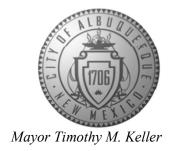
CITY OF ALBUQUERQUE

Planning Department Alan Varela, Director



September 24, 2025

Evan Babcock CDM Smith 6110 Indian School Road NE Albuquerque, NM, 87110

RE: Santa Barbara Arsenic Treatment Facility

3301 Claremont Ave NE Grading and Drainage Plan

Engineer's Stamp Date: 08/12/2025

Hydrology File: H16D100 Case # HYDR-2025-00291

Dear Mr. Babcock:

PO Box 1293

Based upon the information provided in your submittal received 9/24/2025, the Grading & Drainage Plans are 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.

Albuquerque

PRIOR TO CERTIFICATE OF OCCUPANCY:

NM 87103

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

www.cabq.gov

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 505-924-3314 or amontoya@cabq.gov.

Sincerely,

Anthony Montoya, Jr., P.E., C.F.M.

anth Mars

Senior Engineer, Hydrology

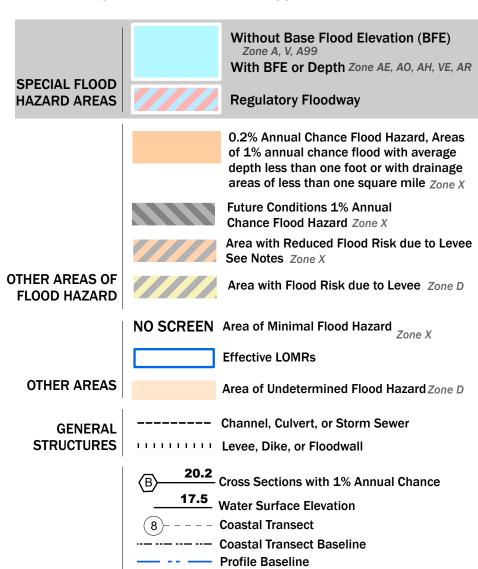
Planning Department, Development Review Services



106°35'37.11"W 35°5'30.95"N

FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR DRAFT FIRM PANEL LAYOUT



- Hydrographic Feature

Base Flood Elevation Line (BFE)

Jurisdiction Boundary

Limit of Study

OTHER

FEATURES

NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Flood Map Service Center website at https://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report,

and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well

as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number

For community and countywide map dates, refer to the Flood Insurance Study Report for this jurisdiction.

To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Basemap information shown on this FIRM was provided in digital format by USDA, Farm Service Agency (FSA). This information was derived from NAIP, dated April 11, 2018.

This map was exported from FEMA's National Flood Hazard Layer (NFHL) on 5/15/2025 4:15 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time. For additional information, please see the Flood Hazard

Mapping Updates Overview Fact Sheet at https://www.fema.gov/media-library/assets/documents/118418 This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below.

The basemap shown complies with FEMA's basemap accuracy standards. This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date.

SCALE

Map Projection: GCS, Geodetic Reference System 1980; Vertical Datum: NAVD88

For information about the specific vertical datum for elevation features, datum conversions, or vertical monuments used to create this map, please see the Flood Insurance Study (FIS) Report for your community at https://msc.fema.gov

	1	inch = 5	00 feet	1:6,00	00	
	0	250	500	1,000	1,500	2,000 Feet
NI					Meters	reet
IN	0	50 100	200	300	400	

City of Albuquerque **Planning Department Development Review Services HYDROLOGY SECTION APPROVED** 9/24/2025 anth Mars H16D100 HydroTrans # __ THE APPROVAL OF THESE PLANS/REPORTS SHALL NOT BE CONSTRUED TO PERMIT VIOLATIONS OF ANY CITY ORDINANCE OR STATE LAW, AND SHALL NOT PREVENT THE CITY OF ALBUQUERQUE FROM REQUIRING CORRECTIONS FOR ERRORS OR DIMENSIONS IN PLANS, SPECIFICATIONS, OR CONSTRUCTION DOCUMENTS. SUCH APPROVED PLANS/REPORTS SHALL NOT BE CHANGED, MODIFIED OR ALTERED WITHOUT AUTHORIZATION.

THE APPROVAL OF THESE PLANS/REPORTS SHALL EXPIRE TWO (2) YEARS AFTER THE APPROVAL DATE IF NO BUILDING PERMIT HAS BEEN PULLED ON THE DEVELOPMENT.

