

CITY OF ALBUQUERQUE

Planning Department
Alan Varela, Director



Mayor Timothy M. Keller

September 26, 2024

Christopher Archuleta, P.E.
Community Design Solutions
9384 Valley View Drive NW, Suite 100
Albuquerque, NM 87114

RE: Tidal Wave
10601 Unser Blvd NW
Permanent CO – Accepted
Engineer's Certification Date: 08/22/2024
Engineer's Stamp Date: 04/18/23
Hydrology File: A11D017C

Dear Mr. Archuleta:

PO Box 1293

Based on the Certification received 8/23/2024 and site visit on 8/26/2024, this letter serves as a “green tag” from Hydrology Section for a Permanent Certificate of Occupancy to be issued by the Building and Safety Division.

Albuquerque

If you have any questions, please contact me at 505-924-3314 or amontoya@cabq.gov.

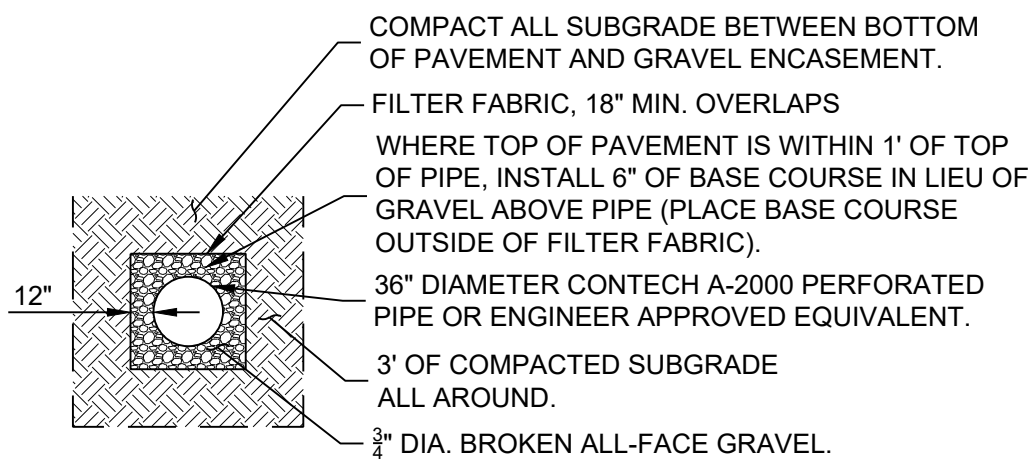
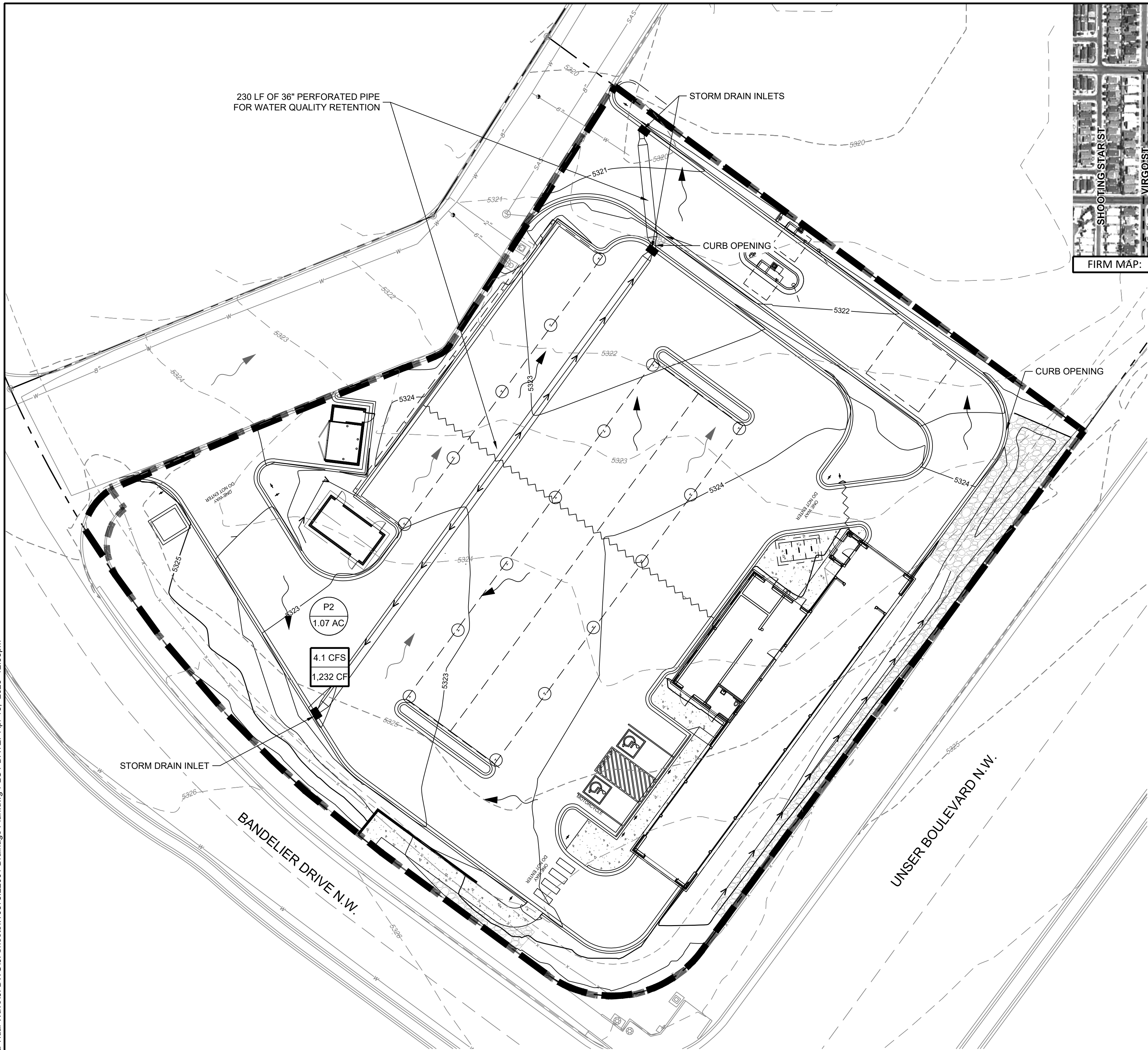
NM 87103

