

CITY OF ALBUQUERQUE

Planning Department
Alan Varela, Interim Director



Mayor Timothy M. Keller

April 13, 2022

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

**RE: Saranam Golf Course & Montano
4701 Montano Rd NW
Grading and Drainage Plan
Engineer's Stamp Date: 04/08/2022
Hydrology File: E11D013B**

Dear Mr. Bohannon:

Based upon the information provided in your submittal received 04/12/2022, the 2nd Revised Grading and Drainage Plan is approved for Building Permit.

PO Box 1293

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.

Albuquerque

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.

NM 87103

www.cabq.gov

Please provide Drainage Covenant for the stormwater quality 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 to Marion 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.

If you have any questions, please contact me at 924-3695 or dggutierrez@cabq.gov

Sincerely,

David G. Gutierrez, P.E.
Senior Engineer, Hydrology
Planning Department



City of Albuquerque

Planning Department
Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 6/2018)

Project Title: Saranam Golf Course & Montano **Building Permit #:** _____ **Hydrology File #:** _____

DRB#: _____ **EPC#:** PR-2020-003461 **Work Order#:** _____

Legal Description: TR 27A-2 TAYLOR RANCH REDIV OF TR 27-A INTO TRS 27A-1 27A-2 OF THE PLAT OF TRAS27-A, S-1, S-2 & S-3 TAYLOR RANCH SITUATE WITHIN SECTIONS 23, 25 & 26