National Flood Insurance Program FEMA ALBUQUERQUE

NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP

PANEL 351 OF 750

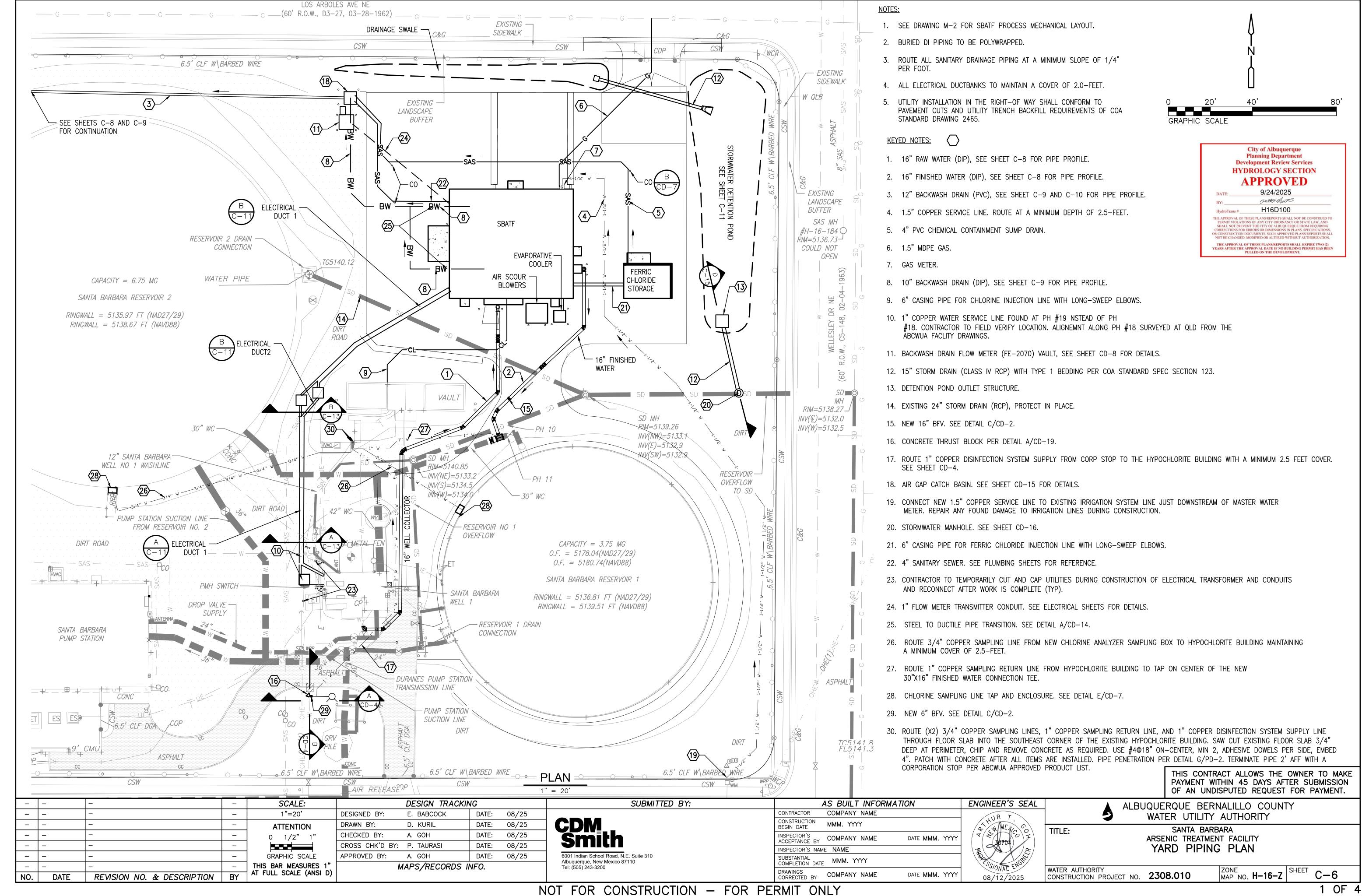
