



Mayor Timothy M. Keller

April 8, 2022

David Soule, P.E.
Rio Grande Engineering
PO Box 93924
Albuquerque, New Mexico 87199

RE: **Lot 32A West Highland
13012 Sand Cherry Pl. NE
Grading and Drainage Plan
Engineers Stamp Date 1/20/22 (E23D037)
Pad Certification Date 3/15/2022**

Mr. Soule,

Based upon the information provided in your submittal received 3/16/2022, this plan is approved for Building Permit.

PO Box 1293

Please inform the builder/owner to attach a copy of this approved plan and this letter to the construction sets in the permitting process prior to sign-off by Hydrology.

Albuquerque

Reiterate to the Owner/Contractor that a separate permit for a garden/retaining wall must be obtained, with the approved G&D plan and Pad Certification. Also, let the owner/contractor know that if a pool is to be added in the future the G&D plan will need to be modified showing the location of the pool and the land treatment differences. Also advise the owner & Contractor that dirt is not allowed in the public right of way to climb the curb. Crusher fines or lumber is allowed. If dirt is used this will delay going forward with the construction of the home.

NM 87103

www.cabq.gov

Prior to Certificate of Occupancy release, Engineer Certification per the DPM checklist of this plan will be required.

If you have any questions, please contact me at 924-3986 or earmijo@cabq.gov.

Sincerely,

Ernest Armijo, P.E.
Principal Engineer, Planning Dept.
Development Review Services



City of Albuquerque

Planning Department
Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 6/2018)

Project Title: 13012 Sand Cherry **Building Permit #:** _____ **Hydrology File #:** _____

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

Legal Description: LOT 32A WEST HIGHLANDS AT HIGH DESERT

City Address: 13012 Sand Cherry

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 _____ DRB SITE _____ ADMIN SITE

Check all that Apply:

DEPARTMENT:

☒ HYDROLOGY/ DRAINAGE
☐ TRAFFIC/ TRANSPORTATION

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?

IS THIS A RESUBMITTAL?: ☒ Yes ☐ No

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

☒ BUILDING PERMIT APPROVAL
☐ CERTIFICATE OF OCCUPANCY
☐ PRELIMINARY PLAT APPROVAL
☐ SITE PLAN FOR SUB'D APPROVAL
☐ SITE PLAN FOR BLDG. PERMIT APPROVAL
☐ FINAL PLAT APPROVAL
☐ SIA/ RELEASE OF FINANCIAL GUARANTEE
☐ FOUNDATION PERMIT APPROVAL
☐ GRADING PERMIT APPROVAL
☐ SO-19 APPROVAL
☐ PAVING PERMIT APPROVAL
☐ GRADING/ PAD CERTIFICATION
☐ WORK ORDER APPROVAL
☐ CLOMR/LOMR
☐ FLOODPLAIN DEVELOPMENT PERMIT
☐ OTHER (SPECIFY) _____

DATE SUBMITTED: _____ **By:** _____

COA STAFF:

ELECTRONIC SUBMITTAL RECEIVED: _____

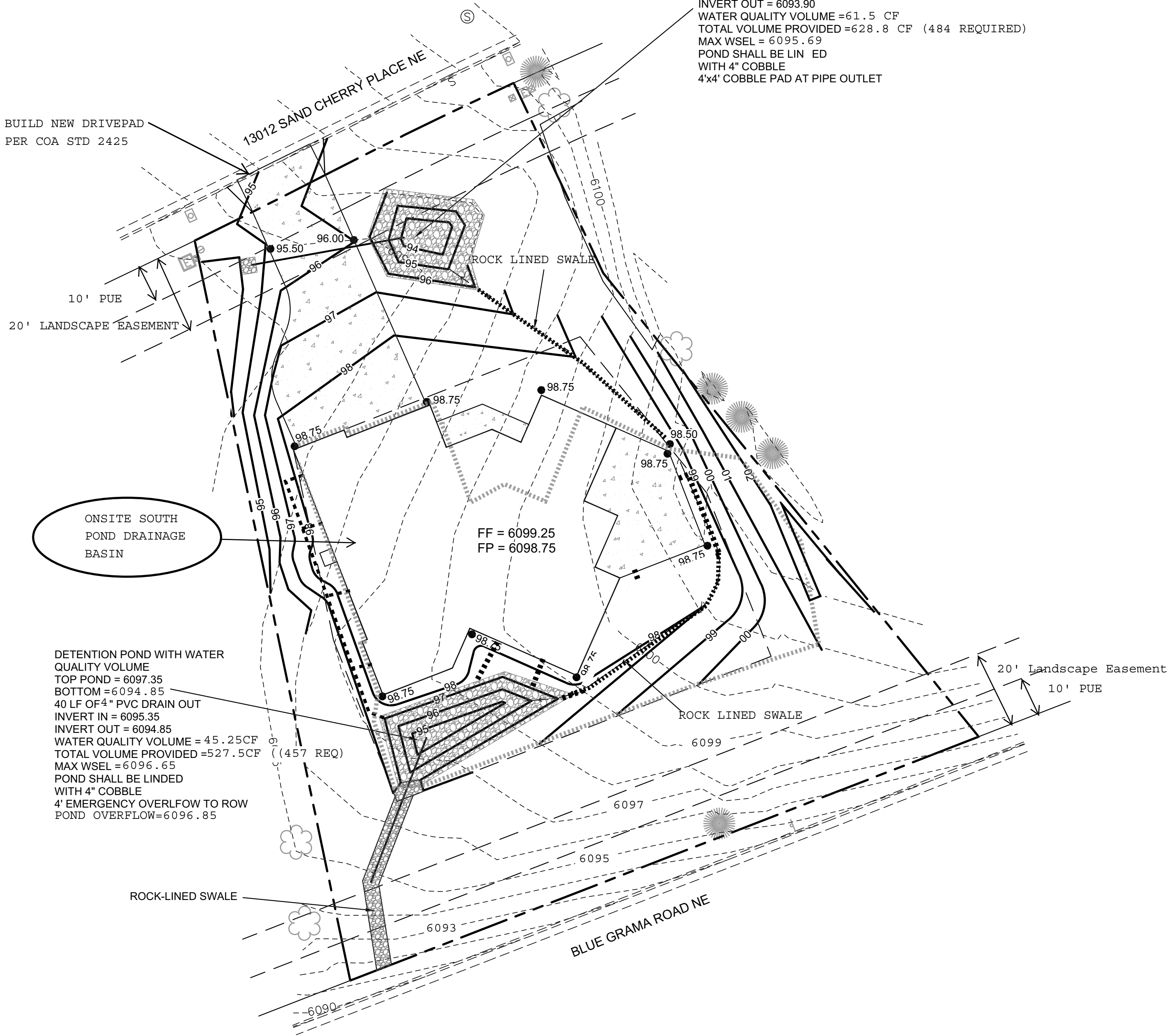
FEE PAID: _____

I, DAVID SOULE HAVE PERSONALLY INSPECTED THE SITE. I HEREBY CERTIFY THE PAD HAS BEEN CONSTRUCTED SUCH THAT IT IS IN SUBSTANTIAL CONFORMANCE TO THE APPROVED GRADING PLAN DATED 1/20/22