Sincerely,

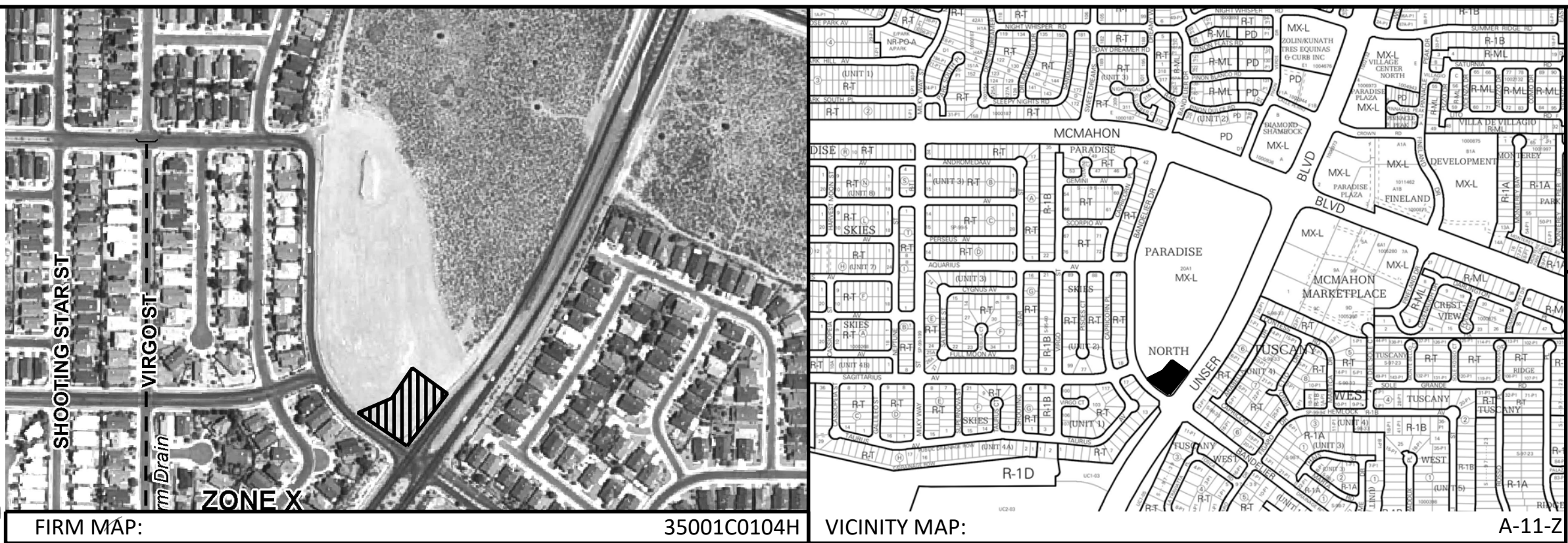
www.cabq.gov

Anthony Montoya, Jr., P.E.
Senior Engineer, Hydrology
Planning Department, Development Review Services

