CITY OF ALBUQUERQUE

Planning Department Alan Varela, Director



Mayor Timothy M. Keller

December 5, 2022

David Aube, P.E. Cushing Terrell 306 W. Railroad St., Ste. 104 Missoula, MT 59802

RE: APD Community Safety Department Facility Lot 20-A & Lot 24A, Block 9. Virginia Place Add'n 1138 San Mateo Blvd. SE Grading Plan Engineer's Stamp Date: 12/2/2022 Hydrology File: L18D054A

Dear Mr. Aube,

PO Box 1293 Based upon the information provided in your submittal received 12/2/2022, the Grading & Drainage Plan is approved for Building Permit. Please attach a copy of this approved plan in the construction sets for Building Permit processing along with a copy of this letter.

PRIOR TO CERTIFICATE OF OCCUPANCY:

Albuquerque

Engineer's Certification, per the DPM Part 6-14 (F): *Engineer's Certification Checklist For Non-Subdivision* is required.

^{NM 87103} 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, 505-924-3420) 14 days prior to any earth disturbance.

If you have any questions, please contact me at 505-924-3695 or tchen@cabq.gov.

Sincerely,

Tieque Che

Tiequan Chen, P.E. Principal Engineer, Hydrology Planning Department, Development Review Services

File: L18D045A



City of Albuquerque

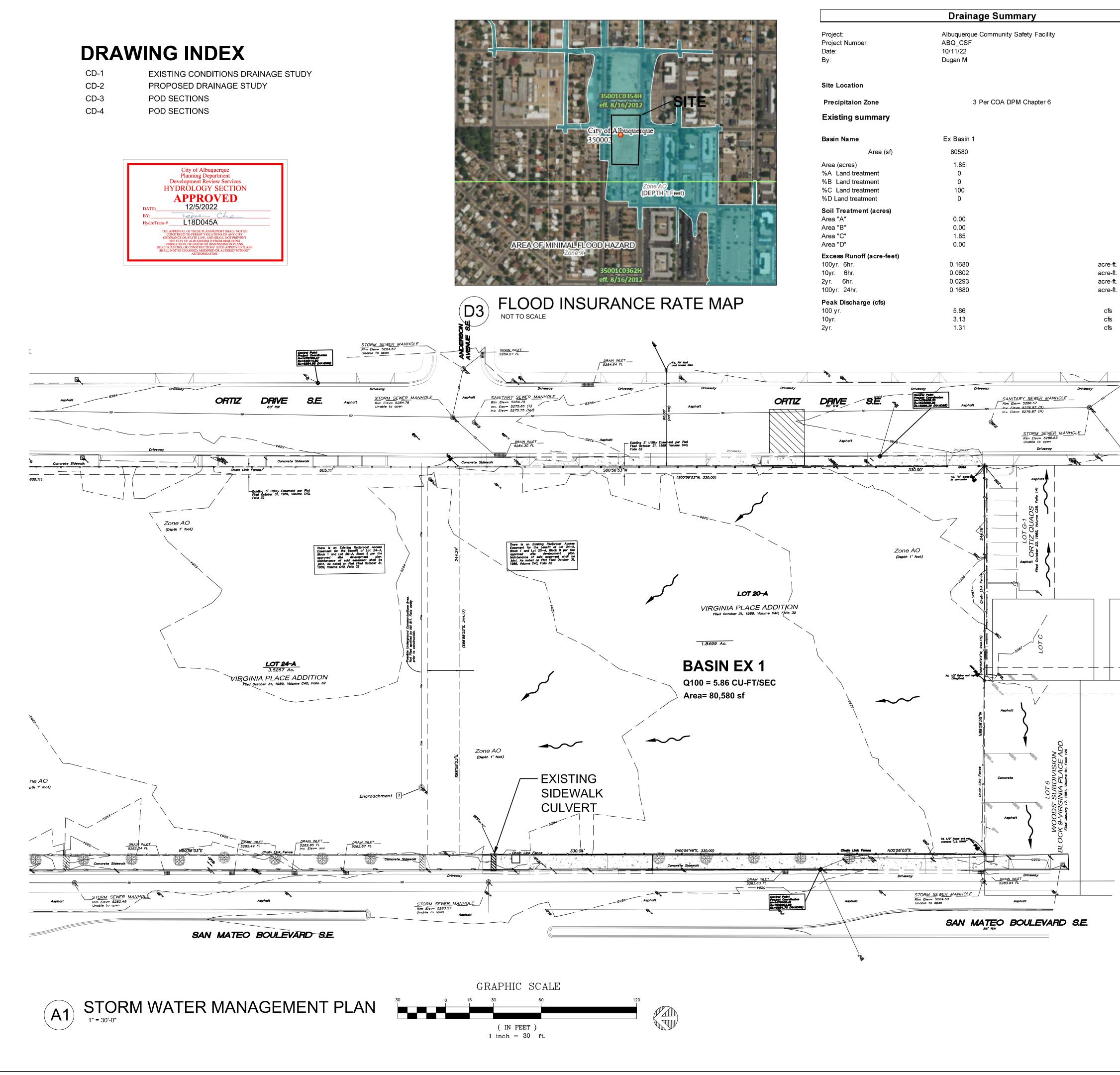
Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

Project Title: APD Comm Safety Bi	uilding Permit #Hydrology File #
DRB#	EPC#
Legal Description: Lot 20-A, Virginia Place	Add'n. City Address OR Parcel 1138 San Mateo BLVD SE
	Contact: Dave Aube
Address: <u>306 Railroad St, Suite 104</u> Email: <u>daveaube@cushingterrell.com</u>	Phone: <u>406-540-3219</u>
Applicant/Owner: <u>COA DMD</u>	Contact: Stacy Hererra
Address: <u>Cushing Terrell</u> Email: <u>shererra@cabq.gov</u>	Phone: <u>505-768-2768</u>
TYPE OF DEVELOPMENT: PLAT (#of lots RE-SUBMITTAL: X YES NO	s)RESIDENCEDRB SITE ADMIN SITE: X
DEPARTMENT: TRANSPORTATION Check all that apply:	X HYDROLOGY/DRAINAGE
TYPE OF SUBMITTAL:	TYPE OF APPROVAL/ACCEPTANCE SOUGHT:
ENGINEER/ARCHITECT CERTIFICATION	X BUILDING PERMIT APPROVAL
PAD CERTIFICATION	CERTIFICATE OF OCCUPANCY
CONCEPTUAL G&D PLAN	CONCEPTUAL TCL DRB APPROVAL
GRADING PLAN	PRELIMINARY PLAT APPROVAL
X DRAINAGE REPORT	SITE PLAN FOR SUB'D APPROVAL
DRAINAGE MASTER PLAN	SITE PLAN FOR BLDG PERMIT APPROVAL
FLOOD PLAN DEVELOPMENT PERMIT APP	PFINAL PLAT APPROVAL
ELEVATION CERTIFICATE	SIA/RELEASE OF FINANCIAL GUARANTEE
CLOMR/LOMR	FOUNDATION PERMIT APPROVAL
TRAFFIC CIRCULATION LAYOUT (TCL)	GRADING PERMIT APPROVAL
ADMINISTRATIVE	SO-19 APPROVAL
TRAFFIC CIRCULATION LAYOUT FOR DRE	BPAVING PERMIT APPROVAL
APPROVAL	GRADING PAD CERTIFICATION
TRAFFIC IMPACT STUDY (TIS)	WORK ORDER APPROVAL
STREET LIGHT LAYOUT	CLOMR/LOMR
OTHER (SPECIFY)	FLOOD PLAN DEVELOPMENT PERMIT
PRE-DESIGN MEETING?	OTHER (SPECIFY)

