CITY OF ALBUQUERQUE

Planning Department
Alan Varela, Interim Director

Mayor Timothy M. Keller

November 15, 2021

David Soule, P.E.
Rio Grande Engineering
P.O. Box 93924
Albuquerque, NM 87199

RE: House of Life Ministries
Grading & Drainage Plan and Drainage Report
Engineer's Stamp Date: 10/12/21
Hydrology File: F11D020

Dear Mr. Soule:

Based upon the information provided in your submittal received 10/13/2021, the Grading & Drainage Plan and Drainage Report are approved for Building Permit and for action by the DRB on the Preliminary Plat. Please attach a copy of this approved plan in the construction sets for Building Permit processing along with a copy of this letter.

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

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 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.

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 924-3995 or 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

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 6/2018)

Project Title: HOUSE OF LIFE Building Permit #:_____ Hydrology File #: _____

DRB#: _____ EPC#: _____ Work Order#: _____

Legal Description: TRACT B COORS VILLAGE SUBDIVISION

City Address: UN ADDRESSED LOT ON QUAKER HEIGHTS

Applicant: _____ Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

Other Contact: RIO GRANDE ENGINEERING Contact: DAVID SOULE

Address: PO BOX 93924 ALB NM 87199

Phone#: 505.321.9099 Fax#: 505.872.0999 E-mail: david@riograndeengineering.com

TYPE OF DEVELOPMENT: ___ PLAT ___ RESIDENCE X DRB SITE ___ ADMIN SITE

Check all that Apply:

DEPARTMENT:

X HYDROLOGY/ DRAINAGE

___ TRAFFIC/ TRANSPORTATION

TYPE OF SUBMITTAL:

___ ENGINEER/ARCHITECT CERTIFICATION

___ PAD CERTIFICATION

___ CONCEPTUAL G & D PLAN

X GRADING PLAN

X 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?

IS THIS A RESUBMITTAL?: X Yes ___ No

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

X BUILDING PERMIT APPROVAL

___ CERTIFICATE OF OCCUPANCY

X 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:_____

DRAINAGE REPORT

For

HOUSE OF LIFE
TRACT 2 COORS VILLAGE

Albuquerque, New Mexico

Prepared by

Rio Grande Engineering
PO Box 93924
Albuquerque, New Mexico 87199

City of Albuquerque
Planning Department
Development Review Services
HYDROLOGY SECTION
APPROVED
DATE: 11/15/21
BY: Renée C. Brissette
HydroTrans # F11D020

THE APPROVAL OF THESE PLANS/REPORT SHALL NOT BE CONSTRUED TO PERMIT VIOLATIONS OF ANY CITY ORDINANCE OR STATE LAW, AND SHALL NOT PREVENT THE CITY OF ALBUQUERQUE FROM REQUIRING CORRECTION, OR ERROR OR DIMENSIONS IN PLANS, SPECIFICATIONS, OR CONSTRUCTIONS. SUCH APPROVED PLANS SHALL NOT BE CHANGED, MODIFIED OR ALTERED WITHOUT AUTHORIZATION.

OCTOBER 2021

David Soule P.E. No. 14522

TABLE OF CONTENTS

Purpose 3
Introduction 3
Existing Conditions 3
Exhibit A-Vicinity Map 4
Proposed Conditions 5
Summary 5

