

# CITY OF ALBUQUERQUE

Planning Department  
Alan Varela, Director



Mayor Timothy M. Keller

March 14, 2022

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

**RE: Sombra del Oeste  
Grading and Drainage Plans  
Engineer's Stamp Date: 02/08/22  
Hydrology File: M09D032**

Dear Mr. Thompson:

Based upon the information provided in your submittal received 02/08/2022, the Grading & Drainage Plans are approved for Grading Permit, Work Order and for action by the DRB on Platting.

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](mailto: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](mailto:rbrissette@cabq.gov).

Sincerely,

*Renée C. Brissette*

Renée C. Brissette, P.E. CFM  
Senior Engineer, Hydrology  
Planning Department



# City of Albuquerque

Planning Department

Development & Building Services Division

## DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 11/2018)

**Project Title:** \_\_\_\_\_ **Building Permit #:** \_\_\_\_\_ **Hydrology File #:** \_\_\_\_\_

**DRB#:** \_\_\_\_\_ **EPC#:** \_\_\_\_\_ **Work Order#:** \_\_\_\_\_

**Legal Description:** \_\_\_\_\_

**City Address:** \_\_\_\_\_

**Applicant:** \_\_\_\_\_ **Contact:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**Phone#:** \_\_\_\_\_ **Fax#:** \_\_\_\_\_ **E-mail:** \_\_\_\_\_

**Owner:** \_\_\_\_\_ **Contact:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**Phone#:** \_\_\_\_\_ **Fax#:** \_\_\_\_\_ **E-mail:** \_\_\_\_\_

**TYPE OF SUBMITTAL:** \_\_\_\_\_ PLAT (75\_# OF LOTS) \_\_\_\_\_ RESIDENCE \_\_\_\_\_ DRB SITE \_\_\_\_\_ ADMIN SITE

**IS THIS A RESUBMITTAL?:** \_\_\_\_\_ Yes \_\_\_\_\_ No

**DEPARTMENT:** \_\_\_\_\_ TRAFFIC/ TRANSPORTATION \_\_\_\_\_ HYDROLOGY/ DRAINAGE

Check all that Apply:

### TYPE OF SUBMITTAL:

- \_\_\_\_\_ ENGINEER/ARCHITECT CERTIFICATION
- \_\_\_\_\_ PAD CERTIFICATION
- \_\_\_\_\_ CONCEPTUAL G & D PLAN
- \_\_\_\_\_ GRADING PLAN
- \_\_\_\_\_ DRAINAGE MASTER PLAN
- \_\_\_\_\_ DRAINAGE REPORT
- \_\_\_\_\_ FLOODPLAIN DEVELOPMENT PERMIT APPLIC
- \_\_\_\_\_ ELEVATION CERTIFICATE
- \_\_\_\_\_ CLOMR/LOMR
- \_\_\_\_\_ TRAFFIC CIRCULATION LAYOUT (TCL)
- \_\_\_\_\_ TRAFFIC IMPACT STUDY (TIS)
- \_\_\_\_\_ OTHER (SPECIFY) \_\_\_\_\_
- \_\_\_\_\_ PRE-DESIGN MEETING?

### 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: \_\_\_\_\_



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.

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

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.

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).

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 E-11E IS THE AMOLE ARROYO THAT CONVEYS OFFSITE FLOWS PAST THE SITE. IT 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 FROM 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 10.19 CFS (WELL BELOW THE ALLOWABLE DISCHARGE OF 25.59 CFS).

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 SMOKEETREE DRIVE SW. THIS BASIN PRO 1 CONTAINS 8,852 SF AND GENERATES A PEAK RUNOFF OF 0.48 CFS. RUNOFF FROM THIS BASIN IS DRAINED INTO POND A THAT HAS AN AVAILABLE VOLUME OF 1, 704 CUBIC FEET. THERE IS NO WATER QUALITY VOLUME REQUIRED FROM THIS BASIN AS THERE IS NO IMPERVIOUS SURFACE. DRAINAGE FROM THE HOUSES WILL BE REQUIRED TO DRAIN TOWARD THE STREET TO REDUCE THE CROSS LOT DRAINAGE.

