

# CITY OF ALBUQUERQUE

Planning Department  
Alan Varela, Director



Mayor Timothy M. Keller

April 13, 2022

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

**RE: Lot 4 Unser and McMahon Center  
Grading & Drainage Plans  
Engineer's Stamp Date: 04/12/22  
Hydrology File: A11D017B**

Dear Mr. Bohannon:

Based upon the information provided in your submittal received 03/01/2022, the Grading & Drainage Plans are 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 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 Drainage Covenant with Exhibit A for the stormwater quality ponds per Article 6-15(C) of the DPM prior to Permanent Release of Occupancy. Please submit the original copies along with the \$ 25.00 recording fee check made payable to Bernalillo County to Marion G. Velasquez ([mgvelasquez@cabq.gov](mailto:mgvelasquez@cabq.gov)) on the 4th floor of Plaza de Sol. Please note that Hydrology will need a pdf copy of the recorded Drainage Covenant prior to Hydrology's approval of Permanent Release of Occupancy.

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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*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)



# City of Albuquerque

Planning Department

Development & Building Services Division

## DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 11/2018)

**Project Title:** \_\_\_\_\_ **Building Permit #:** \_\_\_\_\_ **Hydrology File #:** \_\_\_\_\_

**DRB#:** \_\_\_\_\_ **EPC#:** \_\_\_\_\_ **Work Order#:** \_\_\_\_\_

**Legal Description:** \_\_\_\_\_

**City Address:** \_\_\_\_\_

**Applicant:** \_\_\_\_\_ **Contact:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**Phone#:** \_\_\_\_\_ **Fax#:** \_\_\_\_\_ **E-mail:** \_\_\_\_\_

**Owner:** \_\_\_\_\_ **Contact:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**Phone#:** \_\_\_\_\_ **Fax#:** \_\_\_\_\_ **E-mail:** \_\_\_\_\_

**TYPE OF SUBMITTAL:** \_\_\_\_\_ PLAT (\_\_\_\_# OF LOTS) \_\_\_\_\_ RESIDENCE \_\_\_\_\_ DRB SITE \_\_\_\_\_ ADMIN SITE

**IS THIS A RESUBMITTAL?:** \_\_\_\_\_ Yes \_\_\_\_\_ No

**DEPARTMENT:** \_\_\_\_\_ TRAFFIC/ TRANSPORTATION \_\_\_\_\_ HYDROLOGY/ DRAINAGE

Check all that Apply:

### TYPE OF SUBMITTAL:

- \_\_\_\_\_ ENGINEER/ARCHITECT CERTIFICATION
- \_\_\_\_\_ PAD CERTIFICATION
- \_\_\_\_\_ CONCEPTUAL G & D PLAN
- \_\_\_\_\_ GRADING PLAN
- \_\_\_\_\_ DRAINAGE MASTER PLAN
- \_\_\_\_\_ DRAINAGE REPORT
- \_\_\_\_\_ FLOODPLAIN DEVELOPMENT PERMIT APPLIC
- \_\_\_\_\_ ELEVATION CERTIFICATE
- \_\_\_\_\_ CLOMR/LOMR
- \_\_\_\_\_ TRAFFIC CIRCULATION LAYOUT (TCL)
- \_\_\_\_\_ TRAFFIC IMPACT STUDY (TIS)
- \_\_\_\_\_ OTHER (SPECIFY) \_\_\_\_\_
- \_\_\_\_\_ PRE-DESIGN MEETING?

### TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

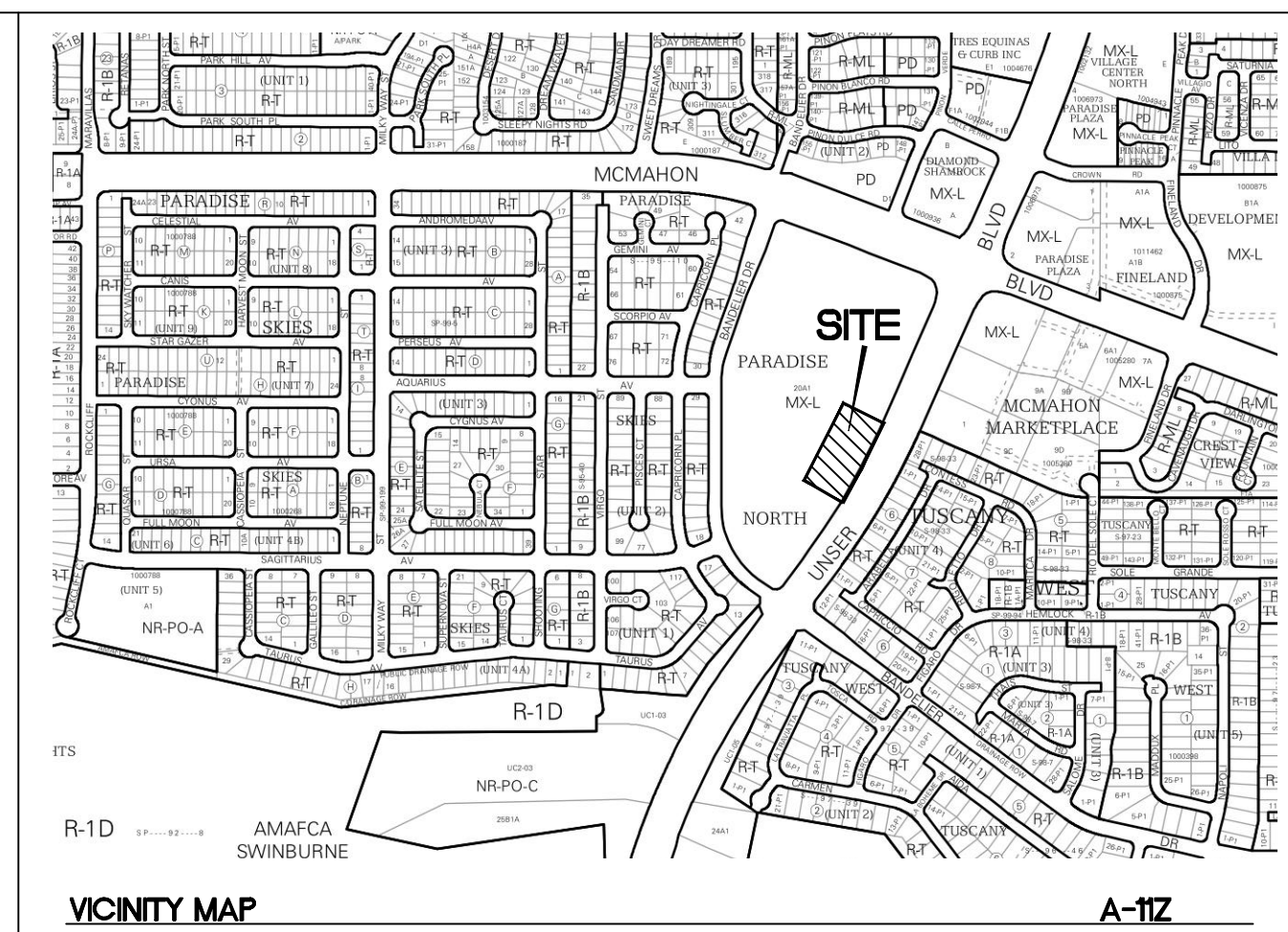
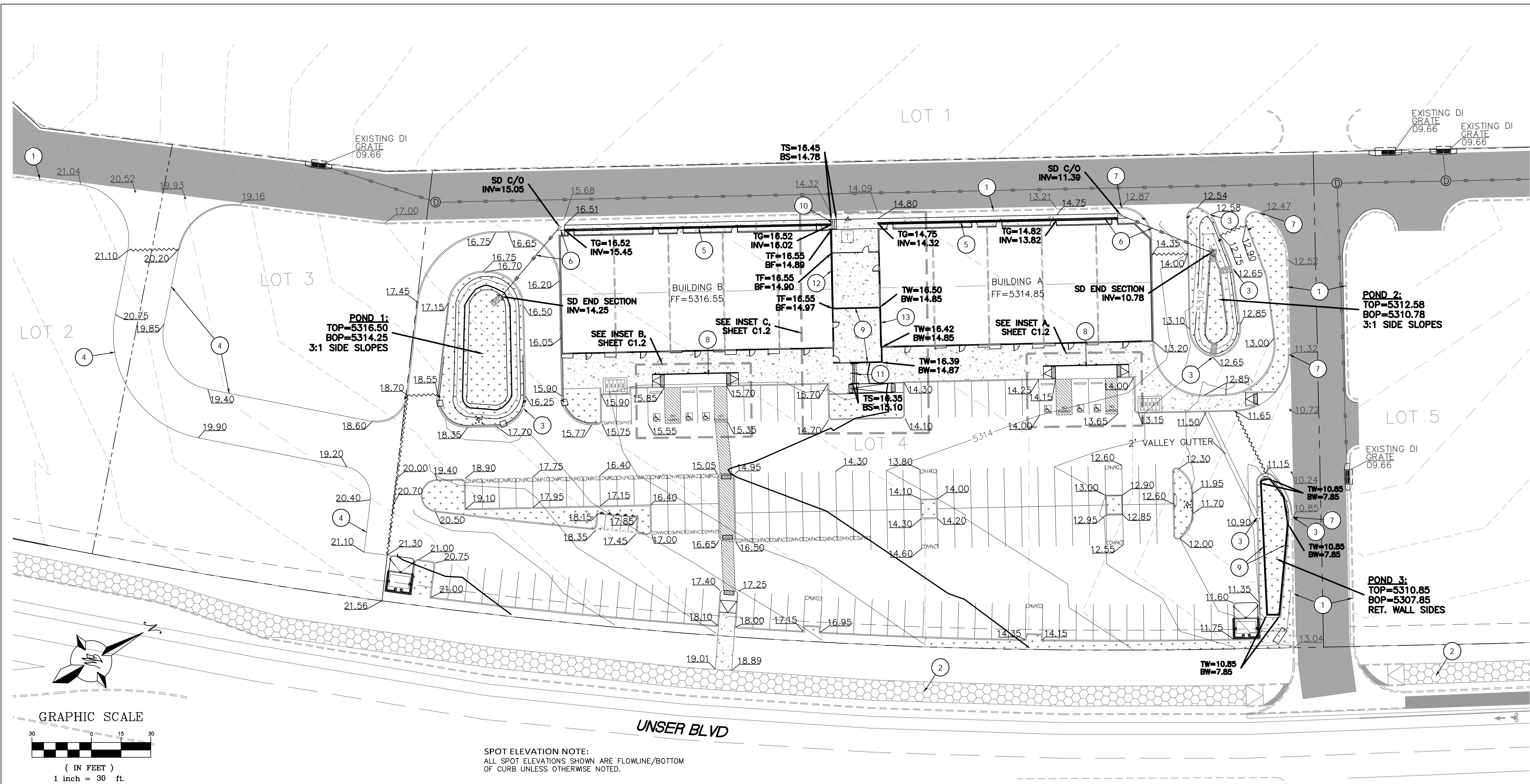
- \_\_\_\_\_ BUILDING PERMIT APPROVAL
- \_\_\_\_\_ CERTIFICATE OF OCCUPANCY
- \_\_\_\_\_ PRELIMINARY PLAT APPROVAL
- \_\_\_\_\_ SITE PLAN FOR SUB'D APPROVAL
- \_\_\_\_\_ SITE PLAN FOR BLDG. PERMIT APPROVAL
- \_\_\_\_\_ FINAL PLAT APPROVAL
- \_\_\_\_\_ SIA/ RELEASE OF FINANCIAL GUARANTEE
- \_\_\_\_\_ 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:** \_\_\_\_\_ **By:** \_\_\_\_\_

COA STAFF:

ELECTRONIC SUBMITTAL RECEIVED: \_\_\_\_\_

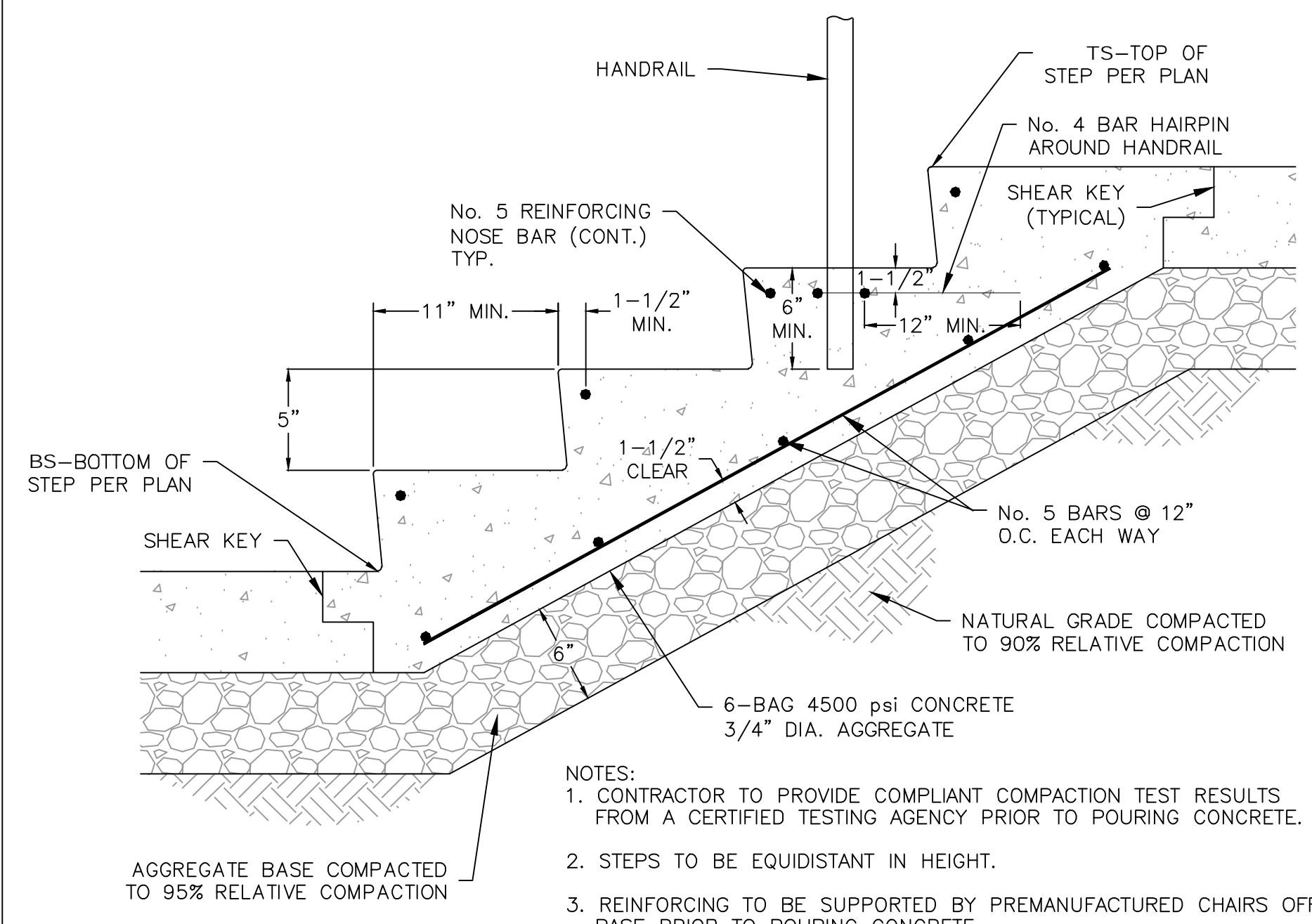
FEE PAID: \_\_\_\_\_



**LEGAL DESCRIPTION:**  
LOT 4 PLAT OF OF UNSER AND MCMAHON CENTER WITHIN THE TOWN OF ALAMED GRANT  
PROJECTED SECTION 2, TOWNSHIP 11 NORTH, RANGE 2 EAST, N.M.P.M. CITY OF  
ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO.