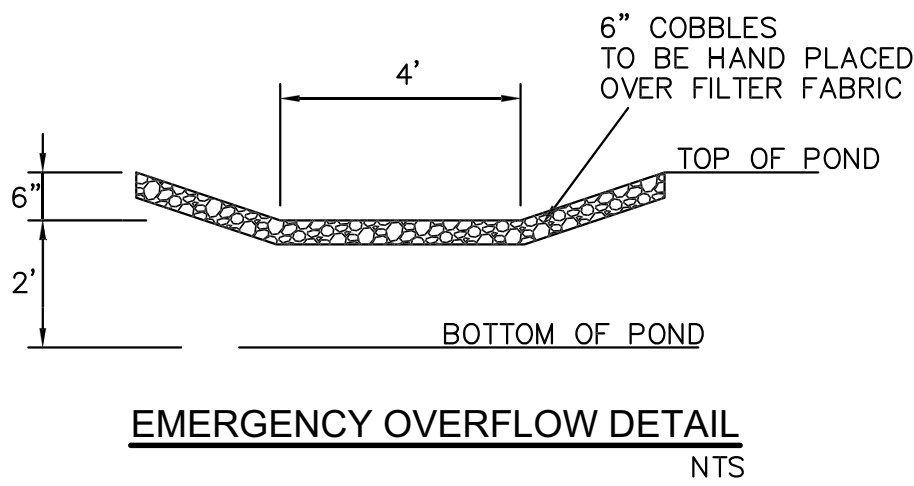
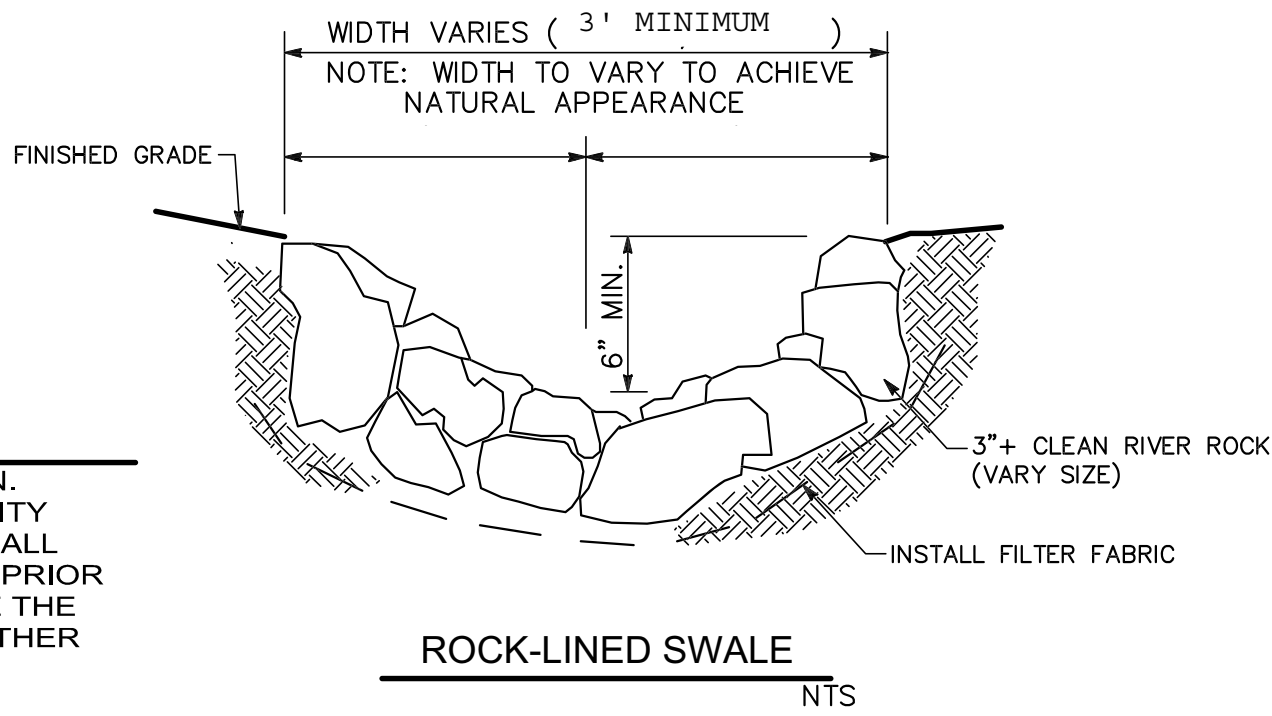


3/15/22

DETENTION POND WITH WATER QUALITY VOLUME
TOP POND = 6096.05
BOTTOM = 6094.00
40 LF OF 5" PVC DRAIN OUT
INVERT IN = 6094.50
INVERT OUT = 6093.90
WATER QUALITY VOLUME = 61.5 CF
TOTAL VOLUME PROVIDED = 628.8 CF (484 REQUIRED)
MAX WSEL = 6095.69
POND SHALL BE LINED WITH 4" COBBLE
4'x4' COBBLE PAD AT PIPE OUTLET