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 2,428 CUBIC FEET. THE PEAK RUNOFF FROM THIS BASIN WILL BE 7.44 CFS AND AFTER ROUTING THROUGH POND B, WILL BE REDUCED TO 4.71 CFS THAT WILL BE CONVEYED VIA UNDERGROUND STORM PIPING TO POND C FOR FURTHER REDUCTION IN RUNOFF RATES.

BASIN PRO 3 WAS CREATED TO BE ABLE TO SIDE THE CROSS LOT DRAINAGE AND TO DETERMINE RUNOFF RATES WITHIN VALLEY COTTONWOOD DRIVE SW. THE PEAK RUNOFF RATE FOR THE ENTIRE BASIN IS 1.24 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 6.73 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 3.37 CFS. THIS CAN EASILY BE ACCOMPLISH VIA A TYPE A INLET PER DPM FIGURE 6.9.9. RUNOFF WILL THEN BE CONVEY TO POND C.

BASIN PRO 5 IS LOCATED ALONG THE EASTERN SIDE OF THE SITE. EXCESS RUNOFF FROM THIS BASIN IS 1.55 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 3,157 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 17.44 CAN BE RELEASED WITHOUT ANY RESTRICTIONS.

THE UNDERGROUND STORM CONVEYANCE SYSTEM WILL BE SIZED TO CONVEY 10.19 CFS INTO GIBSON BOULEVARD SW AND OVER TO AN EXISTING STORM DRAINAGE SYSTEM AT STAMPEDE DRIVE SW. BECAUSE THE PRIVATE STORM DRAINAGE FORMERLY CONVEYED THE 10.21 CFS INTO THE SAME SYSTEM, DOWNSTREAM CAPACITY WILL NOT BE AFFECTED BY CONNECTING INTO THE SYSTEM.

THE SITE DOES CONTAIN A SINGLE BASIN (LABELED OFF BASIN EX 1) THAT IS LOCATED UNDER THE POWERLINES AND THEREFORE NOT REALLY PART OF THE DEVELOPED PROPERTY. THIS BASIN HAS BEEN DESIGNED TO HAVE FULL 100 YEAR EVENT RETENTION. SHOULD THIS POND BE EXCEEDED THE EXCESS RUNOFF WOULD ENTER GIBSON BOULEVARD SW.