City Address: 4701 Montano Rd NW

Applicant: Tierra West, LLC **Contact:** LUIS NORIEGA

Address: 5571 MIDWAY PARK PLACE NE, ALBUQUERQUE, NM 87109

Phone#: 505-858-3100 **Fax#:** _____ **E-mail:** LNORIEGA@TIERRAWESTLLC.COM

Other Contact: Saranam **Contact:** Tracy Weaver

Address: 1028 Eubank NE Suite F, Albuquerque, NM 87112

Phone#: _____ **Fax#:** _____ **E-mail:** tweaver@saranamabq.org

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) _____

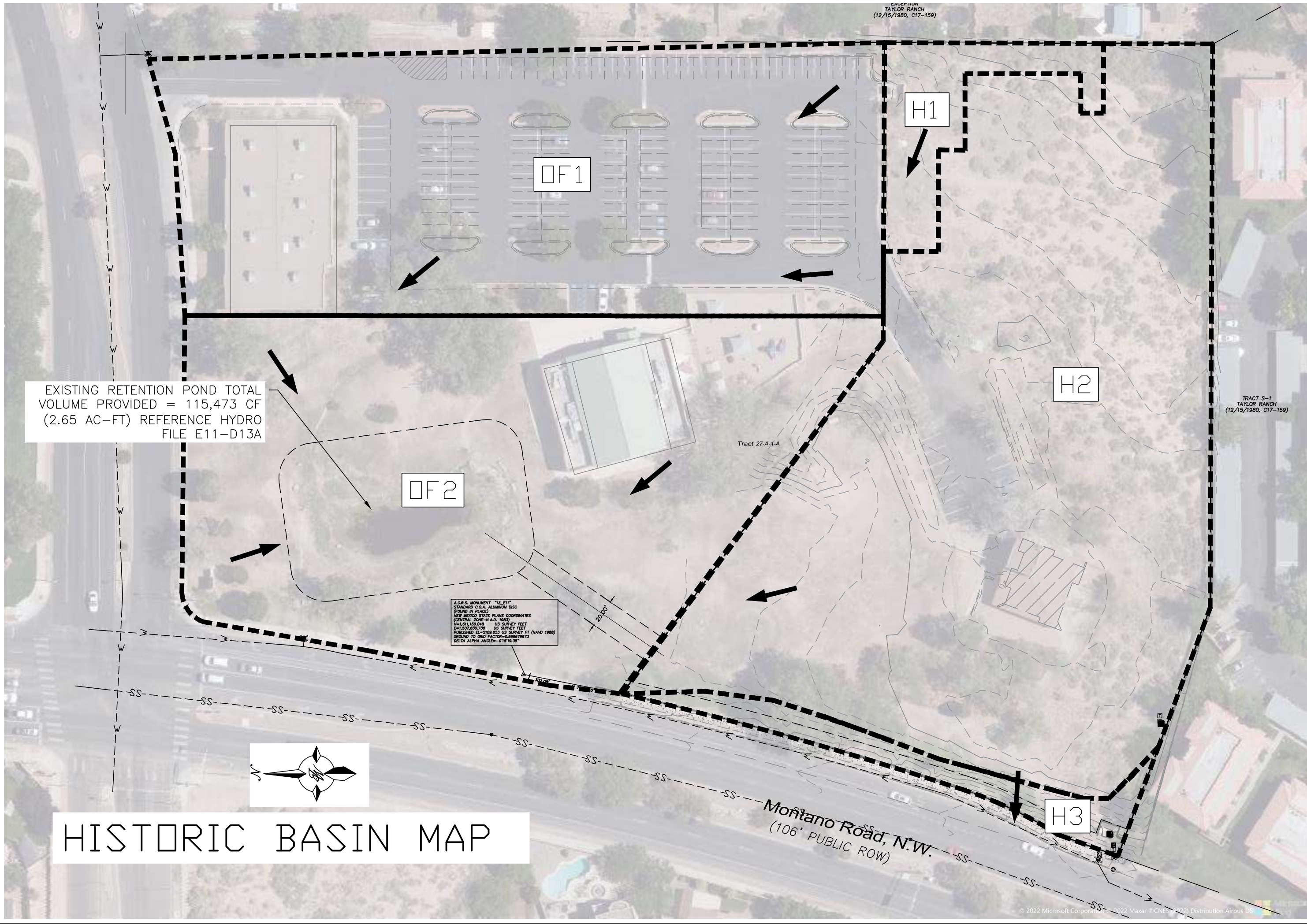
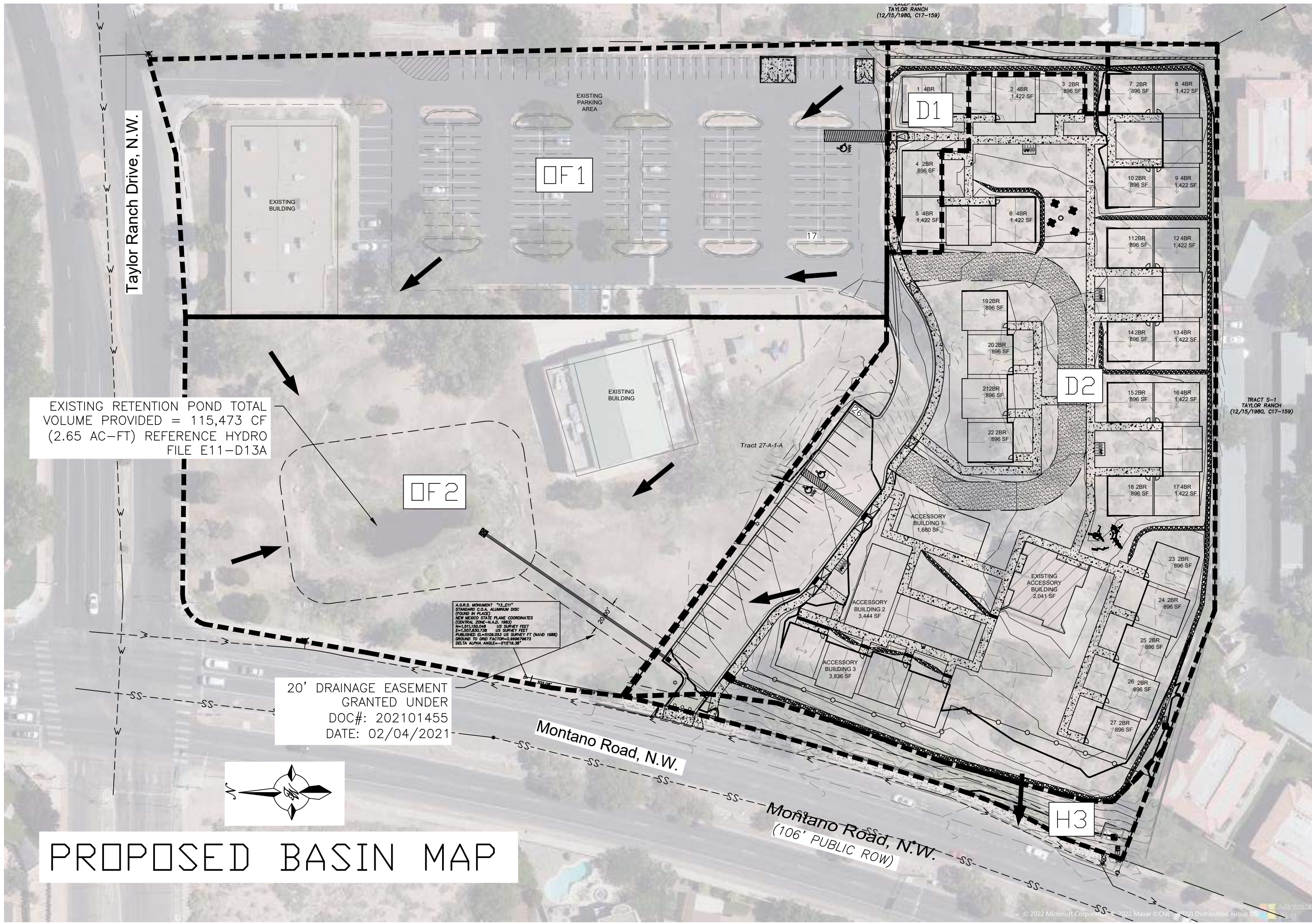
DATE SUBMITTED: 04/12/22 **By:** LUIS NORIEGA

COA STAFF:

ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____

\\TWNAS\Z_Drive\2019\2019080 Golf Course & Montano 25 Unit Home (Saranam)\dwg\EPIC\2019080_BASIN.dwg Apr 08, 2022 -- 9:54am



INTRODUCTION & REFERENCE FILES

FILE #: E11D013A

FLOOD PLAIN

THE PROJECT AREA IS INCLUDED ON FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) PANEL 35001C0114H DATED AUGUST 16, 2012 AND IS SHOWN ON THIS PAGE. THE MAP INDICATES THE SITE LIES WITHIN FLOOD ZONE X, AN AREA OF MINIMAL FLOOD HAZARD.