- LEGEND**
- CURB & GUTTER
  - BOUNDARY LINE
  - EASEMENT
  - EXISTING STORM DRAIN
  - BUILDING
  - PROPOSED SIDEWALK
  - EXISTING CURB & GUTTER
  - WATER BLOCK
  - LANDSCAPING
  - EXISTING INDEX CONTOUR
  - EXISTING CONTOUR
  - PROPOSED INDEX CONTOUR
  - PROPOSED CONTOUR
  - EXISTING ASPHALT TO REMAIN (PRIVATE ROAD)

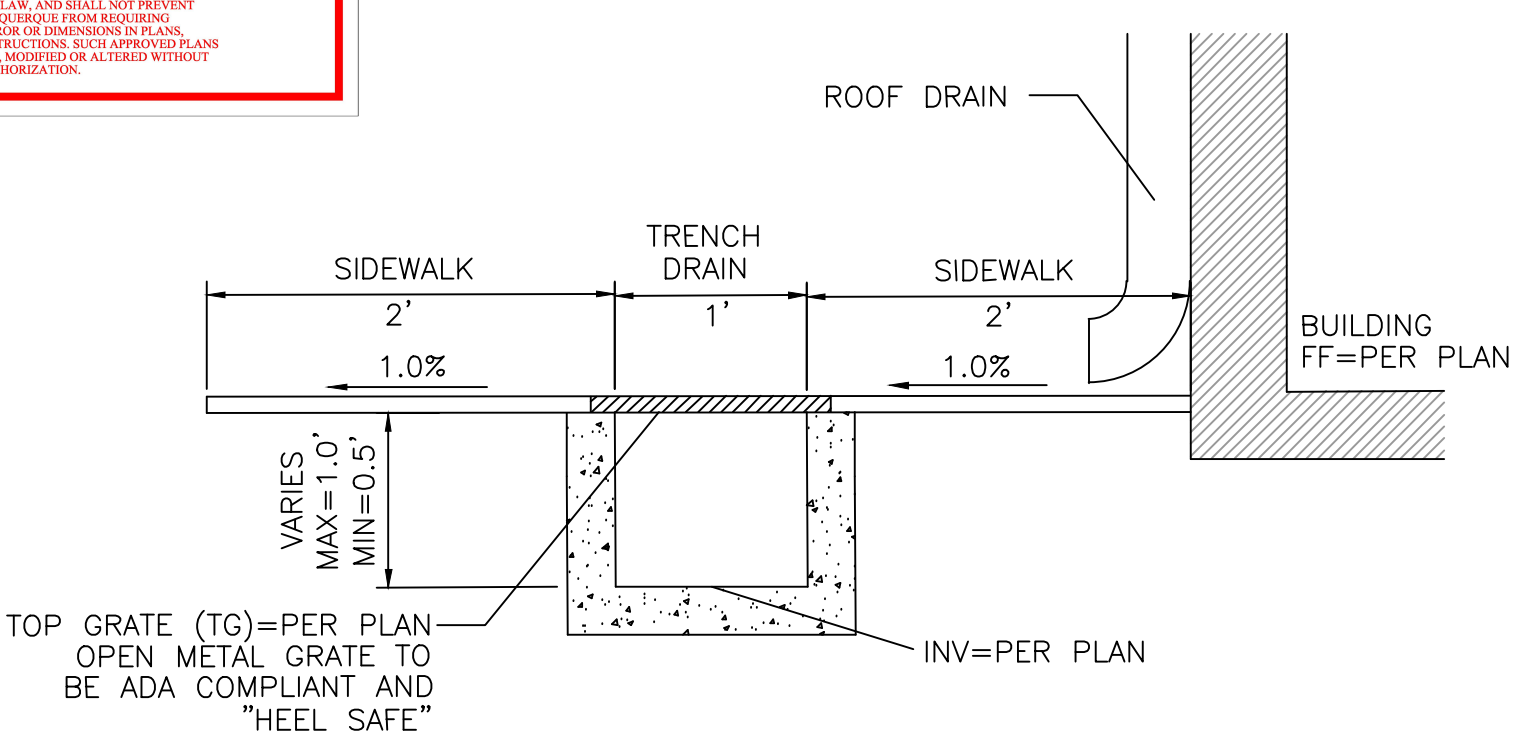
- KEYED NOTES**
- 1 EXISTING CURB & GUTTER TO REMAIN
  - 2 EXISTING ASPHALT TRAIL TO REMAIN
  - 3 PROPOSED 2' CURB CUT
  - 4 PROPOSED EDGE OF ASPHALT - NO CURB
  - 5 PROPOSED TRENCH DRAIN, S=0.4% MIN., SEE DETAIL THIS SHEET
  - 6 PROPOSED 6" PVC STORM DRAIN, S=1.5% MIN.
  - 7 TIE NEW ONSITE CURB TO EXISTING CURB
  - 8 PROPOSED 6" HEADER CURB
  - 9 PROPOSED RETAINING WALL W/ PEDESTRIAN RAILING
  - 10 PROPOSED CONCRETE STAIRS (4 5" STEPS), SEE DETAIL THIS SHEET
  - 11 PROPOSED CONCRETE STAIRS (3 5" STEPS), SEE DETAIL THIS SHEET
  - 12 EXTENDED FOOTING, SEE PLAN FOR TOP/BOTTOM OF FOOTING
  - 13 EXTENDED STEMWALL, SEE PLAN FOR TOP/BOTTOM OF WALL