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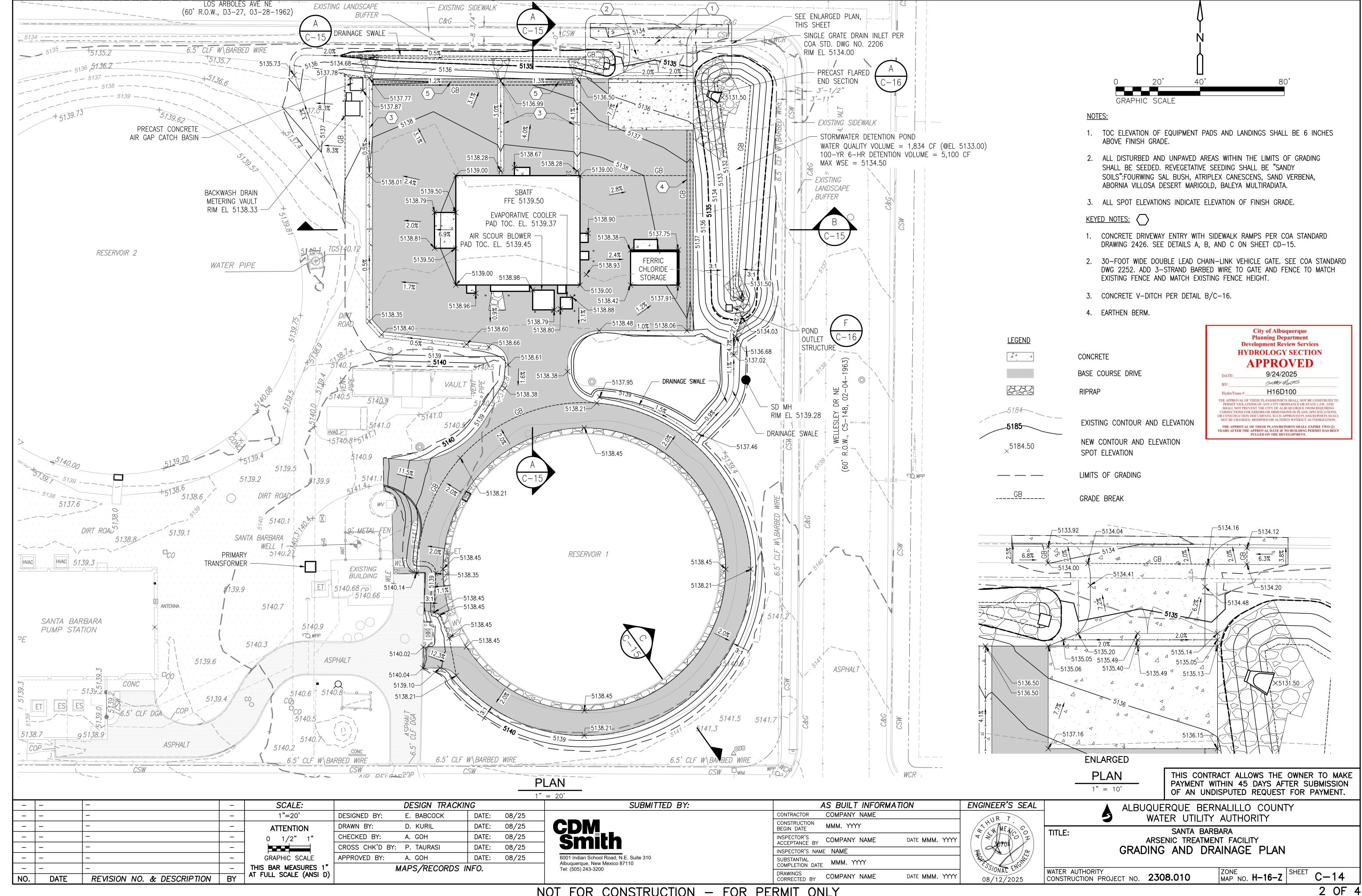
COMMUNITY BERNALILLO COUNTY CITY OF