NAME: N:\Projects\W0378-Daniel Puzak Projects\W0378-22001 Aria Tidal Wave\3-DWG\3. Sheets\W0378-22001 Drainage Plan.dwg PLOT DATE: Apr 18, 2023 12:38pm



PERFORATED PIPE DETAIL
NOT TO SCALE



ABBREVIATIONS

AC	ACRE
CF	CUBIC FOOT
ELEV	ELEVATION
FF	FINISHED FLOOR
INV	INVERT
LF	LINEAR FOOT
NMAPWA	NEW MEXICO AMERICAN PUBLIC WORKS ASSOCIATION
MAX	MAXIMUM
MIN	MINIMUM
PVC	POLYVINYL CHLORIDE
ROW	PUBLIC RIGHT OF WAY
RPBA	REDUCED PRESSURE BACKFLOW ASSEMBLY
SAS	SANITARY SEWER
SD	STORM DRAIN
STD DWG	STD DWG
VOL	VOLUME
WTR	WATER
WQ	WATER QUALITY
YR	YEAR
HR	HOUR
WSEL	WATER SURFACE ELEVATION

BACKGROUND

LOT 2, UNSER MCMAHON CENTER IS APPROXIMATELY 1.07 ACRES IN THE CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO. THE PROPERTY IS LOCATED ON THE NORTH CORNER OF THE INTERSECTION OF UNSER BOULEVARD AND BANDELIER DRIVE. THE SITE IS CURRENTLY UNDEVELOPED. LOT 2 IS SUBJECT TO THE APPROVED MASTER DRAINAGE PLAN FOR PARADISE NORTH - UNSER/MCMAHON (HYDROLOGY FILE: A11D017) COMPLETED BY TIERRA WEST IN 2020. THE PROPOSED PROJECT IS A TIDAL WAVE CAR WASH.

METHODOLOGY

HYDROLOGY CALCULATIONS FOR THE SITE ARE PERFORMED IN ACCORDANCE WITH THE ALBUQUERQUE DEVELOPMENT PROCESS MANUAL (DPM) ARTICLE 6.2 USING THE RATIONAL METHOD TO CALCULATE PEAK FLOW RATES TO ENSURE ALL FLOW PATHS ARE SUFFICIENT TO CARRY FLOWS. THE REQUIRED WATER QUALITY VOLUME WAS CALCULATED BY MULTIPLYING THE IMPERVIOUS AREA BY THE FIRST FLUSH RUNOFF VALUE OF 0.42". ALL HYDROLOGIC AND HYDRAULIC CALCULATIONS CAN BE FOUND ON THIS SHEET.

EXISTING CONDITIONS

IN 2020-2021, LOT 2 WAS MASS GRADED AS PART OF THE LARGER PARADISE NORTH MASS GRADING. INTERNAL ROADS, STORM DRAIN, AND UTILITY MAINS WERE ALSO INSTALLED AS PART OF THE CONSTRUCTION.

UNDER THE EXISTING CONDITIONS, LOT 2 SLOPES FROM SOUTH TO NORTH AT A SLOPE OF 2%-3%. THE STORMWATER RUNOFF GENERATED BY THE SITE DRAINS FROM SOUTH TO NORTH INTO THE INTERNAL FRONTAGE STREET. THE STORMWATER IS CONVEYED IN THE STREET TO AN EXISTING INLET AND AND STORM DRAIN SYSTEM THAT EVENTUALLY DISCHARGES INTO THE PUBLIC STORM DRAIN IN MCMAHON BOULEVARD.

DEVELOPED CONDITIONS

THE DEVELOPED DRAINAGE CONDITION CONFORMS TO THE DRAINAGE INTENT OF THE APPROVED MASTER DRAINAGE PLAN (TIERRA WEST, 2020).

BASIN P2 CONTAINS 1.07 ACRES AND CORRESPONDS TO BASIN P2 IN THE MASTER DRAINAGE PLAN (TIERRA WEST, 2020). PER THE MASTER DRAINAGE PLAN, BASIN P2 HAS AN ALLOWABLE DISCHARGE RATE OF 4.3 CFS. THE DEVELOPED DISCHARGE RATE IS 4.1 CFS WHICH IS BELOW THE ALLOWABLE RATE.

