CITY OF ALBUQUERQUE

Planning Department
Alan Varela, Interim Director

Mayor Timothy M. Keller

April 7, 2022

Ronald R. Bohannan, 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: 2/15/2022
Hydrology File: E11D013B

Dear Mr. Bohannan:

Based upon the information provided in your submittal received 2/16/2022, the Grading & Drainage Plan **is not** approved for Building Permit. The following comments need to be addressed for approval of the above referenced project:

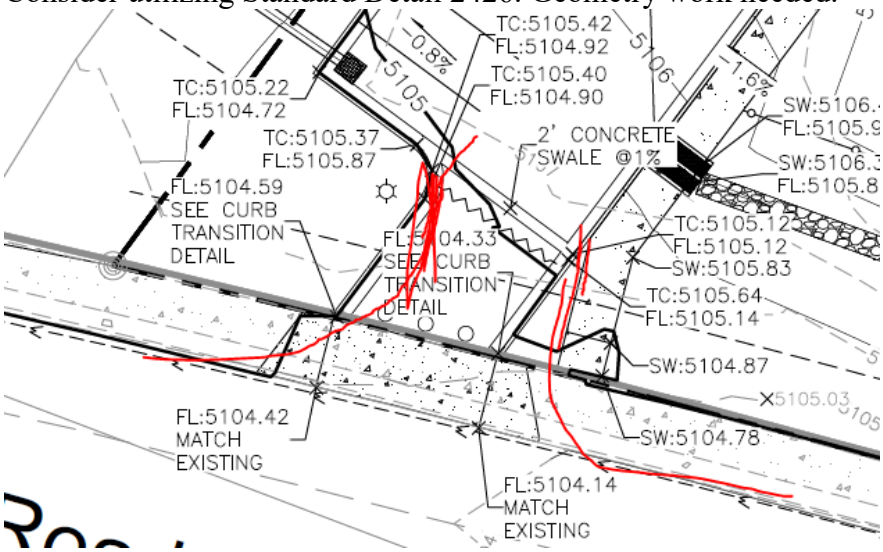
PO Box 1293

Albuquerque

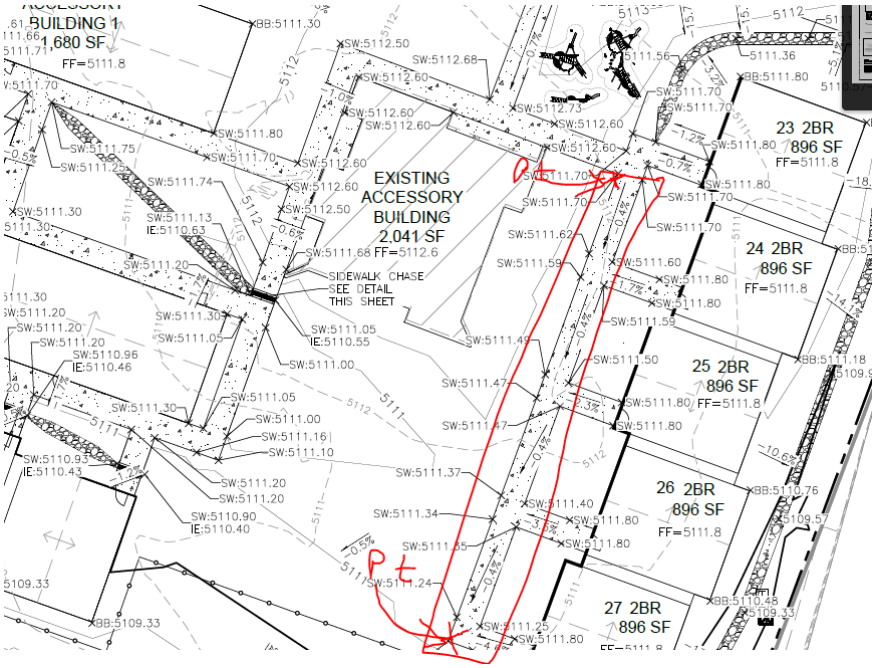
NM 87103

www.cabq.gov

General Comments

1. Will this entrance work? Have you gotten comments from Traffic Section?
   a. Consider utilizing Standard Detail 2426. Geometry work needed.
   b. 

2.
3. Practically, during construction so many points are not needed and it makes the plans very hard to review.

a. 

4. The drafting is very difficult to wrap my head around as much information is on here and makes the plans difficult to review. Please review drafting standards for company if possible. I feel line weights and work with drafting would help make the plans apparent.
    a. What I really would like to know is how water is conveying (e.g. low/High points and grade changes, flow lines. Spots for construction where it makes sense. Contours show the big idea where points will show the small details only when needed)
    b. For example, this section below, I cannot tell what proposed vs. existing contours are without straining my eyes.

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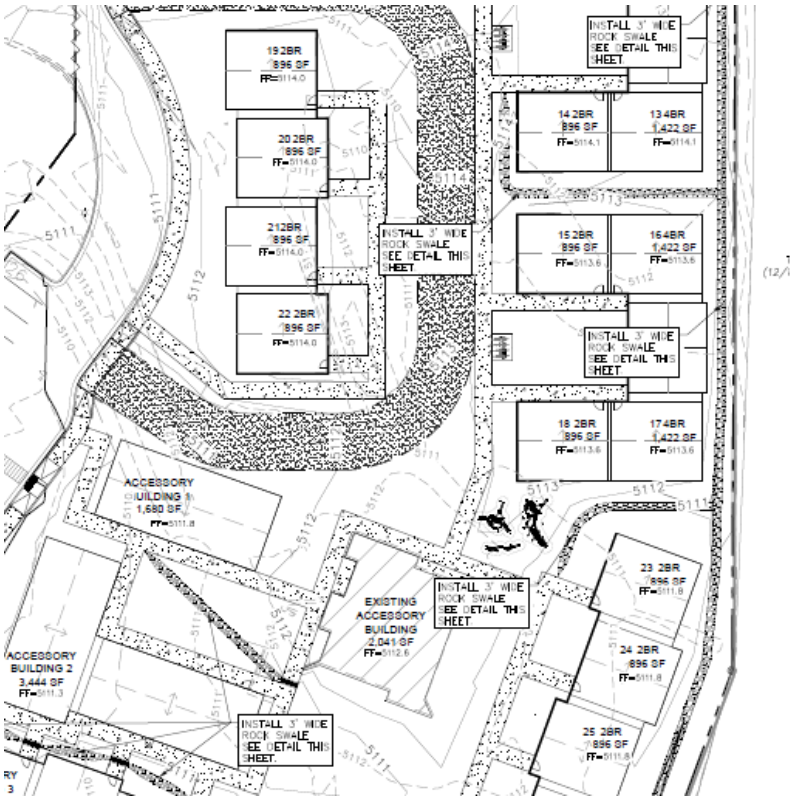
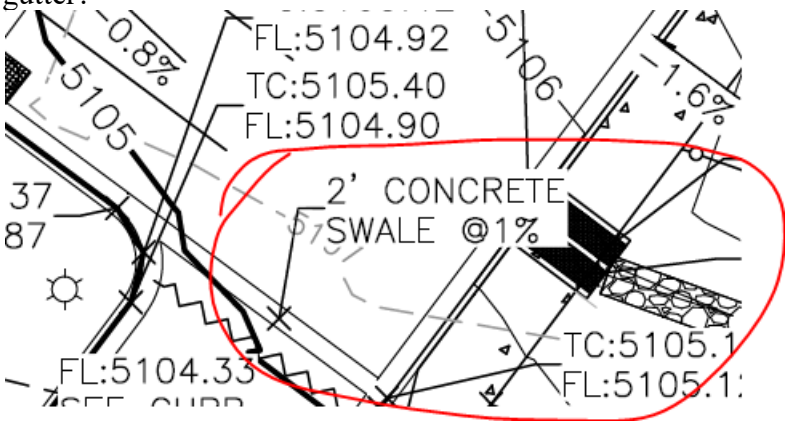
i.



5. Valley gutter?

a.



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, 924-3420) 14 days prior to any earth disturbance.

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

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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 X DRB SITE ___ ADMIN SITE

IS THIS A RESUBMITTAL? X Yes ____ No

DEPARTMENT ____ TRANSPORTATION X HYDROLOGY/DRAINAGE

Check all that Apply:

TYPE OF SUBMITTAL:

____ ENGINEER/ARCHITECT CERTIFICATION
____ PAD CERTIFICATION
____ CONCEPTUAL G & D PLAN
X 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:

X 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: 02.16.22 By: LUIS NORIEGA

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____

CITY OF ALBUQUERQUE

Planning Department
Alan Varela, Interim Director

Mayor Timothy M. Keller

February 7, 2022

Ronald R. Bohannan, 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: 1/4/2022
Hydrology File: E11D013B

Dear Mr. Bohannan:

Based upon the information provided in your submittal received 1/4/2022, the Grading & Drainage Plan **is not** approved for Building Permit. The following comments need to be addressed for approval of the above referenced project:

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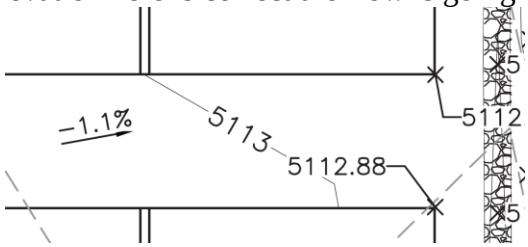
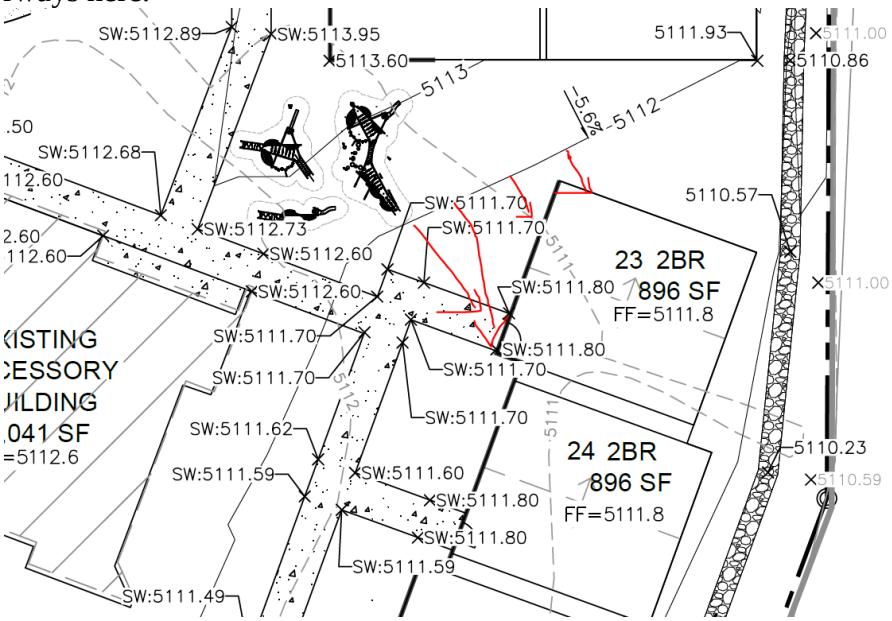
General Comments

1. The Basin Map does not appear to reflect the same buildings as the G&D Sheets.
    a. Additionally, it appears flow is directly differently.
    b. Ensure cross lot drainage is established (easement) if that is the plan and show how this will be routed to the proper location overall. We need to know where the water ends up ultimately.
2. Please utilize new DPM revision Chapter 6.
3. It appears the overall flow should end up in the lake and should be retained if possible. Please provide retention calculations (100-year storm event for 10 days) and show how this volume will be contained on-site.
4. Check FF vs corner spot elevations. They do not match.
5. Call out all pipes and materials.
    a. Show invert elevations.
6. Swales
    a. Provide elevations to show how they flow.
    b. Provide section and reference to each one.
7. Overall the site needs to have a close review to ensure all of the shown elevations work.
    a. If the elevation here is correct the flow is going right into the building?

i.



8. Please reference DPM Chaper 6.
9. Please take a second look at everything. See below, it appears flow may go directly into the doorways here.



a.

10. Include project benchmark and datum.
11. The site must show cross lot drainage easement and ensure flow is being properly conveyed per the easements. Also ensure the pond can handle the additional retention volume for the site and show existing and proposed volumes for the entire volume the pond is collecting. Show all of this information on this G&D.