DATE SUBMITTED: 11-23-22



	Drainage Summary	
Project: Project Number: Date: By:	Albuquerque Community Safety Facility ABQ_CSF 10/11/22 Dugan M	
Site Location		
Precipitaion Zone	3 Per COA DPM Chapter 6	
Existing summary		
Basin Name	Ex Basin 1	
Area (sf)	80580	
Area (acres)	1.85	
%A Land treatment	0	
%B Land treatment	0	
%C Land treatment	100	
%D Land treatment	0	
Soil Treatment (acres)		
Area "A"	0.00	
Area "B"	0.00	
Area "C"	1.85	
Area "D"	0.00	
Excess Runoff (acre-feet)		
100yr. 6hr.	0.1680	acre
10yr. 6hr.	0.0802	acre
2yr. 6hr.	0.0293	acre
100yr. 24hr.	0.1680	acre
Peak Discharge (cfs)		
100 yr.	5.86	cfs
10yr.	3.13	cfs
2yr.	1.31	cfs

I. PURPOSE AND SCOPE

THE PURPOSE OF THIS DRAINAGE PLAN IS TO PRESENT THE EXISTING AND PROPOSED DRAINAGE CONDITIONS FOR PROPOSED ALBUQUERQUE COMMUNITY SAFETY DEPARTMENT FACILITY, IN ALBUQUERQUE. THE ZONE ATLAS PAGE FOR THE SITE IS L-17.

RMATION

II. SITE DESCRIPTION AND HISTORY

THE PROJECT SITE IS LOCATED ON THE EAST SIDE OF SAN MATEO BOULEVARD, BETWEEN SAN MATEO BLVD AND ORTIZ DRIVE SE.

THE SITE IS CURRENTLY VACANT LAND WITH FULLY DEVELOPED PROPERTIES SURROUNDING THE SOUTH AND UNDEVELOPED TO THE NORTH.

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.