THE STORMWATER RUNOFF FROM P2 IS CONVEYED ACROSS THE PARKING LOT. THE WATER IS RECEIVED BY THREE CURB INLETS THAT CONNECT TO AN UNDERGROUND WATER QUALITY RETENTION SYSTEM FOR P2. STORMWATER VOLUME EXCEEDING THE CAPACITY OF THE UNDERGROUND RETENTION FLOWS OVER THE NORTHERN TWO INLETS AND DISCHARGES DIRECTLY INTO THE INTERNAL STREET PER THE DRAINAGE INTENT OF THE MASTER DRAINAGE PLAN. RUNOFF FROM THE LANDSCAPING AREA ALONG THE SOUTH EDGE OF THE BUILDING IS CONVEYED INTO THE DRIVE AISLE VIA A SWALE AND CURB OPENING. RUNOFF FROM THE ROOF OF THE BUILDING DISCHARGES DIRECTLY INTO THE PARKING LOT.

SUB-BASIN P2 GENERATES 1,232 CF OF FIRST FLUSH RUNOFF WHICH IS RETAINED ONSITE IN A 36" DIAMETER PERFORATED PIPE LOCATED UNDER THE PARKING AREA. THE PIPE IS WRAPPED IN GRAVEL AND FILTER FABRIC, PER THE DETAIL ON THIS SHEET.

THE WATER QUALITY TABLE ON THIS SHEET UNDER "HYDROLOGY CALCULATIONS" SUMMARIZES THE REQUIRED AND PROVIDED WATER QUALITY VOLUMES FOR THE DEVELOPED CONDITION.

Hydrology Calculations

The following calculations are based on Albuquerque's Development Process Manual, Article 6-2

Runoff Rate:

Treatment Type Areas

Subbasin	Area _a (ac)	Area _b (ac)	Area _c (ac)	Area _d (ac)	Total (ac)
P2	0.00	0.00	0.26	0.81	1.07

100-yr Peak Discharge values based on Zone 1 from Table 6.2.14

Q_A = 1.54 cfs/ac Q_B = 2.16 cfs/ac Q_C = 2.87 cfs/ac Q_D = 4.12 cfs/ac

Peak Discharge calculation for a 100-yr, 24-hour storm event from equation 6.6

Subbasin	Discharge (cfs)
P2	4.1

Water Quality:

Required Water Quality volume for first flush of 0.42"

Subbasin	Req Volume (cu. ft.)	Provided Volume (cu. ft.)	Net Volume (cu. ft.)
P2	1,232	1,625	-393

DESIGNED
DRAWN
CHECKED
DATE
4.18.2023

RESPEC
COMMUNITY DESIGN SOLUTIONS
7770 JEFFERSON STREET SUITE 200
ALBUQUERQUE, NM 87126
WWW.RESPEC.COM PHONE (505) 253-9718

RESPEC

STAMP
SHELDON E. GREER
NEW MEXICO
17154
REGISTERED PROFESSIONAL ENGINEER
4/18/2023
THIS DRAWING IS INCOMPLETE
AND NOT TO BE USED FOR
CONSTRUCTION UNLESS IT IS
STAMPED, SIGNED AND DATED