**CONCRETE STAIR DETAIL**  
NTS



**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.

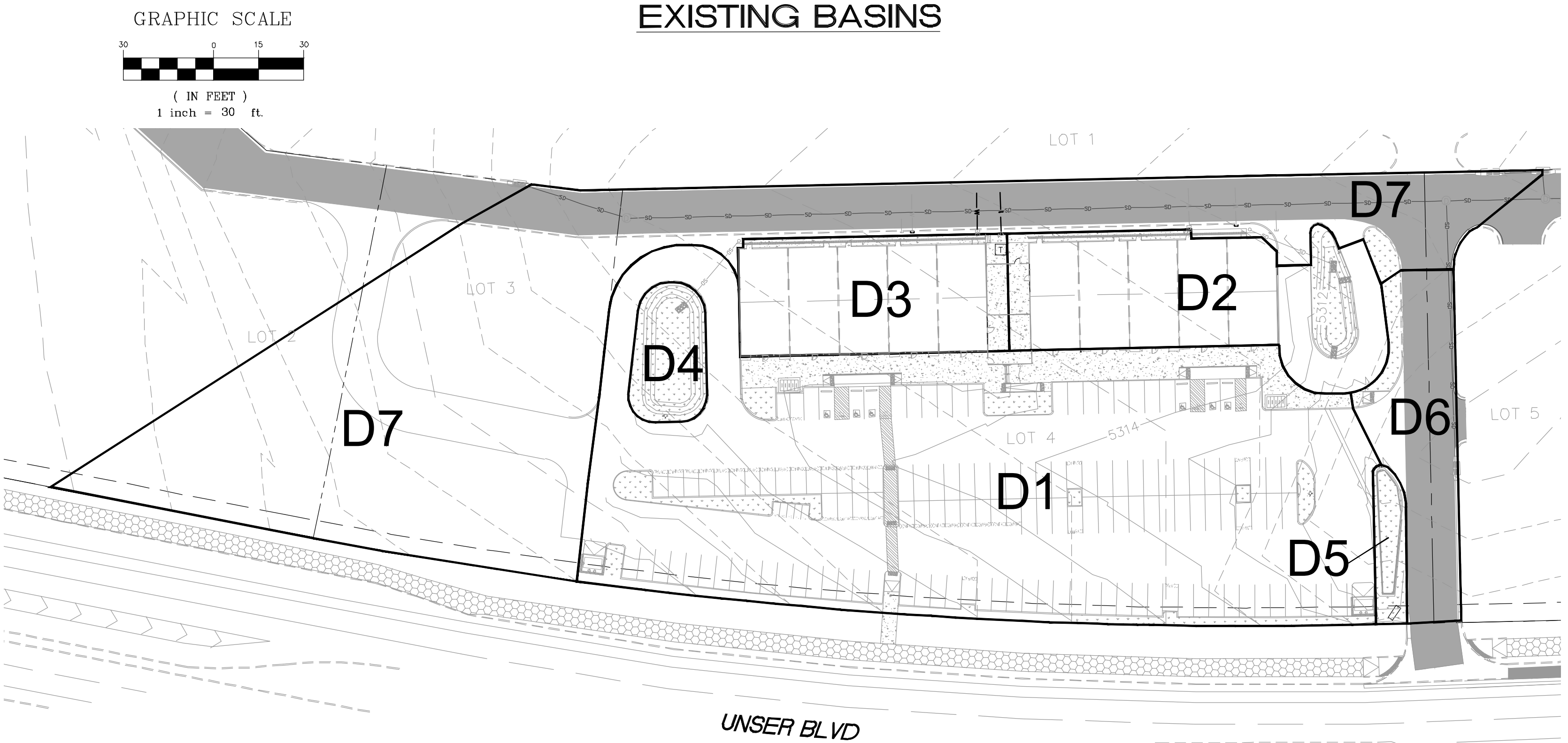
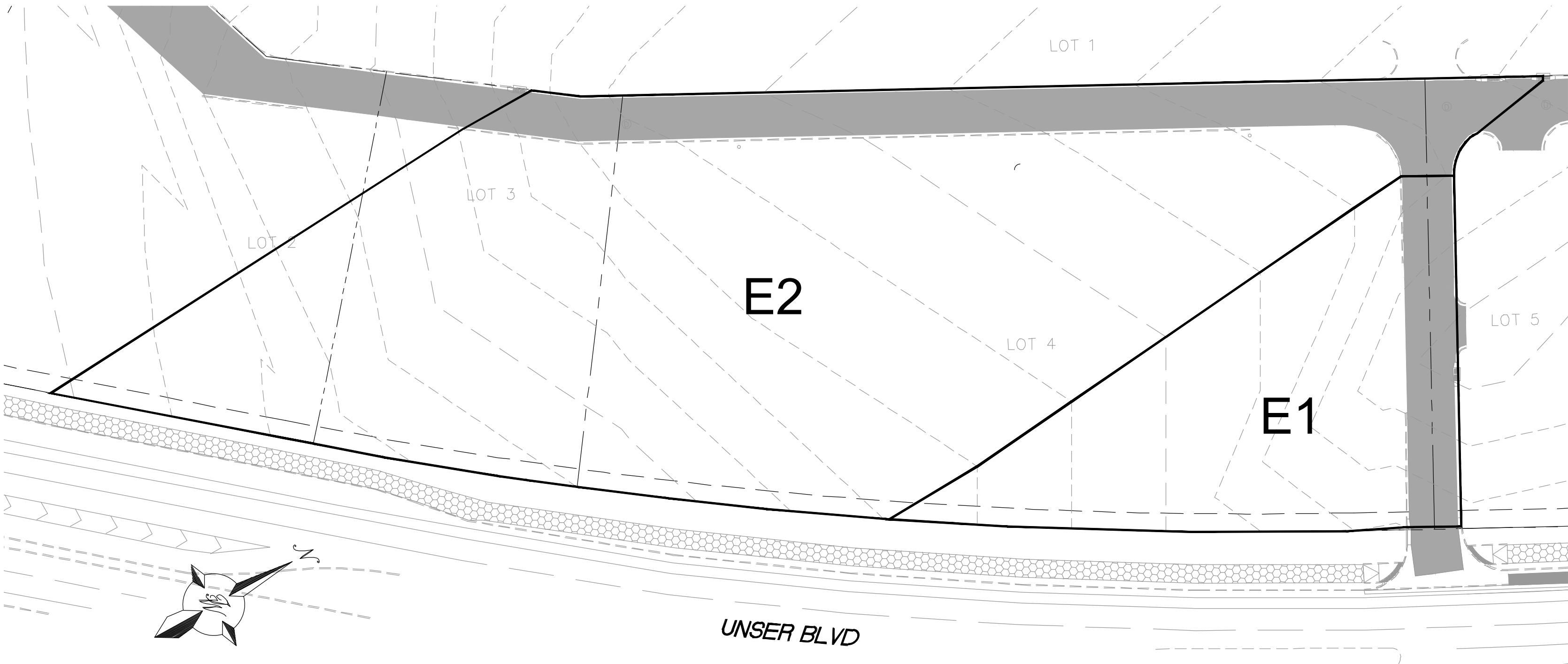


**TRENCH DRAIN DETAIL**  
NTS

- EROSION CONTROL NOTES:**
- CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TOPSOIL DISTURBANCE PERMIT PRIOR TO BEGINNING WORK.
  - CONTRACTOR IS RESPONSIBLE FOR MAINTAINING RUN-OFF ON SITE DURING CONSTRUCTION.
  - CONTRACTOR IS RESPONSIBLE FOR CLEANING ALL SEDIMENT THAT GETS INTO EXISTING RIGHT-OF-WAY.
  - REPAIR OF DAMAGED FACILITIES AND CLEANUP OF SEDIMENT ACCUMULATIONS ON ADJACENT PROPERTIES AND IN PUBLIC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.
  - ALL EXPOSED EARTH SURFACES MUST BE PROTECTED FROM WIND AND WATER EROSION PRIOR TO FINAL (CITY) ACCEPTANCE OF ANY PROJECT.
  - ALL SLOPES NOT STABILIZED AT THE END OF THE PROJECT SHALL BE STABILIZED IN ACCORDANCE WITH COA SPECS OR 3/4" GRAVEL

- NOTICE TO CONTRACTORS**
- AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY.
  - 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.
  - TWO WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE, 765-1234, FOR LOCATION OF EXISTING UTILITIES.
  - 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.
  - BACKFILL COMPACTION SHALL BE ACCORDING TO TRAFFIC/STREET USE.
  - MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
  - WORK ON ARTERIAL STREETS SHALL BE PERFORMED ON A 24-HOUR BASIS.