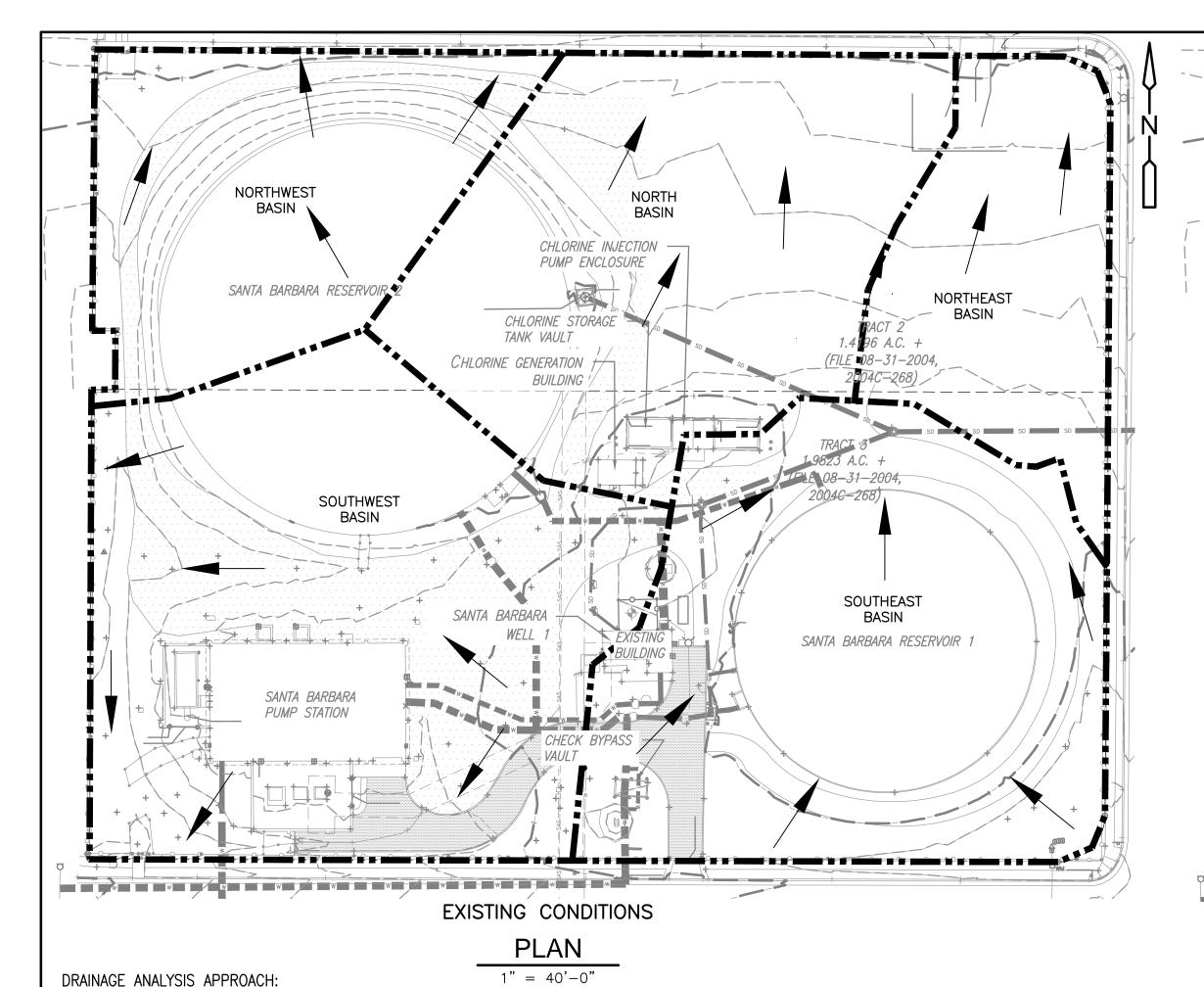
350002

0351

MAP NUMBER 35001C0351H **EFFECTIVE DATE** August 16, 2012







THE DRAINAGE ANALYSIS FOR THE SITE WAS PERFORMED IN ACCORDANCE WITH METHODS OUTLINED IN THE DEVELOPMENT PROCESS MANUAL (DPM) CHAPTER 6, ARTICLE 6-2, SECTION 6.2 (A), ENTITLED "PROCEDURE FOR 40-ACRE OR SMALLER BASINS." THE DESIGN STORM USED FOR BOTH EXISTING AND DEVELOPED CONDITIONS IS THE 100-YEAR 6-HOUR STORM EVENT FOR RUNOFF. RUNOFF VOLUMES FOR BOTH EXISTING AND PROPOSED CONDITIONS WERE CALCULATED WITH 100-YEAR 6-HOUR EXCESS PRECIPITATION VALUES FROM THE DPM BASED ON ZONE 3. PEAK DISCHARGE RLOW RATES WERE CALCULATED USING THE RATIONAL METHOD FOR THE 100-YEAR EVENT ASSUMING A TIME OF CONCENTRATION DURATION OF 12 MINUTES IN ZONE 3. THE REQUIRED STORMWATER QUALITY VOLUME (SWQV) WAS CALCULATED AS SPECIFIED FOR REDEVELOPMENT PROJECTS IN THE DPM PART 6-12 STORMWATER QUALITY AND LOW-IMPACT DEVELOPMENT

