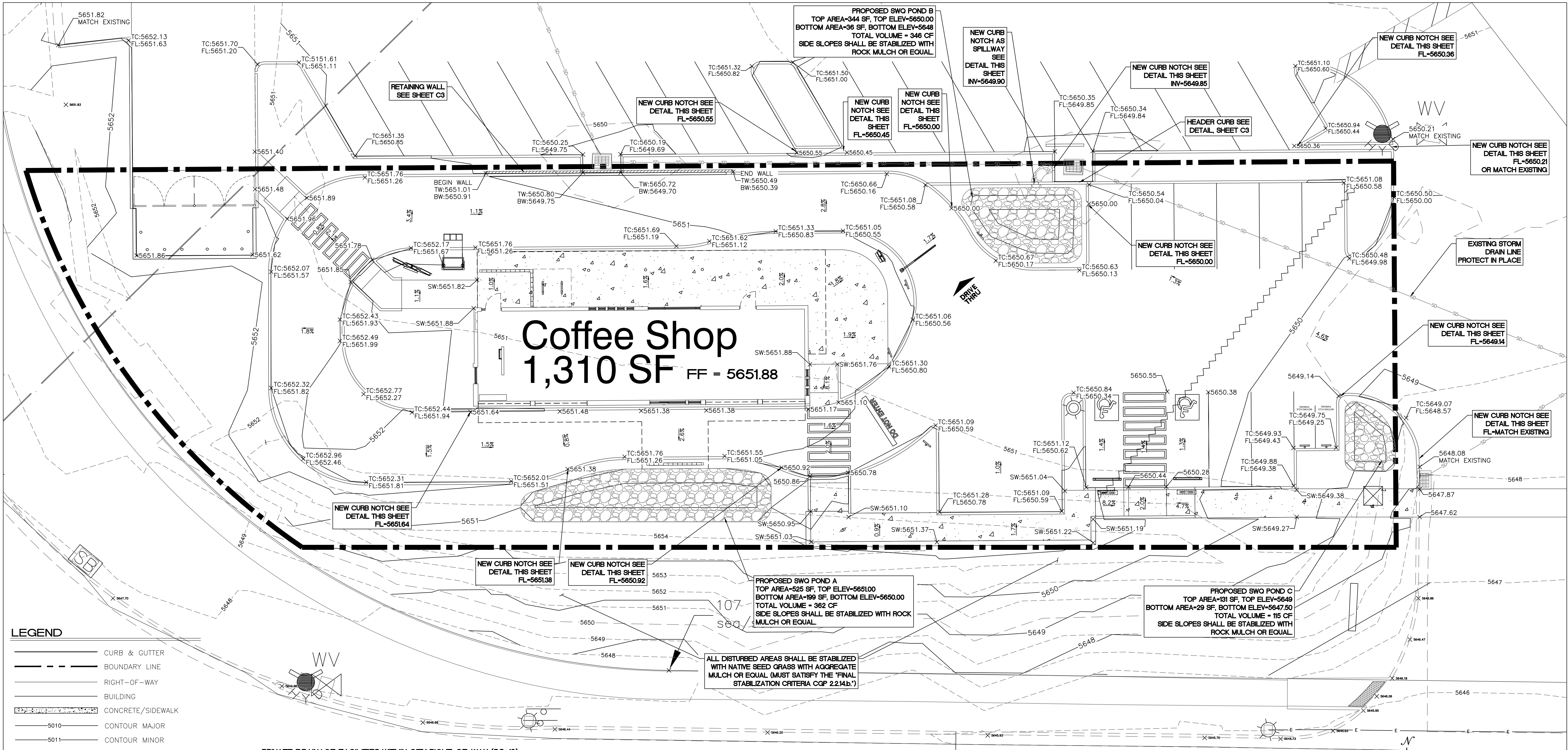
**Nyroplast**  
3130 Veterans Avenue • Buford, GA 30518  
(866) 888-8479 / (770) 932-2443 • Fax: (770) 932-2490  
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ENGINEER'S SEAL	STARBUCKS ON TRAMWAY ALBUQUERQUE, NM	DRAWN BY BF
RONALD R. BOHANNAN NEW MEXICO PROFESSIONAL ENGINEER 07/19/2023	GRADING AND DRAINAGE BASIN MAP	DATE 07/11/2023
TIERRA WEST, LLC 5571 MIDWAY PARK PLACE NE ALBUQUERQUE, NM 87109 (505) 858-3100 www.tierrawestllc.com		2023047_BASINS
		SHEET # C1
		JOB # 2023047