	<b>LOT 4, UNSER/MCMAHON CENTER ALBUQUERQUE, NM</b>	<b>DRAWN BY</b> pm
	<b>GRADING AND DRAINAGE PLAN</b>	<b>DATE</b> 4-11-22
	 5571 MIDWAY PARK PL. NE, ALBUQUERQUE, NEW MEXICO 87109 (505) 858-3100 www.tierrawestllc.com	<b>DRAWING</b> 2020015-GR
		<b>SHEET #</b> <b>C1.0</b>
		<b>JOB #</b> 2020015



Existing Conditions											
Basin Descriptions								100-Year, 6-Hr		10-Year, 6-Hr	
Basin ID	Area (sf)	Area (acres)	Area (sq miles)	Treatment A % (acres)	Treatment B % (acres)	Treatment C % (acres)	Treatment D % (acres)	Weighted E (in)	Volume (ac-ft)	Flow cfs	Weighted E (in)
E1	34,076.53	0.782	0.00122	0%	0.000	0%	0.000	85%	0.665	15%	0.117
E2	119,722.50	2.748	0.00429	0%	0.000	0%	0.000	87%	2.391	13%	0.357
Total	153,799.03	3.531	0.00552	0%	0.000	0%	0.000	3.056	0.475		

Proposed Conditions											
Basin Descriptions								100-Year, 6-Hr		10-Year, 6-Hr	
Basin ID	Area (sf)	Area (acres)	Area (sq miles)	Treatment A % (acres)	Treatment B % (acres)	Treatment C % (acres)	Treatment D % (acres)	Weighted E (in)	Volume (ac-ft)	Flow cfs	Weighted E (in)
D1	60,697.90	1.393	0.00218	0%	0.000	13%	0.181	0%	0.000	87%	1.212
D2	13,889.46	0.319	0.00050	0%	0.000	11%	0.035	0%	0.000	89%	0.284
D3	9,688.64	0.222	0.00035	0%	0.000	0%	0.000	100%	0.222	2.240	0.42
D4	2,911.30	0.067	0.00010	0%	0.000	75%	0.050	25%	0.017	0%	0.000
D5	1,484.58	0.034	0.00005	0%	0.000	100%	0.034	0%	0.000	0%	0.000
D6	7,393.84	0.170	0.00027	0%	0.000	8%	0.014	0%	0.000	92%	0.156
D7	57,733.41	1.325	0.00207	0%	0.000	2%	0.027	60%	0.795	38%	0.504
Total	153,798.83	3.531	0.00552	0%	0.000	0%	0.341	0.812	2.378	0.529	12.86

**Equations:**

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	4.32	2.57	

#### Water Quality Volume (Basin D1)

Total Impervious Area = 52,808 SF

Retainage depth = 0.42" = 0.035' (COA DPM Article 6-12)

Retention Volume = 0.035\*52,808 = 1,849 CF = **0.043 Ac-Ft**

#### Water Quality Volume (Basin D2)

Total Impervious Area = 12,445.2 SF

Retainage depth = 0.42" = 0.035' (COA DPM Article 6-12)

Retention Volume = 0.035\*12,445.2 = 436 CF = **0.010 Ac-Ft**

#### Water Quality Volume (Basin D3)

Total Impervious Area = 9,688.64 SF

Retainage depth = 0.42" = 0.035' (COA DPM Article 6-12)

Retention Volume = 0.035\*9,688.64 = 339 CF = **0.008 Ac-Ft**

#### Water Quality Volume (Basin D4 & D5)

D4 & D5 have 0% impervious area, therefore have no water quality volume requirement.

#### POND 1 (Full Retention)

Contributing Basins = D3 & D4

Contributing Basin Area = 0.289 acres

Basin D3 + D4 Retention Pond Required Volume (100yr-10Day Volume):

$V_{100DMS} = V_{100} + A_0 * (P_{100DMS} - P_{100}) / 12 \text{ in/ft}$  (COA DPM Equation 6.5)

$V_{100DMS} = (0.042 \text{ ac-ft} + 0.004 \text{ ac-ft}) + (0.222 \text{ ac} + 0 \text{ ac}) * (3.9 \text{ in} - 2.17 \text{ in}) / 12 \text{ in/ft}$

$V_{100DMS} = 0.046 \text{ ac-ft} + (0.222 \text{ ac}) * (1.73 \text{ in}) / 12 \text{ in/ft}$

$V_{100DMS} = 0.078 \text{ ac-ft} = 3,397.7 \text{ CF}$

#### Pond Volume Calculations

$A_0$  - Bottom Of The Pond Surface Area

$A_1$  - Top Of The Pond Surface Area

$D$  - Water Depth

$D_1$  - Total Pond Depth

$C$  - Change In Surface Area / Water Depth

Volume =  $A_0 * D + 0.5 * C * D^2$

$C = (A_1 - A_0) / D_1$

$A_0 = 1,071.95 \text{ ft}^2$

$A_1 = 2,181.66 \text{ ft}^2$

$D_1 = 2.25 \text{ ft}$

$C = 493.20$

ACTUAL ELEVATION	DEPTH (ft)	VOLUME (ac-ft)	Q (cfs)	Note
5314.25	0.00	0.0000	0.0000	BOP
5314.75	0.50	0.0137	0.0000	
5315.25	1.00	0.0303	0.0000	
5315.75	1.50	0.0497	0.0000	
5316.25	2.00	0.0719	0.0000	
5316.38	2.13	0.0781	0.0000	MWSE
5316.50	2.25	0.0840	0.0000	TOP

#### POND 2 (SWQ Retention Only)

#### Pond Volume Calculations

$A_0$  - Bottom Of The Pond Surface Area

$A_1$  - Top Of The Pond Surface Area

$D$  - Water Depth

$D_1$  - Total Pond Depth

$C$  - Change In Surface Area / Water

Volume =  $A_0 * D + 0.5 * C * D^2$

$C = (A_1 - A_0) / D_1$

$A_0 = 316.93 \text{ ft}^2$

$A_1 = 1,040.22 \text{ ft}^2$

$D_1 = 1.80 \text{ ft}$

$C = 401.83$

ACTUAL ELEVATION	DEPTH (ft)	VOLUME (ac-ft)	Note
5310.78	0.00	0.0000	BOP
5311.28	0.50	0.0048	
5311.78	1.00	0.0119	
5312.28	1.50	0.0213	
5312.58	1.80	0.0280	Outfall Invert*

\*Stormwater Quality Volume Retention Required = 0.01 Ac-Ft

#### POND 3 (SWQ Retention Only)

#### Pond Volume Calculations

$A_0$  - Bottom Of The Pond Surface Area

$A_1$  - Top Of The Pond Surface Area

$D$  - Water Depth

$D_1$  - Total Pond Depth

$C$  - Change In Surface Area / Water

Volume =  $A_0 * D + 0.5 * C * D^2$

$C = (A_1 - A_0) / D_1$

$A_0 = 625.52 \text{ ft}^2$

$A_1 = 625.52 \text{ ft}^2$

$D_1 = 3.40 \text{ ft}$

$C = 0.00$

ACTUAL ELEVATION	DEPTH (ft)	VOLUME (ac-ft)	Note
5307.85	0.00	0.0000	
5308.35	0.50	0.0072	
5308.85	1.00	0.0144	
5309.35	1.50	0.0215	
5309.85	2.00	0.0287	
5310.35	2.50	0.0359	
5310.85	3.00	0.0431	Outfall Invert*