Appendix

Hydraulic Model and calculations ..... A

Map

Site Grading and Drainage Plan

PURPOSE

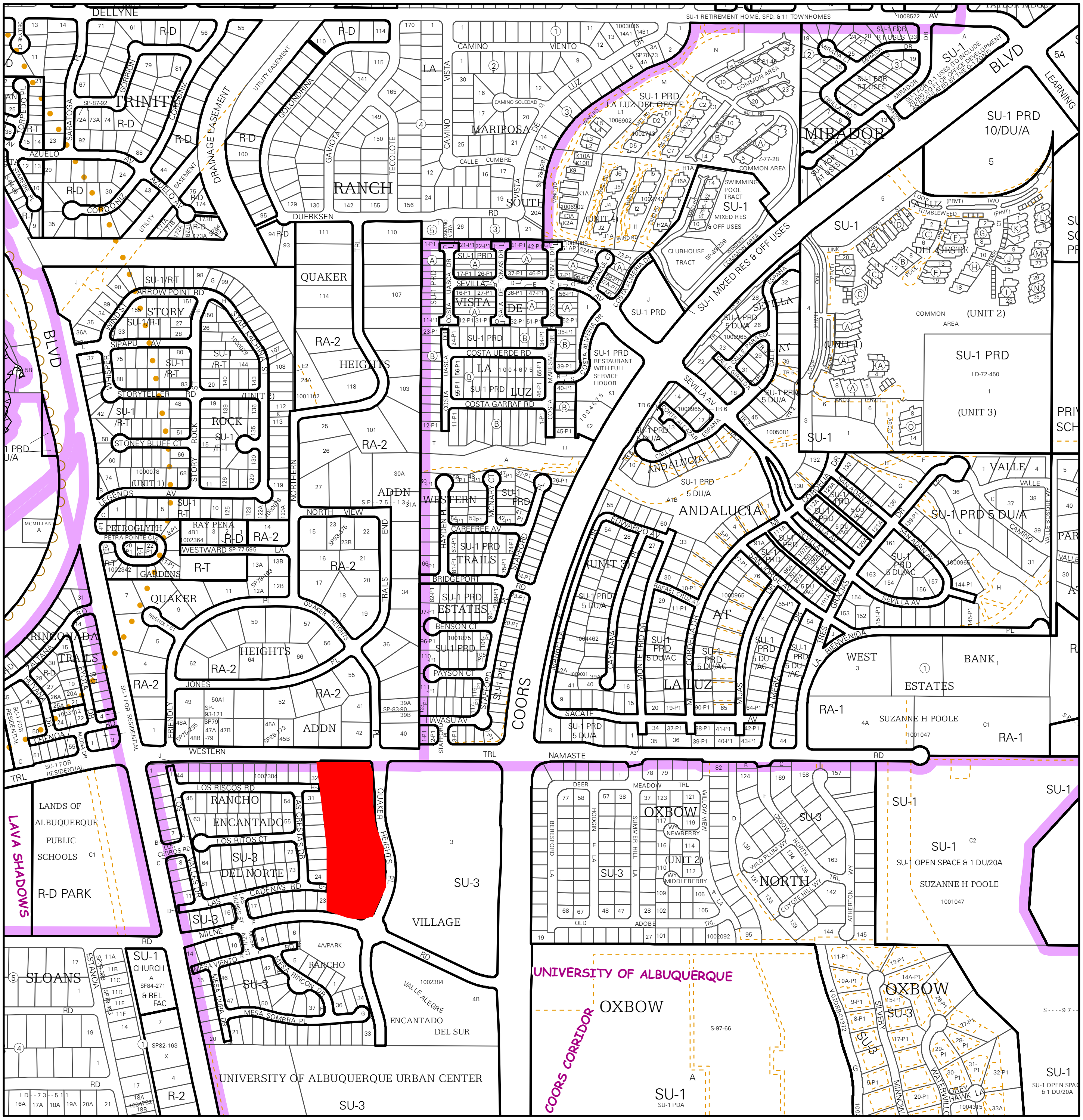
The purpose of this report is to provide the Drainage Management Plan for the subdivision of a 5.07 acre lot located in phase Coors Village Subdivision1 of The Highlands. The plan shall conform to the fully developed assumption of the Coors Village master drainage Plan The report shall demonstrate the project will not adversely affect the surrounding properties, nor the upstream or downstream facilities.

INTRODUCTION

The subject of this report, as shown on the Exhibit A, is a 5.07 -acre parcel of land located on the south side of western trails west of Quaker Heights. The current legal description of this site is lot 2 Coors village. As shown on FIRM map35001C0114H, the entire site is located within Flood Zone X. The site is bound on the south by roadways to the north, south and east and a solid wall to the west. The site is not impacted by upland flow. The site is an undeveloped site. This site is identified to have developed conditions of 0%A, 20%B, 5%C and 75% D within the master drainage plan. The site is programmed to discharge 20.98 cfs to a 30” storm drain stubbed into the property at the southwest corner.

EXISTING CONDITIONS

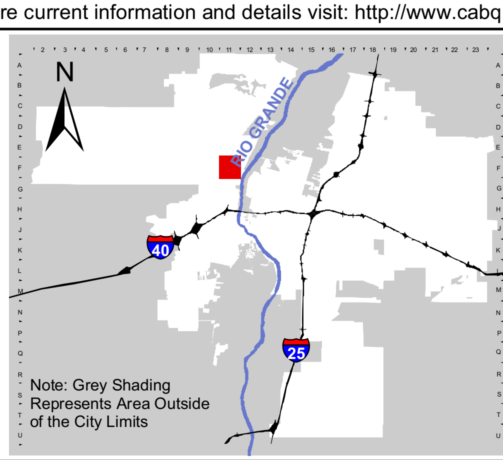
The site is currently undeveloped. The site is not impacted by upland flows. The flows drain from north to south entering into Milne Road. Future tract 2B contains a large pond and does not discharge at this time.



For more current information and details visit: http://www.cabq.gov/gis

Albuquerque Geographic Information System

Map amended through: 1/28/2016



Note: Grey Shading Represents Area Outside of the City Limits

Zone Atlas Page:

F-11-Z

Selected Symbols

- SECTOR PLANS
- Design Overlay Zones
- City Historic Zones
- H-1 Buffer Zone
- Petroglyph Mon.
- Escarpment
- 2 Mile Airport Zone
- Airport Noise Contours
- Wall Overlay Zone