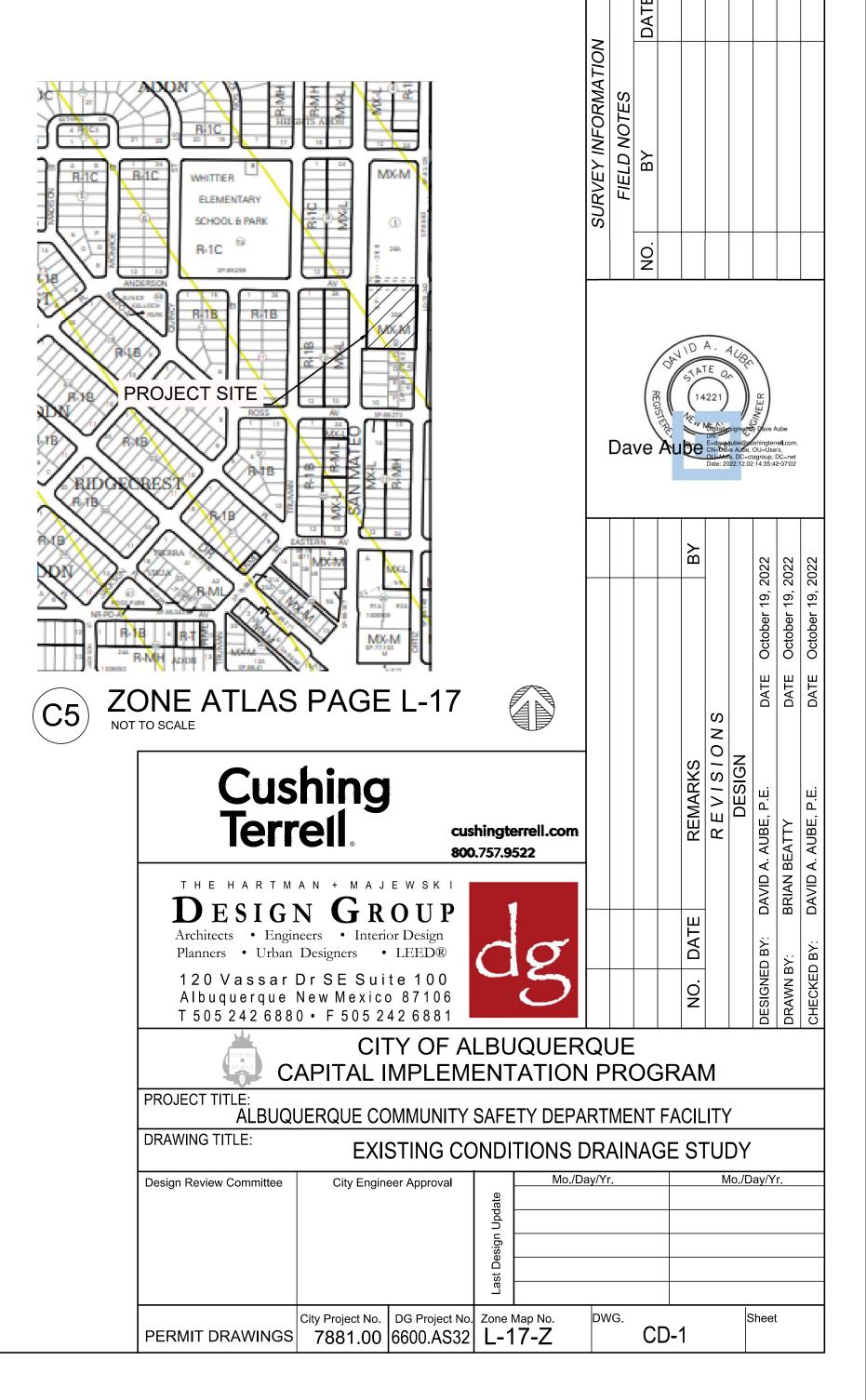
IV. PRECIPITATION

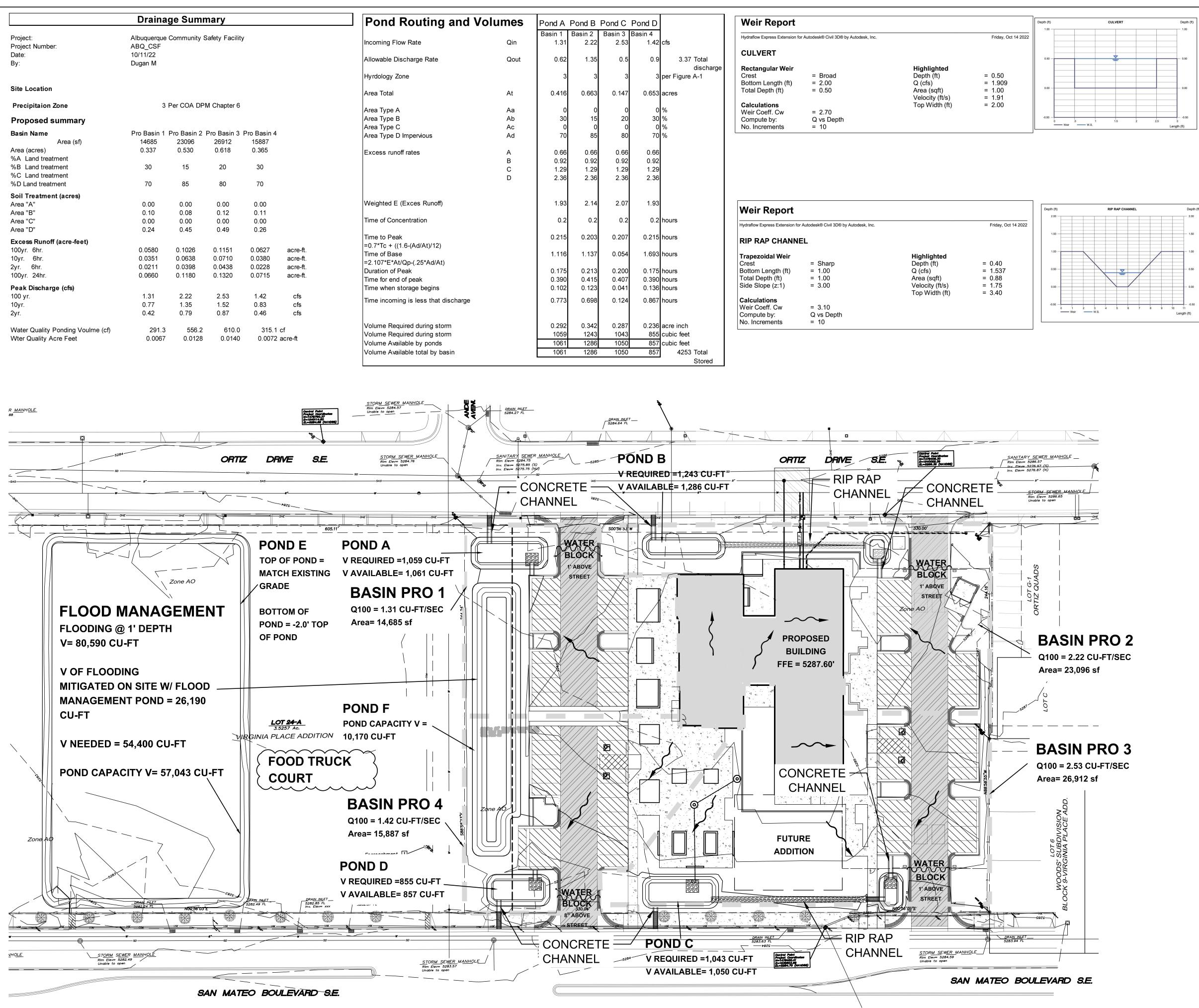
THE STORM EVENT USED FOR THE FOLLOWING CALCULATIONS IS THE 100YR-6HR STORM. THE PROJECT SITE IS LOCATED IN ZONE 3 (EAST OF SAN MATEO, AND WEST OF EUBANK).

V. EXISTING DRAINAGE CONDITIONS

CURRENTLY THE SITE IS VACANT LAND BUT HAS HAD PREVIOUS DEVELOPMENT THAT HAS SINCE BEEN DEMOLISHED. THE SITE GENERALLY DRAINS FROM SOUTH TO NORTH. THERE ARE SIDEWALK CULVERTS IN PLACE TO ALLOW WATER TO DRAIN INTO THE STREET ALONG SAN MATEO BOULEVARD. THE ADJACENT PROPERTIES TO THE SOUTH ARE DEVELOPED AND CURRENTLY DRAIN TO THE WEST AND EAST ONTO SAN MATEO BOULEVARD AND ORTIZ DRIVE SE. THEREFORE THERE IS NO OFF SITE DRAINAGE FROM THESE SITES. THE SITE TO THE NORTH IS UNDEVELOPED AND CONTINUES DRAINING TO THE NORTH, THEREFORE THERE IS NO OFF SITE DRAINAGE CROSSING THIS PROJECT SITE. THE TOTAL RUNOFF FROM THE EXISTING PARCEL IS 5.86 CFS.

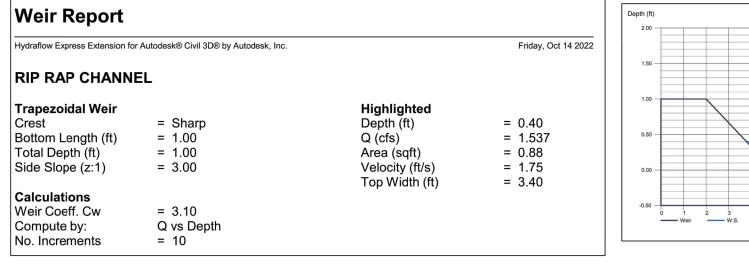
THIS SITE IS IN A A0 FLOOD ZONE PER FEMA. THIS INDICATES THAT DURING 100 YEAR RAINFALL EVENTS THAT THE DEPTH OF FLOW WILL BE 1' DEEP.