HISTORIC DRAINAGE:

THERE IS NO OFFSITE FLOWS INTO THE PARCEL. THE HISTORIC DRAINAGE RUNOFF IS RETAINED ONSITE WITH THE PARCEL DRAINING TO THE EXISTING RETENTION POND AT THE SOUTHWEST CORNER. IT APPEARS FROM A CURSORY REVIEW OF THE AVAILABLE DOCUMENTS THE RETENTION POND WAS SIZED TO ACCOMMODATE THE ENTIRE PARCEL IN A DEVELOPED STATE, AS DETAILED ON THE SITE DEVELOPMENT PLAN. THE LAKE IS AT LEAST 6 FEET DEEP AND THERE IS AN EXISTING MARSH/WETLAND AREA THAT WAS PLANTED AND IS IN GOOD HEALTH FOR ALBUQUERQUE. A SMALL PORTION OF THE EMBANKMENT ALONG THE FRONTAGE DRAINS DIRECTLY INTO MONTANO RD. THIS SLOPED LANDSCAPED AREA WILL REMAIN IN THE DEVELOPED CONDITION AND FREELY DISCHARGE.

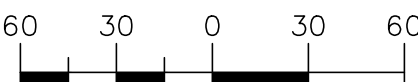
PROPOSED DRAINAGE:

THE WEIGHTED E METHOD FROM THE "CITY OF ALBUQUERQUE DEVELOPMENT PROCESS MANUAL CH 6 WAS USED TO CALCULATE THE RUNOFF AND VOLUME FOR THE SITE. THE HYDROLOGY TABLES ARE SHOWN ON THIS PAGE. THE SITE WAS DIVIDED INTO 5 BASINS WITH THE APPROPRIATE LAND TREATMENT DETERMINED AS SHOWN IN THE DRAINAGE TABLE. THE MAJORITY OF THE SITE WILL SHEET FLOW AND BE DIRECTED BY CURB AND GUTTER TO A 3'X3' GRATE INLET IN THE PARKING LOT IN THE SOUTH WEST CORNER OF THE SITE WHICH HAS THE INLET CAPACITY FOR THE EXPECTED FLOW. ROOF DRAINS FROM THE RESIDENTIAL BUILDINGS SHALL BE DIRECTED INTO THE PARKING LOT AREA AND SHEET FLOW ACROSS THE PROPERTY. THE RUNOFF SHALL THEN BE DISCHARGED DIRECTLY TO THE EXISTING RETENTION POND VIA AN 18-INCH HDPE PIPE THAT HAS THE CAPACITY TO CONVEY THE DESIGN FLOWS. THE LANDSCAPED EMBANKMENT ALONG MONTANO WILL FREELY DISCHARGE INTO THE STREET AND DOES NOT CONTRIBUTE SIGNIFICANT FLOWS. A SMALL PORTION OF THE DRIVEWAY ENTRANCE SHALL ALSO FLOW INTO MONTANO RD. AS SHOWN IN THE HYDROLOGY CALCULATIONS THE EXISTING RETENTION POND HAS ENOUGH CAPACITY TO RETAIN THE 100 YR - 10 DAY STORM AND ANY REQUIRED STORM WATER QUALITY VOLUME.

LEGEND

--- BASIN BOUNDARY

GRAPHIC SCALE



SCALE: 1"=60'



DPM Weighted E Method Chapter 6

Precipitation Zone 1

East of Mesa View United Methodist Church

4701 Montano Rd NW, Albuquerque, NM 87120

TWLLC

Date 2/10/2022

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 E * Total Area

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

Existing Conditions

Basin Descriptions												100-Year, 10-Day			
Basin ID	Tract	Area (sf)	Area (acres)	Area (sq miles)	Treatment A		Treatment B		Treatment C		Treatment D		Weighted E	Volume	Flow
					%	(acres)	%	(acres)	%	(acres)	%	(acres)	(in)	(ac-ft)	cfs
H1	27-A-2-A	9,700	0.22	0.00035	85%	0.189	0%	0.000	10%	0.022	5%	0.011	0.675	0.014	0.40
H2	27-A-2-A	132,562	3.04	0.00476	70%	2.130	0%	0.000	20%	0.609	10%	0.304	0.799	0.246	6.28
*H3	27-A-2-A	7,636	0.18	0.00027	0%	0.000	0%	0.000	100%	0.175	0%	0.000	0.950	0.014	0.50
OF1	27-A-1-A	96,500	2.22	0.00346	0%	0.000	5%	0.111	15%	0.332	80%	1.772	1.971	0.619	8.49
OF2	27-A-1-A	102,500	2.35	0.00368	4%	0.094	0%	0.000	80%	1.882	16%	0.376	1.140	0.278	7.10
Total		142,262	8.01	0.01251		2.414		0.111		3.021		2.464		1.158	22.276