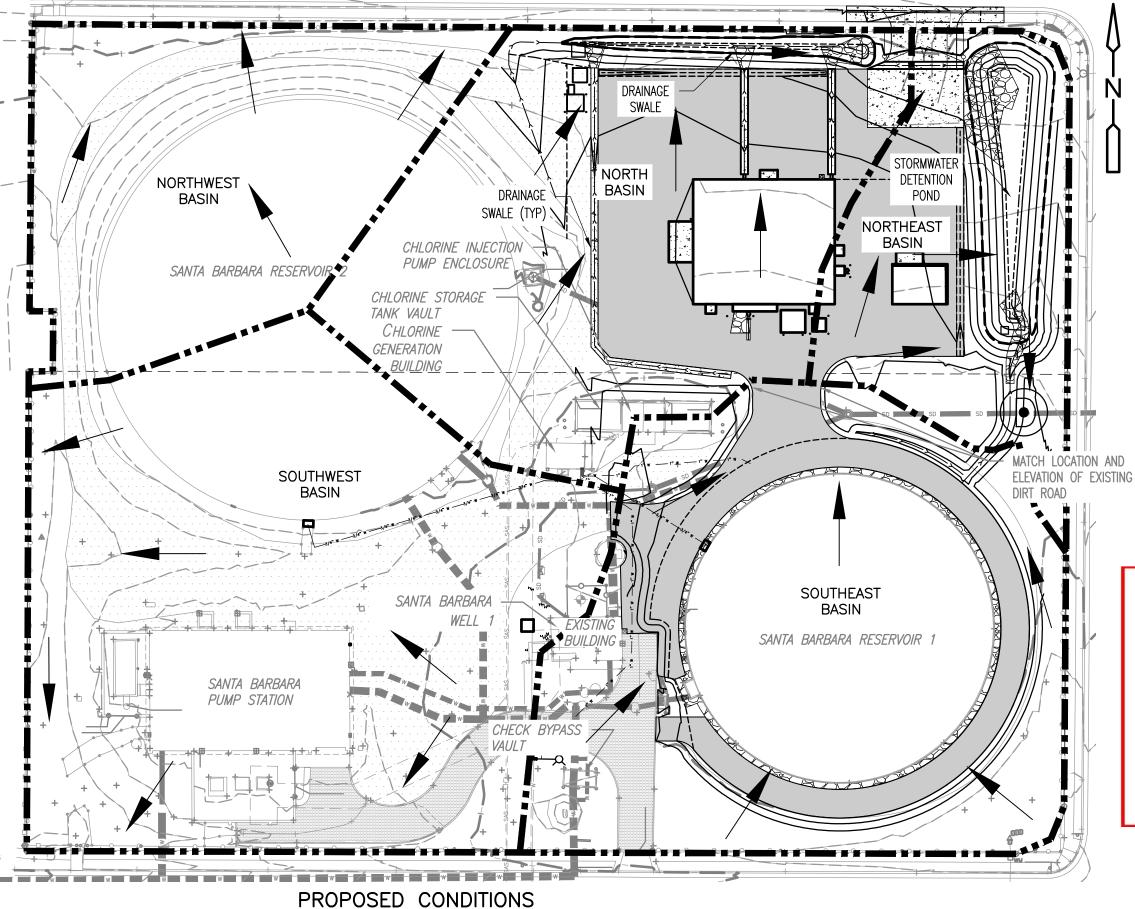
EXISTING CONDITIONS:

NO.

DATE

THE SANTA BARBARA PUMP STATION AND RESERVOIR SITE IS LOCATED JUST EAST OF WELLESLEY DRIVE NE, BETWEEN LOS ARBOLES AVENUE NE AND CLAREMONT AVENUE NE. THE SITE HOUSES TWO WATER STORAGE RESERVOIRS, SEVERAL BUILDINGS, UNDERGROUND STRUCTURES, AND UNDERGROUND PIPING. LAND TREATMENT IS A MIXTURE OF ASPHALT PAVEMENT, DIRT ROADS, AND UNPAVED AREAS WITH GENTLE SLOPES BETWEEN 0 TO 10%. UNDER EXISTING CONDITIONS, THE SITE IS COMPRISED OF FIVE DRAINAGE SUBBASINS, ALL OF WHICH DISCHARGE SURFACE RUNOFF INTO THE PUBLIC RIGHT-OF-WAY TO THE NORTH, EAST, AND SOUTH OF THE SITE. NO SUBSURFACE STORMWATER COLLECTION SYSTEM EXISTS ON THE SITE. WHILE A 24-INCH DIAMETER REINFORCED CONCRETE PIPE (RCP) ARE USED TO CONVEY EMERGENCY OVERFLOW FROM THE RESERVOIRS TO THE COA MUNICIPAL STORM DRAIN SYSTEM ON WELLESLEY DR NE. NO STORMWATER RUNOFF CURRENTLY DISCHARGES INTO THE COA STORM DRAIN