Pond A	Pond B	Pond C	Pond D	
Basin 1	Basin 2	Basin 3	Basin 4	
1.31	2.22	2.53		cfs
		2.00		
0.00	1 25	0 5	0.0	2 27 Tatal
0.62	1.35	0.5	0.9	
				discharge
3	3	3	3	per Figure A-1
0.416	0.663	0.147	0.653	acres
0	0	0	0	%
0		0		
30	15	20	30	
0	0	0	0	%
70	85	80	70	%
0.66	0.66	0.66	0.66	
0.92	0.92	0.92		
1.29	1.29	1.29		
2.36	2.36	2.36	2.36	
1.93	2.14	2.07	1.93	
0.2	0.2	0.2	0.2	hours
0.2	0.2	0.2	0.2	liouis
0.045	0.000	0.007	0.045	
0.215	0.203	0.207	0.215	hours
1.116	1.137	0.054	1.693	hours
0.175	0.213	0.200	0.175	hours
0.390	0.415	0.407		hours
0.102	0.123	0.041		hours
0.102	0.123	0.041	0.130	nours
0.773	0.698	0.124	0.867	hours
0.000	0.240	0 207	0.000	aara inah
0.292	0.342	0.287		acre inch
1059	1243	1043		cubic feet
1061	1286	1050	857	cubic feet
1061	1286	1050	857	4253 Total
				Stored

Weir Report				Depth (ft)		(
Hydraflow Express Extension for	r Autodesk® Civil 3D® by Autodesk, Inc.		Friday, Oct 14 2022	1.00		
CULVERT				0.50 -		
Rectangular Weir		Highlighted				
Crest	= Broad	Depth (ft)	= 0.50	-		
Bottom Length (ft)	= 2.00	Q (cfs)	= 1.909	-		
Total Depth (ft)	= 0.50	Area (sqft)	= 1.00	0.00		
		Velocity (ft/s)	= 1.91	-		
Calculations		Top Width (ft)	= 2.00	-		
Weir Coeff. Cw	= 2.70					
Compute by:	Q vs Depth			-0.50	.5 1	
No. Increments	= 10				Weir W.S.	



GRAPHIC SCALE

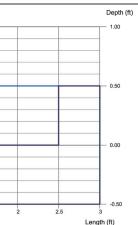
(IN FEET) 1 inch = 30 ft.

STORM WATER MANAGEMENT PLAN

A1

1" = 30'-0"





VI. PROPOSED DRAINAGE CONDITIONS

THE NEW BUILDING IS LOCATED IN THE CENTER OF THE SITE. THE NEW BUILDING WILL HAVE A ROOF RIDGE THAT DRAIN APPROXIMATELY $\frac{1}{2}$ OF THE ROOF TO THE EAST AND ¹/₂ TO THE SOUTH. THE BUILDING'S FINISH FLOOR ELEVATION IS SET AT 5287.60' WHICH IS OVER 1' ABOVE THE BASE FLOOD ELEVATION. BASE FLOOD ELEVATIONS ARE SET AT 1' ABOVE EXISTING GRADE.

DATE INFORMATION

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281 165 IA =

14221

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Dave

THE SITE IS DIVIDED INTO 4 BASINS. BASIN PRO 1 GENERALLY DRAINS TO THE EAST COLLECTING WATER FROM THE PARKING LOT AND RAISED CONCRETE SIDEWALKS. THE STORM CONVEYANCE SYSTEM FOR THIS BASIN INCLUDES A CONCRETE CHANNEL FROM THE PARKING LOT TO POND A. POND A ALLOWS A STORAGE CAPACITY OF 1061 CF AT 1.5' DEEP. THE PEAK FLOWRATE OF THIS BASIN IS 1.31 CFS AND THE ALLOWED DISCHARGE BACK INTO ORTIZ DRIVE THROUGH A SIDEWALK CULVERT FROM THE POND IS 0.62 CFS.

BASIN PRO 2 GENERALLY DRAINS TO THE EAST COLLECTING WATER FROM THE PARKING LOT, ROOF, AND RAISED CONCRETE SIDEWALKS. THE STORM CONVEYANCE SYSTEM FOR THIS BASIN INCLUDES A CONCRETE CHANNEL FROM THE PARKING LOT TO A ROUTING DEPRESSION WHICH IS THEN BE CONVEYED TO POND B THROUGH A RIP RAP CHANNEL. POND B ALLOWS A STORAGE CAPACITY OF 1286 CF AT 1.5' DEEP. THE PEAK FLOWRATE OF THIS BASIN IS 2.22 CFS AND THE ALLOWED DISCHARGE BACK INTO ORTIZ DRIVE THROUGH A SIDEWALK CULVERT FROM THE POND IS 1.35 CFS. 60% OF BASIN PRO 2 PASSES THROUGH THE CULVERT ON THE NORTH EAST CORNER OF THE PARKING LOT AT A PEAK FLOW OF 1.33 CFS. THE PEAK FLOW AVAILABLE IN THE CHANNEL IS 1.9 CFS.

BASIN PRO 3 GENERALLY DRAINS TO THE WEST COLLECTING WATER FROM THE PARKING LOT, ROOF, RAISED CONCRETE SIDEWALKS AND FUTURE BUILDING ADDITION. THE STORM CONVEYANCE SYSTEM FOR THIS BASIN INCLUDES A CONCRETE CHANNEL FROM THE PARKING LOT TO A ROUTING DEPRESSION WHICH WILL THEN BE CONVEYED TO POND C THROUGH A RIP RAP CHANNEL. POND C WILL ALLOW A STORAGE CAPACITY OF 1050 CF AT 1.5' DEEP. THE PEAK FLOWRATE OF THIS BASIN IS 2.53 CFS AND THE ALLOWED DISCHARGE BACK INTO SAN MATEO BOULEVARD THROUGH A SIDEWALK CULVERT FROM THE POND IS 0.5 CFS. 60% OF BASIN PRO 2 PASSES THROUGH THE CULVERT ON THE NORTH WEST CORNER OF THE PARKING LOT AT A PEAK FLOW OF 1.52 CFS. THE PEAK FLOW AVAILABLE IN THE CHANNEL IS 1.9 CFS.

BASIN PRO 4 GENERALLY DRAINS TO THE WEST COLLECTING WATER FROM THE PARKING LOT AND RAISED CONCRETE SIDEWALKS. THE STORM CONVEYANCE SYSTEM FOR THIS BASIN INCLUDES A CONCRETE CHANNEL FROM THE PARKING LOT TO POND D. POND D ALLOWS A STORAGE CAPACITY OF 857 CF AT 1.5' DEEP. THE PEAK FLOWRATE OF THIS BASIN IS 1.43 CFS AND THE ALLOWED DISCHARGE BACK INTO SAN MATEO BOULEVARD THROUGH AN EXISTING SIDEWALK CULVERT FROM THE POND IS 0.9 CFS.