*BASIN H3 NATURALLY FLOWS TO CITY ROW AND IS NOT INCLUDED IN TOTAL VOLUME/FLOW

Proposed Conditions

Basin Descriptions												100-Year, 10-Day		
Basin	Tract	Area	Area	Area	Treatment A	Treatment B		Treatment C		Treatment D		Weighted E	Volume	Flow
ID		(sf)	(acres)	(sq miles)	%	(acres)	%	(acres)	%	(acres)	%	(in)	(ac-ft)	cfs
H1	27-A-2-A	9,700	0.22	0.00035	0%	0.000	25%	0.056	25%	0.056	50%	1.111	1.540	0.045 0.74
H2	27-A-2-A	132,562	3.04	0.00476	0%	0.000	20%	0.609	20%	0.609	60%	1.826	1.680	0.689 10.58
*H3	27-A-2-A	7,636	0.18	0.00027	0%	0.000	0%	0.000	100%	0.175	0%	0.000	0.950	0.014 0.50
OF1	27-A-1-A	96,500	2.22	0.00346	0%	0.000	5%	0.111	15%	0.332	80%	1.772	1.971	0.619 8.49
OF2	27-A-1-A	102,500	2.35	0.00368	4%	0.094	0%	0.000	80%	1.882	16%	0.376	1.140	0.278 7.10
Total		142,262	8.01	0.01251		0.094		0.775		3.054		4.086		1.631 26.916

*BASIN H3 NATURALLY FLOWS TO CITY ROW AND IS NOT INCLUDED IN TOTAL VOLUME/FLOW

Excess Precipitation, E (in.)		
Zone 1	100-Year	10-Year
Ea	0.55	0.08
Eb	0.73	0.22
Ec	0.95	0.44
Ed	2.24	1.24

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

EXISTING POND	ELEVATION FT	AREA SF	VOLUME (CF)
	5100	326	0
	5101	4486	2406
	5102	8728	9013
	5103	12123	19439
	5104	19494	35247
	5105	41186	65577
OVERFLOW	5106	58625	115473

100-YR 10-DAY POND DATA	VOLUME AC-FT	VOLUME CF
Historic Pond Volume	1.158	50,442.40
Proposed Pond Volume Required	1.631	71,046.25
Existing Pond volume provided (Max)	2.65	115,473.00

* Existing pond volume obtained from As-builts file E11_D13A (11/22/2002)



VICINITY MAP:

E-11, 12-Z



FIRM MAP: 35001C0114H

DATE: 8/16/2012



SARANAM AT
4701 MONTANO RD NW

CONCEPTIONAL GRADING
& DRAINAGE PLAN

TERRA WEST, LLC
5571 MIDWAY PARK PLACE NE
ALBUQUERQUE, NM 87109
(505) 858-3100
www.tierrawestllc.com