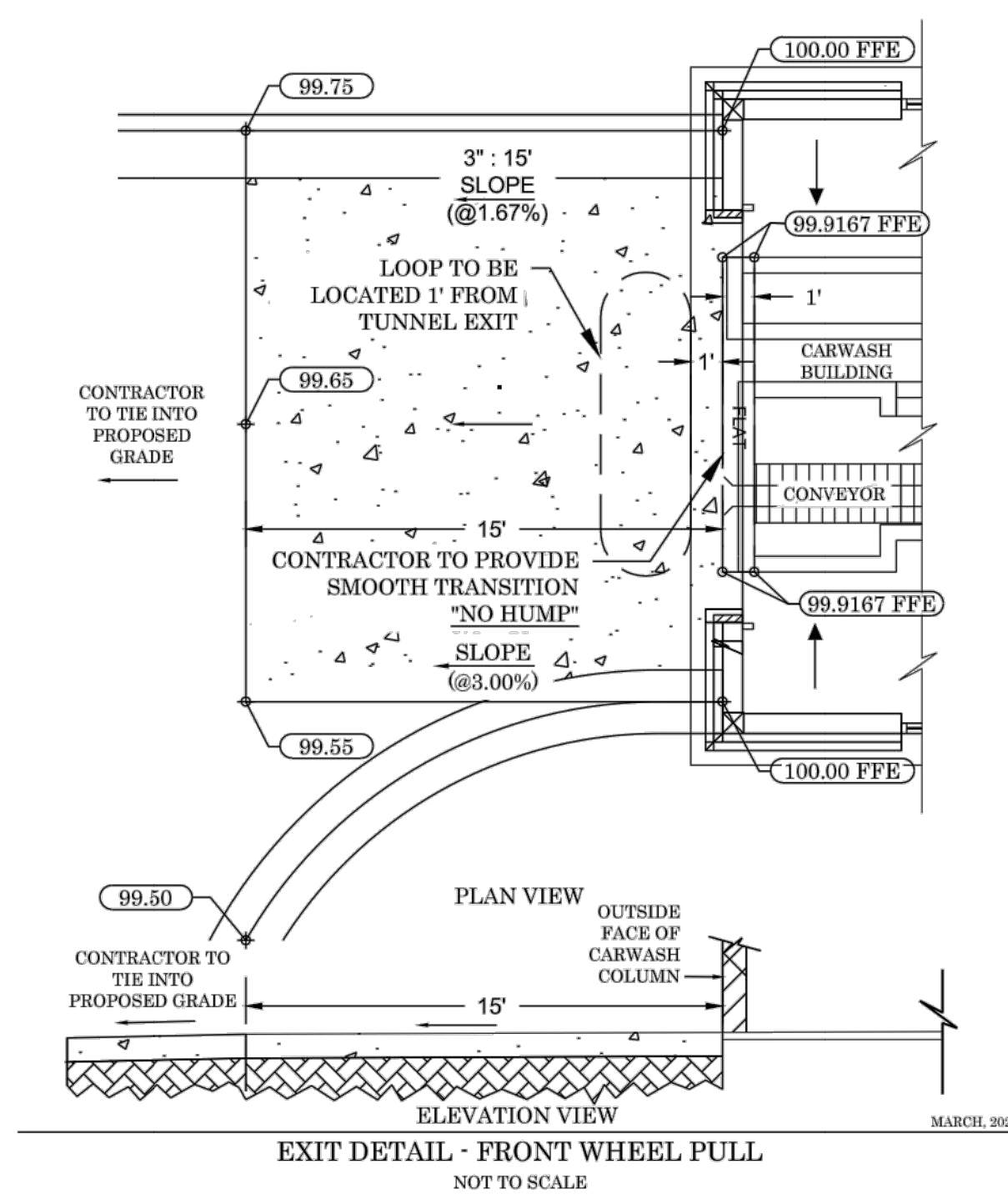
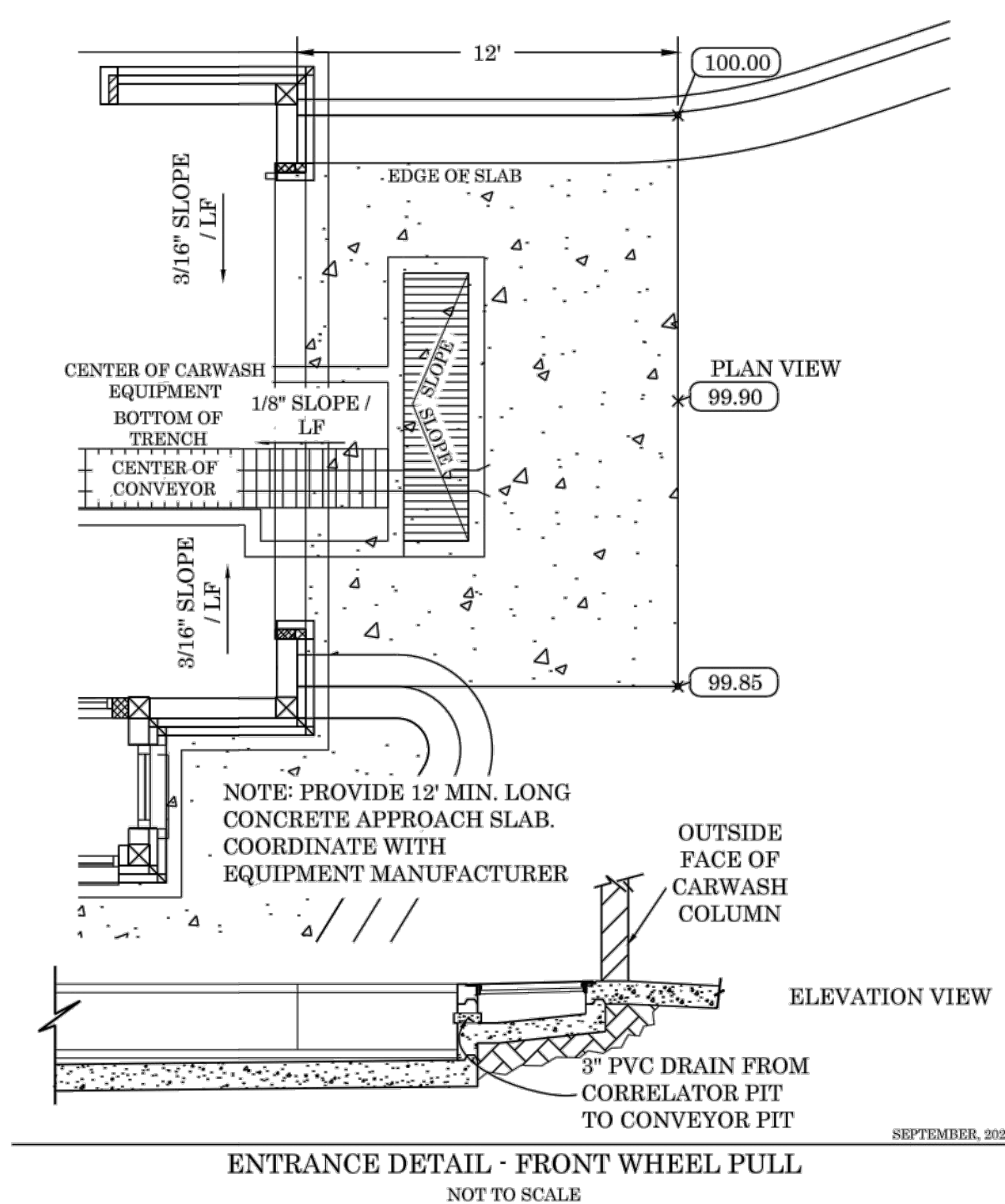
Know what's below.
Call before you dig.
PROJ. #: #####