ALL 4 DRIVEWAY ACCESSES HAVE A HIGH POINT TO CREATE A WATER BLOCK FROM SITE RUNOFF TO STREET RUNOFF. THE HEIGHT OF THESE WATER BLOCKS ARE 1' FROM STREET FLOWLINE ELEVATION WITH THE EXEPTION OF BASIN PRO 4 WHICH IS AT 8" ABOVE STREET FLOWLINE ELEVATION.

TOTAL DISCHARGE ALLOWED OFFSITE IS 5.86 CFS, TOTAL PROPOSED DISCHARGE IS 3.37 CFS. WATER QUALITY VOLUMES WILL BE DETAINED IN THE PONDS, THE WATER QUALITY VOLUMES ARE AS FOLLOWS: [291 CF, 556 CF, 610 CF, 315 CF]. THE AVAILABLE VOLUMES ARE AS FOLLOWS RESPECTIVELY: [1061 CF, 1286 CF, 1050 CF, 857 CF]

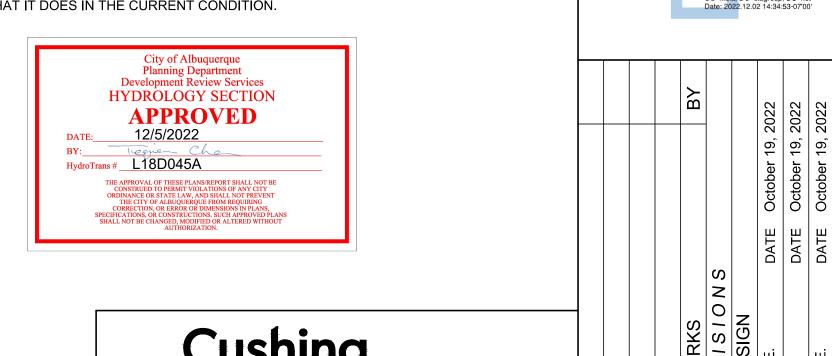
VII. FLOOD VOLUME MITIGATION

THIS SITE ACCORDING TO FEMA IS IN ZONE AO WHICH DEFINES THIS SITE HAVING A 1' FLOOD DEPTH. THE VOLUME OF THIS 1' FLOOD DEPTH ACROSS THE 1.85 ACRE SITE IS 80,590 CU-FT. WITH THE PROPOSED SITE GRADING, THE SITE IS ABLE TO HOLD 26,190 CU-FT OF THIS FLOODING. THIS CALCULATION INCLUDES POND F WHICH ACCOUNTS FOR 10,170 CU-FT OF THE 26,190 CU-FT. THE REMAINING 54,400 CF OF FLOOD WATER IS STORED OFF-SITE IN POND E. THIS POND HAS A STORAGE CAPACITY OF 57,043 CU-FT.

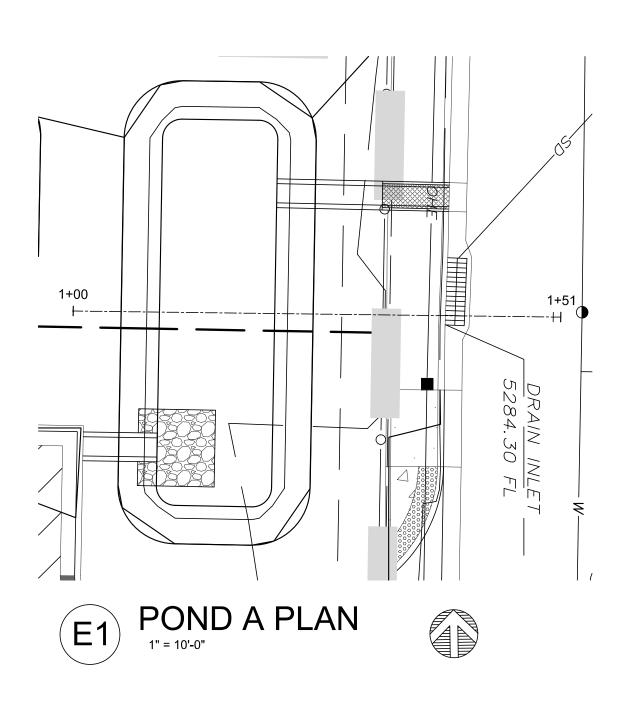
VIII. CONCLUSIONS

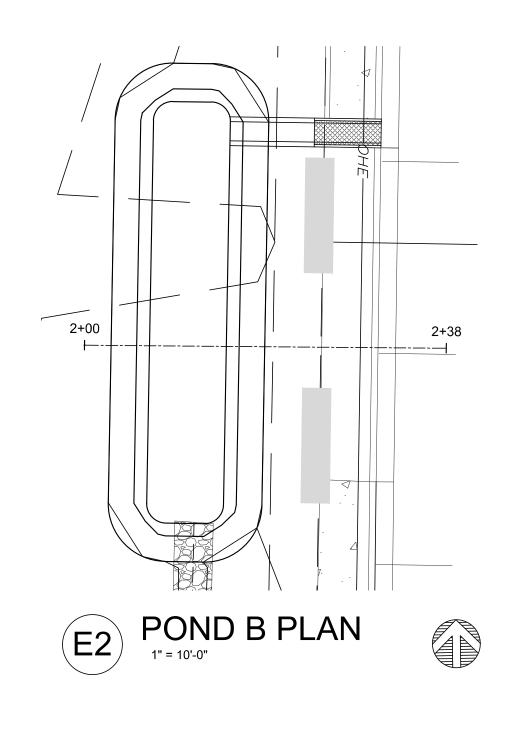
THE PROPOSED DEVELOPMENT WILL REDUCE THE EXCESS RUNOFF FROM THE SITE FROM 5.86 CFS TO 3.37 CFS.