DRAWN BY
LN

DATE
03/01/2022

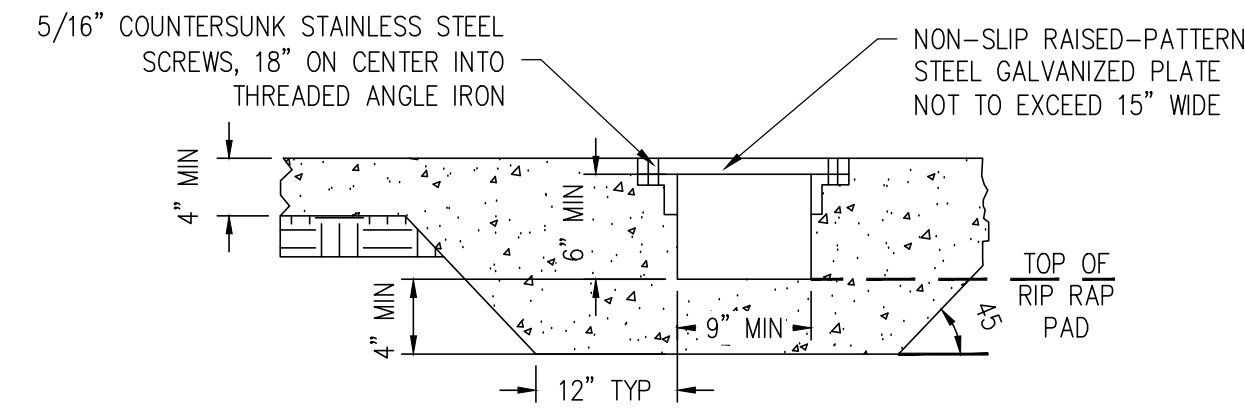
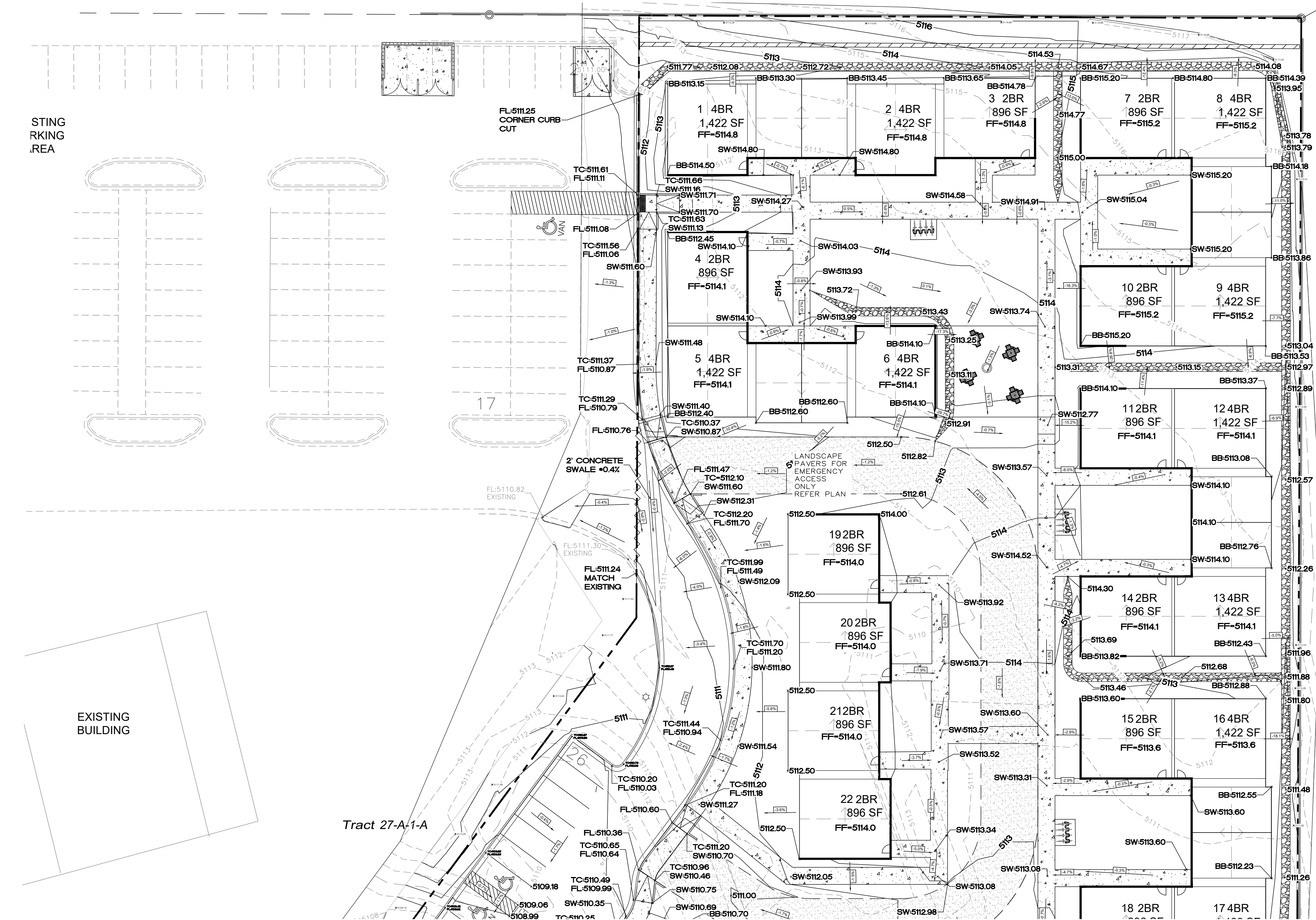
2019080_BASIN

SHEET #

C2.1

JOB #
2019080

\\TWNAS\Z_Drive\2019\2019080 Golf Course & Montano 25 Unit Home (Saranam)\dwg\EP\2019080_GRE.dwg Apr 08, 2022 -- 9:52am



SIDEWALK CHASE
NTS

LEGEND

—	CURB & GUTTER	—5010—	CONTOUR MAJOR
- - -	BOUNDARY LINE	—5011—	CONTOUR MINOR
- · - · -	EASEMENT	x 5048.25	SPOT ELEVATION
- - - - -	CENTERLINE	→	FLOW ARROW
- - - - -	RIGHT-OF-WAY	- - - - -	EXISTING CURB & GUTTER
▬	BUILDING	- - - - -	EXISTING BOUNDARY LINE
▬	SIDEWALK	—5010—	EXISTING CONTOUR MAJOR
▬	SCREEN WALL	- - - - -	EXISTING CONTOUR MINOR
▬	FENCE LINE	x 5048.25	EXISTING SPOT ELEVATION
▬	GRADE BREAK		

SPOT ELEVATION LEGEND

SW=SIDEWALK ELEVATION
FL=FLOW LINE ELEVATION
TC=TOP OF CURB ELEVATION
FF=FINISHED FLOOR ELEVATION
IE=INVERT ELEVATION
BB=FINISHED GRADE AT BOTTOM OF BEAM
REFER TYPICAL UNIT SECTION

SPOT ELEVATION NOTE:

ALL SPOT ELEVATIONS ARE FLOWLINE UNLESS OTHERWISE NOTED.

