CITY OF ALBUQUERQUE

Planning Department
Alan Varela, Director

Mayor Timothy M. Keller

July 1, 2024

David Thompson, PE
Thompson Engineering Consultants, Inc.
PO Box 65760
Albuquerque, NM 87193

RE: Sombra del Oeste
Revised Grading and Drainage Plans
Engineer's Stamp Date: 06/20/24
Hydrology File: M09D032

Dear Mr. Thompson:

Based upon the information provided in your submittal received 06/21/2024, the Revised Grading & Drainage Plans are approved for Grading Permit, Work Order and for action by Development Hearing Officer (DHO) on Preliminary Plat.

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 (Dough 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 (DTIS)

Project Title: Sombra del Oeste Hydrology File # M09D032
Legal Description: Tracts 12-B-1-A and 12-B-1-B, El Rancho Grande 1
City Address, UPC, OR Parcel: 8801 Gibson Blvd. SW

Applicant/Agent: Thompson Engineering Consultants, Inc Contact: David B. Thompson, P.E.
Address: P.O. Box 65769, Albuquerque, NM 87193 Phone: (505) 271-2199
Email: tecnm@yahoo.com

Applicant/Owner: Homewise Contact: Eugene Chavez
Address: 1301 Siler Road, Bldg D, Santa Fe, NM 87507 Phone: (505) 955-7036
Email: echavez@homewise.org

(Please note that a DFT SITE is one that needs Site Plan Approval & ADMIN SITE is one that does not need it.)

TYPE OF DEVELOPMENT: ☑ PLAT (#of lots) 72 ☐ RESIDENCE ☐ DFT SITE ☐ ADMIN SITE

RE-SUBMITTAL: ☑ YES ☐ NO

DEPARTMENT: ☐ TRANSPORTATION ☑ HYDROLOGY/DRAINAGE

Check all that apply under Both the Type of Submittal and the Type of Approval Sought:

TYPE OF SUBMITTAL:

- ☐ ENGINEER/ARCHITECT CERTIFICATION
- ☐ PAD CERTIFICATION
- ☐ CONCEPTUAL G&D PLAN
- ☑ GRADING & DRAINAGE PLAN
- ☐ DRAINAGE REPORT
- ☐ DRAINAGE MASTER PLAN
- ☐ CLOMR/LOMR
- ☐ TRAFFIC CIRCULATION LAYOUT (TCL) ADMINISTRATIVE
- ☐ TRAFFIC CIRCULATION LAYOUT FOR DFT APPROVAL
- ☐ TRAFFIC IMPACT STUDY (TIS)
- ☐ STREET LIGHT LAYOUT
- ☐ OTHER (SPECIFY)

TYPE OF APPROVAL SOUGHT:

- ☐ BUILDING PERMIT APPROVAL
- ☐ CERTIFICATE OF OCCUPANCY
- ☐ CONCEPTUAL TCL DFT APPROVAL
- ☑ PRELIMINARY PLAT APPROVAL
- ☐ FINAL PLAT APPROVAL
- ☐ SITE PLAN FOR BLDG PERMIT DFT 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
- ☐ OTHER (SPECIFY)

DATE SUBMITTED: June 20, 2024

REV. 09/13/23

I. PURPOSE AND SCOPE

THE PURPOSE OF THIS DRAINAGE PLAN IS TO PRESENT THE EXISTING AND PROPOSED DRAINAGE CONDITIONS FOR PROPOSED SOMBRA DEL OESTE SUBDIVISION, LOCATED IN THE 9001 BLOCK OF GIBSON BOULEVARD SW, IN ALBUQUERQUE. THE ZONE ATLAS PAGE FOR THE SITE IS M-09-Z.

II. SITE DESCRIPTION AND HISTORY

THE PROJECT SITE IS LOCATED ON THE NORTH SIDE OF GIBSON BOULEVARD SE, BETWEEN UNSER BOULEVARD SW, AND SNOW VISTA BOULEVARD SW.

THE SITE IS CURRENTLY VACANT WITH DEVELOPED PROPERTIES SURROUNDING.

III. COMPUTATIONAL PROCEDURES

HYDROLOGIC ANALYSIS WAS PERFORMED UTILIZING THE DESIGN CRITERIA BASED ON CHAPTER 6, HYDROLOGY, OF THE DEVELOPMENT PROCESS MANUAL RELEASED 2020. TABLES WITHIN CHAPTER 6, WERE USED TO AID IN THE STUDY OF THE SITE HYDROLOGY.