0 750 1,500 Feet

PROPOSED CONDITIONS

The proposed improvements consist of a multi phased church on the southerly 3.55 acres. The northerly 1.51 acre will become a future tract. The initial phase will include the main building, with 2 large pads for future buildings; in addition a parking area is being constructed. The proposed site development will contain two onsite basins that drain to an inlet and pipe discharging to the existing 30" storm drain provided for this site. The site will allow for the free discharge of undeveloped storm water from the northern tract. Basin B contains the western portion of the proposed building and pads. This basin contains 0.55 acres and will discharge 1.94 cfs to a new type D inlet. Basin 2B encompasses the future tract 2B. This tract will be allowed to discharge 6.26 cfs to the proposed 18" private storm drain west of the building. A pipe and inlet shall be stubbed into the property. The property currently retains 48948 cf, which is significantly greater than the 16482 cf generated. Future development may extend the storm drain onto the site and discharge at the peak rate of 6.26 cfs. Basin A contains the remaining portion of the site. This basin will discharge 11.23 cfs to a large shallow depressed pond that will retain the majority of the flow. This pond will overflow into the Type D inlet. In the ultimate condition the site will discharge 19.43 cfs to the existing storm drain, which is less than the allowed rate. Upon development of the northerly portion and onsite buildings, the outfall may need to be modified and this pond will become a parking area and the overall outlet will be limited to 20.98 cfs. The site retains in excess of the required first flush volume

SUMMARY AND RECOMMENDATIONS

This project is located within a previously approved Coors village master drainage study. The site has been designed to discharge 19.43 cfs which is less than the 20.98 allowed. The site will retain 24,536 cf of developed storm water on tract 2A and 48948 cf on future tract 2B, which is greater than the 5017cf required. Since the lot area does exceed 1 acre, erosion and sediment Control Plan and NOI shall be required prior to any construction activity.

APPENDIX A

HYDRAULIC CALCULATIONS

Weighted E Method

											100-Year, 6-hr.			10-DAY
Basin	Area (sf)	Area (acres)	Treatment A %	Treatment A (acres)	Treatment B %	Treatment B (acres)	Treatment C %	Treatment C (acres)	Treatment D %	Treatment D (acres)	Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs	Volume (ac-ft)
ALLOWED	220850.00	5.070	0%	0	20%	1.014	5%	0.254	75%	3.803	1.803	0.762	20.98	1.269
BASIN B	24033.00	0.552	0%	0	20%	0.110	48%	0.265	33%	0.182	1.398	0.064	1.94	0.089
BASIN 2-B	65871.00	1.512	0%	0	20%	0.302	5%	0.076	75%	1.134	1.803	0.227	6.26	0.378
BASIN A	130946.00	3.006	0%	0	25%	0.752	23%	0.691	52%	1.563	1.557	0.390	11.23	0.599
OVERALL SITE	220850.00	5.070	0%	0	23%	1.164	20%	1.032	57%	2.879	1.613	0.682	19.43	1.065

Equations:

Weighted E = Ea*Aa + Eb*Ab + Ec*Ac + Ed*Ad / (Total Area)

Volume = Weighted D * Total Area

Flow = Qa * Aa + Qb * Ab + Qc * Ac + Qd * Ad

.48 cf per sf developed

First flush requirement	5017.0	cubic feet
treatment provided	24536	cubic feet
contributing basin	26072.44	

Where for 100-year, 6-hour storm(zone2)

Ea=	0.53	Qa=	1.56
Eb=	0.78	Qb=	2.28
Ec=	1.13	Qc=	3.14
Ed=	2.12	Qd=	4.7

DRAINAGE NARRATIVE

THIS PROJECT IS A DEVELOPMENT OF A SITE THAT PART OF THE COORS VILLAGE MASTER DRAINAGE PLAN. THIS SITE IS PROGRAMED TO DRAIN TO AN EXISTING STORM DRAIN STUBBED INTO THE PROPERTY. THIS SITE IS ALLOWED TO DISCHARGE 20.98 CFS. THE PROPOSED DEVELOPMENT CONSISTS OF ONE BUILDING A LARGE PARKING AREA AND SEVERAL PADS. THIS DEVELOPMENT WILL DRAIN TO A LARGE FIELD THAT WILL SERVE AS A WATER QUALITY POND AND WILL FACILITATE FUTURE DEVELOPMENT THAT MAY INCLUDE PARKING LOT DETENTION TO MAINTAIN THE ALLOWED DISCHARGE RATE. THIS SITE WILL DISCHARGE19.43 CFS WHICH IS LESS THAN ALLOWED AND WILL RETAIN 24,536 CUBIC FEET, WHICH IS IN EXCESS THE REQUIRED FIRST FLUSH VOLUME