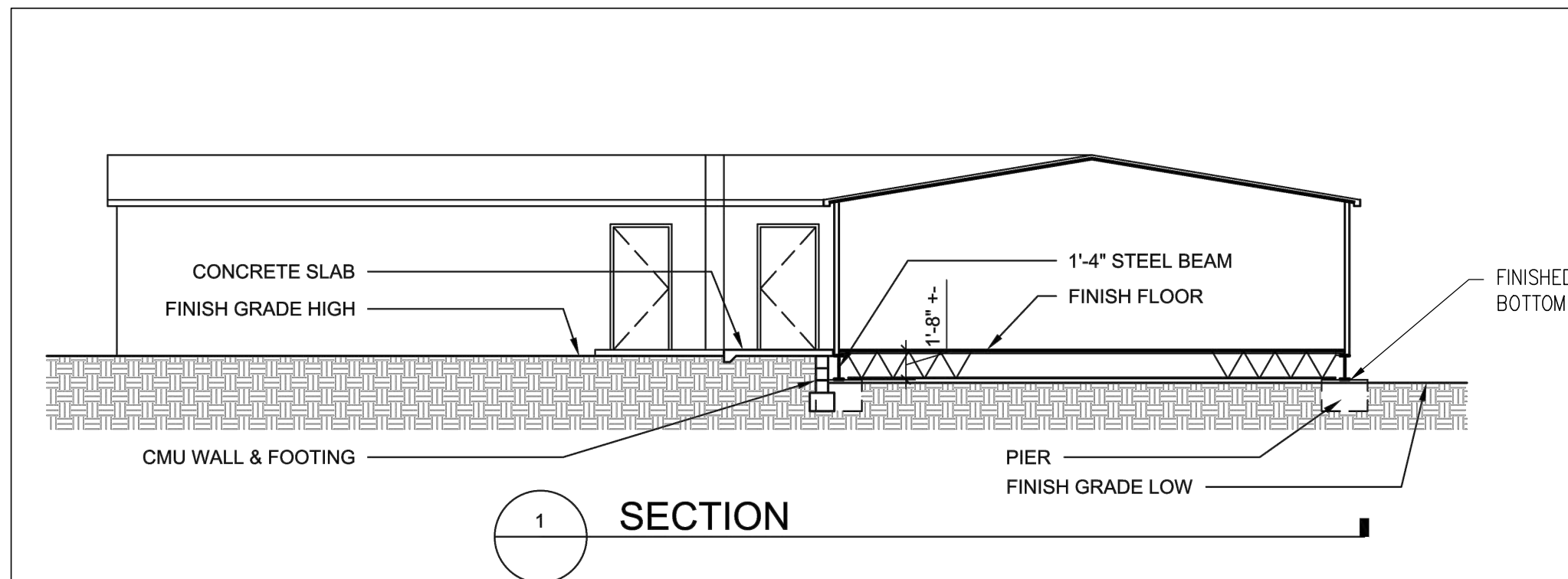
CAUTION
ALL EXISTING UTILITIES/TOPOGRAPHY SHOWN WERE OBTAINED FROM RESEARCH, AS-BUILTS, SURVEYS OR INFORMATION PROVIDED BY OTHERS. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO AND INCLUDING ANY EXCAVATION, TO DETERMINE THE ACTUAL LOCATION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

TRACT S-1
TAYLOR RANCH
(12/15/1980, C17-159)

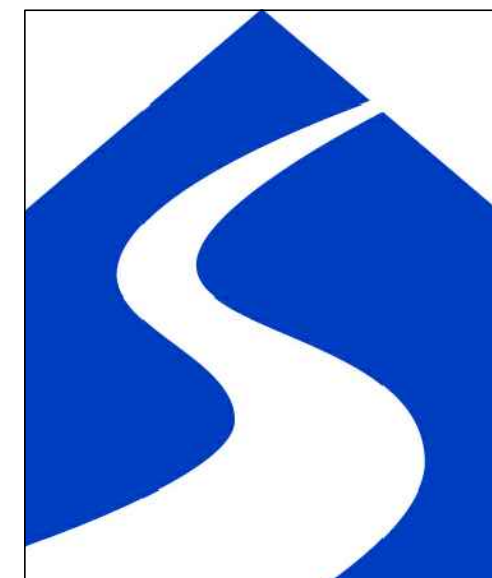



NOTICE TO CONTRACTORS

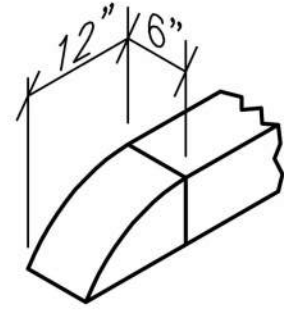
1. CONTACT STORM DRAIN MAINTENANCE AT (505) 857-8033 TO SCHEDULE A MEETING PRIOR TO FORMING.
2. AN EXCAVATION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY.
3. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
4. 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.
5. 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.
6. BACKFILL COMPACTION SHALL BE ACCORDING TO TRAFFIC/STREET USE.
7. MAINTENANCE OF THE FACILITY SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY BEING SERVED.
8. WORK ON ARTERIAL STREETS MAY BE REQUIRED ON A 24-HOUR BASIS.
9. 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.