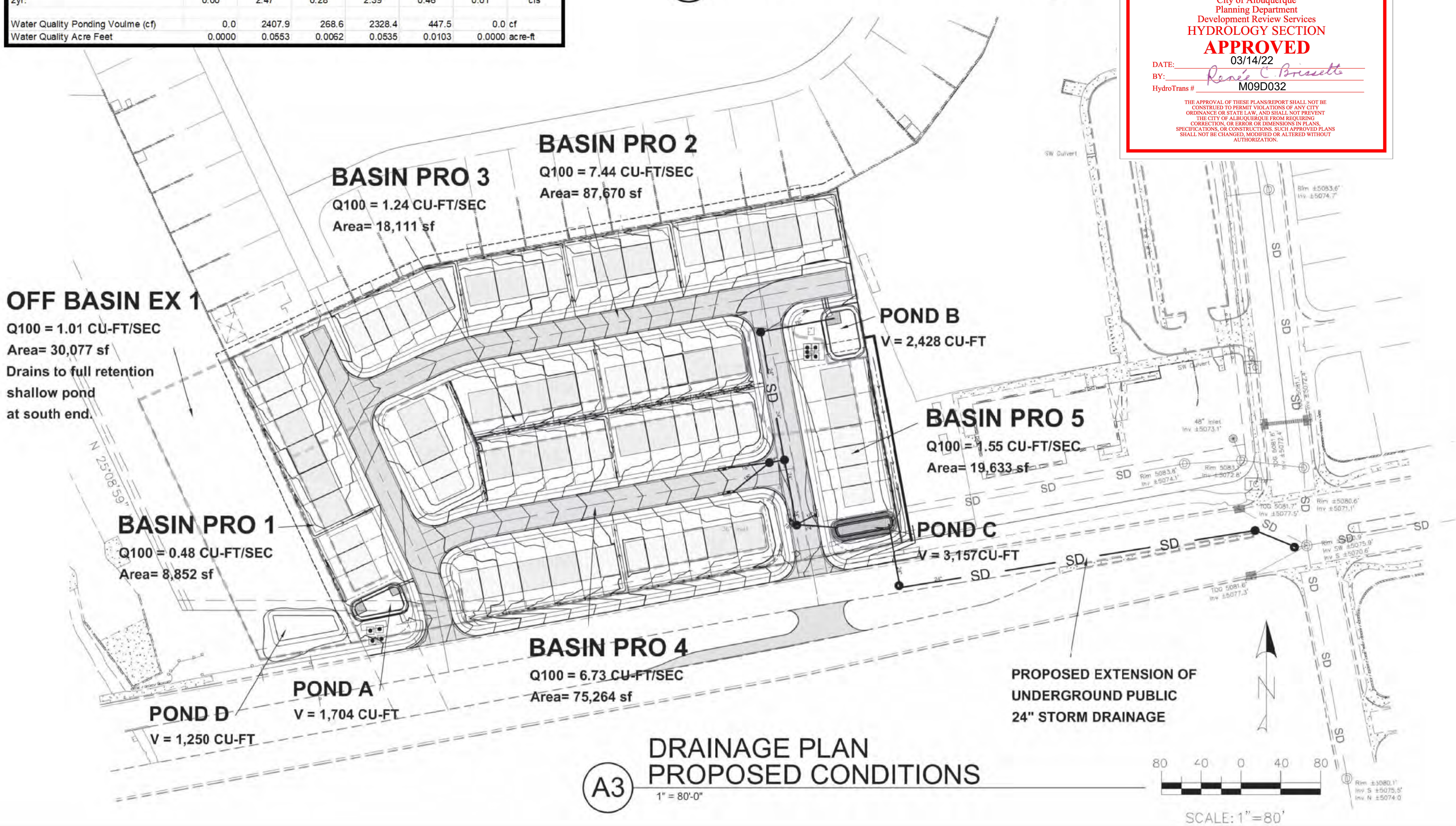
THE PROPOSED SUBDIVISION HAS BEEN DESIGNED TO DIVERT STREET AND ROOF RUNOFF INTO A SERIES OF WATER QUALITY PONDS PRIOR TO BEING CONVEYED VIA A NEW UNDERGROUND STORM PIPING SYSTEM CONNECTING TO THE EXISTING PUBLIC STORM DRAINAGE SYSTEM AT GIBSON BOULEVARD SW, AND STAMPEDE DRIVE SW. THE PROPOSED PEAK RATE (DEVELOPED FLOW 10.21 CFS) IS WELL BELOW THE ALLOWABLE OF 25.59 CFS, THERE SHOULD BE NOT AFFECT TO DOWNSSTREAM FACILITIES.