\*Stormwater Quality Volume Retention Required = 0.043 Ac-Ft

#### EXISTING DRAINAGE:

THE SITE IS KNOWN AS LOT 4 OF A RECENTLY PLATTED 9-LOT SUBDIVISION KNOWN AS UNSER AND MCMAHON CENTER. SITE CONSISTS OF 2.54 ACRES AND IS CURRENTLY UNDEVELOPED. THE SITE HAS BEEN PREVIOUSLY ROUGH-GRADED. AS SHOWN BY THE VICINITY MAP, THIS SITE IS BOUNDED BY UNSER BLVD TO THE EAST, A PAVED PRIVATE ROAD TO THE NORTH AND WEST (LOCATED WITHIN THE PROPERTY BOUNDARY OF THE SITE WITHIN AN ACCESS EASEMENT), AND A VACANT ROUGH-GRADED LOT TO THE SOUTH (LOT 3 OF THE UNSER AND MCMAHON CENTER). AS SHOWN BY THE FEMA FIRM MAP, THE SITE DOES NOT LIE WITHIN ANY FLOODPLAIN.

THE SITE CONSISTS OF DRAINAGE SHEET FLOW FROM SOUTHEAST TO NORTHWEST TOWARDS THE PRIVATE ROADS MENTIONED PREVIOUSLY, WHICH ULTIMATELY LEADS TO RECENTLY CONSTRUCTED CURB INLETS IN THE PRIVATE ROADS. THE GROUND COVER CONSISTS OF COMPACTED SOIL DUE TO RECENT ROUGH-GRADING ACTIVITY WITH SLOPES ACROSS THE SITE BEING APPROXIMATELY 2%. BASIN E2 CONSISTS OF THE NORTHWESTERLY QUADRANT OF THE SITE AND DRAINS TO THE CURB INLET IN THE EAST-WEST PRIVATE ROAD. BASIN E1 CONSISTS OF THE REMAINING PORTIONS OF THE SITE, A PORTION OF THE NORTH-SOUTH PRIVATE ROAD, AND UPLAND FLOWS FROM PART OF LOTS 2 AND 3. THIS BASIN DRAINS TO THE TWO CURB INLETS IN THE NORTH-SOUTH PRIVATE ROAD, WITHIN LOT 5.

THE SITE LIES WITHIN A MASTER DRAINAGE PLAN KNOWN AS 'PARADISE NORTH - UNSER/MCMAHON' DATED 08/04/2020 (HYDROLOGY FILE A11D017). PER THIS DRAINAGE MASTER PLAN, THE SITE LIES WITHIN MASTER PLAN'S PROPOSED BASINS P4 AND P5. BASIN P4 IS ALLOWED TO DISCHARGE 3.13 CFS TO THE CURB INLETS IN THE NORTH-SOUTH PRIVATE ROAD IN LOT 5. BASIN P5 IS ALLOWED TO DISCHARGE 5.52 CFS TO THE CURB INLET IN THE EAST-WEST PRIVATE ROAD. INCLUDING THE BASINS FOR THE SITE-ADJACENT DEVELOPED PRIVATE ROADS AND THE UPLAND FLOWS OF LOT 3, THE MASTER PLAN DRAINAGE CRITERIA ALLOWS A MAXIMUM OF 7.02 CFS TO THE CURB INLETS IN THE NORTH-SOUTH PRIVATE ROAD IN LOT 5, AND A MAXIMUM OF 6.21 CFS TO THE CURB INLET IN THE EAST-WEST PRIVATE ROAD.

PER THE DRAINAGE MASTER PLAN, ALL DEVELOPED LOTS ARE REQUIRED TO RETAIN THEIR STORMWATER QUALITY VOLUME ONSITE PRIOR TO RELEASING ANY RUNOFF TO THE CURB INLETS AND STORM DRAIN IN THE INTERNAL PRIVATE ROADS.

#### PROPOSED DRAINAGE:

THE PROPOSED DEVELOPMENT WILL BE A RETAIL/SHOPPING CENTER WITH 2 BUILDINGS (BUILDINGS A AND B), A DRIVE-THRU FOR EACH BUILDING, AND PARKING/PEDESTRIAN ACCOMMODATIONS. THIS DEVELOPMENT WILL BE BUILT OUT IN ITS ENTIRETY IN A SINGLE PHASE. THE SITE WILL PREDOMINANTLY DRAIN FROM SOUTH TO NORTH AND TOWARDS THE EXISTING CURB INLETS IN THE ADJACENT PRIVATE ROADS.

PROPOSED BASIN D1 CONSISTS OF ALL THE PARKING AND LANDSCAPING AREA EAST OF THE BUILDINGS, AND THE DRIVE-THRU LANE OF BUILDING B. THIS BASIN SURFACE FLOWS FROM SOUTH TO NORTH TOWARDS A CURB CUT OPENING ALONG THE LANDSCAPE ISLAND AT THE NORTHEAST END OF THE SITE. THIS LANDSCAPE ISLAND, ALSO SHOWN AS BASIN D5, WILL CONTAIN DRAINAGE POND 3 FOR STORMWATER QUALITY RETENTION OF BASIN D1 PRIOR TO RELEASING RUNOFF THROUGH A CURB CUT ON THE NORTH SIDE OF THE POND. RUNOFF WILL THEN BE DIRECTED TOWARDS THE EXISTING CURB INLET IN THE EAST-WEST PRIVATE ROAD (BASIN D6) AT A MAXIMUM 100-YR DISCHARGE RATE OF 6.13 CFS, WHICH IS LESS THAN THE ALLOWABLE DISCHARGE RATE OF 6.21 CFS IN THE DRAINAGE MASTER PLAN.