IV. PRECIPITATION

THE STORM EVENT USED FOR THE FOLLOWING CALCULATIONS IS THE 100YR-6HR STORM. THE PROJECT SITE IS LOCATED IN ZONE 1 (WEST OF RIO GRANDE).

V. EXISTING DRAINAGE CONDITIONS

CURRENTLY THE SITE IS VACANT AND GENERALLY DRAINS FROM NORTH-WEST TO SOUTH-EAST. A PRIVATE STORM DRAINAGE SYSTEM WAS INSTALLED ALONG GIBSON TO CONVEY EXCESS RUNOFF FROM THE SITE. THE PRIVATE STORM DRAINAGE SYSTEM WILL BE ABANDONED AND WILL NOT BE UTILIZED FOR THIS DEVELOPMENT. THE PRIVATE STORM DRAINAGE SYSTEM ALLOWED FOR UP TO 25.9 CFS AND THEREFORE THIS SITE CAN HAVE FREE DISCHARGE UP TO THAT LIMIT.

TO THE WEST OF THE SITE IS THE AMOLE ARROYO THAT CONVEYS OFFSITE FLOWS PAST THE SITE. THE IS ALSO AN OVERHEAD POWER TRANSMISSION LINE FOR PNM ALONG THE WESTERN BOUNDARY OF THE SITE. NO OFFSITE FLOWS WILL ENTER THE SITE FROM THE WEST. THE NORTH SIDE OF THE SITE, CONTAINS A FULLY DEVELOPED SUBDIVISION THAT DIRECTS RUNOFF FROM ADJACENT PROPERTIES NORTH INTO THE ROADWAYS SYSTEM. NO OFFSITE FLOWS WILL ENTER THE SITE FROM THE NORTH. THE EAST SIDE IF THE SITE IS LOWER AND THEREFORE WILL NOT CREATE ANY OFFSITE FLOWS FRO THIS PROJECT. TO THE SOUTH IS GIBSON BOULEVARD SW. GIBSON DRAINS FROM WEST TO EAST.

THE PRE-DEVELOPED PEAK RUNOFF RATE FROM THE SITE IS 14.66 CFS (WELL BELOW THE ALLOWABLE DISCHARGE OF 25.59 CFS).

VI. PROPOSED DRAINAGE CONDITIONS

THE PROPOSED SUBDIVISION HAS BEEN DESIGNED TO ROUTE EXCESS RUNOFF THROUGH SHALLOW PONDING AREAS AND ON-SITE COLLECTION AND CONVEYANCE SYSTEMS TO REDUCE THE PEAK RUNOFF RATE BACK TO HISTORIC RATES, AND TO CONTAIN THE NECESSARY WATER QUALITY VOLUME AS REQUIRED BY THE CITY OF ALBUQUERQUE DEVELOPMENT PROCESS MANUAL, CHAPTER 6.

FOR ANALYSIS OF EXCESS RUNOFF FLOW RATES AND WATER QUALITY VOLUME REQUIREMENTS THE SITE HAD BEEN DIVIDED INTO 5 PROPOSED BASINS.

BASIN PRO 1, IS ALONG THE WESTERN SIDE OF THE PROJECT AND ONLY CONTAINS THE BACKYARDS OF THE WESTERN LOTS ALONG SMOKETREE DRIVE SW. THIS BASIN PRO 1 CONTAINS 8,579 SF AND GENERATES A PEAK RUNOFF OF 0.41 CFS. RUNOFF FROM THIS BASIN IS DRAINED THROUGH THE WESTERN SIDE OF THE LOTS INTO THE OPEN AREA BELOW THE POWER LINES THAT HAS A DEPRESSION CREATED FROM BORROW, AND HAS AVAILABLE VOLUME OF 5,126 CUBIC FEET. THIS BASIN DOES NOT CONTAIN ANY IME=PERVIOUS SURFACE FOR WATER QUALITY.