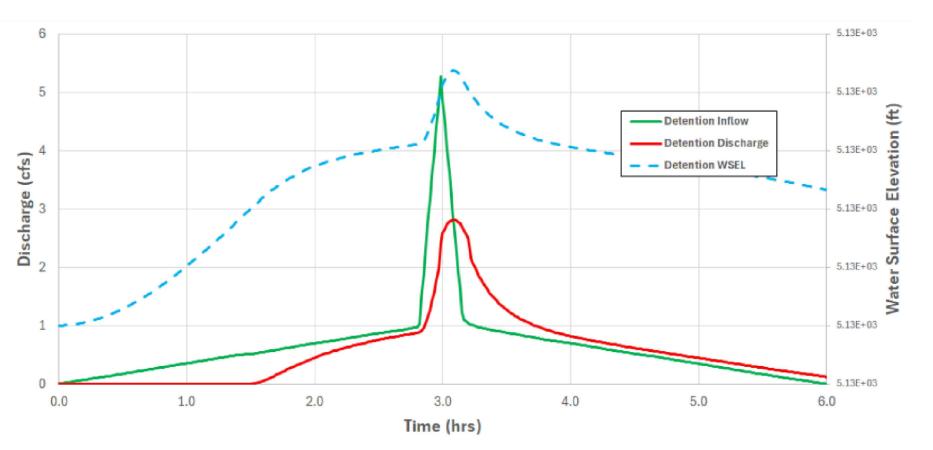
SUBBASIN	EXISTING CONDITIONS						PROPOSED CONDITIONS (PRIOR TO ATTENUATION)								
	TOTAL SURFACE AREA (ACRES)	IMPERVIOUS AREA (D) (ACRES)	PERVIOU S AREA (C) (ACRES)	PERVIOU S AREA (A) (ACRES)	EXCESS PRECIPITATIO N WEIGHTED E	RUNOFF VOLUME 100 YEAR 6 HOUR STORM(CF)	PEAK FLOW RATIONAL METHOD (CFS)	TOTAL SURFACE AREA (ACRES)	IMPERVIO US AREA (D) (ACRES)	PERVIOU S AREA (C) (ACRES)	PERVIOU S AREA (A) (ACRES)	EXCESS PRECIPITATIO N WEIGHTED E	RUNOFF VOLUME 100 YEAR 6 HOUR STORM(CF)	PEAK FLOW RATIONAL METHOD (CFS)	SWC (CF
NORTH BASIN	0.72	0.14	0.43	0.15	1.30	3,402	2.29	0.72	0.43	0.11	0.19	1.86	4,876	2.61	402
NORTHEAST BASIN	0.38	0.00	0.15	0.23	0.84	1,156	0.48	0.38	0.13	0.00	0.25	1.34	3,512	0.60	126
SOUTHEAST BASIN	0.86	0.30	0.16	0.40	1.41	4,412	1.86	0.86	0.50	0.00	0.37	1.77	5,541	2.24	469
TOTAL	1.96	0.44	0.75	0.78		8,970	4.63	1.96	1.06	0.11	0.80		13,929	5.46	996
IOTE: THE NORTHWE	ST AND SC	OUTHWEST BAS	INS WILL F	EMAIN UN	CHANGED FROM	M THE EXISTIN	G TO PROPO	SED CONDI	TIONS.						
100-YR, 6-HR EXCESS PRECIPITATION, E (ZONE 3)				RATIONAL	METHOD Q_PE	AK (CFS) = CiA						SWQV = 0.26 ir	nches/12 * IM	PERVIOUS AR	EA
E_C	1.09	in		C_C	0.64		COEFFICIEN	T FOR LANI	D TREATMEN	ГС					
E_D	2.58	in		C_D	0.91		COEFFICIENT		T FOR LAND TREATMENT D						
E_A	0.67			C_A	0.37		COEFFICIEN	T FOR LANI	D TREATMEN	ΓA					
VEIGHTED E (IN) = (E			(%D)	i	4.96	IN/HR	100-YEAR, 1	2-MINUTE							
/_6-HR (ACRE-FT) = (\	NEIGHTED	E)(AREA)/12													