TYPICAL UNIT SECTION (FOR REFERENCE ONLY)
NTS

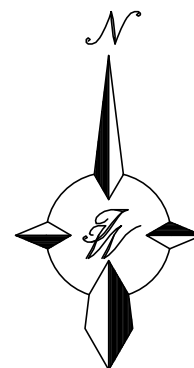


<div>ENGINEER'S SEAL</div>		<div>SARANAM AT</div> <div>4701 MONTANO RD NW</div>		<div>DRAWN BY</div> <div>LN</div>	
<div><div><div>RONALD R. BOHANNAN</div><div>NEW MEXICO</div><div>7868</div><div>PROFESSIONAL ENGINEER</div></div><div></div><div>04/08/2022</div></div>		<div>DETAILED GRADING PLAN</div> <div>(NORTH)</div>		<div>DATE</div> <div>03/01/2022</div>	
				<div>2019080_GRE</div>	
		<div><div><div></div><div></div></div><div>TIERRA WEST, LLC</div><div>5571 MIDWAY PARK PLACE NE</div><div>ALBUQUERQUE, NM 87109</div><div>(505) 858-3100</div><div>www.tierrawestllc.com</div></div>		<div>SHEET #</div> <div>C2.3</div>	
<div>RONALD R. BOHANNAN</div> <div>P.E. #7868</div>				<div>JOB #</div> <div>2019080</div>	

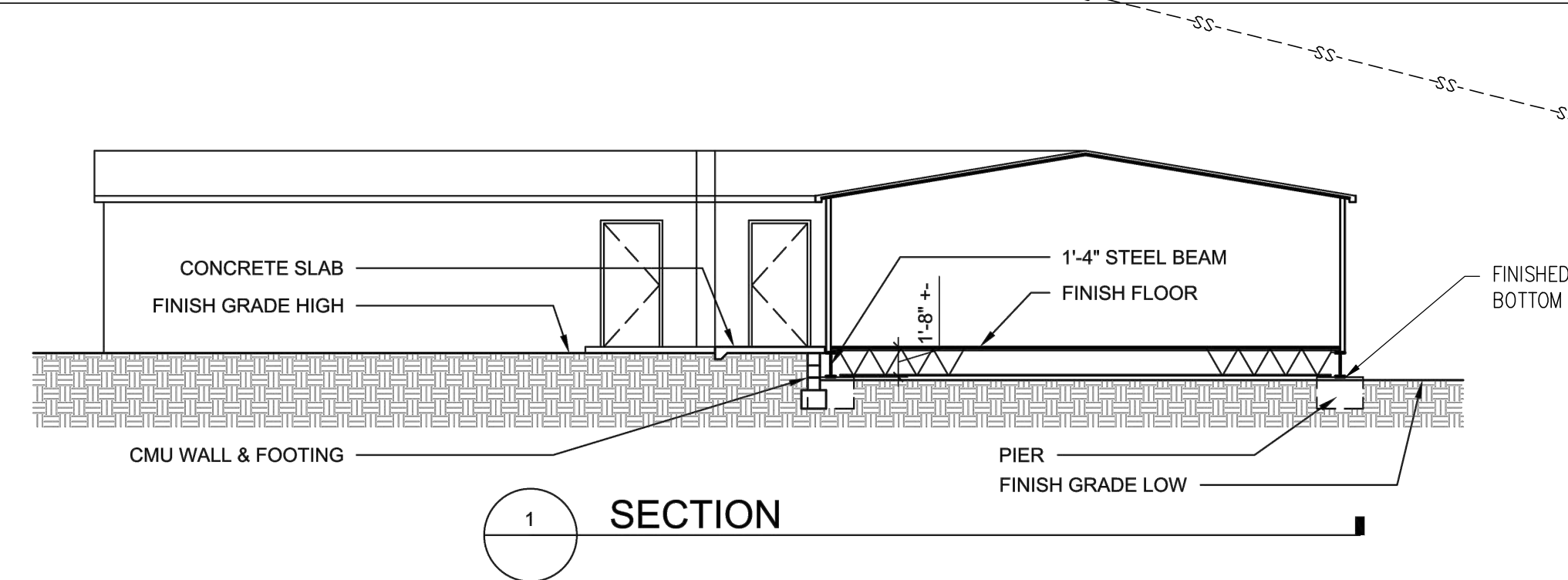
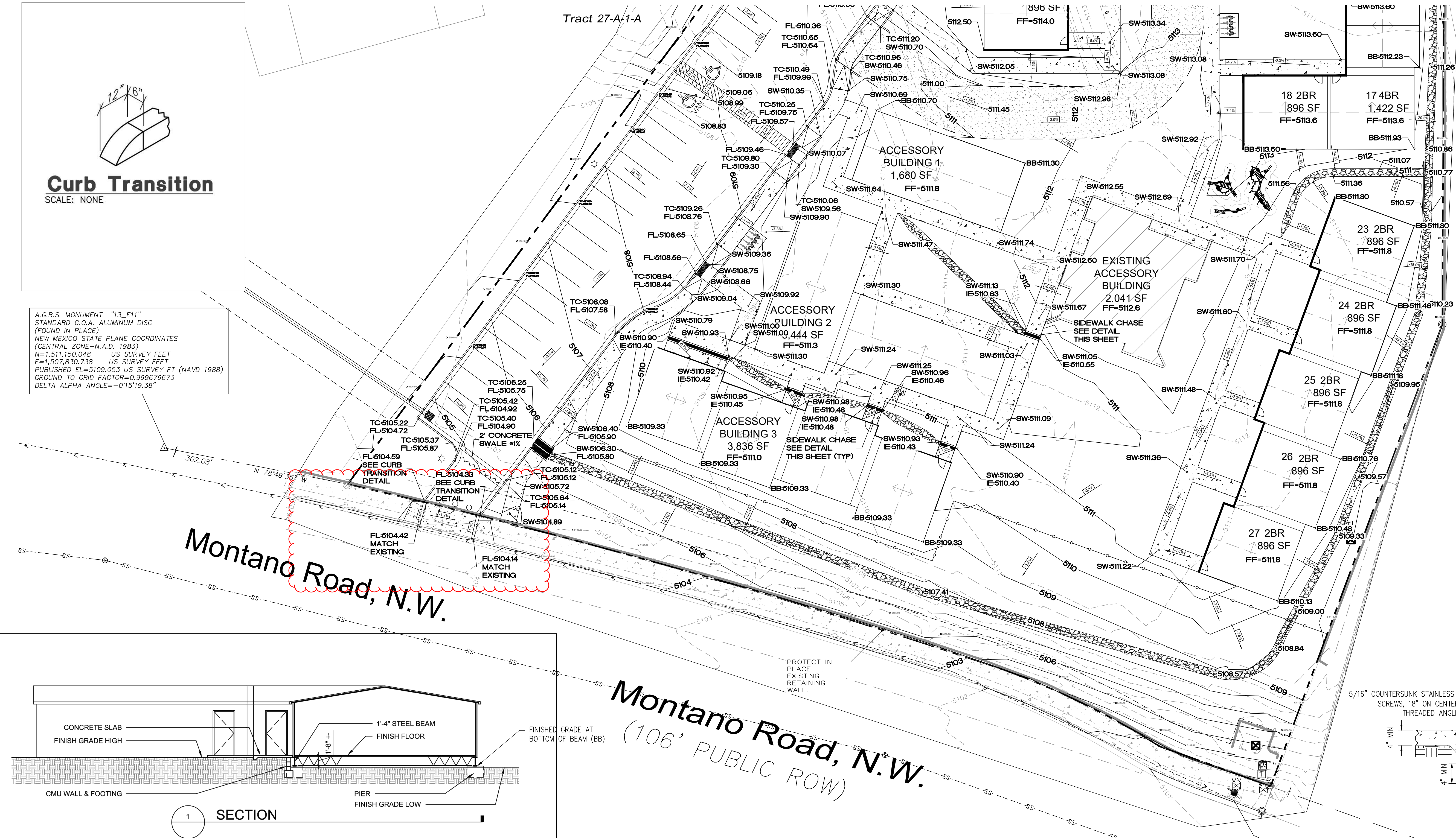