BASIN PRO 2 IS LOCATED ALONG THE NORTH SIDE OF THE SITE. IT WILL DRAIN FROM THE WEST TO EAST AND INTO POND B, THAT WILL HAVE AN AVAILABLE VOLUME OF 1,962 CUBIC FEET. THE PEAK RUNOFF FROM THIS BASIN WILL BE 7.33 CFS AND AFTER ROUTING THROUGH POND B, WILL BE REDUCED TO 5.50 CFS THAT WILL BE CONVEYED VIA UNDERGROUND STORM PIPING TO POND C FOR FURTHER REDUCTION IN RUNOFF RATES. POND B WILL CONTAIN THE WATER QUALITY VOLUME OF 1,695 CF.

BASIN PRO 3 WAS CREATED TO BE ABLE TO SIZE THE CROSS LOT DRAINAGE AND TO DETERMINE RUNOFF RATES WITHIN VALLEY COTTONWOOD DRIVE SW. THE PEAK RUNOFF RATE FOR THE ENTIRE BASIN IS 1.25 CFS INCLUDING THE 0.42 CFS THAT IS CONVEYED VIA THE TWO BACKYARD CROSS LOT DRAINAGE SWALES. EACH SIDE OF THE RETAINING WALL WILL NEED TO CONVEY 0.21 CFS.

BASIN PRO 4 IS LOCATED ALONG THE SOUTHERN SIDE OF THE SITE AND GENERATES A PEAK RUNOFF RATE OF 6.66 CFS. BACKYARD CROSS LOT DRAINAGE WILL DRAIN 6 LOTS AND GENERATE A PEAK RUNOFF RATE OF 0.17 CFS. EXCESS RUNOFF FROM THIS BASIN WILL DRAIN TO A SERIES OF CATCH BASINS NEAR THE INTERSECTION OF MOUNTAIN ASH AVE SW AND VALLEY COTTONWOOD DR SW. EACH SIDE OF THE ROAD WILL NEED TO COLLECT A PEAK RUNOFF RATE OF 3.33 CFS. THIS CAN EASILY BE ACCOMPLISH VIA A TYPE "A " INLET PER DPM FIGURE 6.9.9. RUNOFF WILL THEN BE CONVEY UNDERGROUND TO POND C.

BASIN PRO 5 IS LOCATED ALONG THE EASTERN SIDE OF THE SITE. EXCESS RUNOFF FROM THIS BASIN IS 1.41 CFS. A SMALL PORTION WILL BE DRAINED VIA A CROSS LOT DRAINAGE SWALE INTO POND C. THE REMAINDER OF THE BASIN WILL DRAIN INTO VALLEY COTTONWOOD DR SW AND INTO POND C BY A TYPE "A" CATCH BASIN ON EACH SIDE OF THE ROAD IN A SUMP CONDITION.

POND C HAS BEEN SIZED TO CONTAIN THE WATER QUALITY VOLUME OF 3,032 CUBIC FEET. AS MENTIONED IN THE EXISTING CONDITIONS, THE PRIOR GRADING AND DRAINAGE PLANS INDICATED THIS SITE WAS DESIGNED TO RELEASE 25.59 CFS AND THEREFORE THE FULLY DEVELOPED PEAK FLOWRATE OF 16.60 CAN BE RELEASED WITHOUT ANY RESTRICTIONS.

THE UNDERGROUND STORM CONVEYANCE SYSTEM WILL BE SIZED TO CONVEY 12.25 CFS INTO GIBSON BOULEVARD SW AND CONNECTING TO THE EXISTING STORM DRAINAGE SYSTEM AT STAMPEDE DRIVE SW. BECAUSE THE PRIVATE STORM DRAINAGE FORMERLY CONVEYED THE 25.59 CFS INTO THE SAME SYSTEM, DOWNSTREAM CAPACITY WILL NOT BE AFFECTED BY CONNECTING INTO THE SYSTEM.