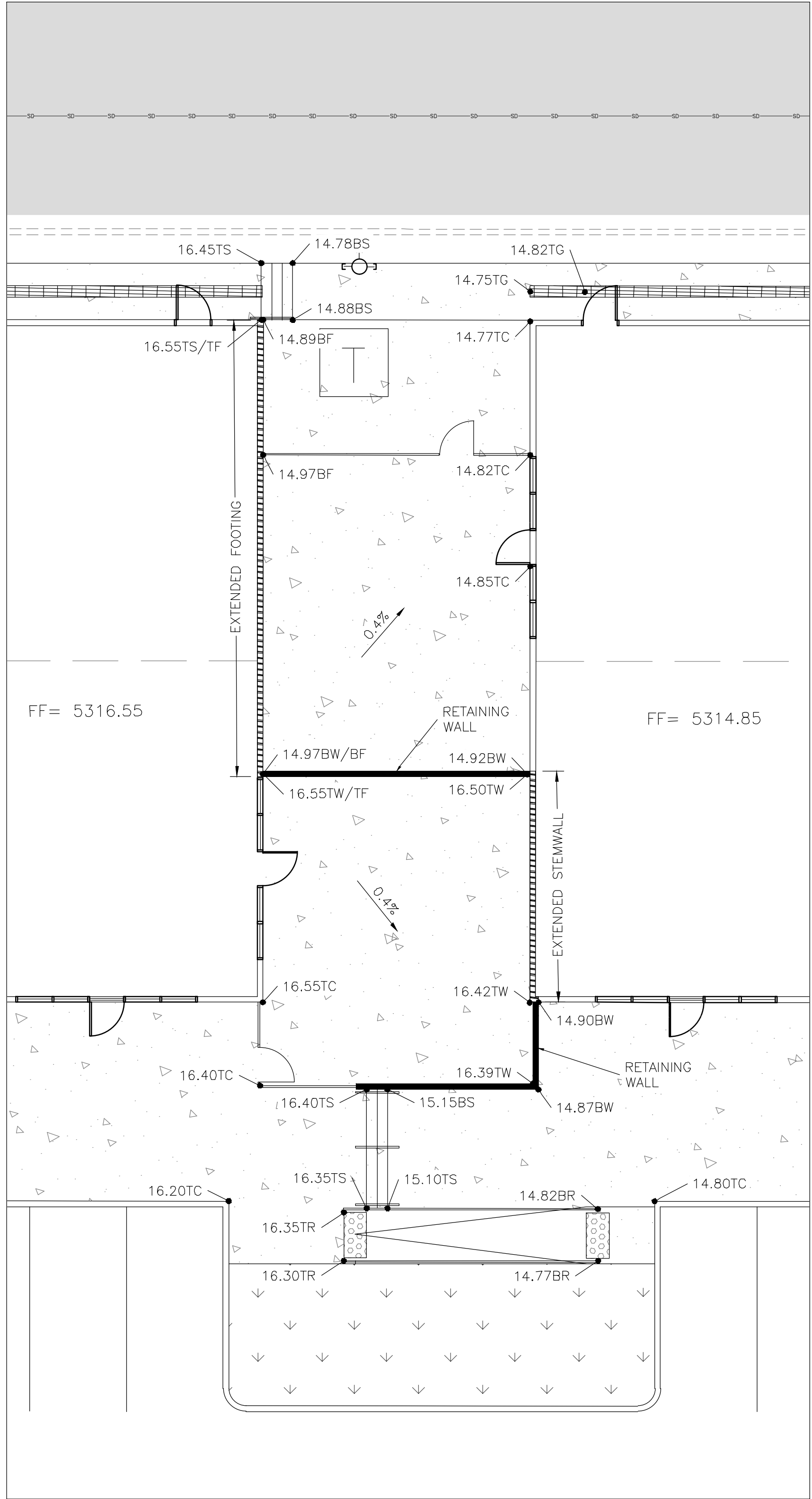
PROPOSED BASIN D2 CONSISTS OF BUILDING A PLUS THE ADJACENT DRIVE-THRU LANE. BUILDING A WILL DRAIN TO THE WEST SIDE OF THE BUILDING AND DOWN ROOF SCUPPERS THAT WILL RELEASE THE ROOF DRAINAGE INTO A TRENCH DRAIN IN THE SIDEWALK. THIS DRAINAGE WILL THEN BE CONVEYED INTO A 6-INCH PVC PIPE THAT DAYLIGHTS INTO POND 2, WHICH IS LOCATED IN THE LANDSCAPE ISLAND WHERE THE DRIVE-THRU LANE IS. THE SURROUNDING DRIVE-THRU LANE WILL ALSO SURFACE FLOW INTO THIS POND VIA CURB CUTS. POND 3 IS SIZED TO CAPTURE THE WATER QUALITY VOLUME OF BASIN D2 PRIOR TO RELEASING RUNOFF THROUGH A CURB CUT ON THE WEST SIDE OF THE LANDSCAPE ISLAND. RUNOFF WILL THEN BE DIRECTED TOWARDS THE EXISTING CURB INLETS IN THE NORTH-SOUTH PRIVATE ROAD. THE MAXIMUM 100-YR DISCHARGE RATE FROM BASIN D2, PLUS THE ADJACENT PRIVATE ROADWAY AND UPLAND FLOWS OF LOT 3 (BASIN D7) IS 5.66 CFS. THIS IS LESS THAN THE ALLOWABLE DISCHARGE RATE OF 7.02 CFS IN THE DRAINAGE MASTER PLAN. BASIN D7 HYDROLOGY ALSO INCLUDES PAVING AN ACCESS ROUTE FROM THE NORTH-SOUTH PRIVATE ROAD TO THE SOUTH SIDE OF LOT 3.

BASIN D3 CONSISTS OF BUILDING B. SIMILAR TO BUILDING A, BUILDING B DRAINS TOWARDS THE WEST SIDE OF THE BUILDING AND DOWN ROOF SCUPPERS THAT WILL RELEASE THE ROOF DRAINAGE INTO A TRENCH DRAIN IN THE SIDEWALK. THIS DRAINAGE WILL THEN BE CONVEYED INTO A 6-INCH PVC PIPE THAT DAYLIGHTS INTO POND 1, WHICH IS LOCATED IN THE LANDSCAPE ISLAND OF THE ADJACENT DRIVE-THRU LANE (BASIN D4). THIS POND WILL FULLY RETAIN THE 100-YR, 10-DAY VOLUME OF BOTH BASINS D3 AND D4.

THE TOTAL FLOWS OF THE ENTIRE SITE PLUS UPLAND FLOWS AND ADJACENT PRIVATE ROADS IS 12.86 CFS OVER 3.531 ACRES OF BASIN. THE PROPOSED FULLY DEVELOPED LOT 3 SITE MEETS THE REQUIREMENTS SET IN THE DRAINAGE MASTER PLAN FOR PARADISE NORTH-UNSER/MCMAHON, BOTH FOR ALLOWABLE DISCHARGE AND STORMWATER QUALITY REQUIREMENTS.