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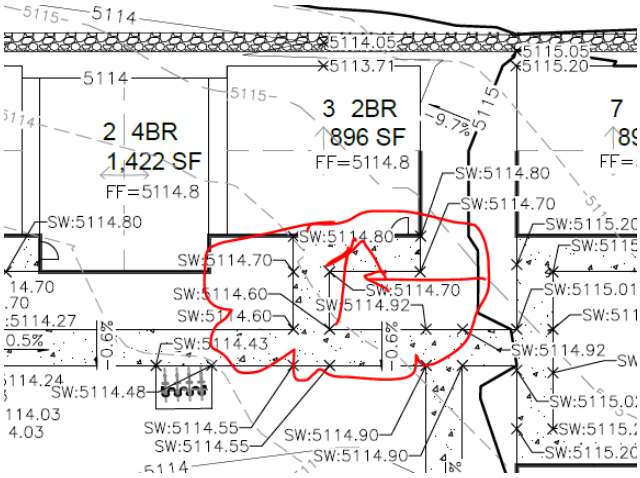
SHEET C2.1

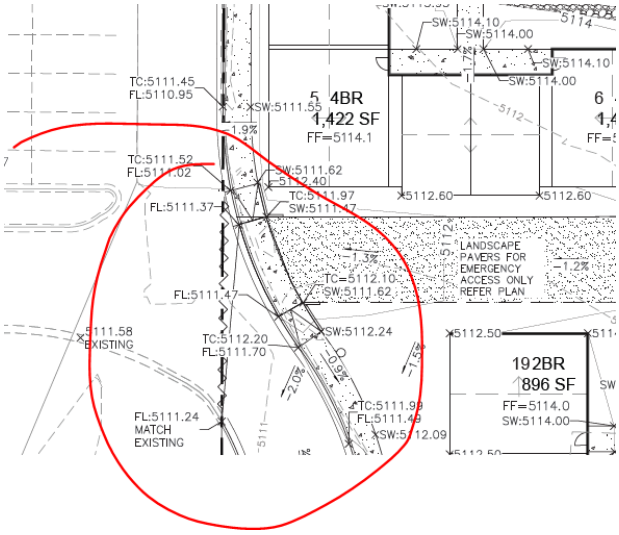
1. Please double check the calculations for the tables provided. I checked a couple and did not come up with the same.
2. Please include the required volume for retention. (100-year, 10-day storm)

SHEET C2.3

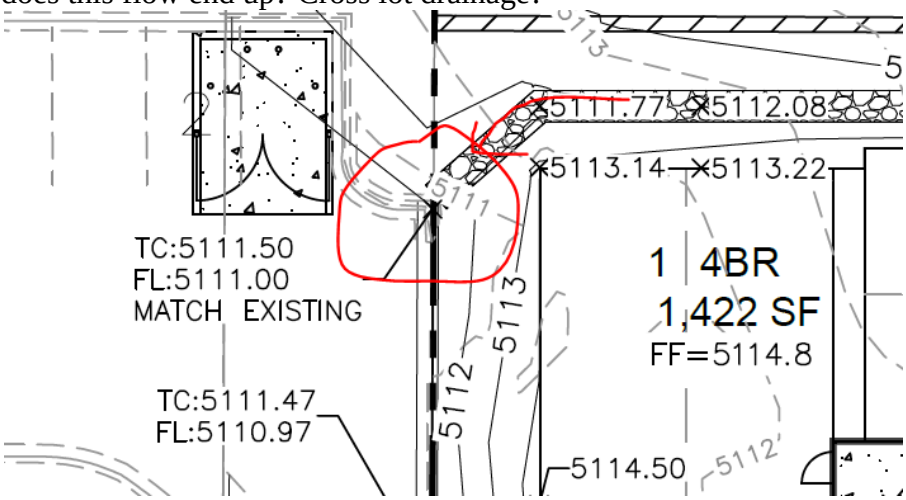
3. Check this area. Appears maybe some ponding and may flow right to the doorway area here.

a. 

4. Is this a water block? If so, please provide elevations showing how these grades will work and ensure flow does not drain across lots.

a. 

5. Where does this flow end up? Cross lot drainage?

a. 

6. Check all pads. They should be higher than surrounding grade.

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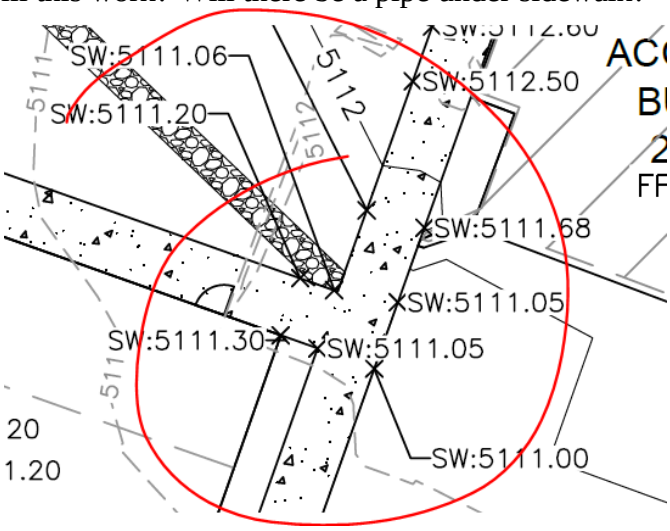
7. How will this work? Will there be a pipe under sidewalk?



a.
b. Please show all of these details. As of now it appears this is just a ponding area.

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, 924-3420) 14 days prior to any earth disturbance.

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

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TIERRA WEST, LLC

5571 Midway Park Pl. NE Albuquerque, NM 87109
(505) 858-3100 fax (505) 858-1118 1-800-245-3102
tierrawestllc.com

February 15, 2022

Mr. David Gutierrez, P.E.
City of Albuquerque, Planning Department
PO BOX 1293
Albuquerque, NM 87103

RE: Saranam Golf Course & Montano
4701 Montano Rd NW
Grading and Drainage Plan

Dear Mr. Gutierrez,

Per the correspondence dated February 7, 2022, please find the following responses addressing the comments listed below:

1. The Basin Map does not appear to reflect the same buildings as the G&D Sheets.
    a. Additionally, it appears flow is directly differently.
    b. Ensure cross lot drainage is established (easement) if that is the plan and show how this will be routed to the proper location overall. We need to know where the water ends up ultimately.

    Response: See updated sheet C2.1, basin maps updated to reflect latest changes to site plan and grading. Tract 27-A-2A (Project site) is to drain to the large retention pond located just west of site via an 18" HDPE pipe located within a 20' drainage easement granted under DOC# 202101455 (attached).

2. Please utilize new DPM revision Chapter 6.
    Response: Hydrology calculations updated to new DPM chapter 6 requirements.

3. It appears the overall flow should end up in the lake and should be retained if possible. Please provide retention calculations (100-year storm event for 10 days) and show how this volume will be contained on-site.
    Response: See updated sheet C2.1, the proposed 100 yr. - 10 day storm volume was calculated and is the design storm. According to as-builts under hydro file E11_D13A (Attached) the existing retention pond/lake west of the site has enough capacity to retain the proposed design storm volume.

4. Check FF vs corner spot elevations. They do not match.
    Response: See typical unit section detail, sheets C2.3 or C2.4. The housing units are to be built on piers and 1.67' steel beams. Therefore the corner spots may be lower than the FF due to the design of the housing units,

5. Check out all pipes and materials.
    a. Show invert elevations.

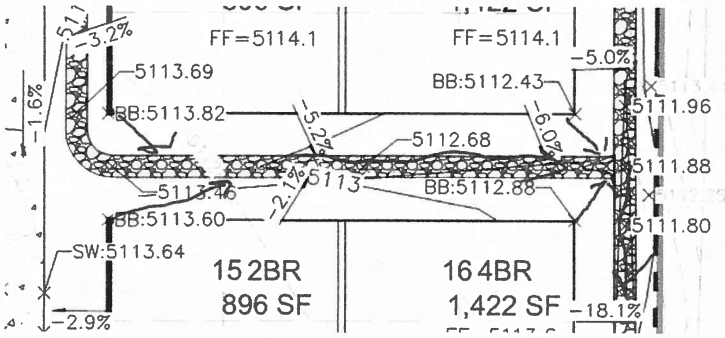
    Response: Only one pipe proposed on the southwest side of site see sheet C2.2. Pipe material, slope and invert elevations called out.

6. Swales
    a. Provide elevations to show how they flow.
    b. Provide section and reference to each one.

    Response: Swale section and call outs are shown on sheet C2.2, swale elevations shown on sheets C2.3 and C2.4.

7. Overall the site needs to have a close review to ensure all of the shown elevations work.
    a. If the elevation here is correct the flow is going right into the building?

Response: Site analyzed to ensure shown elevations work, swales added to areas which may be prone to ponding see below.

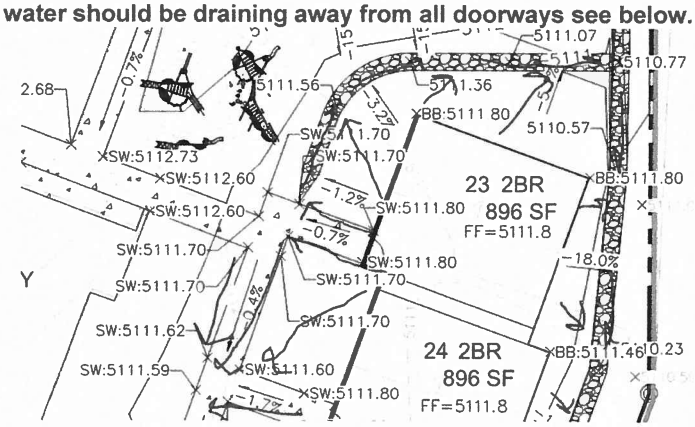


8. Please reference DPM Chapter 6.

Response: Referenced on sheet C2.1.

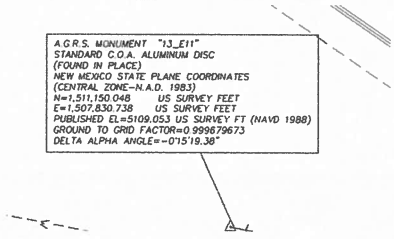
9. Please take a second look at everything. See below, it appears flow may go directly into the doorways here.

Response: Storm water should be draining away from all doorways see below.



10. Include project benchmark and datum.

Response: See sheets C2.1 or C2.2 for datum.



11. The site must show cross lot drainage easement and ensure flow is being properly conveyed per the easements. Also ensure the pond can handle the additional retention volume for the site and show existing and proposed volumes for the entire volume the pond is collecting. Show all of this information on this G&D.

Response: See updated sheet C2.1, pond data. Tract 27-A-2A (Project site) is to drain to the large retention pond located just west of site via an 18" HDPE pipe located within a 20' drainage easement granted under DOC# 202101455 (attached).

Sheet C2.1

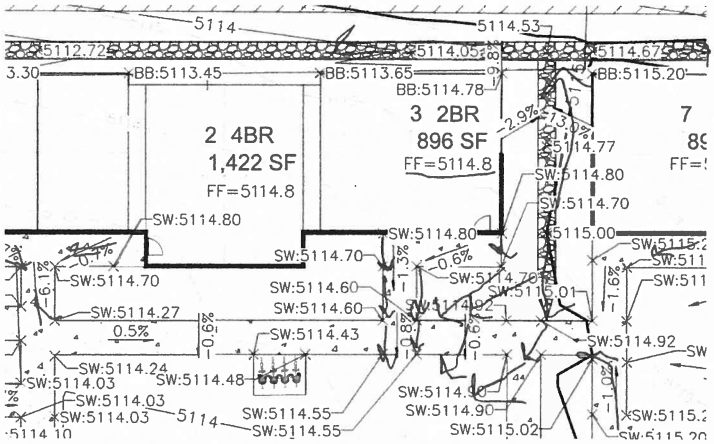
1. Please double check the calculations for the tables provided. I checked a couple and did not come up with the same.

Response: Calculations updated to new DPM chapter 6 requirements.

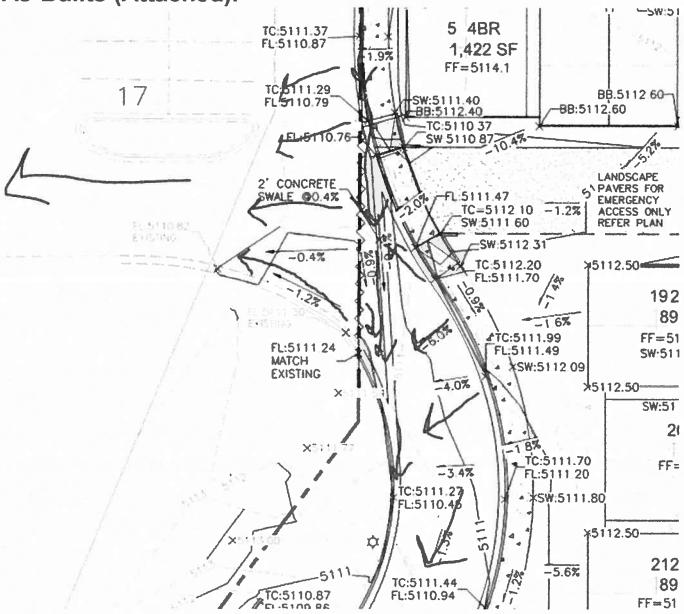
2. Please include the required volume for retention. (100-year, 10-day storm)
Response: Required volume included in sheet C2.1.