Drainage Summary									
Project:	SOMBRA 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						
Area (sf)	209537		20372						
Area (acres)	4.81		0.47						
%A Land treatment	0		0						
%B Land treatment	100		100						
%C Land treatment	0		0						
%D Land treatment	0		0						
Soil Treatment (acres)									
Area "A"	0.00		0.00						
Area "B"	4.81		0.47						
Area "C"	0.00		0.00						
Area "D"	0.00		0.00						
Excess Runoff (acre-feet)									
100yr. 6hr.	0.2926		0.0285		acre-ft.				
10yr. 6hr.	0.1042		0.0101		acre-ft.				
2yr. 6hr.	0.0040		0.0004		acre-ft.				
100yr. 24hr.	0.2926		0.0285		acre-ft.				
Peak Discharge (cfs)									
100 yr.	10.39		1.01		cfs				
10yr.	3.90		0.38		cfs				
2yr.	0.10		0.01		cfs				
Proposed summary									
Basin Name	Pro Basin 1	Pro Basin 2	Pro Basin 3	Pro Basin 4	Pro Basin 5	Off EX 1			
Area (sf)	8852	87670	18111	75264	19633	20372			
Area (acres)	0.203	2.013	0.416	1.728	0.451	0.47			
%A Land treatment						0			
%B Land treatment	100.0	21.5	57.6	11.6	34.9	100			
%C Land treatment						0			
%D Land treatment	0.0	78.5	42.4	88.4	65.1	0			
Soil Treatment (acres)									
Area "A"	0.00	0.00	0.00	0.00	0.00	0.00			
Area "B"	0.20	0.43	0.24	0.20	0.16	0.47			
Area "C"	0.00	0.00	0.00	0.00	0.00	0.00			
Area "D"	0.00	1.98	0.18	1.53	0.29	0.00			
Excess Runoff (acre-feet)									
100yr. 6hr.	0.0124	0.3212	0.0475	0.2973	0.0644	0.0285	acre-ft.		
10yr. 6hr.	0.0044	0.1976	0.0262	0.1863	0.0384	0.0101	acre-ft.		
2yr. 6hr.	0.0002	0.1214	0.0137	0.1173	0.0226	0.0004	acre-ft.		
100yr. 24hr.	0.0124	0.3633	0.0522	0.3380	0.0722	0.0285	acre-ft.		
Peak Discharge (cfs)									
100 yr.	0.44	7.44	1.24	6.73	1.55	1.01	cfs		
10yr.	0.16	4.41	0.65	4.09	0.88	0.38	cfs		
2yr.	0.00	2.47	0.28	2.39	0.46	0.01	cfs		
Water Quality Ponding Volume (cf)	0.0	2407.9	268.6	2328.4	447.5	0.0	cf		
Water Quality Acre Feet	0.0000	0.0553	0.0062	0.0535	0.0103	0.0000	acre-ft		

Pond Routing and Volumes		Point A		Point B		Point C		Point D		Pond Ex
		Runoff	Storage	Runoff	Storage	Runoff	Storage	Runoff	Storage	
Incomey Flow Rate	Qin									
Allowable Discharge Rate		0.00	4.71	0.50	4.53	0.92	0.00	0.00	0.00	10.21 Total
Hydrology Zone		1	1	1	1	1	1	1	1	per Figure A-1
Area Total	A1	2,028	2,019	0.416	1.128	0.451	0.468	acres		
Area Type A	Aa	0	0	0	0	0	0	2%		
Area Type B	Ab	26	26	0	0	0	0	10%		
Area Type C	Ac	26	26	20	20	20	20	0%		
Area Type D Impervious	Ad	55	55	55	55	55	55	0%		
Excess runoff rates										
A	0.44	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	0.67			
C	0.95	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	1.97			
Weighted E (Excess runoff)		1.92	1.92	1.92	1.92	1.92	1.92			
Time of Concentration		3.2	3.2	3.2	3.2	3.2	3.2			
Time to Peak		0.228	0.059	1.620	3.208	3.028	3.774			
$\geq 0.75 \times (1.5 - \text{AdjA}/\text{A12})$		0.341	0.706	0.91	0.683	0.792	0.664			
Time of Offset		12.078	0.540	25.046	0.156	0.136	0.077			
Concentration of Peak		0.136	0.136	0.136	0.156	0.136	0.170			
Time to End of Peak		0.365	1.005	1.765	2.455	2.192	3.772			
Time when storage begins		0.941	0.897	0.854	1.507	1.507	1.507			
Time when storage ends		1.541	1.541	1.564	1.875	1.875	1.875			
Volume Required during storm	acres/inch	0.325	0.671	0.276	0.507	0.377	0.333	acres inch		
Volume Required during storm		1178	2436	1011	1840	1350	1190	cuft		
Volume Stored in Basin during storm		1178	2436			3150	1250	Total Stored		
Top Area		1412	1394			5324	2160			
Bottom Area		860	1241			480	1215			
Top Elevation		5012.25	5099.25			5066.75	5113.50			
Bottom Elevation		5007.75	5007.75			5005.25	5112.75			
Volume Available by ponds	cuft	1178	2436			3150	1250	Public Etc.		
Volume Available total by basin		1178	2436			3150	1250			