PROJECT NAME:
TIDAL WAVE

SHEET TITLE:
DRAINAGE PLAN

SUBMITTED FOR:
BUILDING PERMIT

SHEET NUMBER:
C-101




 CHRISTOPHER A. MEDINA
 NMPLS NO. 15702
 AUGUST 5, 2024
 DATE

I, CHRISTOPHER S. ARCHULETA, NMPE, OF THE FIRM COMMUNITY DESIGN SOLUTIONS, LLC. (CDS), HEREBY CERTIFY THAT THIS PROJECT HAS BEEN GRADED AND WILL DRAIN IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE APPROVED PLAN DATED 05/02/2023. THE RECORD INFORMATION EDITED ONTO THE ORIGINAL DESIGN DOCUMENT HAS BEEN OBTAINED BY CHRISTOPHER A. MEDINA, NMPS, OF THE FIRM TERRA LAND SURVEYS, LLC. I FURTHER CERTIFY THAT I HAVE PERSONALLY VISITED THE PROJECT SITE ON AUGUST 16, 2024 AND HAVE DETERMINED BY VISUAL INSPECTION THAT THE CONSTRUCTION REPRESENTATIVE OF ACTUAL SITE CONDITIONS IS IN TRUE AND ACCURATE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS CERTIFICATION IS SUBMITTED IN SUPPORT OF A REQUEST FOR CERTIFICATE OF OCCUPANCY.

THE RECORD INFORMATION PRESENTED HEREON IS NOT NECESSARILY COMPLETE AND INTENDED ONLY TO VERIFY SUBSTANTIAL COMPLIANCE OF THE GRADING AND DRAINAGE ASPECTS OF THIS PROJECT. THOSE RELYING ON THE RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE USING IT FOR ANY OTHER PURPOSE.