Sheet C2.3

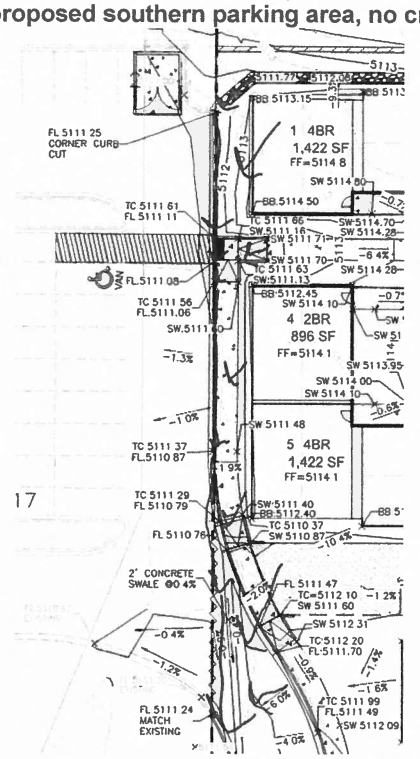
3. Check this area. Appears maybe some ponding and may flow right to the doorway area here.
Response: Storm water should be draining away from all doorways and does not pond see below.



4. Is this a water block? If so, please provide elevations showing how these grades will work and ensure flow does not drain across lots.
Response: Yes there is a water block; flows from the project site are routed south towards the proposed parking area. Flows from the tract to the west flows to the west towards the existing retention pond per As-Builts (Attached).



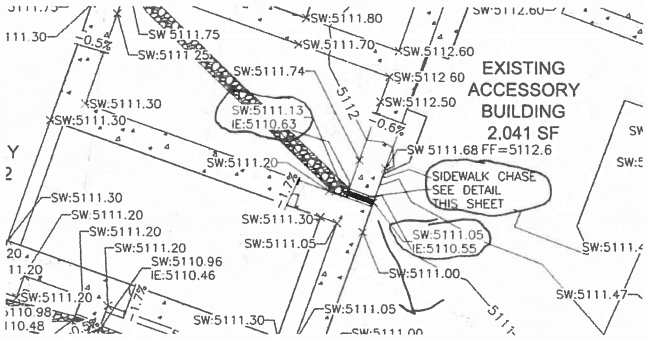
5. Where does this flow end up? Cross lot drainage?
Response: Flows from the project site are intersected by the curb and gutter pan running along the property line towards the proposed southern parking area, no cross lot drainage needed.



6. Check all pads. They should be higher than surrounding grade.
Response: Acknowledged and checked.

7. How will this work? Will there be a pipe under sidewalk?
   a. Picture
   b. Please show all of these details. As of now it appears this is just a ponding area.

Response: Acknowledged a sidewalk chase culvert was proposed in these types of areas see below.

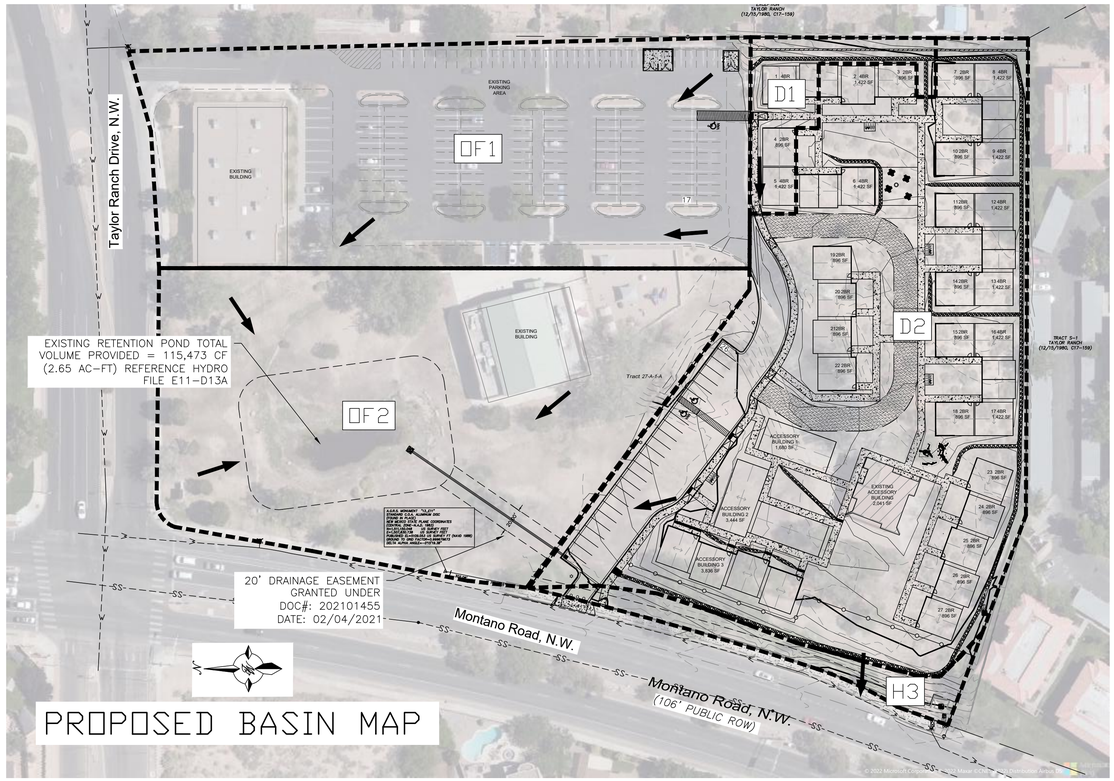


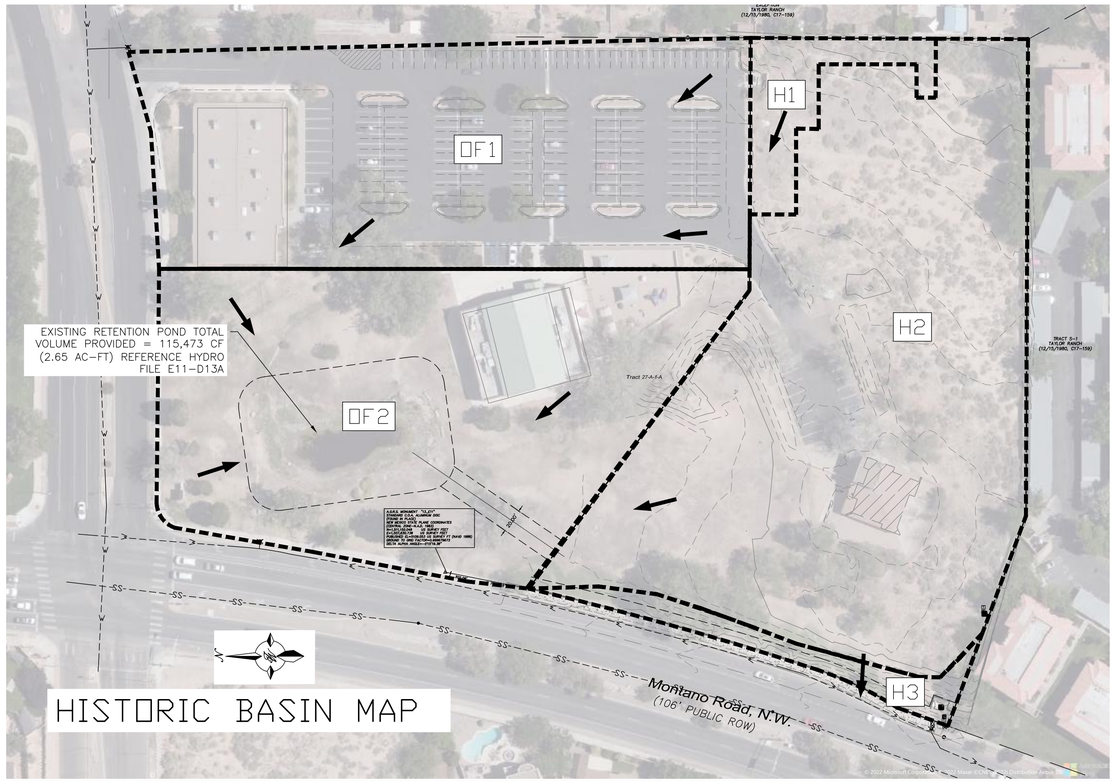
If you have any questions or need additional information regarding this matter, please do not hesitate to contact me.

Sincerely,

Ronald R. Bohannan, P.E

JN: 2019080
RRB/ln/mc





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.

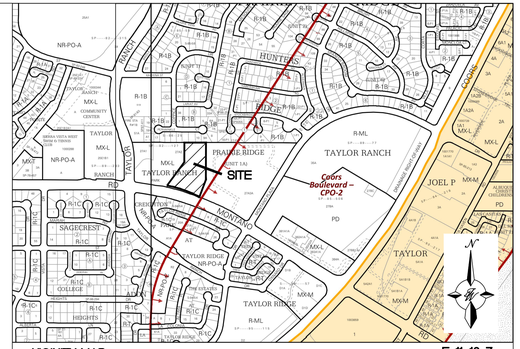
LEGEND

BASIN BOUNDARY

GRAPHIC SCALE

60 30 0 30 60

SCALE: 1"=60'



VICINITY MAP: E-11, 12-Z

FIRM MAP: 35001C0114H DATE: 8/16/2012

DPM Weighted E Method Chapter 6

Precipitation Zone 1

East of Mesa View United Methodist Church

4701 Montaño Rd NW, Albuquerque, NM 87120

TWLLC **Date** 2/10/2022

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

Existing Conditions

Basin ID	Tract	Area (sf)	Area (acres)	Area (sq miles)	Treatment A %	Treatment A (acres)	Treatment B %	Treatment B (acres)	Treatment C %	Treatment C (acres)	Treatment D %	Treatment D (acres)	100-Year, 10-Day Weighted E (in)	Volume (ac-ft)	Flow 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 ID	Tract	Area (sf)	Area (acres)	Area (sq miles)	Treatment A %	Treatment A (acres)	Treatment B %	Treatment B (acres)	Treatment C %	Treatment C (acres)	Treatment D %	Treatment D (acres)	100-Year, 10-Day Weighted E (in)	Volume (ac-ft)	Flow cfs
H1	27-A-2-A	9,700	0.22	0.00035	0%	0.000	25%	0.056	25%	0.056	50%	0.111	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	41166	65577
OVERFLOW	5106	58825	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)