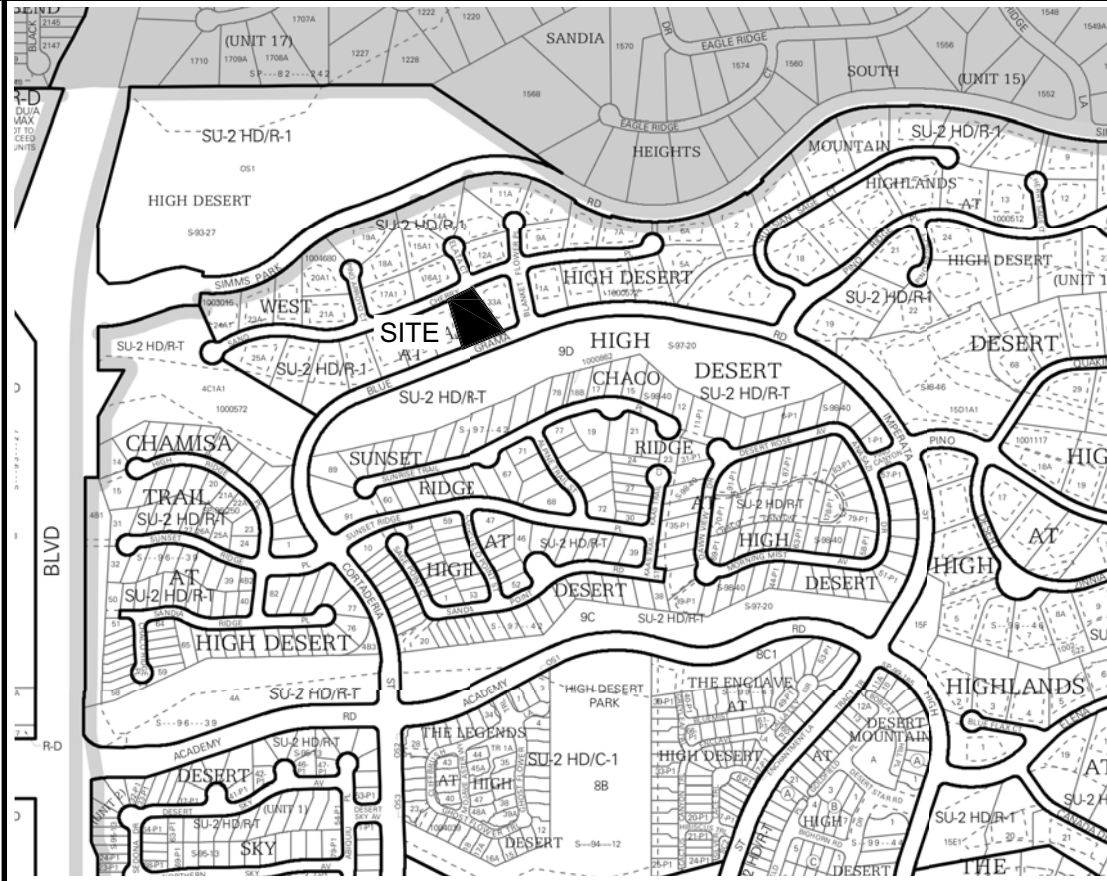
DETENTION POND WITH WATER QUALITY VOLUME
TOP POND = 6097.35
BOTTOM = 6094.85
40 LF OF 4" PVC DRAIN OUT
INVERT IN = 6095.35
INVERT OUT = 6094.85
WATER QUALITY VOLUME = 45.25 CF
TOTAL VOLUME PROVIDED = 527.5 CF (457 REQ)
MAX WSEL = 6096.65
POND SHALL BE LINED WITH 4" COBBLE
4' EMERGENCY OVERFLOW TO ROW
POND OVERFLOW = 6096.85