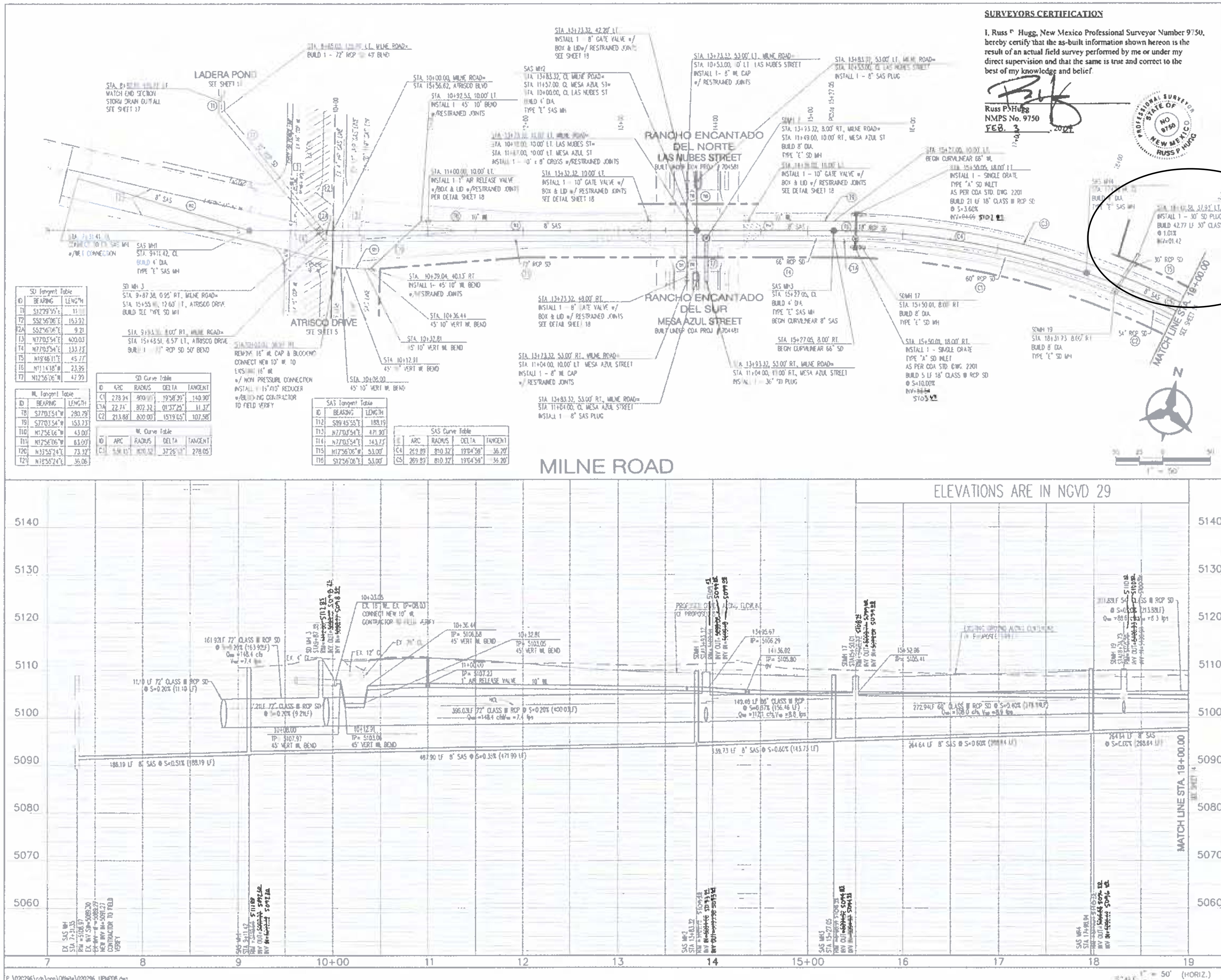
Pipe Capacity

Pipe	D	Slope	Area	R	Q Provided	Q Required	Velocity
	(in)	(%)	(ft^2)		(cfs)	(cfs)	(ft/s)
18HDPE	18	0.65	1.77	0.375	8.49	8.20	4.64

Manning's Equation:

Q = 1.49/n * A * R^(2/3) * S^(1/2)

A = Area
R = D/4
S = Slope
n = 0.013



SURVEYORS CERTIFICATION

I, Russ P. Hugg, New Mexico Professional Surveyor Number 9750, hereby certify that the as-built information shown hereon is the result of an actual field survey performed by me or under my direct supervision and that the same is true and correct to the best of my knowledge and belief.