**C4 FEMA FLOOD ZONE**  
NOT TO SCALE



City of Albuquerque  
Planning Department  
Development Review Services

**HYDROLOGY SECTION**

**APPROVED**

DATE: 03/14/22  
BY: *Renee C. Brissett*  
M09D032

*HydroTrans x*

THE APPROVAL OF THESE PLANS/PROJECT SHALL NOT BE  
CONSIDERED TO PREVENT THE CITY OF ALBUQUERQUE  
FROM ENFORCING ANY CITY ORDINANCE OR STATE LAW, AND SHALL NOT PREVENT  
THE CITY OF ALBUQUERQUE FROM INITIATING ANY INVESTIGATION,  
CORRECTION, OR REPAIR OR REVISIONS IN PLANS,  
SPECIFICATIONS, OR CONSTRUCTIONS, SUCH APPROVED PLANS  
SHALL NOT BE CHANGED, MODIFIED OR ALTERED WITHOUT  
AUTORIZATION.

## ED EXTENSION OF ROUND PUBLIC M DRAINAGE

40 0 40

SCALE: 1"=80'



**Tompson**  
**E**ngineering  
**C**onsultants, Inc.

[tecm@yahco.com](mailto:tecm@yahco.com)

P.O. BOX C57CD  
ALBUQUERQUE, NM 87193

PHONE: (505) 271-2198  
FAX: (505) 830-9248

NO.	REVISION	BY	DATE
PROJECT:			
DATE:		DRAWN BY: DEM	
		CHECKED BY:	
HORIZ. SCALE:		APPROVED BY:	
VERT. SCALE:		FILE:	