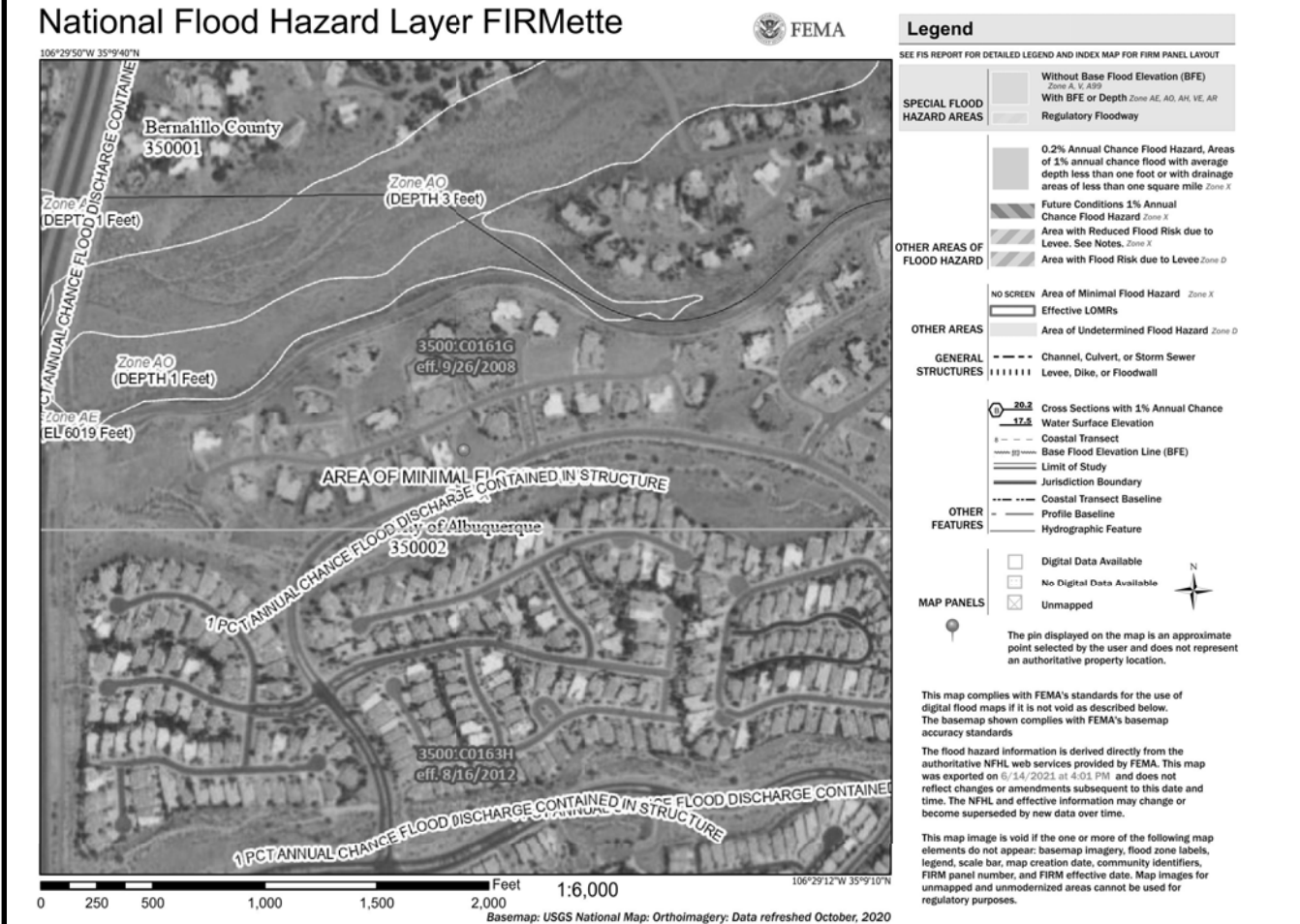
CAUTION:
EXISTING UTILITIES ARE NOT SHOWN. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO ANY EXCAVATION TO DETERMINE THE ACTUAL LOCATION OF UTILITIES & OTHER IMPROVEMENTS.

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: E-23-Z



FIRM MAP:

LEGAL DESCRIPTION:

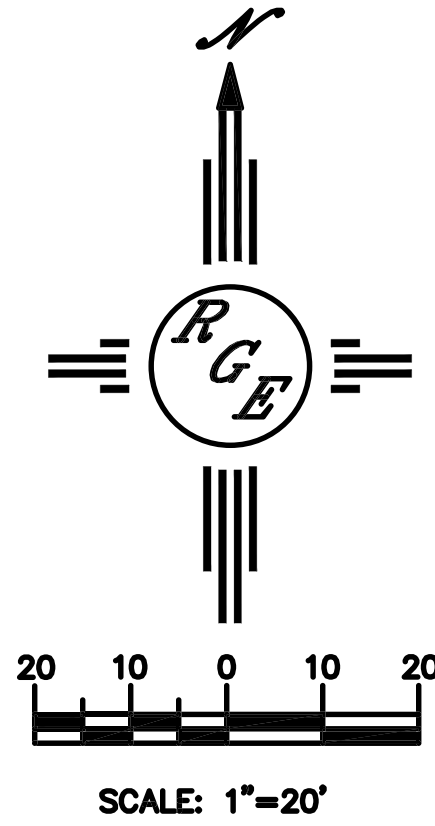
LOT 32A WEST HIGHLAND AT HIGH DESERT
CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO

NOTES:

1. ALL SPOT ELEVATIONS REPRESENT FLOWLINE ELEVATION UNLESS OTHERWISE NOTED.
2. ALL SLOPES SHALL BE 3:1 MAX. AND GRAVEL OR HIGH DESERT SEED MIX
3. ANY PERIMETER WALLS MUST BE PERMITTED SEPARATELY ALL RETAINING WALL DESIGN SHALL BE BY OTHERS.
4. SURVEY INFORMATION PROVIDED BY COMMUNITY SCIENCES CORPORATION USING NAVD DATUM 1988.
5. A PAD ELEVATION CERTIFICATION SHALL BE REQUIRED PRIOR TO RELEASE OF BUILDING PERMIT.