ENGINEER'S SEAL

RONALD R. BOHANNAN NEW MEXICO 7868 PROFESSIONAL ENGINEER

02/15/2022

RONALD R. BOHANNAN P.E. #7868

SARANAM AT
4701 MONTANO RD NW

CONCEPTIONAL GRADING & DRAINAGE PLAN

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

DRAWN BY LN

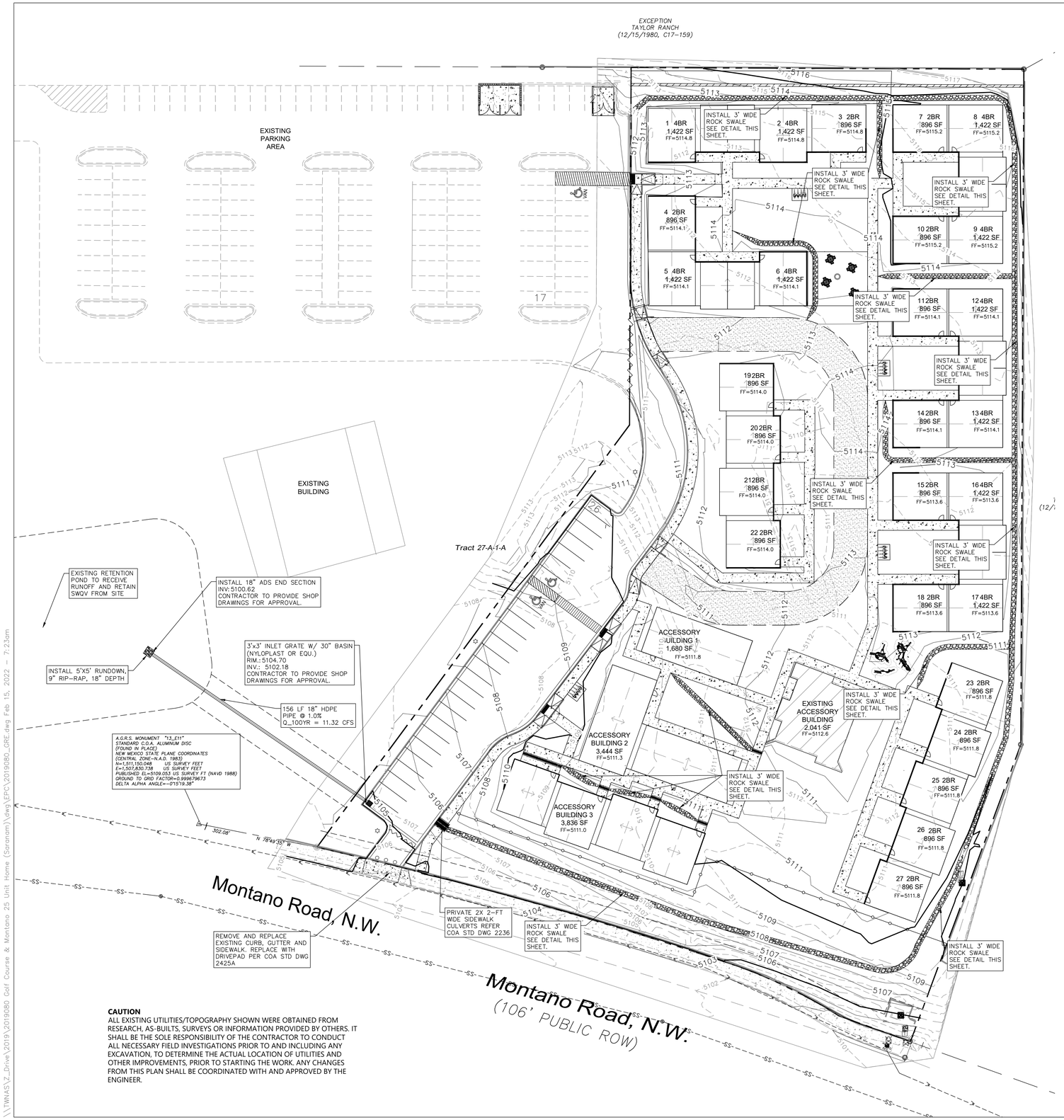
DATE 10/20/2021

2019080_BASIN

SHEET # **C2.1**

JOB # 2019080

\\TWAS\Z_Drive\2019\2019080 Golf Course & Montano 25 Unit Home (Saranam)\dwg\EPC\2019080_BASIN.dwg Feb 14, 2022 - 4:42pm



LEGEND

- CURB & GUTTER
- BOUNDARY LINE
- EASEMENT
- CENTERLINE
- RIGHT-OF-WAY
- BUILDING
- SIDEWALK
- SCREEN WALL
- FENCE LINE
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- 5010 CONTOUR MAJOR
- 5011 CONTOUR MINOR
- x 5048.25 SPOT ELEVATION
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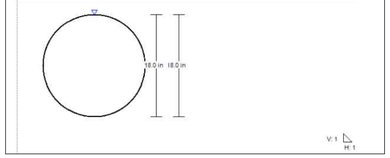
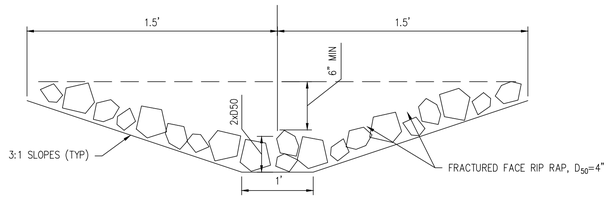
18" STORM PIPE

Project Description	
Friction Method	Manning Formula
Solve For	Discharge
Input Data	
Roughness Coefficient	0.012
Channel Slope	0.010 ft/ft
Normal Depth	18.0 in
Diameter	18.0 in
Discharge	11.38 cfs



18" STORM DRAIN CAPACITY CALC



ROCK SWALE
NTS

MAINTENANCE SCHEDULE

Responsible Party: Property Operator(s).

Access to storm water quality elements: All access to the storm water quality elements shall be accessible from the paved areas within the site. There is no restricted access to the location of both the surface and sub-surface elements.

REGULAR MAINTENANCE	**FREQUENCY**
LITTER MANAGEMENT	
Pick up all litter at site and in Landscape areas and remove from site	Daily
INLETS AND OUTLETS	
Visual inspection for function. Remove silt from slab aprons and debris in pavement areas. Remove all fallen vegetation around inlet and outlet structures.	Monthly
HARD SURFACES	
Sweep all paving regularly. Maintain pavement in autumn after leaf fall. Coordinate with Landscape Contractor if additional maintenance is required.	As required
OCCASIONAL TASKS	**FREQUENCY**
INSPECTION AND INLETS, OUTLETS AND CONTROL CHAMBERS	
Inspect surface structures removing obstructions and silt as necessary. Check there is no physical damage. For below ground control chambers, remove cover and inspect ensuring water is flowing freely and that the exit route for water is unobstructed. Remove debris and silt.	Yearly
POND VEGETATION	
Ensure Pond vegetation is maintained by Landscape Contractor. All weeds and all cuttings removed from site.	As required
SILT MANAGEMENT	
Inspect swales and water quality pond for silt accumulation. Excavate silt, stack and dry within 2-feet of the water quality feature, but outside the design profile where water flows, spread, rake and over-seed. Protect surface from siltation and manage main area of basin for design function or appearance.	Yearly
REMEDIAL WORK	**FREQUENCY**
Inspect storm all water quality structures regularly to check for damage or failure. Undertake remedial work as required.	Yearly

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GRAPHIC SCALE
30 15 0 15 30
SCALE: 1"=30'

ENGINEER'S SEAL
RONALD R. BOHANNAN NEW MEXICO 7868 PROFESSIONAL ENGINEER
02/15/2022
RONALD R. BOHANNAN P.E. #7868

SARANAM AT
4701 MONTANO RD NW

GRADING PLAN (OVER ALL)

DRAWN BY: LN
DATE: 10/20/2021
2019080_GRE
SHEET #: **C2.2**
JOB #: 2019080

TIERRA WEST, LLC
5571 MIDWAY PARK PLACE NE
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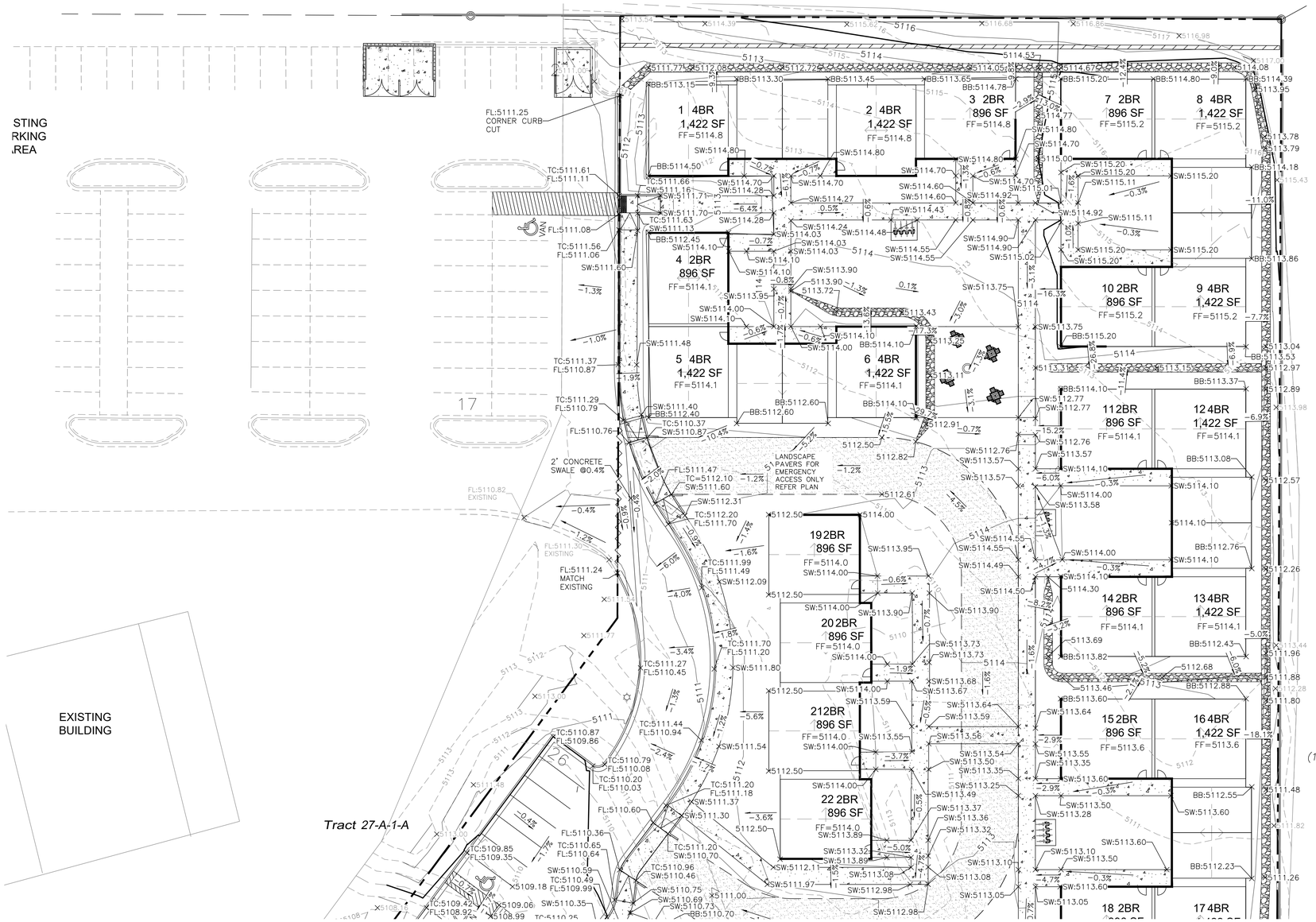
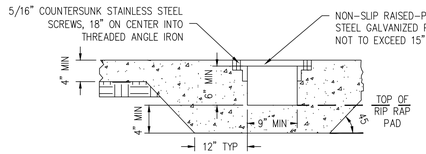
\\TWNAS\Z_Drive\2019\2019080 Golf Course & Montano 25 Unit Home (Saranam)\dwg\EPC\2019080_GRE.dwg Feb 15, 2022 - 7:23am





SIDEWALK CHASE
NTS

LEGEND

- CURB & GUTTER
- BOUNDARY LINE
- EASEMENT
- CENTERLINE
- RIGHT-OF-WAY
- BUILDING
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- EXISTING CURB & GUTTER
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REFER TYPICAL UNIT SECTION

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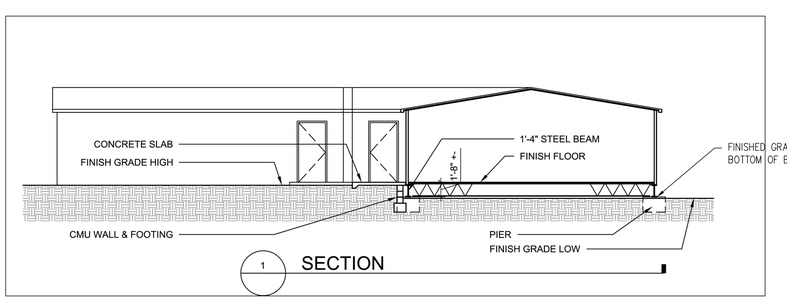

TYPICAL UNIT SECTION (FOR REFERENCE ONLY)
NTS

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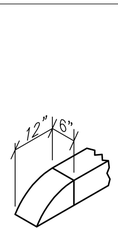
02/15/2022
RONALD R. BOHANNAN P.E. #7868

SARANAM AT
4701 MONTANO RD NW

DETAILED GRADING PLAN (NORTH)

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

DRAWN BY: LN
DATE: 10/20/2021
2019080_GRE
SHEET #: C2.3
JOB #: 2019080



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"

Tract 27-A-1-A

ACCESSORY BUILDING 1
1,680 SF
FF=5111.8

ACCESSORY BUILDING 2
2,444 SF
FF=5111.3

ACCESSORY BUILDING 3
3,836 SF
FF=5111.0

EXISTING ACCESSORY BUILDING
2,041 SF
FF=5112.6

SIDEWALK CHASE SEE DETAIL THIS SHEET

SIDEWALK CHASE SEE DETAIL THIS SHEET (TYP)

2' CONCRETE SWALE @1%

FL:5104.59 SEE CURB TRANSITION DETAIL

FL:5104.33 SEE CURB TRANSITION DETAIL

FL:5104.42 MATCH EXISTING

FL:5104.14 MATCH EXISTING

302.08'

N 78°49'35" W

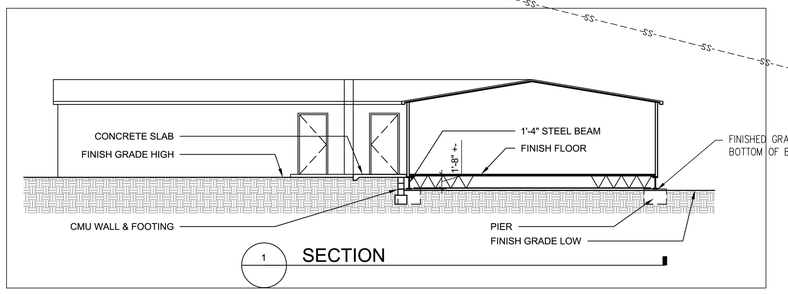
PROTECT IN PLACE EXISTING RETAINING WALL.