THE SITE DOES CONTAIN A TWO OFFSITE BASINS (LABELED OFF BASIN EX 1 AND EX 2) THAT ARE LOCATED UNDER THE POWERLINES AND THEREFORE NOT REALLY PART OF THE DEVELOPED PROPERTY. THE OFFSITE BASINS ARE PART OF A PRIOR APPROVED G&D PLAN

VII. CONCLUSIONS

THE PROPOSED SUBDIVISION HAS BEEN DESIGNED TO DIVERT STREET AND ROOF RUNOFF INTO A SERIES OF WATER QUALITY PONDS PRIOR TO BEING CONVEYED VIA A NEW UNDERGROUND STORM PIPING SYSTEM CONNECTING TO THE EXISTING PUBLIC STORM DRAINAGE SYSTEM AT GIBSON BOULEVARD SW, AND STAMPEDE DRIVE SW. THE PROPOSED PEAK RATE (DEVELOPED FLOW 12.25 CFS) IS WELL BELOW THE ALLOWABLE OF 25.59 CFS, THERE SHOULD BE NOT AFFECT TO DOWNSTREAM FACILITIES.

Drainage Summary

Project: SOMBRE DEL OESTE
Project Number:
Date: 02/05/22
By: Dave

Site Location

Precipitation Zone 1 Per COA DPM Chapter 6

Existing summary

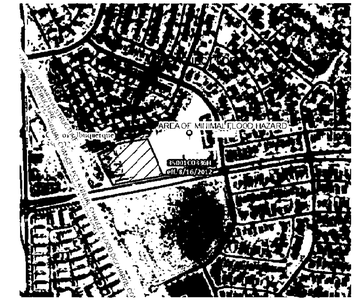
Basin Name	Ex Basin 1	OFF EX 1	OFF EX 2	
Area (sf)	209537	41152	49084	
Area (acres)	4.81	0.94	1.13	
%A Land treatment	0	0	0	
%B Land treatment	100	100	100	
%C Land treatment	0	0	0	
%D Land treatment	0	0	0	
Soil Treatment (acres)				
Area "A"	0.00	0.00	0.00	
Area "B"	4.81	0.94	1.13	
Area "C"	0.00	0.00	0.00	
Area "D"	0.00	0.00	0.00	
Excess Runoff (acre-feet)				
100yr. 6hr.	0.2926	0.0575	0.0685	acre-ft.
10yr. 6hr.	0.1042	0.0205	0.0244	acre-ft.
2yr. 6hr.	0.0040	0.0008	0.0009	acre-ft.
100yr. 24hr.	0.2926	0.0575	0.0685	acre-ft.
Peak Discharge (cfs)				
100 yr.	10.39	2.04	2.43	cfs
10yr.	3.90	0.77	0.91	cfs
2yr.	0.10	0.02	0.02	cfs

Proposed summary

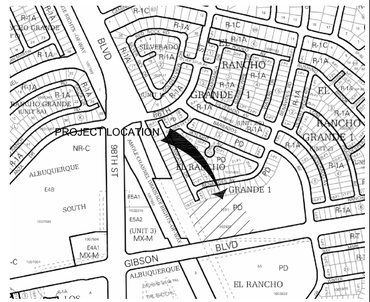
Basin Name	Pro Basin 1	Pro Basin 2	Pro Basin 3	Pro Basin 4	Pro Basin 5	
Area (sf)	7907	88744.96	17679	77317.5	19633	
Area (acres)	0.182	2.037	0.406	1.775	0.451	
%A Land treatment						
%B Land treatment	100.0	26.8	53.5	20.0	50.9	
%C Land treatment						
%D Land treatment		73.2	46.5	80.0	49.1	
Soil Treatment (acres)						
Area "A"	0.00	0.00	0.00	0.00	0.00	
Area "B"	0.18	0.55	0.22	0.35	0.23	
Area "C"	0.00	0.00	0.00	0.00	0.00	
Area "D"	0.00	1.49	0.19	1.42	0.22	
Excess Runoff (acre-feet)						
100yr. 6hr.	0.0110	0.3117	0.0484	0.2867	0.0553	acre-ft.
10yr. 6hr.	0.0039	0.1896	0.0272	0.1769	0.0313	acre-ft.
2yr. 6hr.	0.0002	0.1149	0.0146	0.1092	0.0172	acre-ft.
100yr. 24hr.	0.0110	0.3515	0.0535	0.3245	0.0612	acre-ft.
Peak Discharge (cfs)						
100 yr.	0.39	7.33	1.25	6.62	1.41	cfs
10yr.	0.15	4.28	0.66	3.94	0.75	cfs
2yr.	0.00	2.34	0.30	2.22	0.35	cfs
Water Quality Ponding Voulme (cf)	0.0	2274.9	287.7	2164.9	337.4	cf
Water Quality Acre Feet	0.0000	0.0522	0.0066	0.0497	0.0077	acre-ft