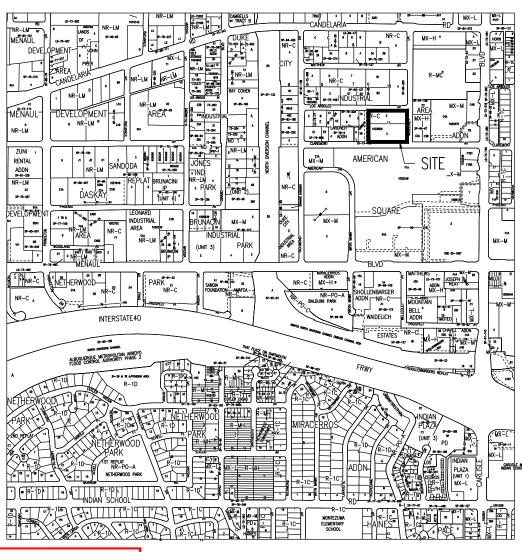


PROPOSED CONDITIONS:

THE SITE: NORTH, NORTHEAST, AND SOUTHEAST. RUNOFF IN THE NORTH BASIN WILL BE DIRECTED OVERLAND TO A NEW DRAINAGE SWALE THAT RUNS ALONG THE NORTH PERIMETER OF THE SITE BEFORE DISCHARGING INTO A NEW DETENTION POND LOCATED IN THE NORTHEAST SUBBASIN. RUNOFF FROM THE SOUTHEAST SUBBASIN WILL ALSO BE ROUTED OVERLAND INTO A SWALE THAT DISCHARGES INTO THE NEW DETENTION BASIN IN THE NORTHEAST CORNER OF THE SITE.

BASED ON E-MAIL COMMUNICATION FROM COA HYDROLOGY ON DECEMBER 4, 2024, WHILE EXISTING SITE RUNOFF DO NOT CURRENTLY DISCHARGE INTO THE COA STORM DRAIN SYSTEM ON WELLESLEY DR NE, THE PROJECT IS ALLOWED TO CONNECT AND DISCHARGE POST-DEVELOPMENT RUNOFF TO THE SYSTEM ON WELLESLEY DR NE. THE PROJECT HAS BEEN GRANTED AN EXEMPTION FROM CONDUCTING A DOWNSTREAM ANALYSIS AS LONG AS THE PROPOSED DETENTION POND AND ORIFICE OUTLET STRUCTURE IS DESIGNED TO RELEASE POST-DEVELOPMENT STORMWATER RUNOFF AT OR BELOW THE CALCULATED HISTORICAL RATE.





City of Albuquerque **Planning Department Development Review Services** HYDROLOGY SECTION **APPROVED** 9/24/2025 sutto Mars H16D100

HALL NOT PREVENT THE CITY OF ALBUQUEROUE FROM REQUIRIN

LEGAL DESCRIPTION: TRACTS 2 AND 3, PLAT OF TRACTS 1, 2, AND 3, BLOCKS 6 AND 11, ALBUQUERQUE, NEW MEXICO.

H-16-Z

BASED ON THE FEMA NATIONAL FLOOD HAZARD LAYER FIRMETTE, THE SITE IS NOT LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA. THE NEAREST MAPPED FLOOD ZONES (ZONES A AND AO) ARE MORE THAN 0.20 MILES AWAY AND DO NOT IMPACT THE SITE.

SITE AREA: 3.5 AC

DRAINAGE ANALYSIS RESULTS:

FOR THE THREE IMPACTED SUBBASINS, THE PEAK RUNOFF UNDER EXISTING CONDITIONS IS 4.63 CFS DURING A 100-YEAR 6-HOUR STORM EVENT. FOR THE THREE IMPACTED SUBBASINS, THE PEAK RUNOFF UNDER PROPOSED CONDITIONS WITHOUT ATTENUATION 5.46 CFS DURING A 100-YEAR 6-HOUR STORM EVENT. FOR THE THREE IMPACTED SUBBASINS, THE SWQV UNDER PROPOSED CONDITIONS IS 996 CF REQUIRED TO BE RETAINED ONSITE