LEGEND

---	XXXX	EXISTING CONTOUR
---	XXXX	EXISTING INDEX CONTOUR
---	XXXX	PROPOSED CONTOUR
---	XXXX	PROPOSED INDEX CONTOUR
+	XXXX	EXISTING SPOT ELEVATION
●	XXXX	PROPOSED SPOT ELEVATION
---		BOUNDARY
---		ADJACENT BOUNDARY
==		EXISTING CURB AND GUTTER
---		PROPOSED EARTHEN SWALE
---		PROPOSED CONCRETE
---		PROPOSED COBBLE LINING
---		ROCK LINED SWALE



ENGINEER'S SEAL	LOT 32A WEST HIGHLAND 13012 SAND CHERRY PLACE NE	DRAWN BY DEM
DAVID SOULE NEW MEXICO REGISTERED PROFESSIONAL ENGINEER 1/20/22 12/23/21 6/18/21	GRADING AND DRAINAGE PLAN	DATE 6-17-21
DAVID SOULE P.E. #14522	Rio Grande Engineering P.O. BOX 53924 ALBUQUERQUE, NM 87199 (505) 321-9099	Let 32A West Highland at High Desert.dwg
		SHEET # C1
		JOB #

BASIN DATA

Basin	Area (sf)	Area (acres)	Treatment A		Treatment B		Treatment C		Treatment D		Q100 GENERATED	Q100 DISCHARGED
			%	(acres)	%	(acres)	%	(acres)	%	(acres)		
ONSITE EXISTING	25168	0.578	82%	0.47396	10.0%	0.058	8.0%	0.04624	0%	0.000	1.19	
UPLAND NORTH	6667	0.153	10%	0.01531	10.0%	0.015	43.0%	0.06581	37%	0.057	0.55	
UPLAND SOUTH	4470	0.103	10%	0.01026	10.0%	0.010	52.0%	0.05336	28%	0.029	0.36	0.36
NORTH PONDBASIN	5424	0.125	5%	0.00623	28.0%	0.035	55.0%	0.06848	12%	0.015	0.40	0.63
SOUTH PONDBASIN	8620	0.198	0%		16.0%	0.032	32.0%	0.06332	52%	0.103	0.76	0.44
REMAININGS LOT	11125	0.255	70%	0.17878	5.0%	0.013	10.0%	0.02554	15%	0.038	0.63	0.63
TOTAL PROPOSED	25169	0.578										1.88
TOTAL HISTORICAL	25169	0.578	82%	0.4738	10.0%		8.0%	0.04622	0%	0.000	2.09	

* INCLUDES FLOW OUT OF N. POND AND UPLAND
**TOTAL FLOW IS LOWER THAN ADDITION OF ALL BASINS DUE TO POND ROUTINGS CHANGING TP

STAGE/STORAGE VOLUME CALCULATIONS

NORTH POND

ACTUAL ELEV.	DEPTH (FT)	AREA SF	VOLUME PER UNIT	VOLUME CUMULATIVI	VOLUME AC-FT	Q (CFS)
94.00	0.00	86.00	0	0	0.000	0.00
94.50	0.00	160.00	61.50	61.5	0.0014	0.00
96.05	1.55	572.00	567.30	628.80	0.014	0.82

Orifice Equation
Q = CA SQRT(2gH)