Pond Routing and Volumes

		Pond A	Pond B	Pond C			Pond D	
		Basin 1	Basin 2	Basin 3	Basin 4	Basin 5	OF EX 1	
Incoming Flow Rate	Qin	0.39	7.33	1.25	6.62	1.41	0.01	cfs
Allowable Discharge Rate	Qout	0.00	5.50	1.00	4.75	1.00	0.00	12.25 Total discharge
Hydrology Zone		1	1	1	1	1	1	per Figure A-1
Area Total	At	0.182	2.037	0.406	1.775	0.451	0.000	acres
Area Type A	Aa	0	0	0	0	0	0	%
Area Type B	Ab	35	26.8	53.5	18.9	50.9	100	%
Area Type C	Ac	0	0	0	0	0	0	%
Area Type D Impervious	Ad	65	73.2	46.5	81.1	49.1	0	%
Excess runoff rates	A	0.44	0.44	0.44	0.44	0.44	0.44	
	B	0.67	0.67	0.67	0.67	0.67	0.67	
	C	0.95	0.95	0.95	0.95	0.95	0.95	
	D	1.97	1.97	1.97	1.97	1.97	1.97	
Weighted E ((Exces Runoff)		1.32	1.62	1.27	1.92	1.31	0.67	
Time of Concentration		0.2	1.2	2.2	3.2	4.2	5.2	hours
Time to Peak =0.7*Tc + ((1.6-(Ad/At)/12)	cf	0.220	0.912	1.635	2.297	3.032	3.773	hours
Time of Base =2.10*E*Ao/Qp-(25*Ad/At)	Ad	1.149	0.767	0.756	0.858	0.760	0.000	hours
Duration of Peak		0.138	0.183	0.116	0.228	0.123	0.000	hours
Time for end of peak		0.365	1.095	1.751	2.525	3.155	3.773	hours
Time when storage begins		0.002	0.685	1.311	1.640	2.155	0.000	hours
Time incoming is less that discharge		1.149	1.014	1.554	2.055	2.462	0.000	hours
Volume Required during storm	acre-inch	0.252	0.467	0.044	0.591	0.088	0.000	acre inch
Volume Required during storm	cf	915	1695	161	2146	318	0	cubic feet
Volume Stored in Basin during storm	cf	5126	1962			1904	1250	Total Stored
Top Area		1412	1996			1164	2160	
Bottom Area		880	1241			455	1265	
Top Elev		5012.23	5099.25			5098.73	5113.50	
Bot Elev		5010.73	5097.75			5095.25	5112.75	
Volume Available by ponds	cf	5126	1962			3092	1250	cubic feet
Volume Available total by basin	cf	5126	1962			3092	1250	