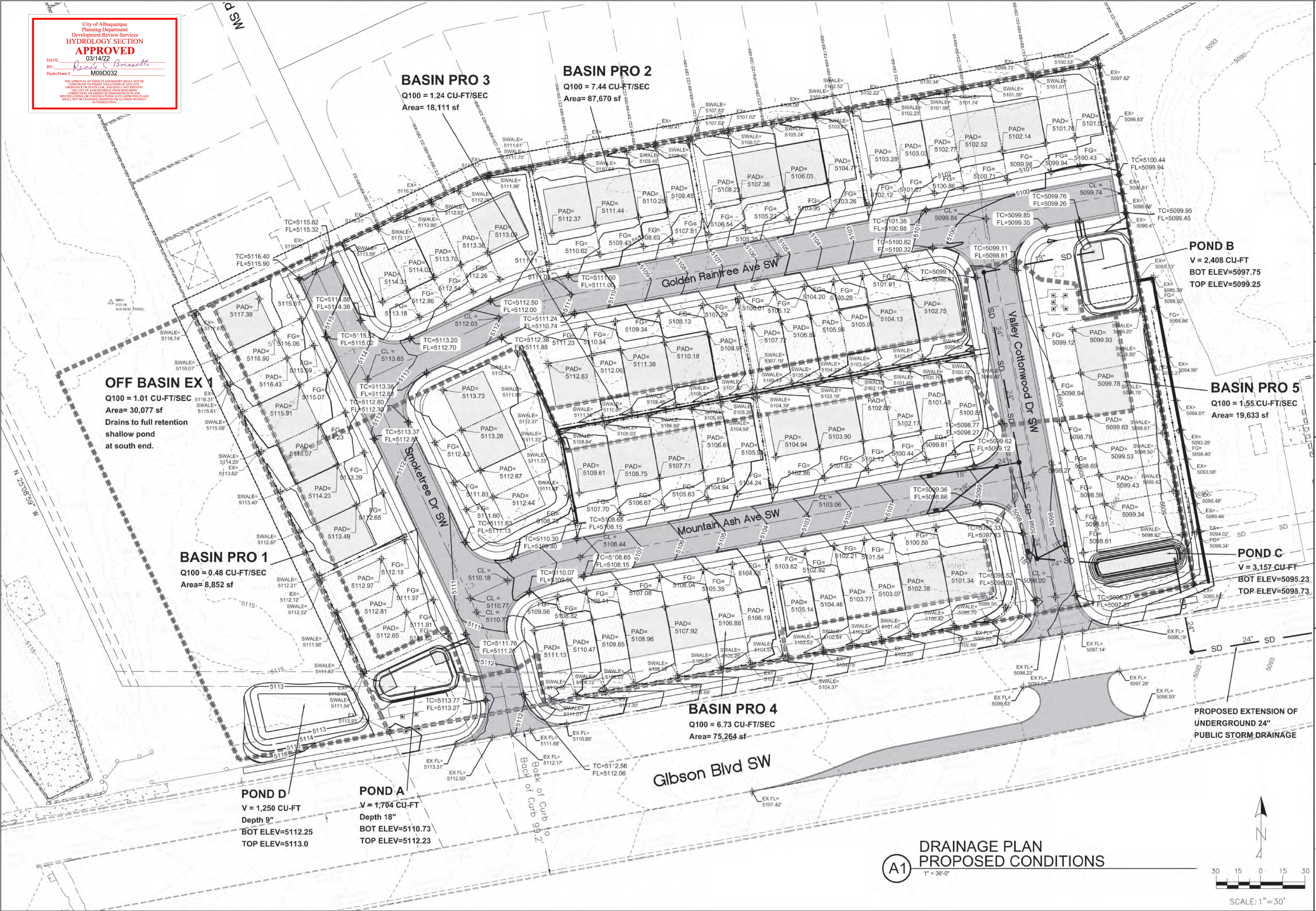


SOMBRA DEL OESTE	CITY/COUNTY REVIEW		
	DEPARTMENT	SIGN-OFF	DATE
	WASTEWATER MGMT. DIV.		
	WATER SERVICE		
	SUBDIVISION ENG.		
	STREETS		
GRADING & DRAINAGE PLAN	TRAFFIC		
	FOR CITY/COUNTY USE ONLY		

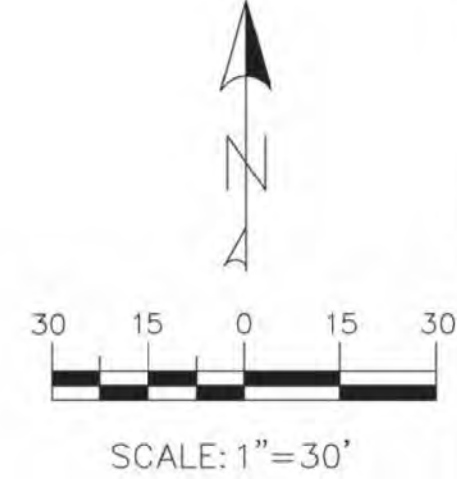


City of Albuquerque  
Planning Department  
Development Review Services  
**HYDROLOGY SECTION**  
**APPROVED**  
DATE: 03/14/22  
BY: *Rebecca Brissett*  
HydroTrans # M09D032

THE APPROVAL OF THESE PLANS DOES NOT  
CONSTITUTE A GUARANTEE OF THE  
ACCURACY OF THE INFORMATION  
CONTAINED HEREIN. THE USER  
SHALL BE RESPONSIBLE FOR  
OBTAINING ALL NECESSARY  
PERMITS AND FOR THE  
CORRECTION OF ANY  
ERRORS OR OMISSIONS.  
SPECIFICATIONS, CONDITIONS, AND  
NOTES SHALL NOT BE CHANGED  
WITHOUT THE WRITTEN  
AUTHORIZATION OF THE  
APPROVING AGENCY.



**DRAINAGE PLAN  
PROPOSED CONDITIONS**  
1" = 30'-0"



**Tompson Engineering Consultants, Inc.**  
  
P.O. BOX 65750  
ALBUQUERQUE, NM 87193  
PHONE: (505) 271-1299  
FAX: (505) 550-9246  
tce@tceco.com

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

9677

*Rebecca Brissett*

2-8-22

DATE

BY

REVISION

NO.

DATE	BY	REVISION	NO.

**SOMBRA DEL OESTE**

**GRADING & DRAINAGE PLAN**

DATE	SIGN-OFF

CITY/COUNTY REVIEW

DEPARTMENT

WASTEWATER MGMT. DIV.

WATER SERVICES

SUBDIVISION ENG.

STREETS

TRAFFIC

SHEET NO.

CD2 of 2