Montano Road, N.W.

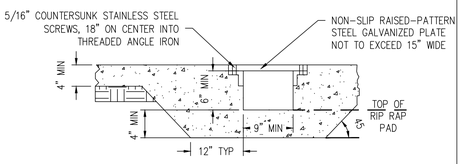
Montano Road, N.W.
(106' PUBLIC ROW)

18 2BR	896 SF	FF=5113.6	
17 4BR	1,422 SF	FF=5113.6	
23 2BR	896 SF	FF=5111.8	
24 2BR	896 SF	FF=5111.8	
25 2BR	896 SF	FF=5111.8	
26 2BR	896 SF	FF=5111.8	
27 2BR	896 SF	FF=5111.8	

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



TYPICAL UNIT SECTION (FOR REFERENCE ONLY)
NTS



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
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GRADE BREAK	

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02/15/2022
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DETAILED GRADING PLAN (SOUTH)

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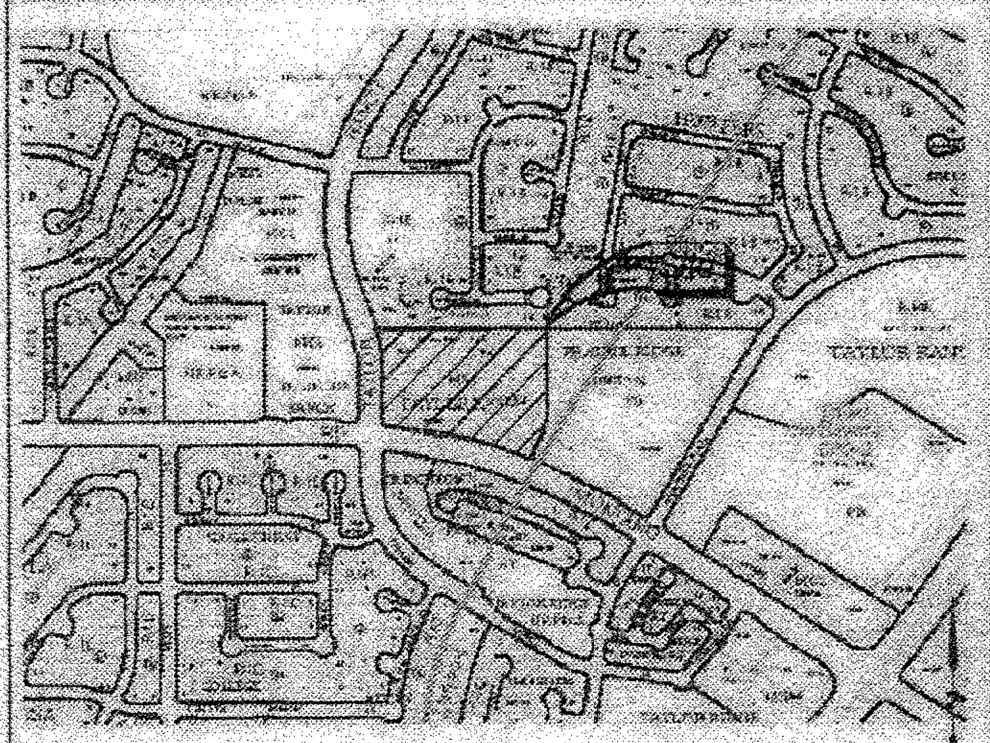
DRAWN BY: LN
DATE: 10/20/2021
2019080_GRE
SHEET # C2.4
JOB # 2019080

\\TWNAS\Z_Drive\2019\2019080 Golf Course & Montano 25 Unit Home (Saranam)\dwg\EPC\2019080_GRE.dwg Feb 15, 2022 - 7:46am

Plat of
Tracts 27-A-1-A & 27-A-2-A
Taylor Ranch
Sections 25 & 26, Township 11 North, Range 2 East, N.M.P.M.
Albuquerque, Bernalillo County, New Mexico
May 2019

RECORDING STAMP

DOC# 2021014555
02/04/2021 12:24 PM Page: 1 of 2
PLAT R:$25.00 B: 2021C P: 0005 Linda Stover, Bernalillo County



Location Map
Zone Atlas Map No. E-11-Z & E-12-Z

Subdivision Data:
GROSS SUBDIVISION ACREAGE: 8.1000 ACRES±
ZONE ATLAS INDEX NO. E-11-Z AND E-12-Z
NO. OF TRACTS CREATED: 2
NO. OF LOTS CREATED: 0
MILES OF FULL-WIDTH STREETS CREATED: 0
DATE OF SURVEY: FEBRUARY 2019

Purpose of Plat
THE PURPOSE OF THIS PLAT IS TO REPLAT THE EXISTING TWO TRACTS INTO TWO NEW TRACTS, TO DEDICATE ADDITIONAL RIGHT OF WAY FOR STREET PURPOSES FOR MONTANO ROAD, NW AND TAYLOR RANCH DRIVE, NW, AND TO GRANT EASEMENTS.

Notes:
1. PLAT SHOWS ALL EASEMENTS OF RECORD.
2. EASEMENT BEARINGS AND DISTANCES SHOWN HEREON ARE RECORD AND EASEMENTS HAVE BEEN ROTATED TO MATCH BASIS OF BEARINGS AND BOUNDARY UNLESS OTHERWISE INDICATED.

Public Utility Easements
PUBLIC UTILITY EASEMENTS SHOWN ON THIS PLAT ARE GRANTED FOR THE COMMON JOINT USE OF:
A. PUBLIC SERVICE COMPANY OF NEW MEXICO ("PNM"), A NEW MEXICO CORPORATION, (PNM ELECTRIC) FOR INSTALLATION, MAINTENANCE AND SERVICE OF OVERHEAD AND UNDERGROUND ELECTRICAL LINES, TRANSFORMERS, AND OTHER EQUIPMENT AND RELATED FACILITIES REASONABLY NECESSARY TO PROVIDE ELECTRICAL SERVICES.

B. NEW MEXICO GAS COMPANY FOR INSTALLATION, MAINTENANCE, AND SERVICE OF NATURAL GAS LINES, VALVES AND OTHER EQUIPMENT AND FACILITIES REASONABLY NECESSARY TO PROVIDE NATURAL GAS SERVICES.

C. QWEST CORPORATION D/B/A CENTURYLINK QC FOR THE INSTALLATION, MAINTENANCE, AND SERVICE OF SUCH LINES, CABLE, AND OTHER RELATED EQUIPMENT AND FACILITIES REASONABLY NECESSARY TO PROVIDE COMMUNICATION SERVICES.

D. CABLE TV FOR THE INSTALLATION, MAINTENANCE, AND SERVICE OF SUCH LINES, CABLE, AND OTHER RELATED EQUIPMENT AND FACILITIES REASONABLY NECESSARY TO PROVIDE CABLE SERVICES.

INCLUDED IS THE RIGHT TO BUILD, REBUILD, CONSTRUCT, RECONSTRUCT, LOCATE, RELOCATE WITHIN THE EASEMENT CHANGE, REMOVE, REPLACE, MODIFY, RENEW, OPERATE AND MAINTAIN FACILITIES FOR PURPOSES DESCRIBED ABOVE, TOGETHER WITH FREE ACCESS TO, FROM AND OVER SAID EASEMENTS, WITH THE RIGHT AND PRIVILEGE OF GOING UPON, OVER AND ACROSS ADJOINING LANDS OF GRANTOR FOR THE PURPOSES SET FORTH HEREIN AND WITH THE RIGHT TO UTILIZE THE RIGHT OF WAY AND EASEMENT TO EXTEND SERVICES TO CUSTOMERS OF GRANTEE, INCLUDING SUFFICIENT WORKING AREA SPACE FOR ELECTRIC TRANSFORMERS, WITH THE RIGHT AND PRIVILEGE TO TRIM AND REMOVE TREES, SHRUBS OR BUSHES WHICH INTERFERE WITH THE PURPOSES SET FORTH HEREIN. NO BUILDING, SIGN, POOL (ABOVEGROUND OR SUBSURFACE), HOT TUB, CONCRETE OR WOOD POOL DECKING, OR OTHER STRUCTURE SHALL BE ERECTED OR CONSTRUCTED ON SAID EASEMENTS, NOR SHALL WELL BE DRILLED OR OPERATED THEREON. PROPERTY OWNERS SHALL BE SOLELY RESPONSIBLE FOR CORRECTING ANY VIOLATIONS OF NATIONAL ELECTRICAL SAFETY CODE BY CONSTRUCTION OF POOLS, DECKING, OR ANY STRUCTURES ADJACENT TO OR NEAR EASEMENTS SHOWN ON PLAT.

EASEMENTS FOR ELECTRIC TRANSFORMER/SWITCHGEARS, AS INSTALLED, SHALL EXTEND TEN (10) FEET IN FRONT OF TRANSFORMER/SWITCHGEAR DOORS AND FIVE (5) FEET ON EACH SIDE.

Disclaimer
IN APPROVING THIS PLAT, PUBLIC SERVICE COMPANY OF NEW MEXICO (PNM), QWEST CORPORATION D/B/A CENTURYLINK QC AND NEW MEXICO GAS COMPANY (NMGC) DID NOT CONDUCT A TITLE SEARCH OF THE PROPERTIES SHOWN HEREON. CONSEQUENTLY, PNM, QWEST CORPORATION D/B/A CENTURYLINK QC AND NMGC DO NOT WAIVE OR RELEASE ANY EASEMENT OR EASEMENT RIGHTS WHICH HAVE BEEN GRANTED BY PRIOR PLAT, REPLAT OR OTHER DOCUMENT AND WHICH ARE NOT SHOWN SPECIFICALLY DESCRIBED AND ON THIS PLAT.

Legal Description
A TRACT OF LAND LYING AND SITUATE WITHIN SECTIONS 25 AND 26, TOWNSHIP 11 NORTH, RANGE 2 EAST, N.M.P.M., CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO, COMPRISING OF TRACTS 27-A-2 AND 27-A-1, TAYLOR RANCH, AS THE SAME IS SHOWN AND DESIGNATED ON THE PLAT THEREOF FILED IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NEW MEXICO ON MAY 17, 1982, IN MAP BOOK C19, PAGE 145. NOW COMPRISING OF TRACTS 27-A-1-A AND 27-A-2-A, TAYLOR RANCH.

THIS IS TO CERTIFY THAT TAXES ARE CURRENT AND PAID ON UPC #: 101106250230010439, 101106252728610440
PROPERTY OWNER OF RECORD: Taylor Ranch
BERNALILLO COUNTY TREASURER'S OFFICE: Yvonne Gallegos

Solar Note:
NO PROPERTY WITHIN THE AREA OF REQUESTED FINAL ACTION SHALL AT ANY TIME BE SUBJECT TO A DEED RESTRICTION, COVENANT, OR BINDING AGREEMENT PROHIBITING SOLAR COLLECTORS FROM BEING INSTALLED ON BUILDINGS OR ERECTED ON THE LOTS OR PARCELS WITHIN THE AREA OF THIS PLAT.