TO ATTENUATE THE POST-DEVELOPMENT 100-YEAR 6-HOUR HYDROGRAPH, A DETENTION POND IS PROPOSED IN THE NORTHEAST CORNER OF THE SITE TO PROVIDE STORAGE VOLUME TO CAPTURE THE HIGHER STORM INFLOW BEFORE DISCHARGING TO WELLESLEY DR NE AT OR BELOW HISTORICAL RUNOFF RATES. THE POND OUTLET STRUCTURE CONSISTS OF A 12-INCH ORIFICE THAT DISCHARGES TO A NEW 15-INCH RCP CONNECTOR TO THE EXISTING 24-INCH RESERVOIR OVERFLOW RCP DRAIN. BASED ON A MEETING WITH COA HYDROLOGY ON MAY 1, 2025, THE HYDRAULIC GRADE LINE (HGL) IN THE DOWNSTREAM STORM DRAIN SYSTEM ON WELLESLEY DR NE IS NOT EXPECTED TO BACK UP TO THE EXISTING 24-INCH RESERVOIR OVERFLOW RCP DRAIN. THEREFORE, NO TAILWATER CONDITIONS IN THE 24-INCH RESERVOIER OVERFLOW RCP DRAIN WAS ASSUMED FOR THE DESIGN OF THE NEW DETENTION POND AND ORIFICE OUTLET STRUCTURE.

A SWMM MODEL WAS DEVELOPED ALONG WITH A SIMPLIFIED HYDROGRAPH TO ROUTE THE 100-YEAR, 6-HOUR STORM THROUGH THE DETENTION POND. THE HYDROGRAPH PLACED THE PEAK FLOW RATE OF 5.46 CFS LINEARLY INTERPOLATED VALUES FROM TIME 0:00 AND 6:00, AND THEN APPLIED A CONSTANT REDUCTION FACTOR TO EACH INTERPOLATED VALUE UNTIL THE TOTAL RUNOFF VOLUME EQUATED TO TOTAL BASIN RUNOFF OF 13,929 CF. THE SYNTHETICALLY DEVELOPED SITE INFLOW HYDROGRAPH WAS ENTERED INTO THE SWMM MODEL AS A TIME-SERIES WITH 10-MINUTE INCREMENTS AND RESULTS WERE CALCULATED ON 1-MINUTE INCREMENTS. THE MODEL WAS RUN FOR A TOTAL OF 8-HOURS TO ENSURE ALL FLOW WAS EITHER RETAINED OR DISCHARGED. THE GRAPH BELOW SHOWS THE INFLOW AND OUTFLOW HYDROGRAPHS ALONG WITH THE POND STORAGE OVER TIME. THE MODEL SHOWS THAT WITH A 12-INCH ORIFICE SET AT INVERT ELEVATION 5133 FT, THE RESULTING PEAK WAS SURFACE ELEVATION IS APPROXIMATELY 5134.19 DURING THE 100-YEAR, 6-HOUR STORM AND THE PEAK ATTENUATED DISCHARGE FLOW RATE IS APPROXIMATELY 2.8 CFS.

> THIS CONTRACT ALLOWS THE OWNER TO MAKE PAYMENT WITHIN 45 DAYS AFTER SUBMISSION

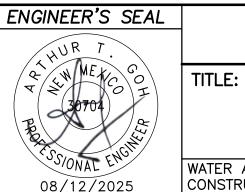
SCALE: DESIGN TRACKING 1"=50' DATE: 08/25 DESIGNED BY E. BABCOCK DRAWN BY: D. KURIL DATE: 08/25 **ATTENTION** CHECKED BY: A. GOH DATE: 08/25 0 1/2" 1" DATE: CROSS CHK'D BY: P. TAURASI 08/25 DATE: GRAPHIC SCALE APPROVED BY: 08/25 THIS BAR MEASURES 1' MAPS/RECORDS INFO. AT FULL SCALE (ANSI D)

REVISION NO. & DESCRIPTION | BY

SUBMITTED BY: **CDM** 6001 Indian School Road, N.E. Suite 310 Albuquerque, New Mexico 87110

Tel: (505) 243-3200

AS BUILT INFORMATION CONTRACTOR COMPANY NAME CONSTRUCTION MMM. YYYY BEGIN DATE INSPECTOR'S ACCEPTANCE BY DATE MMM. YYYY COMPANY NAME INSPECTOR'S NAME NAME SUBSTANTIAL COMPLETION DATE MMM. YYYY COMPANY NAME DATE MMM. YYYY CORRECTED BY



OF AN UNDISPUTED REQUEST FOR PAYMENT. ALBUQUERQUE BERNALILLO COUNTY WATER UTILITY AUTHORITY

SANTA BARBARA ARSENIC TREATMENT FACILITY DRAINAGE PLAN - HYDROLOGY

MAP NO. H-16-Z SHEET WATER AUTHORITY C-14ACONSTRUCTION PROJECT NO. 2308.010