\\TWINAS\Z\_Drive\2023\2023047 Starbucks at Tramway.dwg [EPC\_2023047\_GRE.dwg Jul 19, 2023] - 8:40am



#### LEGEND

	CURB & GUTTER
	BOUNDARY LINE
	RIGHT-OF-WAY
	BUILDING
	CONCRETE/SIDEWALK
	CONTOUR MAJOR
	CONTOUR MINOR
	SPOT ELEVATION
	FLOW ARROW
	EXISTING CURB & GUTTER
	EXISTING CONTOUR MAJOR
	EXISTING CONTOUR MINOR
	EXISTING SPOT ELEVATION
	GRADE BREAK
	RETAINING WALL

#### SPOT ELEVATION LEGEND

SW= TOP OF SIDEWALK  
TC= TOP OF CURB  
FL= FLOW LINE  
FF= FINISHED FLOOR

#### SPOT ELEVATION NOTE:

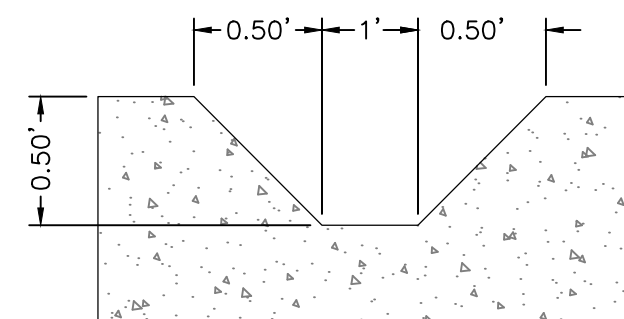
ALL PROPOSED SPOT ELEVATIONS ARE FLOWLINE UNLESS OTHERWISE NOTED.

#### CAUTION

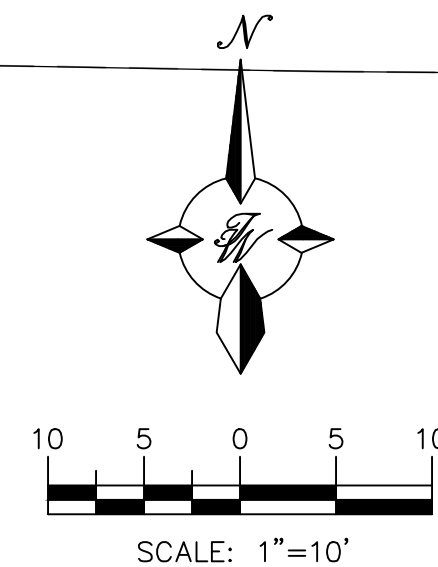
ALL EXISTING UTILITIES/TOPOGRAPHY SHOWN WERE OBTAINED FROM RESEARCH, AS-BUILTS, SURVEYS OR INFORMATION PROVIDED BY OTHERS. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO AND INCLUDING ANY EXCAVATION, TO DETERMINE THE ACTUAL LOCATION OF UTILITIES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

#### PRIVATE DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY (SO-19)

- BUILD SIDEWALK CULVERTS PER COA STD DWG 2236.
- CONTACT STORM DRAIN MAINTENANCE AT (505) 857-8033 TO SCHEDULE A MEETING PRIOR TO FORMING.
- AN EXCAVATION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY.
- 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.
- 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.
- 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.
- BACKFILL COMPACTION SHALL BE ACCORDING TO TRAFFIC/STREET USE.
- MAINTENANCE OF THE FACILITY SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY BEING SERVED.
- WORK ON ARTERIAL STREETS MAY BE REQUIRED ON A 24-HOUR BASIS.
- 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.