Curb Transition
SCALE: NONE

A.G.R.S. MONUMENT "13.E11"
STANDARD C.O.A. ALUMINUM DISC
(FOUND IN PLACE)
NEW MEXICO STATE PLANE COORDINATES
(CENTRAL ZONE-N.A.D. 1983)
N=1,511,150.048 US SURVEY FEET
E=1,507,830.738 US SURVEY FEET
PUBLISHED EL=5109.053 US SURVEY FT (NAVD 1988)
GROUND TO GRID FACTOR=0.999679673
DELTA ALPHA ANGLE=-0°15'19.38"



GRAPHIC SCALE
20 10 0 10 20
SCALE: 1"=20'



TYPICAL UNIT SECTION (FOR REFERENCE ONLY)
NTS

LEGEND

	CURB & GUTTER		CONTOUR MAJOR
	BOUNDARY LINE		CONTOUR MINOR
	EASEMENT		SPOT ELEVATION
	CENTERLINE		FLOW ARROW
	RIGHT-OF-WAY		EXISTING CURB & GUTTER
	BUILDING		EXISTING BOUNDARY LINE
	SIDEWALK		EXISTING CONTOUR MAJOR
	SCREEN WALL		EXISTING CONTOUR MINOR
	FENCE LINE		EXISTING SPOT ELEVATION
	GRADE BREAK		

NOTICE TO CONTRACTORS

- 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.

SPOT ELEVATION LEGEND

SW=SIDEWALK ELEVATION
FL=FLOW LINE ELEVATION
TC=TOP OF CURB ELEVATION
FF=FINISHED FLOOR ELEVATION
IE=INVERT ELEVATION
BB=FINISHED GRADE AT BOTTOM OF BEAM
REFER TYPICAL UNIT SECTION

SPOT ELEVATION NOTE:

ALL 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.



ENGINEER'S SEAL 	SARANAM AT 4701 MONTANO RD NW DETAILED GRADING PLAN (SOUTH) 5571 MIDWAY PARK PLACE NE ALBUQUERQUE, NM 87109 (505) 858-3100 www.tierrawestllc.com	DRAWN BY LN DATE 03/01/2022 2019080_GRE SHEET # C2.4 JOB # 2019080
---------------------	---	---