CHRISTOPHER S. ARCHULETA, P.E. 29025

08/22/2024

DATE _____





















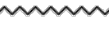

GRADING GENERAL NOTES

1. CONTRACTOR SHALL FIELD VARIOUS SIZE'S AND LOCATION AND ELEVATION. OF ALL EXISTING DRY AND WET UTILITIES PRIOR TO ANY CONSTRUCTION AND NOTIFY ENGINEER OF ANY ISSUES. UTILITY RELOCATION MAY BE REQUIRED
2. GRADES SHOWN ARE FINAL SURFACE GRADES AFTER COMPLETION OF SURFACE IMPROVEMENTS AND PLACEMENTS OF TOPOSOIL..
3. GRADE ADJACENT AREAS AT SITE PERIMETER SHALL MATCH GRADE OF ADJACENT PARCELS.
4. PROVIDE TEMPORARY GRADING FEATURES SUCH AS BERMS, SWALES, SUMPS, AND BASINS TO MANAGE INTERIM STORM WATER RUNOFF DURING CONSTRUCTION PROCESS. STORM WATER RUNOFF LEAVING THE SITE SHALL MEET ALL FEDERAL, STATE AND LOCAL QUALITY REQUIREMENTS.
5. REFER TO GEOTECHNICAL ENGINEERING SERVICES REPORT NO. 1-20816 BY GEO-TEST DATED OCTOBER 11, 2022.
6. COMPOSITE SLOPE IN HANDICAP PARKING SHALL NOT EXCEED 2% IN ANY DIRECTION.
7. CROSS SLOPE ON ADA CROSSLAKES SHALL NOT EXCEED 2%. LONGITUDINAL SLOPE SHALL NOT EXCEED 5%.
8. LONGITUDINAL SLOPE ON CURB RAMP SHALL NOT EXCEED 8.33%. CROSS SLOPE SHALL NOT EXCEED 2%.
9. COMPOSITE SLOPE ON RAMP LANDINGS SHALL NOT EXCEED 2%.
10. CROSS SLOPES ON SIDEWALKS SHALL NOT EXCEED 2%. LONGITUDINAL SLOPES ON ONSITE SIDEWALKS SHALL NOT EXCEED 5%.
11. SLOPE LABELS SHOW APPROXIMATE SLOPES ONLY. WHERE SLOPE LABELS AND SPOT ELEVATION LABELS CONFLICT, SPOT ELEVATION LABELS SHALL GOVERN AND THE SURVEYOR RESPONSIBLE FOR CONSTRUCTION STAKING SHALL CONTACT THE ENGINEER.
12. FOR TUNNEL BUILDING ENTRANCE AND EXIT SLABS, SEE ARCHITECTURAL PLANS.

ABBREVIATIONS

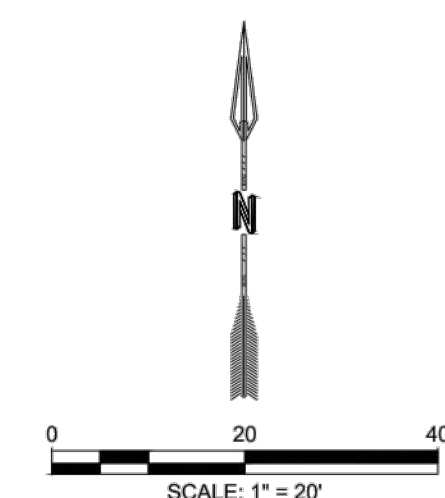
AC	ACRE
BP	BOTTOM OF POND
CF	CUBIC FOOT
ELEV	ELEVATION
FF	FINISHED FLOOR
INV	INVERT
LF	LINEAR FOOT
NMAPIWA	NEW MEXICO AMERICAN PUBLIC WORKS ASSOCIATION
MAX	MAXIMUM
MIN	MINIMUM
PVC	POLYVINYL CHLORIDE
ROW	PUBLIC RIGHT OF WAY
RPBA	REDUCED PRESSURE BACKFLOW ASSEMBLY
SAS	SANITARY SEWER
SD	STORM DRAIN
STD DWG	STANDARD DRAWING
VOL	VOLUME
TP	TOP OF POND
WTR	WATER

SITE CIVIL LEGEND:

PROPERTY BOUNDARY		SPOT ELEVATION SYMBOLS	
	PROPOSED MAJOR CONTOUR		20.00 FLOWLINE
	5072		20.00 EG TOP OF EXISTING GROUND
	PROPOSED MINOR CONTOUR		20.00 FG TOP OF FINISHED GROUND
	— 5072 —		20.00 TG TOP OF GRATE
	5072		20.00 TC TOP OF CONCRETE
	LIMITS OF DISTURBANCE		20.00 EX FL EXISTING FLOWLINE
	FLOWLINE		20.00 TBC TOP BACK OF CURB
	GRADE BREAK / HIGH POINT		20.00 TP TOP OF POND
	2" -4" DIAMETER CRUSHED STONE INSTALLED WITH 6" TYPICAL DEPTH. COORDINATE COLOR WITH LANDSCAPE ARCHITECT.		20.00 BP BOTTOM OF POND
	TOP OF POND		
	EXTENDED CURB		