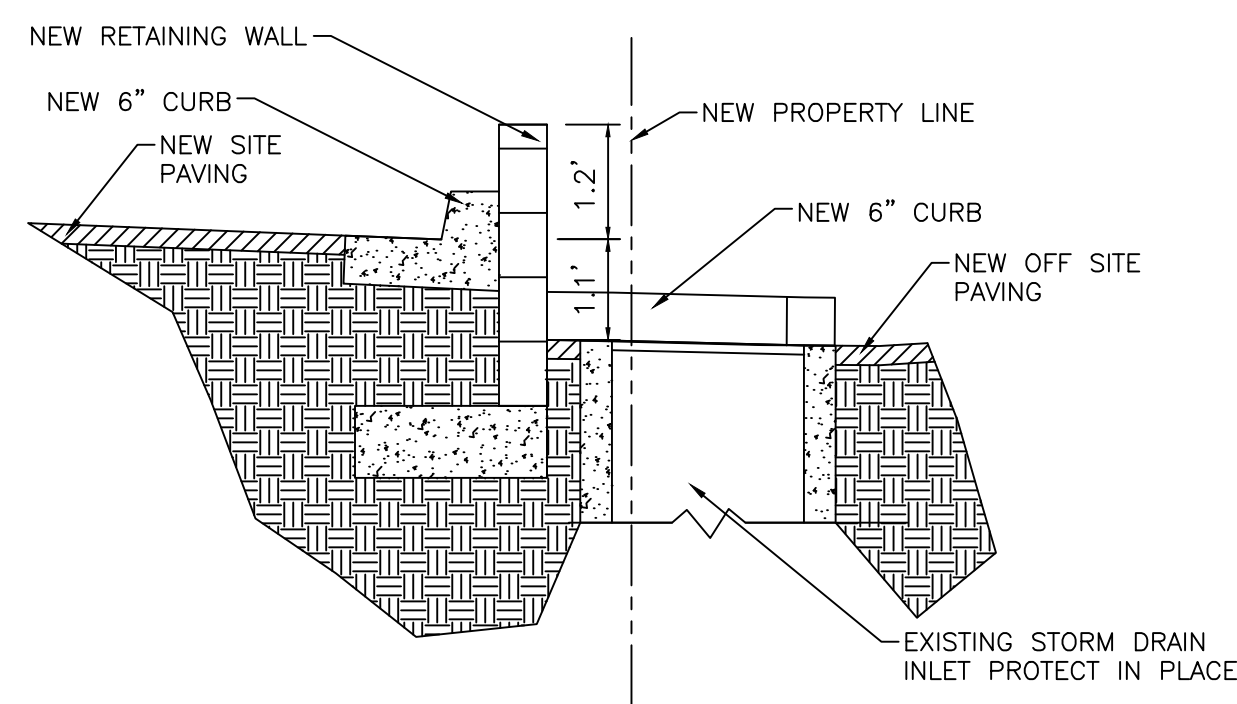