Russ P. Hugg
NMPS No. 9750
FEB. 3, 2004

PROFESSIONAL SURVEYOR STATE OF NEW MEXICO NO 9750 RUSS P HUGG

GENERAL NOTES

1. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITY LOCATIONS AND NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
2. ALL CURVE DATA AND DIMENSIONS ARE CALCULATED FROM CENTERLINE OF PIPE OR MANHOLE. ALL SAS & SD SLOPES ARE CALCULATED TO TRUE PIPE DIMENSIONS FROM INVERT TO INVERT. (PAY ITEMS ARE SHOWN IN PARENTHESIS)
3. GRADE ELEVATIONS, WHERE NOTED, ARE FOR FLOWLINE OF CURB UNLESS OTHERWISE SPECIFIED.
4. CONTRACTOR IS TO INSTALL A 4" X 4" X 5' POST AND END AT THE END OF EACH SANITARY SEWER SERVICE.
5. CONTRACTOR IS RESPONSIBLE FOR REPAIR AND/OR REPLACEMENT OF ALL UTILITY CONDUITS AND EXISTING LINES.
6. CONTRACTOR SHALL PROVIDE THE INSPECTORS WITH THE PROPOSED TESTING PLAN. THE PLAN MUST BE APPROVED BEFORE TESTING OPERATIONS BEGIN.
7. CONTRACTOR SHALL PARK EQUIPMENT AND VEHICLES AS NOT TO INTERFERE WITH NORMAL ACTIVITIES OF RESIDENTS OR OTHER CONTRACTORS ON SITE.
8. ANY DAMAGE TO THE EXISTING FACILITIES (CURB & GUTTER, PAVEMENT, CONDUITS, LANDSCAPING, UTILITY LINES, ETC.) DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTORS' EXPENSE.
9. MH RIMS & CATCH BASIN INLET ELEVATIONS, VALVE BOXES, ARV, FIRE HYDRANT & FLANGE ELEVATIONS ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY AND ADJUST TO FINAL PAVEMENT GRADES.
10. SAS STATIONING FOLLOWS CL OF ROAD UNLESS OTHERWISE NOTED.
11. FLOWLINE ELEVATIONS FOR DROP INLETS ARE PROJECTED FROM FLOWLINE OF STANDARD CURB TO MIDDLE OF DOWNHILL GRATE.
12. ALL WATERLINE APPURTENANCES SHALL USE RESTRAINED JOINTS. REFER TO TABLES LISTED ON OVERALL UTILITY SHEET 12.
13. FOR STORM DRAIN CONSTRUCTION, ALL RCP JOINTS SHALL NOT BE GROUTED PRIOR TO FINAL INSPECTION. FINAL INSPECTION SHALL DETERMINE WHICH JOINTS ARE TO BE GROUTED FOR FINAL ACCEPTANCE OF THE CONSTRUCTION.

LEGEND

- DOUBLE WATER METER
- SINGLE WATER METER
- WATER LINE SHUTOFF VALVE
- WATER LINE TEE
- SAS LATERAL
- SAS MANHOLE
- STORM DRAIN MANHOLE
- STORM DRAIN INLET
- PROPOSED FIRE HYDRANT
- EXISTING WATER VALVE
- PROPOSED STREET LIGHT

KEYED NOTES:

[1] COORDINATE w/PNM ELECTRIC FOR RELOCATION OR SUPPORT OF EXISTING POWER POLE.

[2] REMOVE EXISTING AC PAVEMENT FROM SANITARY SEWER AND STORM DRAIN INSTALLATION PER COA STD. DWG. 2465. MATCH EXISTING GRADES. CONTRACTOR SHALL COORDINATE WITH CITY OF ALBUQUERQUE WATER SYSTEMS (857-8200) AT LEAST (7) SEVEN WORKING DAYS PRIOR TO CONSTRUCTION FOR TRENCH DESIGN TO MAINTAIN PROPER DISTANCE FROM EXISTING 12" AC WL IN MILNE ROAD.

[3] COORDINATE WITH PNM GAS (PAUL PEDRONCELLI 241-7757 OR ALBERT LANDAVAZO 241-7778) AT LEAST (10) TEN WORKING DAYS PRIOR TO CONSTRUCTION FOR SUPPORT OF 4" HP & 12" & 20" VHP LINES.

[4] COORDINATE WITH CITY OF ALBUQUERQUE WATER SYSTEMS DIVISION (857-8200) AT LEAST (7) SEVEN WORKING DAYS PRIOR TO CONSTRUCTION FOR SUPPORT OF 18" CCP WL.

AS-BUILT INFORMATION — CONTRACTOR: SURV-TEK

BENCH MARKS — ALBUQUERQUE CONTROL SURVEY MONUMENT "A1SEPH"; NEW MEXICO STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE (NAD27) COORDINATES: Y = 1,502,246.75; X = 366,686.82; Z = 5113.852; DELTA ALPHA = -00°15'24"; GROUND TO GRID FACTOR = 0.99987686

ENGINEER'S SEAL — 3/27/03

Designed By: SJS — Drawn By: DH/RJG — Checked By: SJS — DATE: 01/08/03

Bohannan ▲ Huston Inc.
Courtyard I 7500 Jefferson St. NE Albuquerque, NM 87109-4335
ENGINEERING • SPATIAL DATA • ADVANCED TECHNOLOGIES