Free Consent and Dedication
THE REPLAT SHOWN HEREON IS WITH THE FREE CONSENT AND IN ACCORDANCE WITH THE DESIRES OF THE UNDERSIGNED OWNER. EXISTING PUBLIC UTILITY EASEMENTS SHOWN HEREON FOR THE COMMON AND JOINT USE OF GAS, ELECTRICAL POWER AND COMMUNICATION SERVICES FOR BURIED AND/OR OVERHEAD DISTRIBUTION LINES, CONDUITS, AND PIPES FOR UNDERGROUND UTILITIES WHERE SHOWN OR INDICATED, AND INCLUDING THE RIGHT OF INGRESS AND EGRESS FOR CONSTRUCTION AND MAINTENANCE, AND THE RIGHT TO TRIM INTERFERING TREES AND SHRUBS. SAID OWNER DOES HEREBY CERTIFY THAT THIS SUBDIVISION IS THEIR FREE ACT AND DEED. SAID OWNER WARRANTS THAT THEY HOLD AMONG THEM COMPLETE AND INDEFEASIBLE TITLE IN FEE SIMPLE TO THE LAND SUBDIVIDED.

SAID OWNER DOES HEREBY GRANT ALL EASEMENTS AS SHOWN HEREON WITH LISTED BENEFICIARIES AND STIPULATIONS.

SAID OWNER DOES HEREBY DEDICATE ALL ADDITIONAL PUBLIC RIGHTS OF WAY FOR STREET PURPOSES SHOWN HEREON TO THE CITY OF ALBUQUERQUE IN FEE SIMPLE WITH WARRANTY COVENANTS.

Ken Trueba 5-15-2019
KEN TRUEBA DATE
CHAIR OF THE BOARD OF TRUSTEES
MESA VIEW UNITED METHODIST CHURCH

Acknowledgment
STATE OF NEW MEXICO) SS
COUNTY OF BERNALILLO)

THIS INSTRUMENT WAS ACKNOWLEDGED BEFORE ME THIS 15 DAY OF May, 2019 BY KEN TRUEBA, CHAIR OF THE BOARD OF TRUSTEES, MESA VIEW UNITED METHODIST CHURCH

BY [signature] MY COMMISSION EXPIRES: 12/3/22
NOTARY PUBLIC

Project No. PR-2019-002606
Application No. SD-2019-00149

Utility Approvals

Approval	Signature	Date
PNM	[signature]	11/05/2020
NEW MEXICO GAS COMPANY	[signature]	8/24/2020
QWEST CORPORATION D/B/A CENTURYLINK QC	Rochelle Abeyta (Digitally signed by Rochelle Abeyta Date: 2020.09.23 10:38:02 -06'00')	
COMCAST	[signature]	8/3/20

City Approvals

Approval	Signature	Date
CITY SURVEYOR	Loren N. Risenhoover P.S.	8/21/2020
TRAFFIC ENGINEERING, TRANSPORTATION DEPARTMENT	Jeanne Wolfenbarger	Jan 22, 2021
A.B.C.W.U.A.	[signature]	Jan 25, 2021
PARKS AND RECREATION DEPARTMENT	[signature]	Jan 22, 2021
AMAFCA	[signature]	9/14/2020
CITY ENGINEER	Ernest Armijo	Jan 22, 2021
DRB CHAIRPERSON, PLANNING DEPARTMENT	[signature]	Jan 25, 2021
CODE ENFORCEMENT	Carl Garcia	Jan 22, 2021

Surveyor's Certificate
I, LARRY W. MEDRANO, A REGISTERED NEW MEXICO PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF NEW MEXICO, HEREBY CERTIFY THAT THIS PLAT WAS PREPARED FROM FIELD NOTES OF AN ACTUAL SURVEY MEETING THE MINIMUM REQUIREMENTS FOR MONUMENTATION AND SURVEYS OF THE CITY OF ALBUQUERQUE SUBDIVISION ORDINANCE AND OF THE MINIMUM STANDARDS FOR LAND SURVEYS AS ADOPTED BY THE N.M. BOARD OF LICENSURE FOR ENGINEERS AND SURVEYORS AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT NO ENCROACHMENTS EXIST EXCEPT AS NOTED ABOVE AND THAT ALL IMPROVEMENTS ARE SHOWN IN THEIR CORRECT LOCATION RELATIVE TO RECORD BOUNDARIES AS LOCATED BY THIS SURVEY.

[signature] 5/15/19
LARRY W. MEDRANO DATE
N.M.P.S. No. 11993

COORDINATE AND DIMENSION INFORMATION

STATE PLANE ZONE	GRID/GROUND COORDINATES	TYPE
NM-C	GRID	STANDARD
HORIZONTAL DATUM: NAD83	VERTICAL DATUM: NAVD88	ROTATION ANGLE: 0° 00' 00.00" / MATCHES DRAWING UNITS: YES
CONTROL USED: ALBUQUERQUE GEODETIC REFERENCE SYSTEM		N = 0, E = 0
GRID TO GROUND: 1.000320316 / GROUND TO GRID: 0.999667978	DISTANCE ANNOTATION: GROUND / BEARING ANNOTATION: GRID	ELEVATION TRANSLATION: ±0.00' / ELEVATIONS USED: NO

PLSS INFORMATION

LAND GRANT	SECTION	TOWNSHIP	RANGE	MERIDIAN	CITY	COUNTY	STATE
N/A	25 & 26	11 NORTH	02 EAST	NMPM	ALBUQUERQUE	BERNALILLO	NM

INDEXING INFORMATION FOR COUNTY CLERK
PROPERTY OWNER: MESA VIEW UNITED METHODIST CHURCH, INC.
SUBDIVISION NAME: TAYLOR RANCH
UPC: 101106252728610440
ADDRESS: 4701 MONTANO ROAD, N.W.

PRECISION SURVEYS, INC.
OFFICE LOCATION: 5700 San Mateo Boulevard, NE, Albuquerque, NM 87113
505.856.5700 PHONE
505.856.7900 FAX

PROJECT INFORMATION

CREW/TECH	DATE OF SURVEY	DRAWN BY	CHECKED BY	PSI JOB NO.	SHEET NUMBER
MT/MC	02/26-27/2019	JK/MP	LM	19-2022P	1 OF 2

2021C-5

(1)

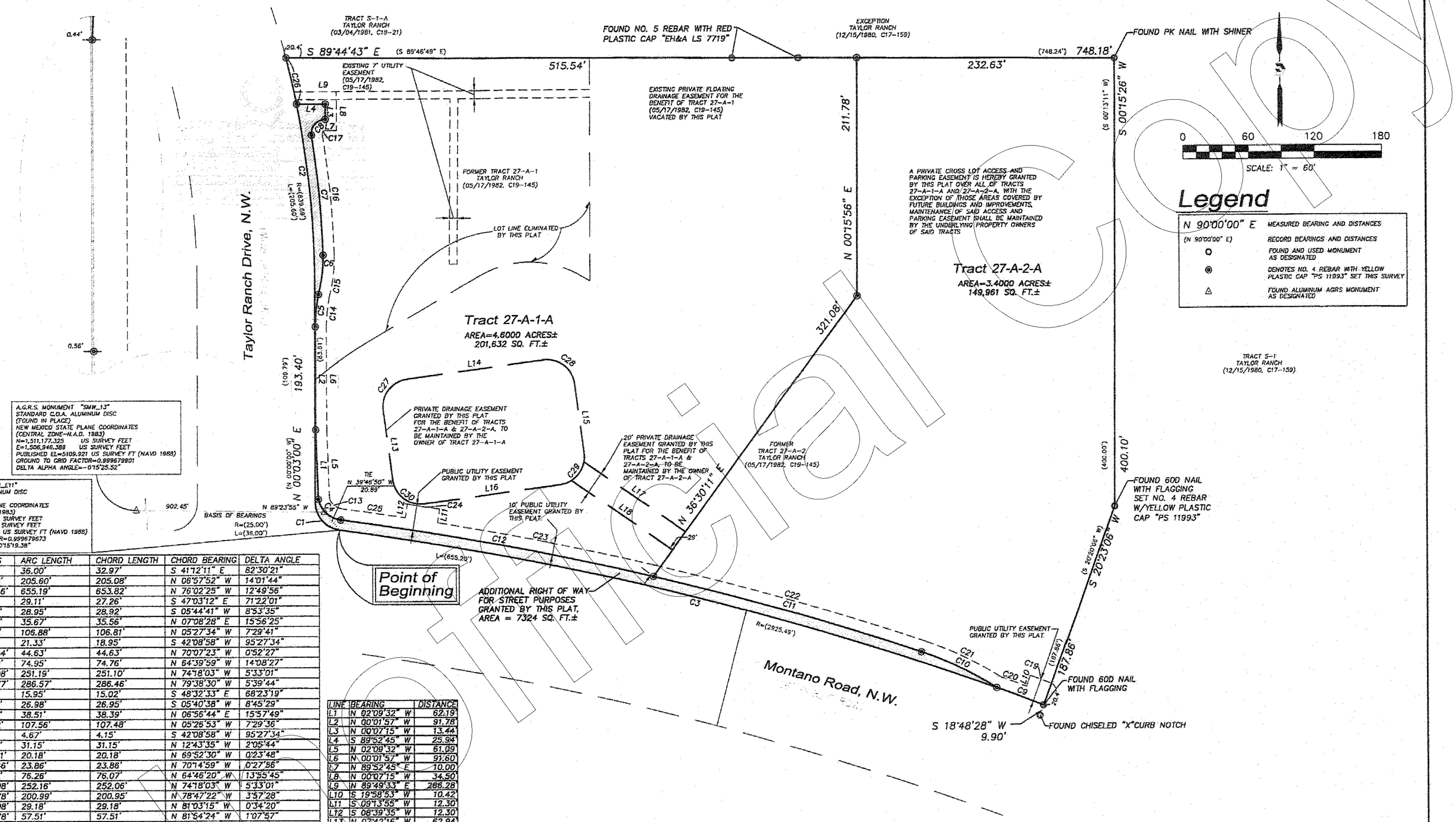
RECORDING STAMP

DOC# 2021014555

02/04/2021 12:24 PM Page: 2 of 2
PLAT R:$25.00 B: 2021C P: 0005 Linda Stover, Bernalillo County

Plat of
Tracts 27-A-1-A & 27-A-2-A
Taylor Ranch

Sections 25 & 26, Township 11 North, Range 2 East, N.M.P.M.
Albuquerque, Bernalillo County, New Mexico
December 2020



Legend

N 90°00'00" E	MEASURED BEARING AND DISTANCES
(N 90°00'00" E)	RECORD BEARINGS AND DISTANCES
○	FOUND AND USED MONUMENT AS DESIGNATED
◉	DENOTES NO. 4 REBAR WITH YELLOW PLASTIC CAP "PS 11993" SET THIS SURVEY
△	FOUND ALUMINUM AGRS MONUMENT AS DESIGNATED

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C1	25.00'	36.00'	32.97'	S 41°12'11" E	82°30'21"
C2	839.68'	205.60'	205.08'	N 06°57'52" W	14°01'44"
C3	2925.46'	655.19'	653.82'	N 76°02'25" W	12°49'56"
C4	23.37'	29.11'	27.26'	S 47°03'12" E	71°22'01"
C5	186.50'	28.95'	28.92'	S 05°44'41" W	8°53'35"
C6	128.23'	35.67'	35.56'	N 07°08'28" E	15°56'25"
C7	817.10'	106.88'	106.81'	N 05°27'34" W	7°29'41"
C8	12.80'	21.33'	18.95'	S 42°08'58" W	95°27'34"
C9	2925.44'	44.63'	44.63'	N 70°07'23" W	0°52'27"
C10	303.69'	74.95'	74.76'	N 64°39'59" W	14°08'27"
C11	2593.08'	251.19'	251.10'	N 74°18'03" W	5°33'01"
C12	2899.77'	286.57'	286.46'	N 79°38'30" W	5°39'44"
C13	13.37'	15.95'	15.02'	S 48°32'33" E	68°23'19"
C14	176.49'	26.98'	26.95'	S 05°40'38" W	8°45'29"
C15	138.23'	38.51'	38.39'	N 06°56'44" E	15°57'49"
C16	822.42'	107.56'	107.48'	N 05°26'53" W	7°29'36"
C17	2.80'	4.67'	4.15'	S 42°08'58" W	95°27'34"
C18	851.68'	31.15'	31.15'	N 12°43'35" W	2°05'44"
C19	2914.71'	20.18'	20.18'	N 69°52'30" W	0°23'48"
C20	2935.46'	23.86'	23.86'	N 70°14'59" W	0°27'56"
C21	313.69'	76.26'	76.07'	N 64°46'20" W	13°55'45"
C22	2603.08'	252.16'	252.06'	N 74°18'03" W	5°33'01"
C23	2909.78'	200.99'	200.95'	N 78°47'22" W	3°57'28"
C24	2922.08'	29.18'	29.18'	N 81°03'15" W	0°34'20"
C25	2909.78'	57.51'	57.51'	N 81°54'24" W	1°07'57"
C26	839.44'	42.51'	42.51'	N 12°31'43" W	2°54'06"
C27	25.0'	39.3'	35.4'	S 37°17'44" W	90°00'00"
C28	25.0'	39.3'	35.4'	N 52°42'16" W	90°00'00"
C29	25.0'	39.3'	35.4'	N 37°17'44" E	90°00'00"
C30	25.0'	39.3'	35.4'	S 52°42'16" E	90°00'00"