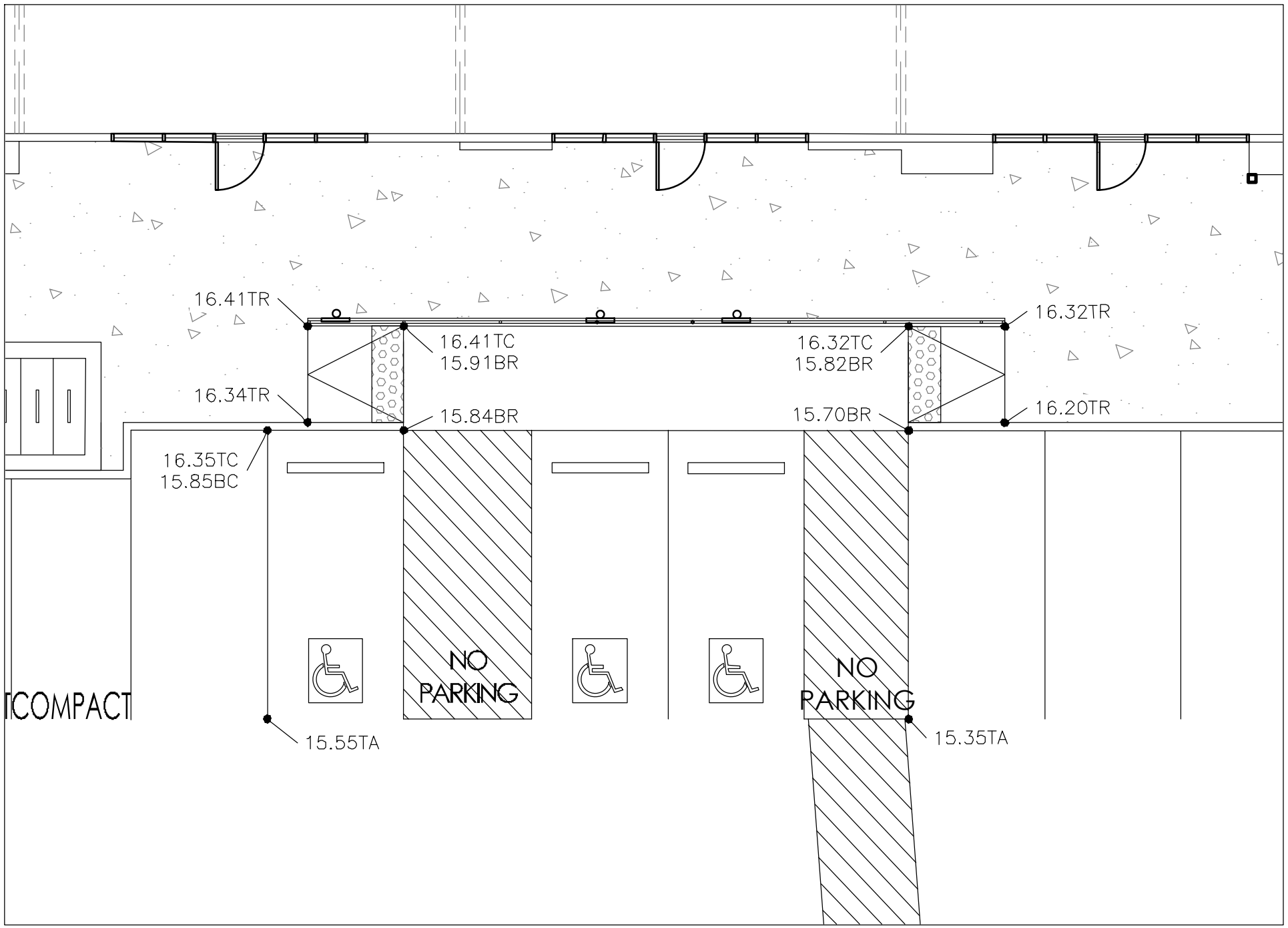


<div>ENGINEER'S SEAL</div> <div>RONALD R. BOHANNAN</div> <div>NEW MEXICO</div> <div>7868</div> <div>PROFESSIONAL ENGINEER</div> <div>04-12-22</div> <div>RONALD R. BOHANNAN</div> <div>P.E. #7868</div>	<div>LOT 4, UNSER/MCMAHON CENTER</div> <div>ALBUQUERQUE, NM</div> <div>DRAINAGE PLAN AND</div> <div>HYDROLOGY</div> <div>TERRA WEST, LLC</div> <div>5571 MIDWAY PARK PL NE</div> <div>ALBUQUERQUE, NEW MEXICO 87109</div> <div>(505) 858-3100</div> <div>www.tierawestllc.com</div>	DRAWN BY pm
		DATE 4-11-22
		DRAWING 2020015-GR
		SHEET # C11
		JOB # 2020015

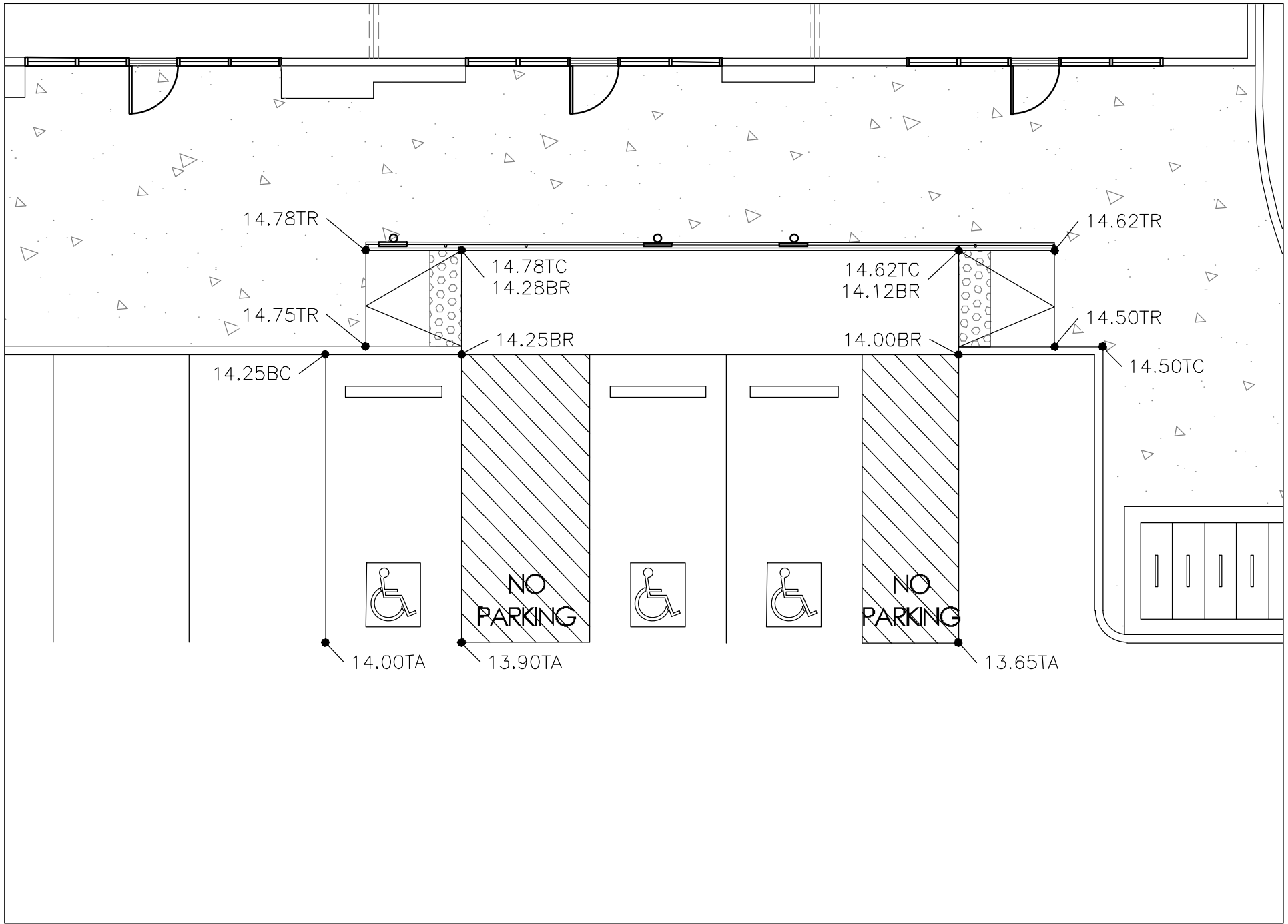


INSET C

**SPOT ELEVATION LEGEND**  
TC = TOP OF CURB/CONCRETE  
BC = BOTTOM OF CURB  
TS = TOP OF STEP  
BS = BOTTOM OF STEP  
TW = TOP OF WALL  
BW = BOTTOM OF WALL  
TF = TOP OF EXTENDED FOOTING  
BF = BOTTOM OF EXTENDED FOOTING  
TA = TOP OF ASPHALT  
TR = TOP OF RAMP  
BR = BOTTOM OF RAMP  
TG = TOP OF GRATE  
TA = TOP OF ASPHALT



INSET B



INSET A



<div>ENGINEER'S SEAL</div> <div></div> <div>RONALD R. BOHANNAN P.E. #7868</div>	LOT 4, UNSER/MCAHON CENTER ALBUQUERQUE, NM	DRAWN BY pm
	DETAILED GRADING INSETS	DATE 4-11-22
	<div><b>TIERRA WEST, LLC</b> 5571 MIDWAY PARK PL NE ALBUQUERQUE, NEW MEXICO 87109 (505) 858-3100 www.tierrawestllc.com</div>	DRAWING 2020015-GR
		SHEET # <b>C1.2</b>
		JOB # 2020015