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT

RANCHO ENCANTADO OFF-SITE IMPROVEMENTS
UTILITY PLAN AND PROFILE
MILNE ROAD

City Project No.	Zone Map No.	Sheet	Of
704281	F-11-Z	13	23

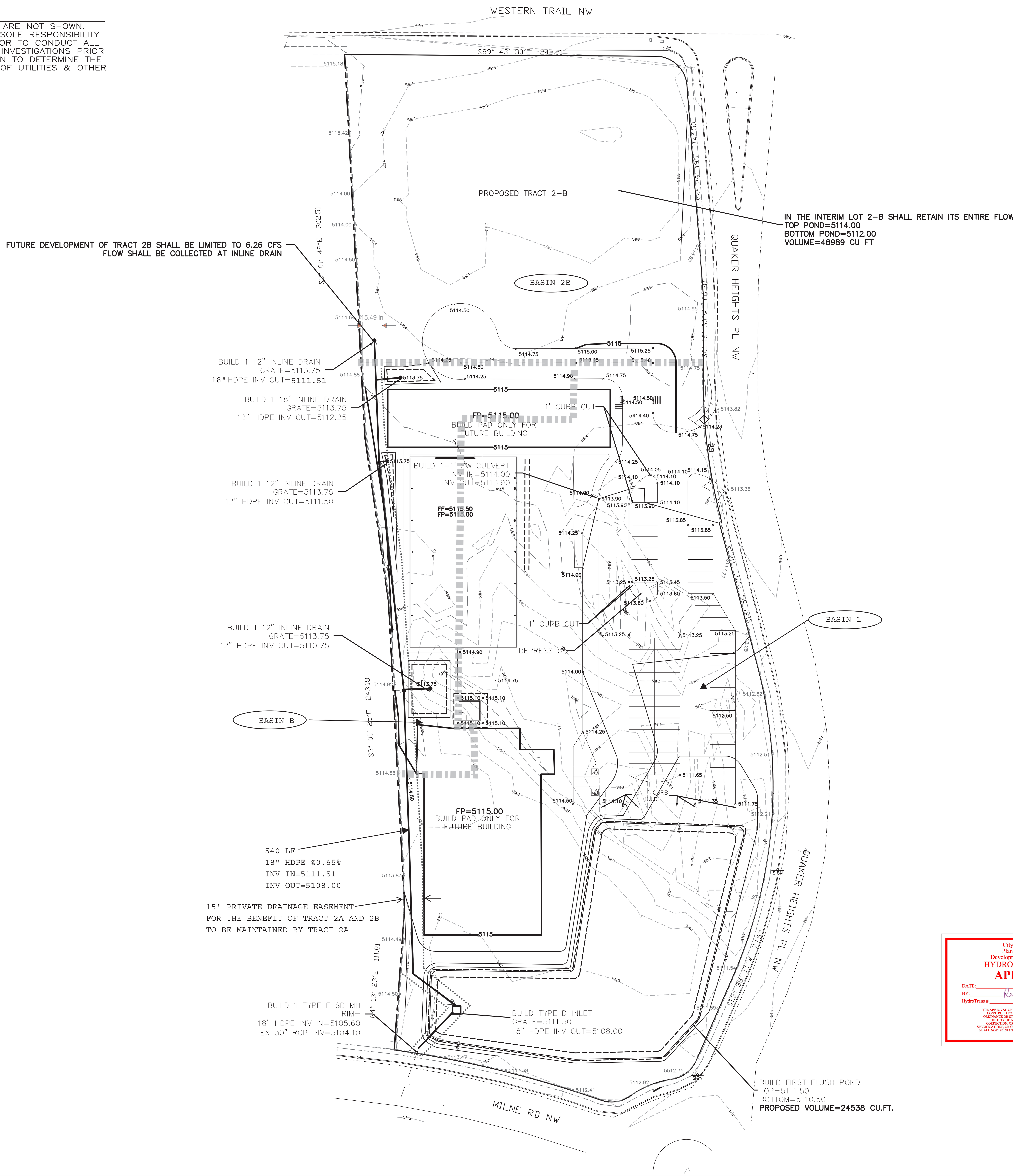
SCALE: 1" = 50' (HORIZ.) 1" = 10' (VERT.)

P:\020296\cp\prp\Offsite\020296_UPMP08.dwg Mar 27, 2003 11:35am

SCANNED BY PLANNING

CAUTION:

EXISTING UTILITIES ARE NOT SHOWN. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO ANY EXCAVATION TO DETERMINE THE ACTUAL LOCATION OF UTILITIES & OTHER IMPROVEMENTS.



EROSION CONTROL NOTES:

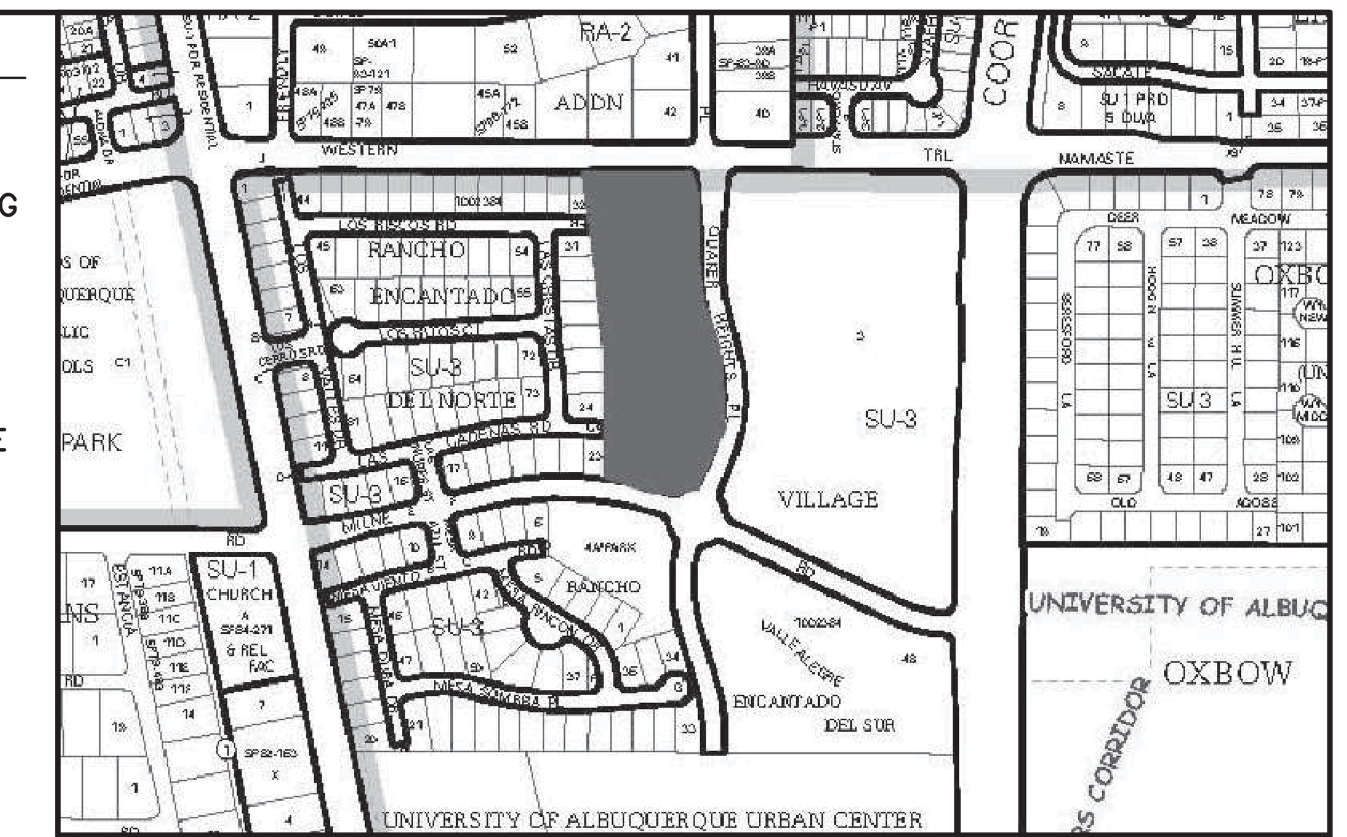
1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TOPSOIL DISTURBANCE PERMIT PRIOR TO BEGINNING WORK.

2. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING RUN-OFF ON SITE DURING CONSTRUCTION.

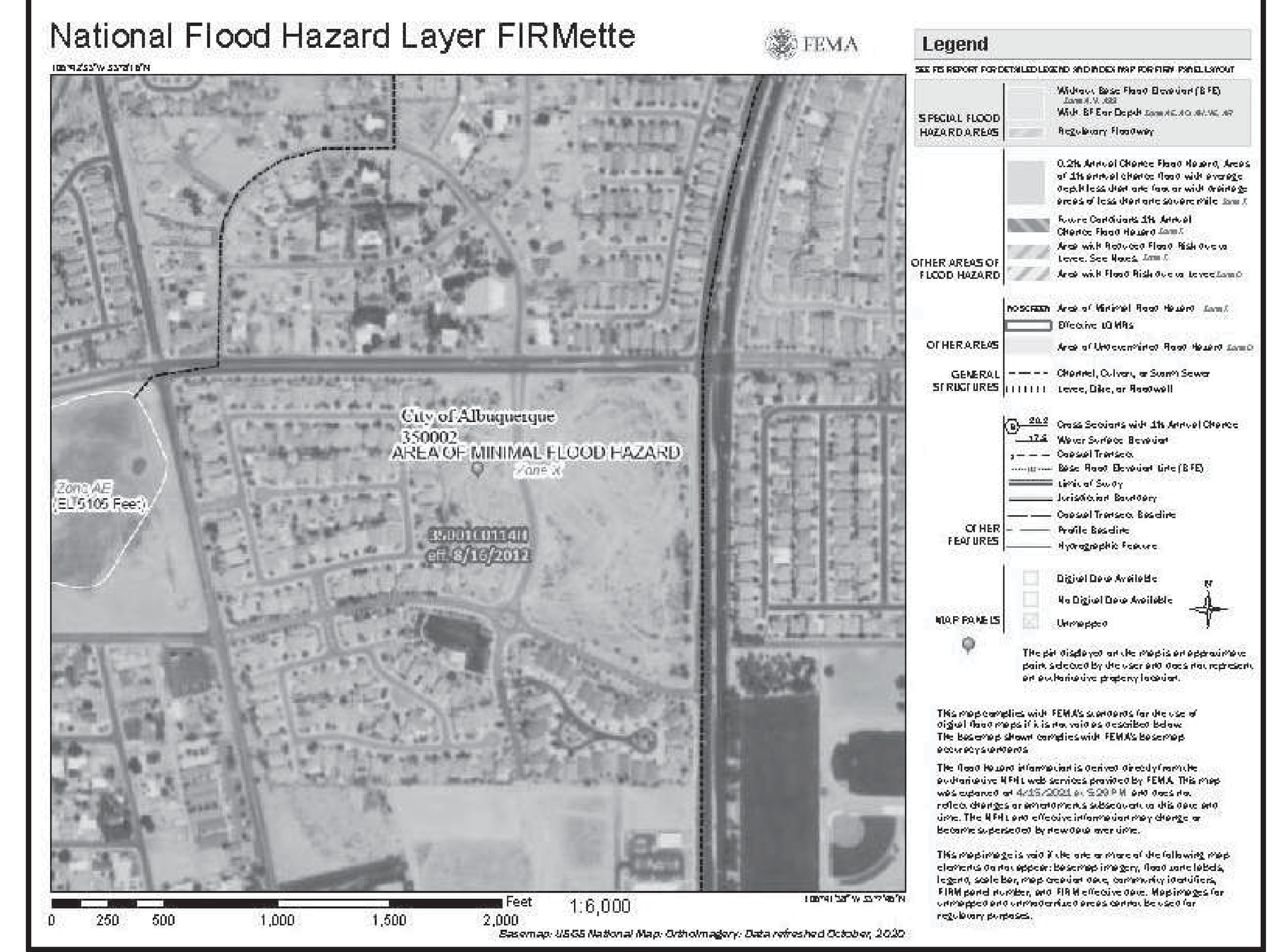
3. CONTRACTOR IS RESPONSIBLE FOR CLEANING ALL SEDIMENT THAT GETS INTO EXISTING RIGHT-OF-WAY.