KEYED NOTES

- 1 ZERO HEIGHT CURB IN THE AREA BETWEEN THE KEYED NOTE ARROWS.
- 2 TRANSITION CURB HEIGHT IN THE AREA BETWEEN THE KEYED NOTE ARROWS. SEE PAVING PLAN FOR LOCATIONS OF ALL CURB TRANSITIONS.
- 3 INSTALL RETAINING WALL WITH FALL PROTECTION PER DETAIL ON SHEET C-107.
- 4 DETAIL TO FULL FILL WITH TOP OF SIDEWALK.
- 5 INSTALL 3" x 36" DIMETER PAVED PIPE PER DETAIL ON SHEET C-104. CONCRETE A-200 FERRATED PIPE OR ENGINEER APPROVED ALTERNATIVE. SEE PROFILES ON SHEET C-105.
- 6 INSTALL NYLOPLAST 2X2 ROAD AND HIGHWAY GRATE ON 3" x 36" DIMETER CATCH BASIN OR ENGINEER APPROVED ALTERNATIVE. GRATE PER MANUFACTURER SPECIFICATIONS. SEE PROFILES ON SHEET C-105.
- 7 CURB INSTALL RAMP.
- 8 CURB INSTALL 36X18 REDUCER.
- 9 INSTALL EXTENDED CURB PER DETAIL ON SHEET C-104.
- 10 CURB INSTALL OPENING PER DETAIL ON SHEET C-104.
- 11 INSTALL 3 X 6 ROCK RUNDOWN PER DETAIL ON SHEET C-104.
- 12 INSTALL 1" TALL TURN-DOWN ON PAY STATION SLABS. COORDINATE WITH ARCHITECT.
- 13 INSTALL SIDEWALK BELOW TOP BACK OF CURB (EXPOSING BACK OF CURB)
- 14 INSTALL FRONT WHEEL PULL ENTRANCE. SEE DETAIL ON SHEET FOR EXACT GRADING.
- 15 INSTALL FRONT WHEEL PULL EXIT. SEE DETAIL ON SHEET FOR EXACT GRADING.
- 16 TAPER CURB OVER 6" TO KEEP COMPOSITE SIDEWALK SLOPE UNDER 5%



COMMUNITY DESIGN SOLUTIONS
7770 JEFFERSON STREET SUITE 200
ALBUQUERQUE, NEW MEXICO 87109
WWW.RESPEC.COM PHONE: (505) 253-9718



STUDIO CONSULTANTS, INC
100 Gold Ave. SW, Suite 205,
Albuquerque, NM 87102
Daniel@ariascinc.com
(505) 506-2314
ARCHITECT

CONTRACTOR

Civil:
RESPEC
7770 Jefferson St NE
Suite #200
Albuquerque, NM 87109

Landscape:
The Hilltop
Landscape Architects
and Contractors
7909 Edith Blvd NE,
Albuquerque, NM 87113

Structural:
Walla Engineering, LTD
6501 Americas Pkwy #301,
Albuquerque, NM 87110

MEP:
BG Buildingworks
7007 Wyoming Blvd NE # F2,
Albuquerque, NM 87109

CONSULTANTS

**TIDAL WAVE
AUTO SPA
120 LEFT ENTRY
STD**

10601 Unser Blvd NW
Albuquerque, NM 87114

OWNER



MARK	DATE	DESCRIPTION



PROJECT DATE: 01/13/23

PROJECT NUMBER: 2213

DRAWN BY: BEM

GRADING PLAN

C-102

DRAINAGE CERTIFICATION

I, CHRISTOPHER S. ARCHULETA, NMPE, OF THE FIRM COMMUNITY DESIGN SOLUTIONS LLC (CDS), HEREBY CERTIFY THAT THIS PROJECT HAS BEEN GRADED AND WILL DRAIN IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE APPROVED PLAN DATED 05/02/2023. THE RECORD INFORMATION EDITED ONTO THE ORIGINAL DESIGN DOCUMENT HAS BEEN OBTAINED BY CHRISTOPHER A. MEDINA, NMPS, OF THE FIRM TERRA LAND SURVEYS, LLC. I FURTHER CERTIFY THAT I HAVE PERSONALLY VISITED THE PROJECT SITE ON AUGUST 16, 2024, AND HAVE DETERMINED BY VISUAL INSPECTION THAT THE SURVEY DATA PROVIDED IS REPRESENTATIVE OF ACTUAL SITE CONDITIONS AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS CERTIFICATION IS SUBMITTED IN SUPPORT OF A REQUEST FOR CERTIFICATE OF OCCUPANCY.

THE RECORD INFORMATION PRESENTED HEREON IS NOT NECESSARILY COMPLETE AND INTENDED ONLY TO VERIFY SUBSTANTIAL COMPLIANCE OF THE GRADING AND DRAINAGE ASPECTS OF THIS PROJECT. THOSE RELYING ON THE RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE USING IT FOR ANY OTHER PURPOSE.



Christopher S. Archuleta, NMPE No. 29025



08/22/2024

Date