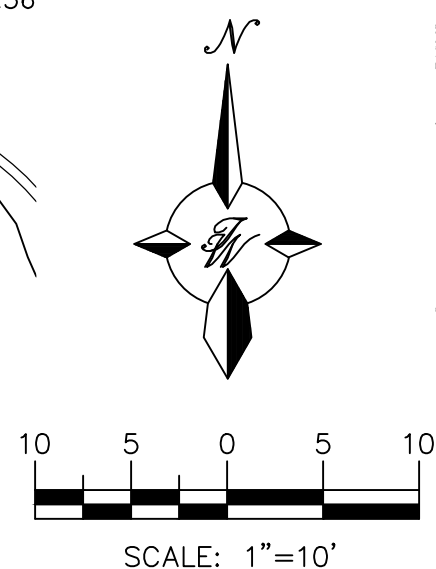
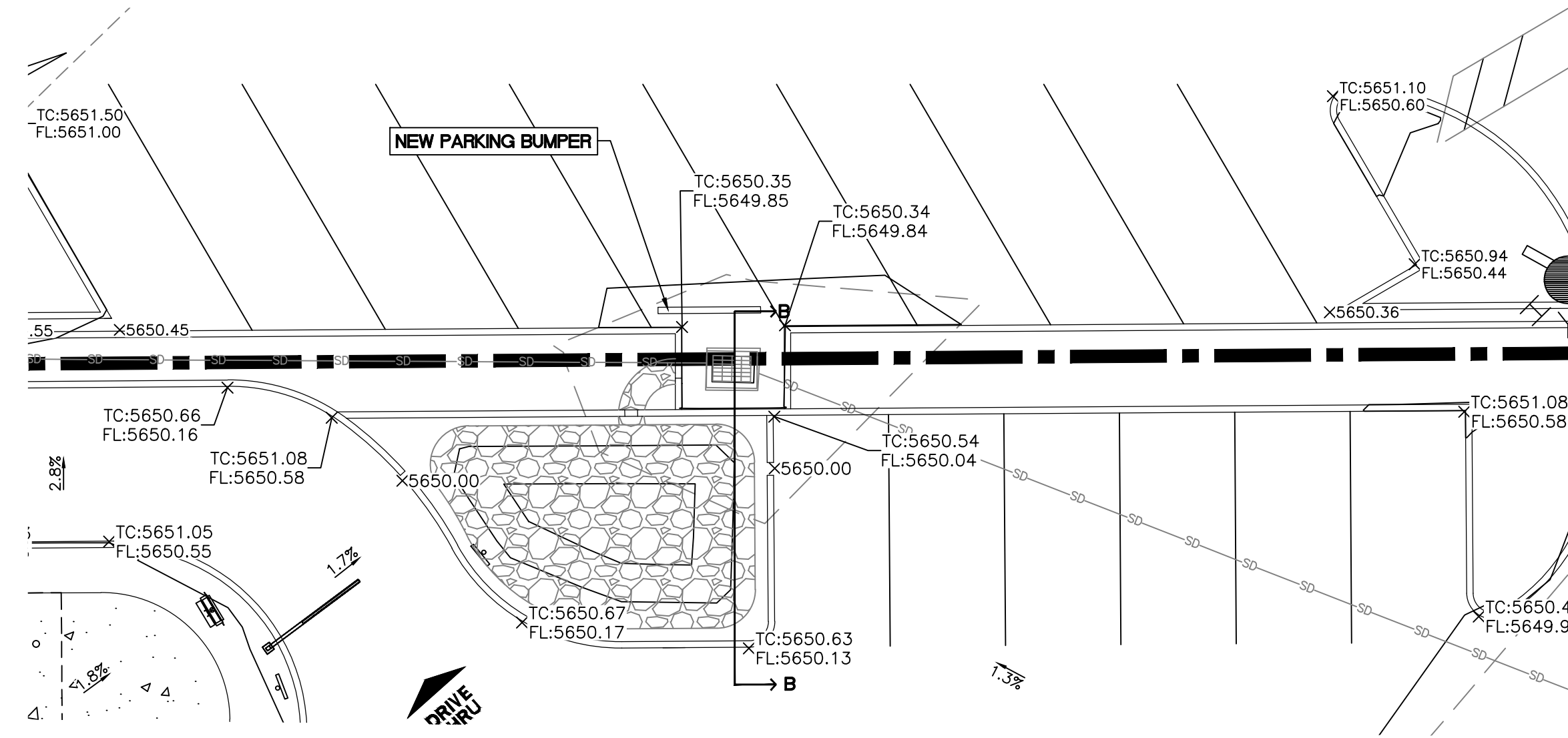