4. REPAIR OF DAMAGED FACILITIES AND CLEANUP OF SEDIMENT ACCUMULATIONS ON ADJACENT PROPERTIES AND IN PUBLIC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.

5. ALL EXPOSED EARTH SURFACES MUST BE PROTECTED FROM WIND AND WATER EROSION PRIOR TO FINAL ACCEPTANCE OF ANY PROJECT.



VICINITY MAP: F-11-Z



FIRM MAP:

LEGAL DESCRIPTION:

-

NOTES:

1. ALL SPOT ELEVATIONS REPRESENT FLOWLINE ELEVATION UNLESS OTHERWISE NOTED.

2. ALL CURB AND GUTTER TO 6" HEADER UNLESS OTHERWISE NOTED.

3. ALL RETAINING WALL DESIGN SHALL BE BY OTHERS.

4. ANY CURBS OR PAVEMENT NEGATIVELY IMPACTED BY CONSTRUCTION ACTIVITY SHALL BE REPLACED TO MATCH EXISTING CONDITIONS.

5. ALL SITE WORK SHALL CONFORM TO CITY OF ALBUQUERQUE STANDARDS FOR PUBLIC WORKS CONSTRUCTION EDITION 9

LEGEND

5414	EXISTING CONTOUR
5415	EXISTING INDEX CONTOUR
5414	PROPOSED CONTOUR
5415	PROPOSED INDEX CONTOUR
	SLOPE TIE
∘ XXXX	EXISTING SPOT ELEVATION
× XXXX	PROPOSED SPOT ELEVATION
	BOUNDARY
	CENTERLINE
	RIGHT-OF-WAY
	PROPOSED CURB
	EXISTING CURB AND GUTTER
	EXISTING SIDEWALK
	RETAINING WALL (DESIGN BY OTHERS

City of Albuquerque
Planning Department
Development Review Services
HYDROLOGY SECTION
APPROVED
DATE: 11/15/21
BY: Renée C Brissette
HydroTrans #: F11D020

THE APPROVAL OF THESE PLANS/REPORT SHALL NOT BE CONSTRUED TO PERMIT VIOLATIONS OF ANY CITY ORDINANCE OR STATE LAW, AND SHALL NOT PREVENT THE CITY OF ALBUQUERQUE FROM REQUIRING CORRECTION OR ERASURE OF ERRORS IN PLANS, SPECIFICATIONS, OR CONSTRUCTION. SUCH APPROVED PLANS SHALL NOT BE CHANGED, MODIFIED OR ALTERED WITHOUT AUTHORIZATION.

N

GRAPHIC SCALE

40 20 0 20 4

SCALE: 1"=40'

ENGINEER'S SEAL DAVID SOULE NEW MEXICO 14522 REGISTERED PROFESSIONAL ENGINEER 10/12/21 DAVID SOULE P.E. #14522	HOUSE OF LIFE GRADING AND DRAINAGE PLAN Rio Grande Engineering 1606 CENTRAL AVENUE SE SUITE 201 ALBUQUERQUE, NM 87106 (505) 872-0999	DRAWN BY WCWJ DATE 10-06-21 210210041-LAYOUT-4-19-21 SHEET # JOB # 210210041