LINE	BEARING	DISTANCE
L1	N 02°09'32" W	62.19
L2	N 00°01'57" W	91.78
L3	N 00°07'15" W	13.44
L4	S 89°52'45" W	25.94
L5	N 02°08'32" W	61.09
L6	N 00°01'57" W	97.60
L7	N 89°52'45" E	10.00
L8	N 00°07'15" W	34.50
L9	N 89°49'33" E	266.28
L10	S 19°58'53" W	10.42
L11	S 09°13'55" W	12.30
L12	S 08°39'35" W	12.30
L13	N 07°42'16" W	62.94
L14	N 82°17'44" E	123.70
L15	S 07°42'16" E	62.94
L16	S 82°17'44" W	123.70
L17	N 55°31'17" W	111.39
L18	N 55°31'17" W	110.63

COORDINATE AND DIMENSION INFORMATION				PLSS INFORMATION				INDEXING INFORMATION FOR COUNTY CLERK		PROJECT INFORMATION	
STATE PLANE ZONE: NM-C	GRID /GROUND COORDINATES: GRID	TYPE: STANDARD		LAND GRANT N/A				PROPERTY OWNER MESA VIEW UNITED METHODIST CHURCH, INC.		CREW/TECH: MT/MC	DATE OF SURVEY 02/26-27/2019
HORIZONTAL DATUM: NAD83	VERTICAL DATUM: NAVD88	ROTATION ANGLE: 0° 00' 00.00"	MATCHES DRAWING UNITS: YES	SECTION 25 & 26	TOWNSHIP 11 NORTH	RANGE 02 EAST	MERIDIAN NMPM	SUBDIVISION NAME TAYLOR RANCH		DRAWN BY: JK/MP	CHECKED BY: LM
CONTROL USED: ALBUQUERQUE GEODETIC REFERENCE SYSTEM		BASE POINT FOR SCALING AND/OR ROTATION: N = 0 E = 0		CITY ALBUQUERQUE		COUNTY BERNALILLO	STATE NM	UPC 101106252728610440	ADDRESS 4701 MONTANO ROAD, N.W.	PSI JOB NO. 19-2022P	SHEET NUMBER 2 OF 2
COMBINED SCALE FACTOR: GRID TO GROUND: 1.000320316 GROUND TO GRID: 0.999667978	DISTANCE ANNOTATION: GROUND	ELEVATION TRANSLATION: ±0.00'	ELEVATIONS VALID: NO								
	BEARING ANNOTATION: GRID										

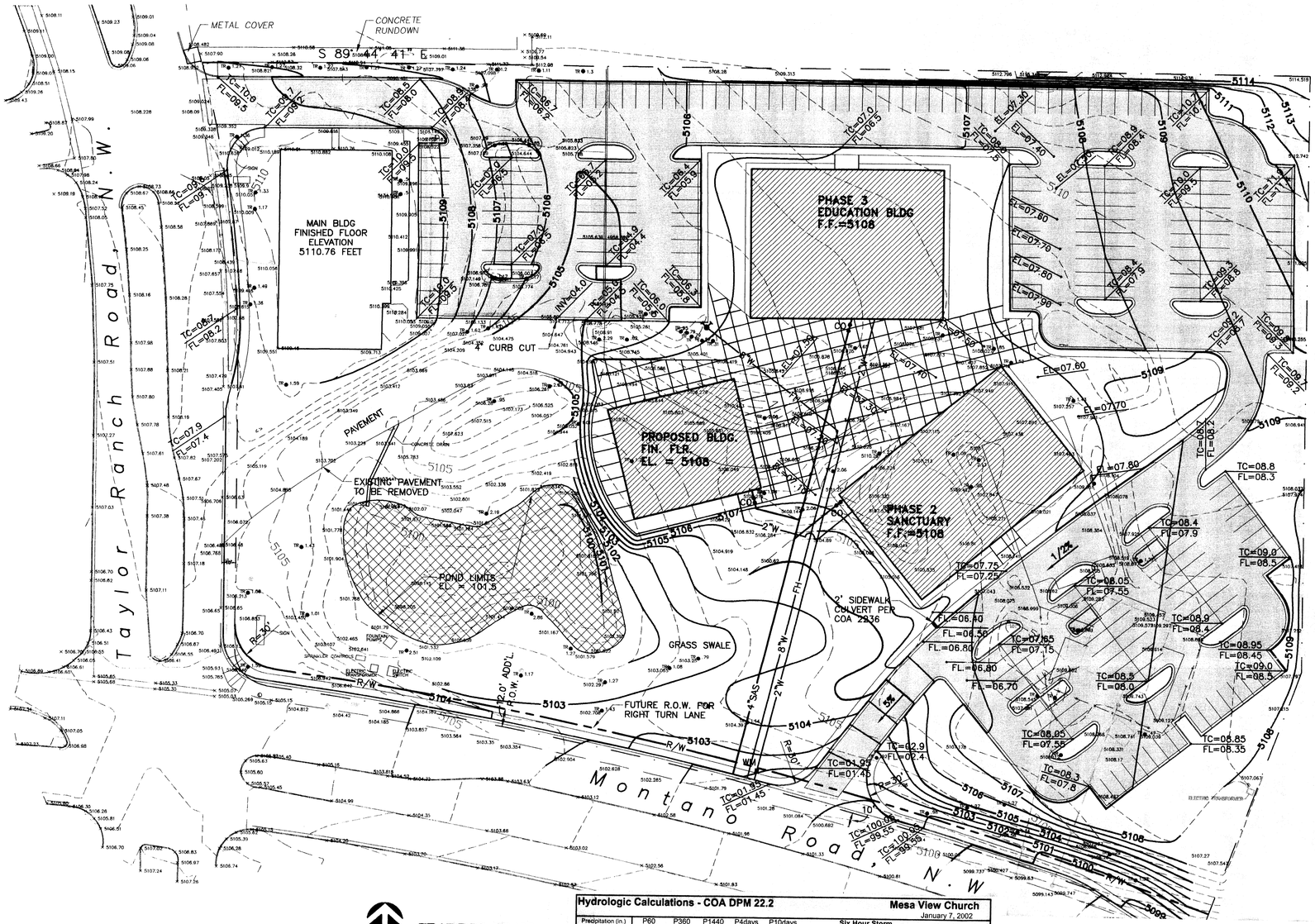
PRECISION SURVEYS, INC.

OFFICE LOCATION:
9200 San Mateo Boulevard, NE
Albuquerque, NM 87113

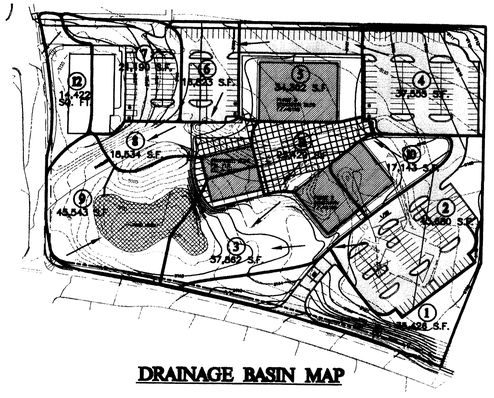
505.856.5700 PHONE
505.856.7900 FAX

2021C-5

(2)



GRADING PLAN
SCALE: 1" = 40'



DRAINAGE BASIN MAP

Hydrologic Calculations - COA DPM 22.2

Mesa View Church
January 7, 2002

	P60	P360	P1440	P4days	P10days	Six Hour Storm			
Precipitation (in.) Zone 1	1.87	2.2	2.66	3.12	3.67				
Excess Precip (in.)	A	B	C	D		A	B	C	D
Table 8	0.44	0.67	0.99	1.97		0.44	0.67	0.99	1.97
Discharge (cfs/ac)	A	B	C	D		A	B	C	D
Table 9	1.29	2.03	2.87	4.37		1.29	2.03	2.87	4.37

Areas and Land Treatments:

	Land Treatments - Existing Conditions					Land Treatments - Fully Developed Conditions				
	A	B	C	D	Area (sf)	A	B	C	D	Area (sf)
Subbasin 1	0	33,655	0	1,771	35,426	0	31,883	0	3,543	35,426
Subbasin 2	0	17,472	21,840	4,368	43,680	0	4,368	0	39,312	43,680
Subbasin 3	0	37,862	0	0	37,862	0	37,862	0	0	37,862
Subbasin 4	37,555	0	0	0	37,555	0	5,633	0	31,922	37,555
Subbasin 5	27,442	0	6,860	0	34,302	0	5,145	0	29,157	34,302
Subbasin 6	0	2,523	0	14,300	16,823	0	2,523	0	14,300	16,823
Subbasin 7	0	3,179	0	18,012	21,190	0	3,179	0	18,012	21,190
Subbasin 8	0	8,340	0	10,194	18,534	0	18,534	0	0	18,534
Subbasin 9	0	40,298	0	4,478	44,775	0	44,775	0	0	44,775
Subbasin 10	0	12,000	3,429	1,714	17,143	0	10,286	0	6,857	17,143
Subbasin 11	0	19,915	0	3,514	23,429	0	1,171	0	22,258	23,429
Subbasin 12	0	4,327	0	10,095	14,422	0	4,327	0	10,095	14,422
					345,141					345,141

Peak Flow Rates Generated:

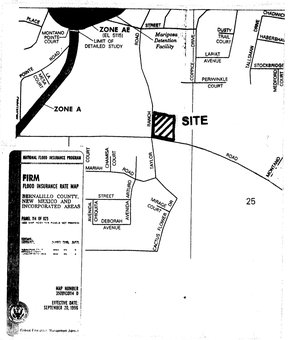
	Peak Flow Rate - Existing Conditions				100 yr	Peak Flow Rate - Developed Conditions				100 yr
	A	B	C	D	Q (cfs)	A	B	C	D	Q (cfs)
Subbasin 1	0.00	1.57	0.00	0.18	1.75	0.00	1.49	0.00	0.36	1.84
		draining to Montano			1.75		draining to Montano			1.84
Subbasin 2	0.00	0.81	1.44	0.44	2.69	0.00	0.20	0.00	3.94	4.15
Subbasin 3	0.00	1.76	0.00	0.00	1.76	0.00	1.76	0.00	0.00	1.76
Subbasin 4	1.11	0.00	0.00	0.00	1.11	0.00	0.26	0.00	3.20	3.46
Subbasin 5	0.81	0.00	0.45	0.00	1.26	0.00	0.24	0.00	2.93	3.16
Subbasin 6	0.00	0.12	0.00	1.43	1.55	0.00	0.12	0.00	1.43	1.55
Subbasin 7	0.00	0.15	0.00	1.81	1.96	0.00	0.15	0.00	1.81	1.96
Subbasin 8	0.00	0.39	0.00	1.02	1.41	0.00	0.86	0.00	0.00	0.86
Subbasin 9	0.00	1.88	0.00	0.45	2.33	0.00	2.09	0.00	0.00	2.09
Subbasin 10	0.00	0.56	0.23	0.17	0.96	0.00	0.48	0.00	0.69	1.17
Subbasin 11	0.00	0.93	0.00	0.35	1.28	0.00	0.05	0.00	2.23	2.29
		draining to Pond			16.32		draining to Pond			22.45
Subbasin 12	0.00	0.20	0.00	1.01	1.21	0.00	0.20	0.00	1.01	1.21
		draining to Taylor Ranch			1.21		draining to Taylor Ranch			1.21
Unattenuated Peak Flow Rate					19	Unattenuated Peak Flow Rate				25