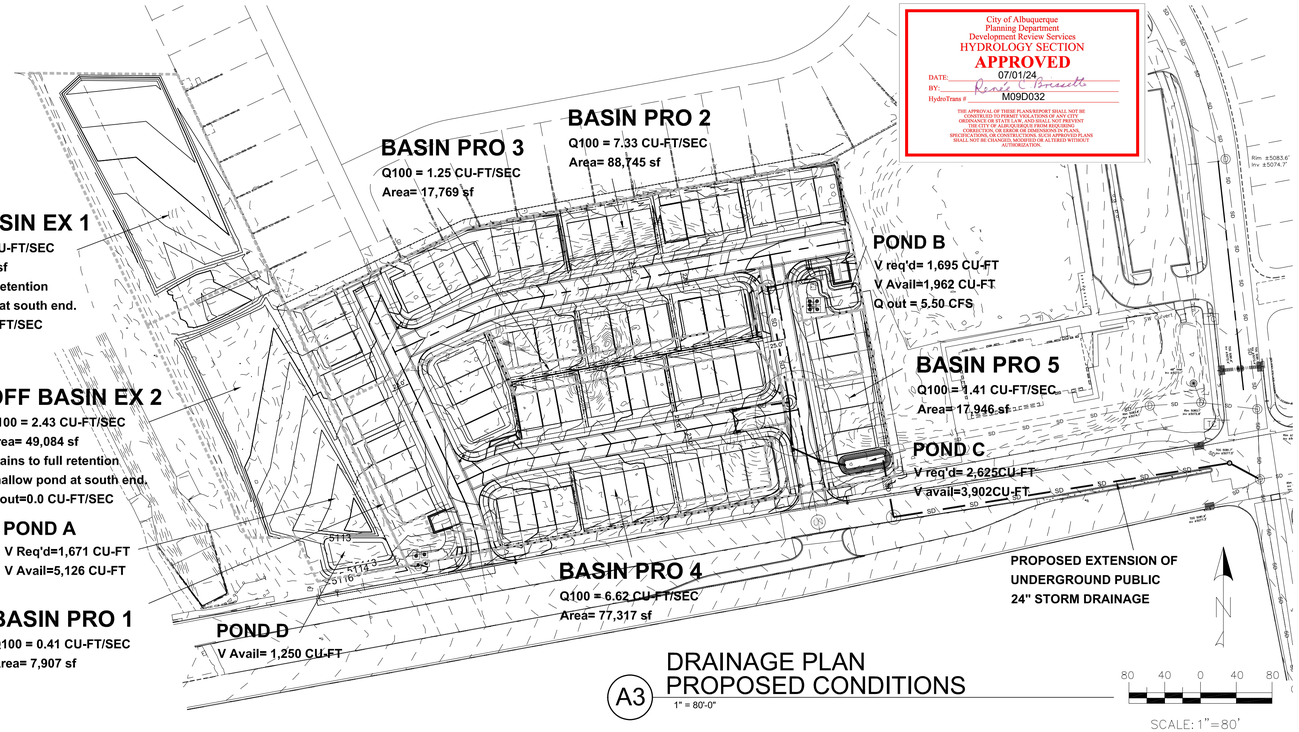
C4 FEMA FLOOD ZONE
NOT TO SCALE



D5 ZONE ATLAS PAGE M-09
NOT TO SCALE

FLOOD ZONE DETERMINATION

The surveyed area, as shown hereon, appears to lie within "ZONE X" (areas determined to be outside the 0.2% annual chance floodplain), shown on National Flood Insurance Program Flood Insurance Rate Map 35001C0336H REVISED 08/16/2012.



A3 DRAINAGE PLAN
PROPOSED CONDITIONS
1" = 80'-0"

80 40 0 40 80
SCALE: 1"=80'

City of Albuquerque
Planning Department
Development Review Services
HYDROLOGY SECTION
APPROVED
07/01/24
DATE:
BY: Renee Brissette
HydroTrans #: M09D032
THE APPROVAL OF THESE PLANS/REPORT SHALL NOT BE CONSTRUED TO PERMIT VIOLATIONS OF ANY CITY ORDINANCE OR STATE LAW. ANY ERROR OR OMISSION RESULTING FROM INCORRECT, INCOMPLETE OR ERRONEOUS CORRECTION, OR ERROR OR DIMENSIONS IN PLANS, SPECIFICATIONS, OR CONSTRUCTIONS, SUCH APPROVED PLANS SHALL NOT BE CHANGED, MODIFIED OR ALTERED WITHOUT AUTHORIZATION.

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tecnm@yahoo.com
P.O. BOX 65760
ALBUQUERQUE, NM 87193
PHONE: (505) 271-2199
FAX: (505) 830-9246

NO.	REVISION	BY	DATE

PROJECT:
DATE:
HORIZ. SCALE:
VERT. SCALE:
DRAWN BY: DEM
CHECKED BY:
APPROVED BY:
FILE:

NEW MEXICO 9677 REGISTERED PROFESSIONAL ENGINEER 6-20-24

SOMBRA DEL OESTE

GRADING & DRAINAGE PLAN

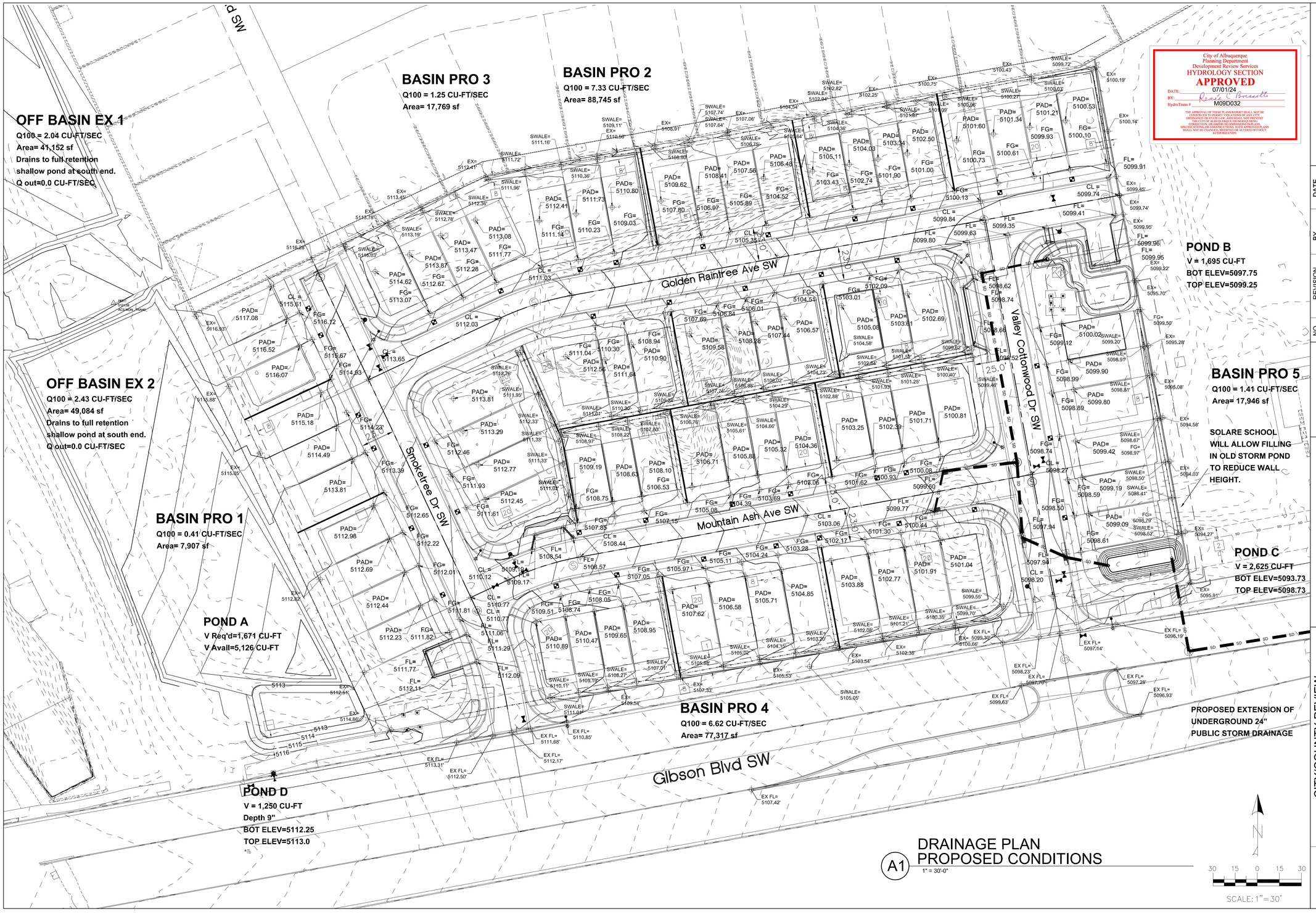
CITY/COUNTY REVIEW

DEPARTMENT	SIGN-OFF	DATE
WASTEWATER MGMT. DIV.		
WATER SERVICES		
SUBDIVISION ENG.		
STREETS		
TRAFFIC		

FOR CITY/COUNTY USE ONLY

SHEET No.

CD1 of 2



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P.O. BOX 65760
ALBUQUERQUE, NM 87193

NO.	REVISION	BY	DATE

PROJECT: SOMBRA DEL OESTE
DATE:
HORIZ. SCALE:
VERT. SCALE:
DRAWN BY: DEM
CHECKED BY:
APPROVED BY:
FILE:

9677 6-20-24

GRADING & DRAINAGE PLAN

CITY/COUNTY REVIEW

DEPARTMENT	SIGN-OFF	DATE
WASTEWATER MGMT. DIV.		
WATER SERVICES		
SUBDIVISION ENG.		
STREETS		
TRAFFIC		

FOR CITY/COUNTY USE ONLY

SHEET No.
CD2 of 2