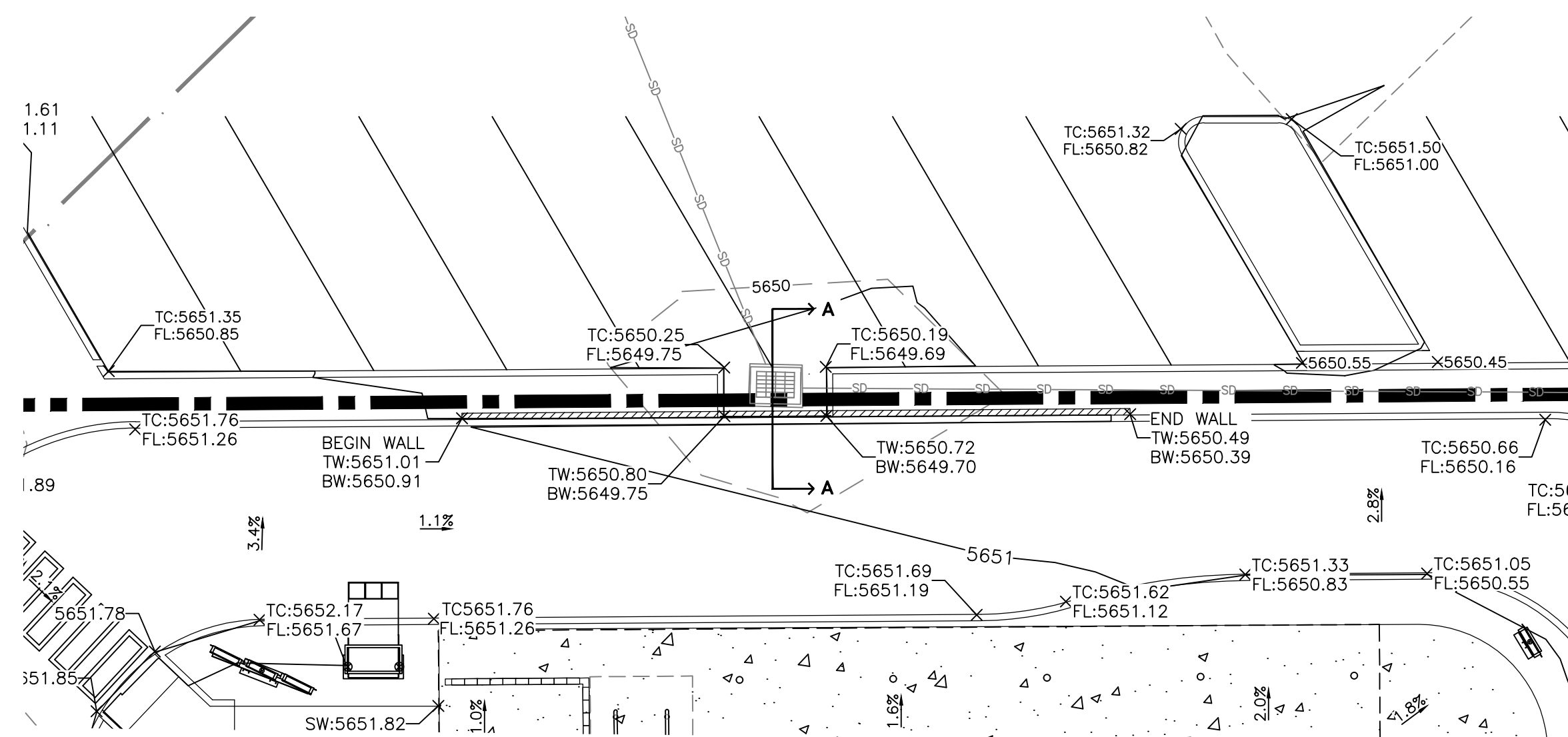