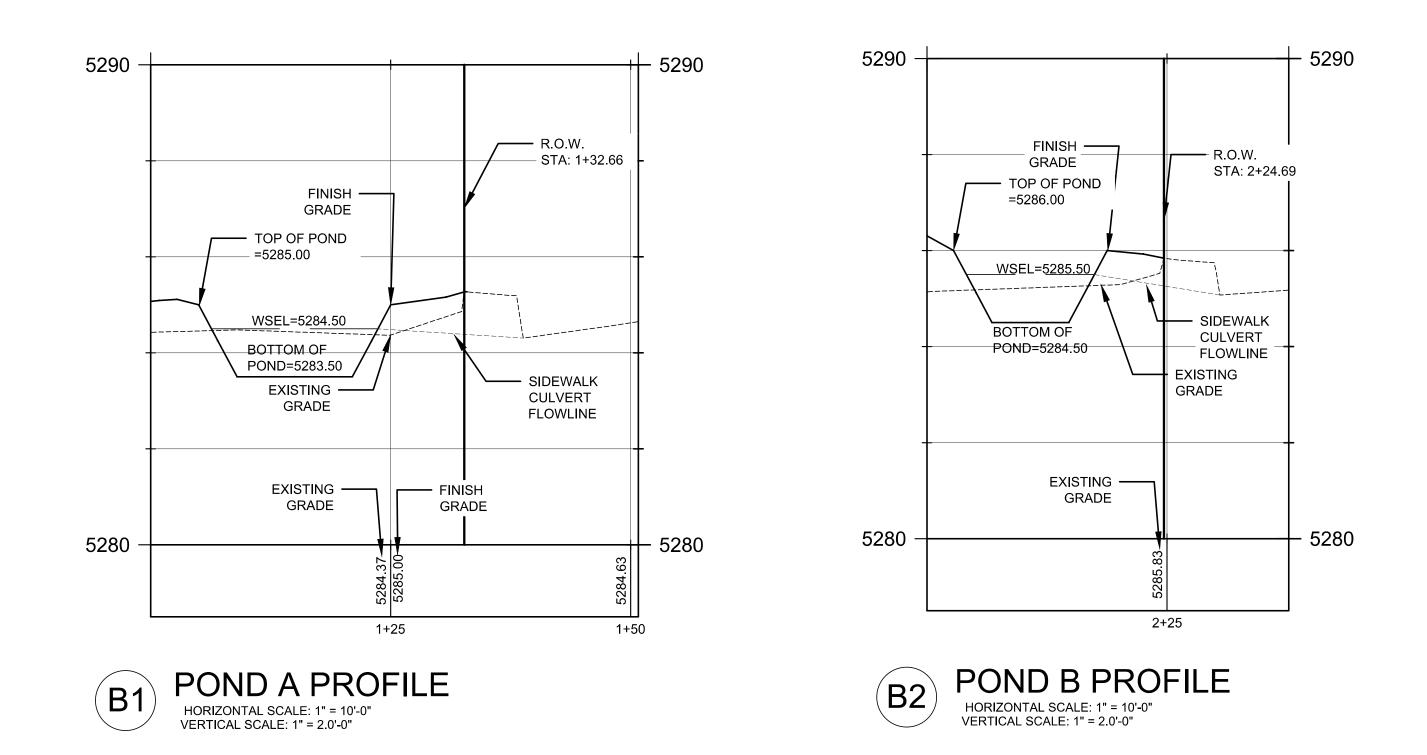
THE SITE WILL DISCHARGE LESS EXCESS RUNOFF IN THE DEVELOPED CONDITION THAT IT DOES IN THE CURRENT CONDITION.

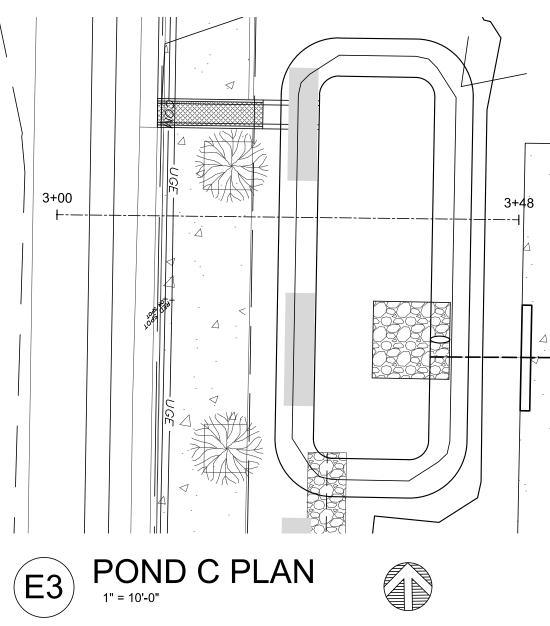


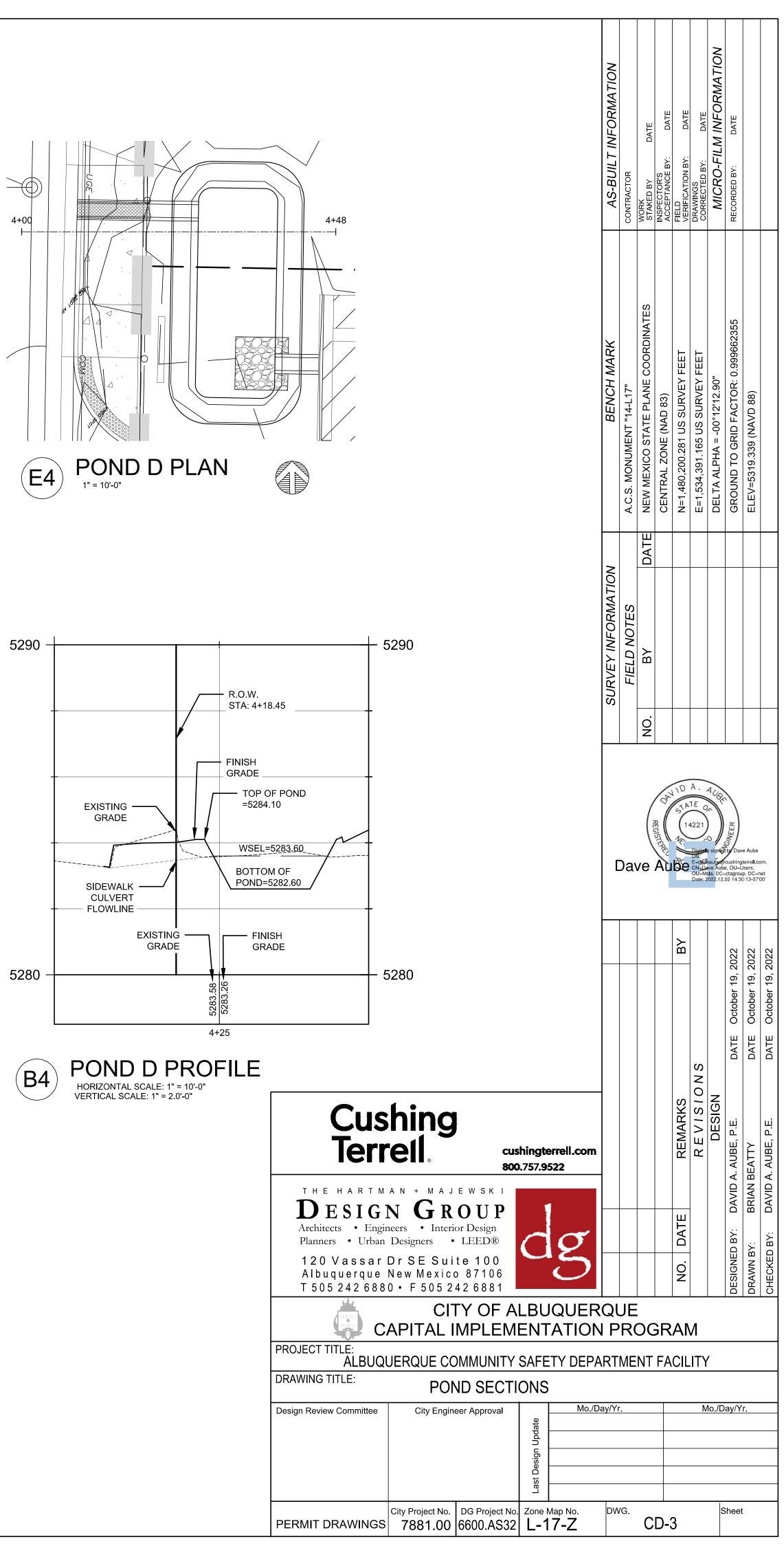
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PERMIT DRAWINGS	City Project No. 7881.00	DG Project No. 6600.AS32		Map No. 7-Z	DW	G.	CD)-2		S	Sheet		