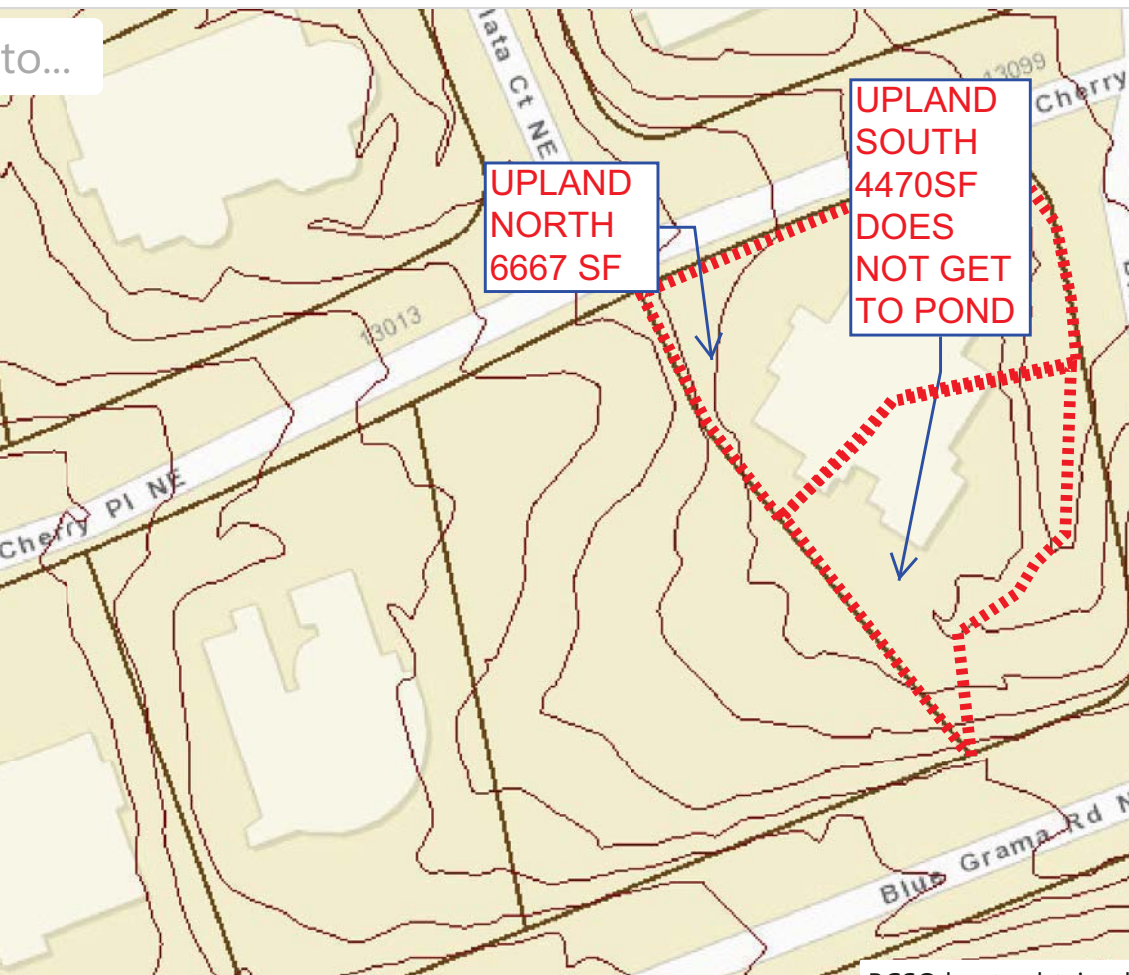
C = 0.6
Diameter (in) 5
Area (ft^2)= 0.136353848
g = 32.2
H (ft) = Depth of water above center of orifice
Q (CFS) = Flow

south pond

ACTUAL ELEV.	DEPTH (FT)	AREA SF	VOLUME PER UNIT	VOLUME CUMULATIVI	VOLUME AC-FT	Q (CFS)
94.85	0.00	15.00	0	0	0.000	0.00
95.35	0.00	166.00	45.25	45.25	0.001	0.00
96.85	1.50	477.00	482.25	527.5	0.012	0.00

Orifice Equation
Q = CA SQRT(2gH)

C = 0.6
Diameter (in) 4
Area (ft^2)= 0.087266463
g = 32.2
H (ft) = Depth of water above center of orifice
Q (CFS) = Flow



Channel Capacity

	Top Width (ft)	Bottom Width (ft)	Depth (ft)	Area (ft^2)	WP (ft)	R	Slope (%)	Q Provided* (cfs)	Q Required (cfs)	Velocity (ft/s)
ADJ TO DR	3	0	0.5	0.75	3.16	0.2371708	1	1.22	0.95	1.90

Manning's Equation:
Q = 1.49/n * A * R^(2/3) * S^(1/2)
A = Area
R = D/4
S = Slope
n = 0.035

* FOR EASE OF CALCULATION, THE HIGHEST RATE IS TO NORTH POND