CURB NOTCH  
NTS

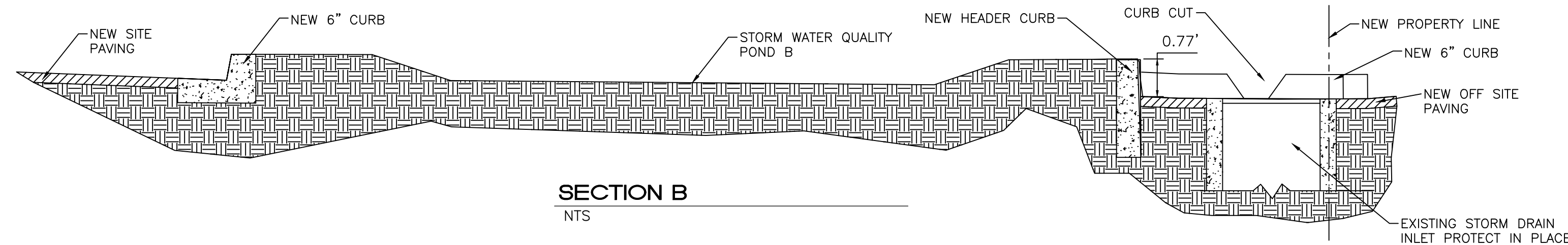


	ENGINEER'S SEAL	STARBUCKS ON TRAMWAY ALBUQUERQUE, NM	DRAWN BY BF
		GRADING & DRAINAGE PLAN	DATE 07/11/2023
	RONALD R. BOHANNAN P.E. #7868	TERRA WEST, LLC 5571 MIDWAY PARK PLACE NE ALBUQUERQUE, NM 87109 (505) 858-3100 www.tierawestllc.com	2023047_GRE
SHEET # <b>C2</b>			JOB # 2023047





**SECTION A**  
NTS

















## SECTION B

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NTS

## LEGEND

	CURB & GUTTER
	BOUNDARY LINE
	RIGHT-OF-WAY
	BUILDING
	CONCRETE/SIDEWALK
	CONTOUR MAJOR
	CONTOUR MINOR
	SPOT ELEVATION
	FLOW ARROW
	EXISTING CURB & GUTTER
	EXISTING CONTOUR MAJOR
	EXISTING CONTOUR MINOR
	EXISTING SPOT ELEVATION
	GRADE BREAK