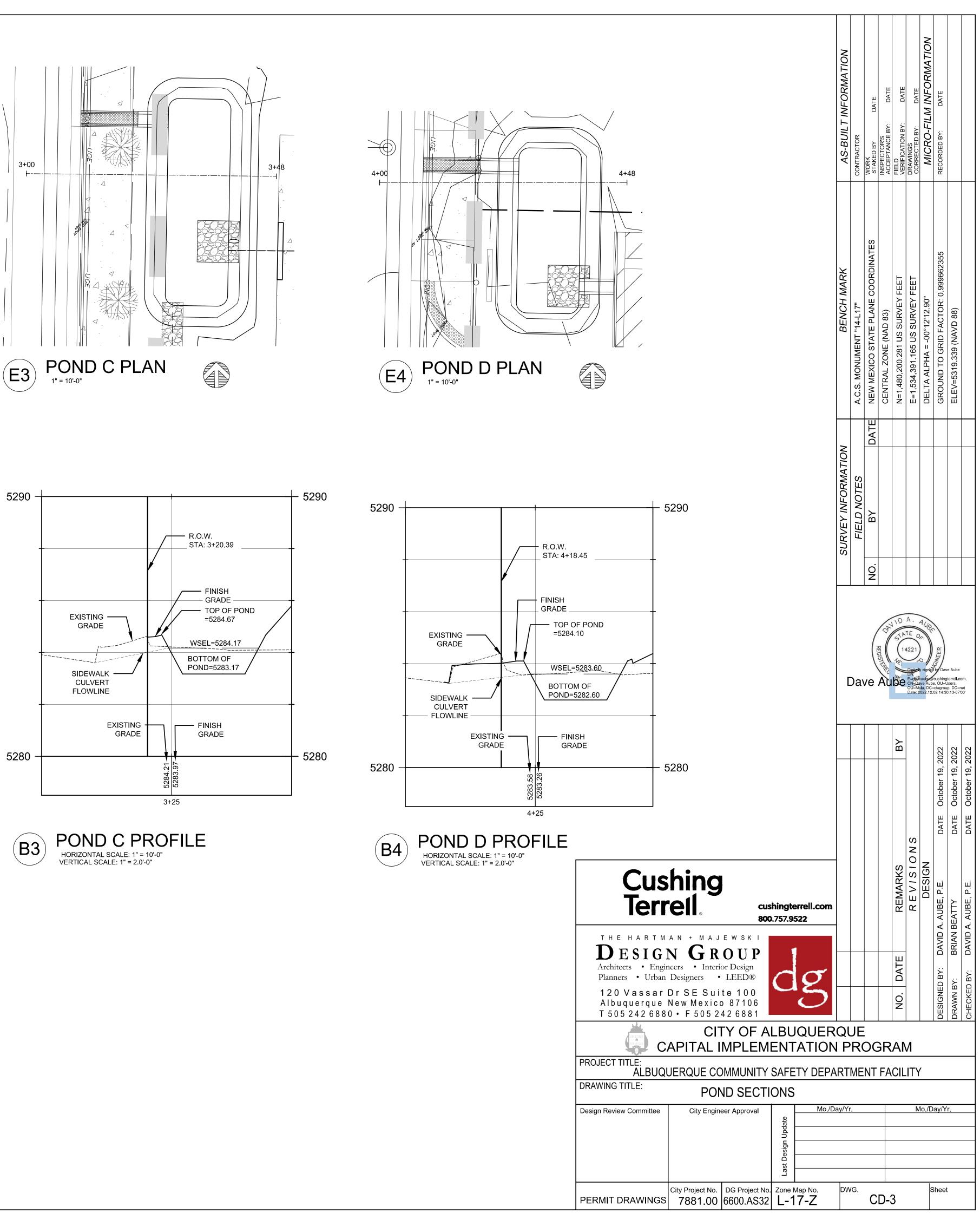


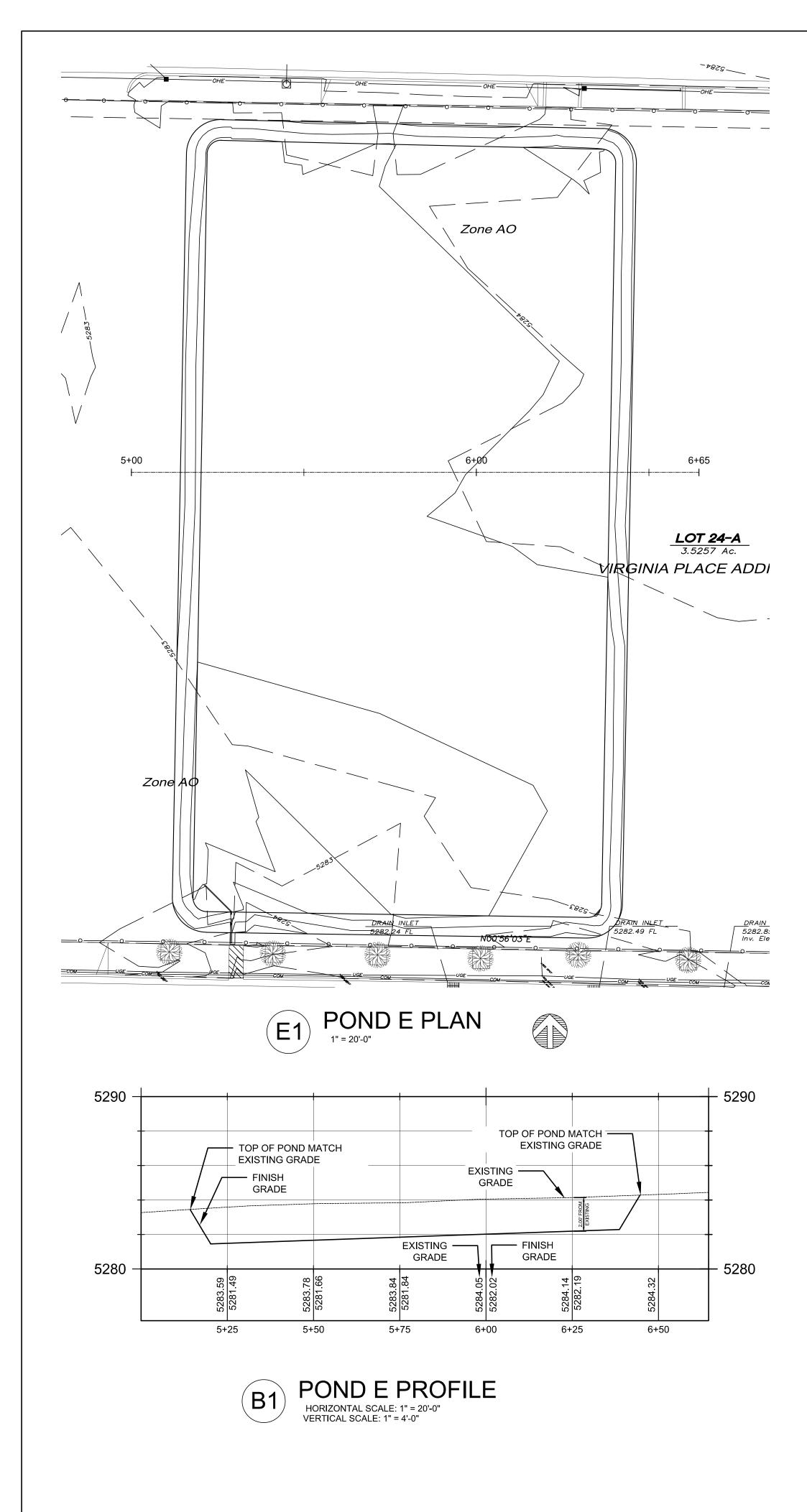


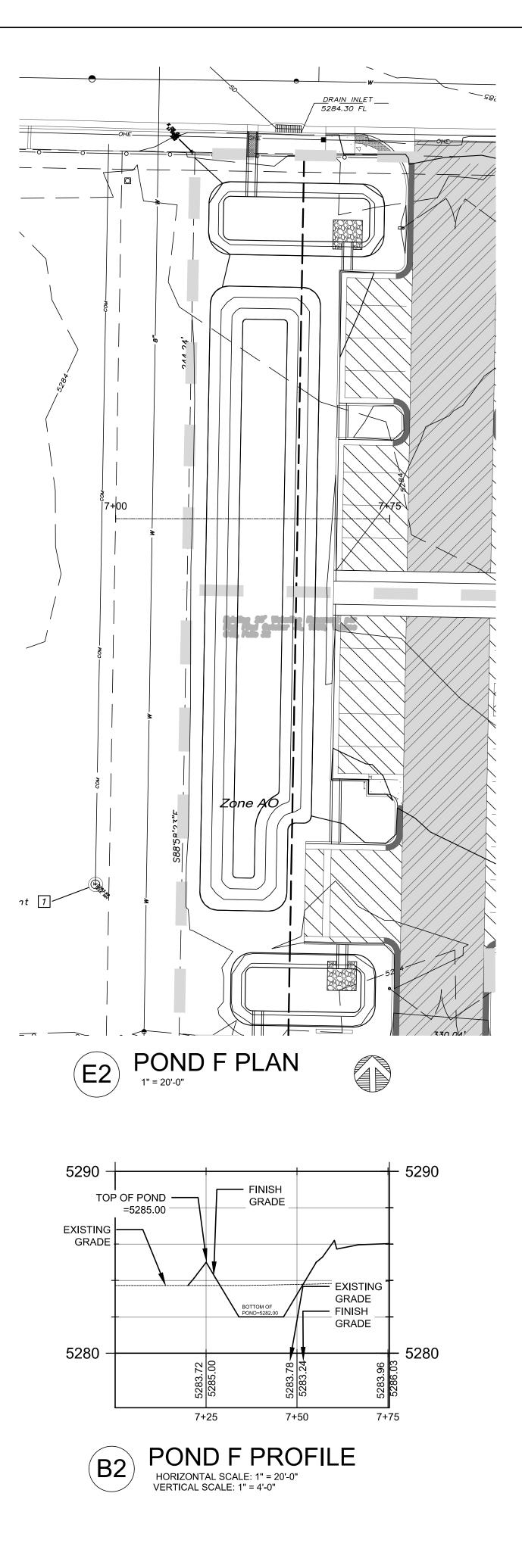












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	AS-BUILT INFORMATION	CONTRACTOR	WORK STAKED BY DATE	INSPECTOR'S ACCEPTANCE BY: DATE	FIELD VERIFICATION BY: DATE	DRAWINGS CORRECTED BY: DATE	MICRO-FILM INFORMATION	RECORDED BY: DATE		
	BENCH MARK	A.C.S. MONUMENT "14-L17"	NEW MEXICO STATE PLANE COORDINATES	CENTRAL ZONE (NAD 83)	N=1,480,200.281 US SURVEY FEET	E=1,534,391.165 US SURVEY FEET	DELTA ALPHA = -00°12'12.90"	GROUND TO GRID FACTOR: 0.999662355	ELEV=5319.339 (NAVD 88)	
	SURVEY INFORMATION	FIELD NOTES	NO. BY DATE							
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					ВҮ	NS		DATE October 19, 2022	DATE October 19, 2022	DATE October 19, 2022
Cushingterrell.com S00.757.9522 THE HARTMAN + MAJEWSKI DESIGN GROUP	-				REMARKS	REVISION	DESIGN	DAVID A. AUBE, P.E.	BRIAN BEATTY	DAVID A. AUBE, P.E.
Architects · Engineers · Interior Design Planners · Urban Designers · LEED® 120 Vassar Dr SE Suite 100 Albuquerque New Mexico 87106 T 505 242 6880 · F 505 242 6881 CITY OF ALBUQUER CAPITAL IMPLEMENTATION				GR	NO. DATE	<u>л</u>		DESIGNED BY:	DRAWN BY:	CHECKED BY:
PROJECT TITLE: ALBUQUERQUE COMMUNITY SAFETY DEPA DRAWING TITLE: POND SECTIONS Design Review Committee City Engineer Approval	\RT	ME				.ITY	/ 10./D	ay/Y	r.	
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