Peak Volumes

Six Hour Subbasin	Runoff Volume - Existing Conditions Six Hour Storm				100 yr V (cu-ft)	Runoff Volume - Developed Conditions Six Hour Storm				100 yr V (cu-ft)
Subbasin 1	0	1,879	0	291	2,170	0	1,780	0	582	2,362
			draining to Montano		2,170			draining to Montano		2,362
Subbasin 2	0	976	1,802	717	3,494	0	244	0	6,454	6,698
Subbasin 3	0	2,114	0	0	2,114	0	2,114	0	0	2,114
Subbasin 4	1,377	0	0	0	1,377	0	315	0	5,240	5,555
Subbasin 5	1,006	0	566	0	1,572	0	287	0	4,787	5,074
Subbasin 6	0	141	0	2,348	2,488	0	141	0	2,348	2,488
Subbasin 7	0	177	0	2,957	3,134	0	177	0	2,957	3,134
Subbasin 8	0	466	0	1,673	2,139	0	1,035	0	0	1,035
Subbasin 9	0	2,250	0	735	2,985	0	2,500	0	0	2,500
Subbasin 10	0	670	283	281	1,234	0	574	0	1,126	1,700
Subbasin 11	0	1,112	0	577	1,689	0	65	0	3,654	3,719
			draining to Pond		22,228			draining to Pond		34,017
Subbasin 12	0	242	0	1,657	1,899	0	242	0	1,657	1,899
			draining to Taylor Ranch		1,899			draining to Taylor Ranch		1,899
					26,296					38,278

Ten Day Subbasin	Runoff Volume - Existing Conditions Ten Day Storm Event				100 yr V (cu-ft)	Runoff Volume - Developed Conditions Ten Day Storm Event				100 yr V (cu-ft)
Subbasin 1					2,367					2,579
		draining to Montano			145,015			draining to Montano		202,731
Subbasin 2					4,029					7,233
Subbasin 3					2,114					2,114
Subbasin 4					1,377					5,555
Subbasin 5					1,572					5,074
Subbasin 6					4,240					4,240
Subbasin 7					5,341					5,341
Subbasin 8					3,388					2,284
Subbasin 9					3,533					3,048
Subbasin 10					1,444					1,910
Subbasin 11					2,119					4,150
		draining to Pond			29,158			draining to Pond		40,948
Subbasin 12					3,136					3,136
		draining to Taylor Ranch			3,136			draining to Taylor Ranch		3,136
					156,494					225,285

VICINITY MAP



FLOOD INSURANCE RATE MAP

Site Location - As shown by the Vicinity Map (Zone Atlas Map E-11), the 8.07-acre site on the west side of Albuquerque is located northeast of the intersection of Montano Road and Taylor Ranch Drive and about 2,200 feet west of Coors Boulevard. At present, the site is developed with a 10,000 square foot church building, a 2,500 square foot outbuilding, and associated paved driveway and parking facilities. A large portion of the undeveloped property on the site is landscaped as a park with a permanent pond as shown. The vast majority of the surrounding area is currently developed, thereby making this a modification to an existing site within an infill area. The proposed improvements consist of a 7,020 square foot Sunday school building with adjacent asphalt paving and drainage facilities for Phase One, a 12,800 square foot sanctuary building with associated parking for Phase Two, and a 13,042 square foot education building with associated parking for Phase Three. The existing driveway from Taylor Ranch Drive is to be abandoned and all access is to be routed to the existing entrance located north of the existing church under Phase One conditions. The proposed driveway located on Montano Road in proposed to be constructed under the Phase Two construction.

Address: Mesa View United Methodist Church, 4701 Montano Road NW, Albuquerque, New Mexico 87120.

Legal Description - Tracts 27-A1 and 27-A2, Taylor Ranch, New Mexico.

Temporary Benchmark - A temporary benchmark for use in construction of the site will be the finish floor elevation of the main church building at elevation 5,110.76 feet. For horizontal datum, a chiseled "X" on the block wall near the northwesterly corner of the site. According to the plat, ACS control station "3-E10" is located at a bearing of N.83deg00'13" and distance of 8,805.16 feet.

Flood Zone - As shown by Panel 114 of 825 of the National Flood Insurance Program Flood Insurance Rate Maps (FIRM) for the City of Albuquerque, New Mexico, dated September 20, 1996, this site does not lie within a designated flood hazard zone.

Existing Conditions - Currently, the properties to the north and east of the project site drain to either Taylor Ranch Drive or Montano Road. No offsite runoff impacts the site. The street slopes are on the order of one-percent and support adequate capacity to carry the fully developed 100-year design flow runoff from the site. The existing pond on the project site acts as a retention facility during significant rainfall events. Most of the subject property discharges through the park area into the pond. The normal water surface of the pond is maintained at elevation 5,101-feet storing approximately 35,247 cubic-feet of water. The maximum capacity of the pond before overtopping occurs was estimated as 115,473 cubic-feet of water at elevation 5,103 feet. All overflow will discharge to Montano Road. The existing 100-year runoff was estimated as 64,405 cubic-feet at an elevation of 5,101.96-feet.

Proposed Grading - The Grading and Drainage Plan shows 1) existing and proposed grades indicated by spot elevations and contours at one-foot intervals with continuity between existing and proposed grades; 2) the limit of existing and proposed improvements. The proposed building pads will be set to correspond to finish floor elevations of 5,108-feet to maintain positive drainage around the buildings. The additional northern parking area on both sides of the Phase Three building will be graded to drain from both ends to the proposed four-foot curb cut and then to the south across the grass-lined swale to the pond as shown on the plan. The grading of the site will maintain the drainage to the existing pond. The proposed condition 100-year rainfall runoff will generate approximately 76,195-cubic feet of volume in the pond at a maximum elevation of 5,102.35-feet. The increase in water surface elevation due to the proposed construction was estimated to be less than five-inches. This will leave about 0.65-foot of freeboard constituting 39,278 cubic-feet of additional storage volume before overtopping.

The Phase Two construction will include the construction of the additional driveway as shown on the Plan. The runoff from this parking facility will discharge through a sidewalk culvert into the pond. The increase in discharge to Montano Road was estimated to be approximately 0.11-cfs.

Hydrologic Methods - The drainage basin map shows twelve separate subbasins 1 through 12 to assess peak flow rates at various points around the project site culminating at the pond or Montano Road. The spreadsheet calculations analyze both the existing and developed conditions for the 100-year, 6-hour rainfall event. The process outlined in the DPM, Section 22.2 was used to quantify the peak flow rates and volumes. As shown by these calculations, the fully developed commercial improvements will result in a minimal increase in runoff generated by the site. Also, by draining the majority of the site toward the existing pond, only a minimal increase in runoff to Montano Road will be found due to the proposed improvements to the site. As noted on the Plan, only subbasin one will continue to discharge onto Montano Road as is the case under current conditions.

The subject property improvements increase the existing peak runoff by about six cubic feet per second and about 12,000 cubic feet of volume in the Pond as shown on the calculations. A spreadsheet for Precipitation Zone 1 is included on this plan. This spreadsheet outlines the peak runoff and volume generated for each subbasin for existing and proposed fully developed conditions.

Erosion Control Measures - The contractor shall ensure that no soil erodes from the site into public right-of-way or onto private property. This can be achieved by constructing temporary berms at the property lines and wetting the soil to keep it from blowing. The contractor shall promptly clean up any material excavated within the public right-of-way so that the excavated material is not susceptible to being washed down the street. The contractor shall secure "Topsoil Disturbance Permits" prior to beginning construction.

POND CAPACITY DATA

Pond Elevation	Area		Volume	
5097	326		0	0
5098	4,486		2,406	2,406
5099	8,728		6,607	9,013
5100	12,123		10,426	19,439
surface 5101	19,494		15,809	35,247
5102	41,166		30,330	65,577
overflow 5103	58,625		49,896	115,473
5104				

Normal pond storage at elevation 5,101 feet	35,247	cf
Maximum pond capacity to overflow	115,473	
Pond capacity from normal water surface to overflow	80,226	cf
Current retained runoff in pond for 100-yr rainfall event	29,158	cf
Total runoff volume under current conditions	64,405	cf
Maximum water surface for existing 100-yr rainfall event	5,101.96	feet
Total proposed retained runoff in pond for 100-yr event	40,948	cf
Total runoff volume under proposed conditions	76,195	cf
Maximum water surface for proposed 100-yr rainfall event	5,102.35	feet

REVISION	BY	DATE
		MARK

DESIGNED BY: M.H.B.
DRAWN BY: T.D.S.
CHECKED BY:

MARK H. BURAK NEW MEXICO 10987 REGISTERED PROFESSIONAL ENGINEER

Mark H. Burak, P.E.
1512 Sagebrush Trail SE
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Civil Engineering Consulting BURAK Development

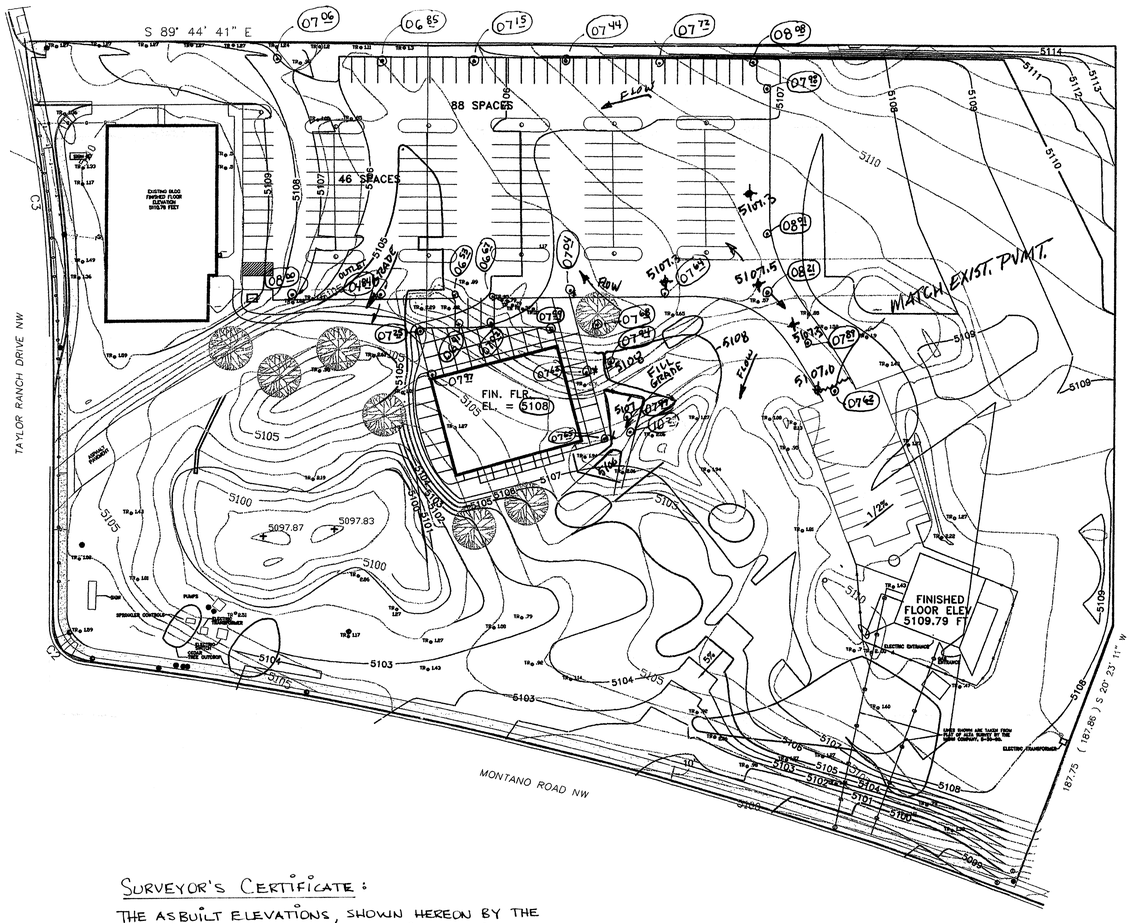
MESA VIEW CHURCH

GRADING AND DRAINAGE PLAN

DRAWING NUMBER

C1

1 OF 1



SURVEYOR'S CERTIFICATE:

THE ASBUILT ELEVATIONS, SHOWN HEREON BY THE CIRCLED NUMBERS, WERE TAKEN IN THE FIELD ON NOVEMBER 22ND, 2002. THE ELEVATIONS SHOWN ARE BASED OFF THE BUILDING F/F ELEVATION OF 5108.00 AND ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

Brian K. McClintock

BRIAN K. McCLINTOCK, NMPS No 11597

DATED: 11/22/2002

Engineer's Certification
Mesa View Church Addition - Phase One

This site was surveyed on November 22, 2002 by Brian K. McClintock, NMPS No. 11597 to confirm post-construction design elevations and drainage for the project's first phase . I, Mark H. Burak, P.E. have assessed the "as constructed" conditions and have found the site to be in substantial compliance with the approved plan stamped 01/08/02.

Mark Burak

Mark H. Burak, P.E. # 10987 December 1, 2002