### SPOT ELEVATION LEGEND

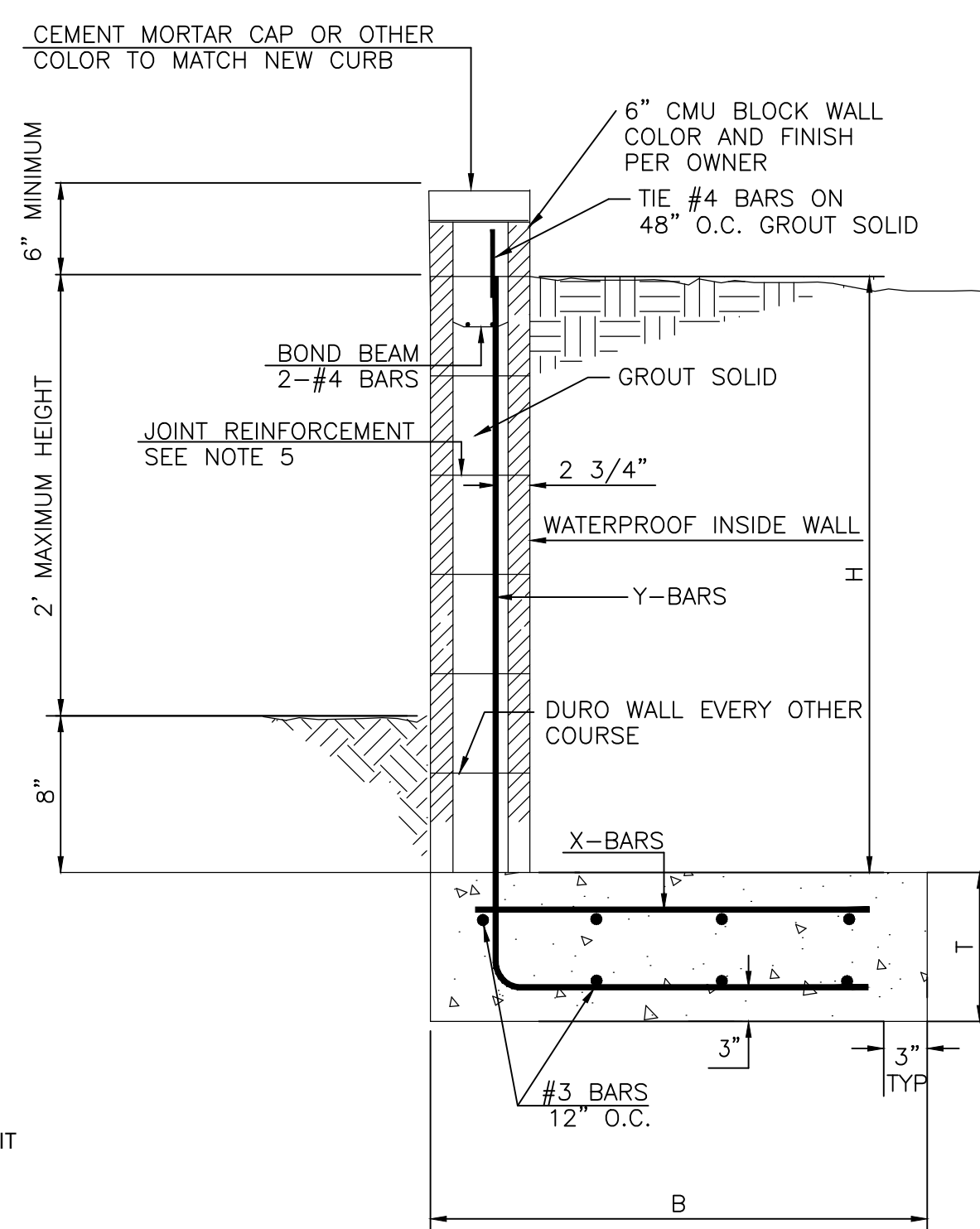
SW= TOP OF SIDEWALK  
TC= TOP OF CURB  
FL= FLOW LINE  
FF= FINISHED FLOOR

## SPOT ELEVATION NOTE:

ALL PROPOSED SPOT  
ELEVATIONS ARE FLOWLINE  
UNLESS OTHERWISE NOTED.

### CAUTION

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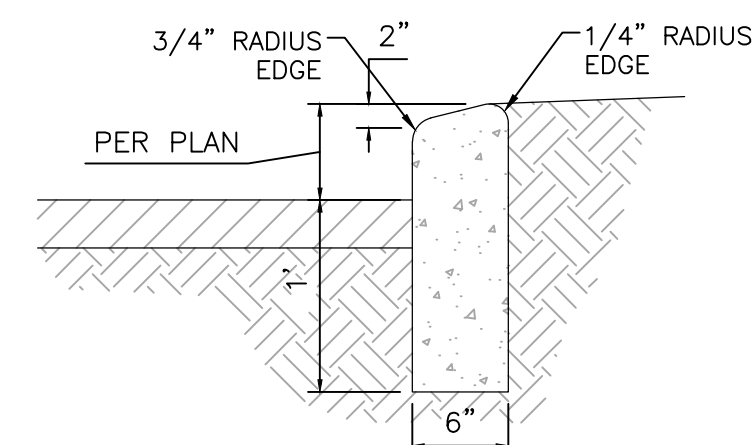
**"L" FOOTING RETAINING WALL DETAIL**  
NTS

GENERAL NOTES:

1. ALL CONCRETE IS TO BE 3000 PSI @ 28 DAYS.
2. MINIMUM COMPACTION UNDER FOOTINGS IS TO BE 95% PER ASTM. D 1557 FOR A DEPTH OF 12" MOISTURE CONTENT IS TO BE ± 2.0%.
3. BACK FILL AGAINST WALLS IS TO BE HAND-PLACED AND COMPACTED.
4. ALL BARS ARE TO BE GRADE 60, ASTM 615.
5. TRUSS TYPE DUR-O-WALL EVERY OTHER COURSE.
6. USE EITHER EXPANSION JOINTS ON 20' CENTERS OR PILASTERS EVERY 12'.
7. 30 BAR DIAMETER LAPS TYPICAL.
8. DUR-O-WALL HORIZONTAL JOINT REINFORCEMENT 16" O.C.
9. OPT. JOINTS 16" O.C. TYPICAL AT FIRST COURSE.
10. OWNER TO SELECT MASONRY COLOR AND/OR FINISH
11. SOLID MASONRY CAP COURSE TYPICAL.
12. WATER PROOF WALL.

6 INCH REINFORCED CONCRETE MASONRY WALL  
(FOR RETAINING PORTION ONLY)

H	B	T	Y-BARS	X-BARS
ft.-in.	ft.-in.	in.		
2'-0"	2'-0"	9"	#4 @ 24" O.C.	



## CURB GENERAL NOTES:

1. ALL CURBS TO BE CONSTRUCTED OF PORTLAND CEMENT CONCRETE.
2. PROVIDE CONTRACTION JOISTS. 12" MAX., SPACING, 1/2 EXP. JTS. AT CURB RETURNS AND AT A MAX. SPACING OF 120" BETWEEN CURB RETURNS AND EACH SIDE OF SEPARATELY CONSTRUCTED DRIVEWAYS. CONTRACTION JOISTS, SHALL BE EITHER SAWED OR TOOLED A MINIMUM OF 1" DEEP AT FINISHED FACES.
3. ALL EDGES SHALL BE EDGED WITH A 3/8" RADUIS EDGING TOOL.
4. 1/4" ISOLATION JOINT SHALL BE PLACED BETWEEN SIDEWALK AND CURB WHEN CAST ADJACENT TO EACH OTHER.

### 6" HEADER CURB DETAIL



NTS

City of Albuquerque  
Planning Department  
Development Review Services  
HYDROLOGY SECTION

**APPROVED**

DATE: 07/27/23  
BY: *Renee C. Brancette*  
HydroTeam L23D015A

THE APPROVAL OF THESE PLANS/REPORT SHALL NOT BE  
CONSIDERED TO REPRESENT VIOLATIONS OF ANY CITY  
ORDINANCE OR STATE LAW, AND DOES NOT  
GUARANTEE THE ACCURACY OF THE INFORMATION  
SUBMITTED TO THE CITY OF ALBUQUERQUE OR ANY RECORDING  
AGENCY. THE CITY OF ALBUQUERQUE IS NOT RESPONSIBLE  
FOR THE ACCURACY OF THE INFORMATION ON THESE  
SPECIFICATIONS. THE INFORMATION ON THESE PLANS  
SHALL NOT BE CHANGED, MODIFIED OR ALTERED WITHOUT  
AUTHORIZATION.

<p>ENGINEER'S SEAL</p>	<p>STARBUCKS ON TRAMWAY ALBUQUERQUE, NM</p>	<p>DRAWN BY BF</p>
 <p>RONALD R. BOHANNAN NEW MEXICO 7868 PROFESSIONAL ENGINEER</p>	<p>GRADING &amp; DRAINAGE PLAN</p>	<p>DATE 07/11/2023</p>
<p>07/19/2023</p>	 <p><i>TERRA WEST, LLC</i> 5571 MIDWAY PARK PLACE NE ALBUQUERQUE, NM 87109 (505) 858-3100 www.tierrowestllc.com</p>	<p>2023047-GRE</p>
<p>RONALD R. BOHANNAN P.E. #7868</p>		<p>SHEET # <b>C3</b></p>
		<p>JOB # 2023047</p>