CITY OF ALBUQUERQUE

Planning Department Alan Varela, Director



Mayor Timothy M. Keller

May 22, 2023

John Stapleton, P.E. Respec 5971 Jefferson St. NE Albuquerque, NM 8710

RE: Mario's Broadway Conceptual Grading and Drainage Plan Engineer's Stamp Date: 05/08/23 Hydrology File: M14D006

Dear Mr. Stapleton:

Based upon the information provided in your submittal received 05/09/2023, the Conceptual Grading & Drainage Plan is preliminary approved for action by the Development Hearing Officer (DHO) on Preliminary Plat/Final Plat.

PO Box 1293 PRIOR TO BUILDING PERMIT:

- Albuquerque
- 1. Please submit the Grading & Drainage Plan to Hydrology for review and approval. This digital (.pdf) is emailed to <u>PLNDRS@cabq.gov</u> along with the Drainage Transportation Information Sheet.

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 (Dough Hughes, PE, <u>jhughes@cabq.gov</u>, 924-3420) 14 days prior to any earth disturbance.

If you have any questions, please contact me at 924-3995 or <u>rbrissette@cabq.gov</u>.

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	g 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 (# OF LOTS)	RESIDENCE DRB SITE ADMIN SITE
IS THIS A RESUBMITTAL?:	Yes	No
DEPARTMENT: TRAFFIC/ TRA	NSPORTATION	HYDROLOGY/ DRAINAGE
Check all that Apply:		TYPE OF APPROVAL/ACCEPTANCE SOUGHT:
TYPE OF SUBMITTAL:		BUILDING PERMIT APPROVAL
ENGINEER/ARCHITECT CERTIFI	CATION	CERTIFICATE OF OCCUPANCY
PAD CERTIFICATION		PRELIMINARY PLAT APPROVAL
CONCEPTUAL G & D PLAN		SITE PLAN FOR SUB'D APPROVAL
GRADING PLAN		SITE PLAN FOR BLDG. PERMIT APPROVAL
DRAINAGE MASTER PLAN		FINAL PLAT APPROVAL
ELOODELAIN DEVELOPMENT P	ERMIT APPI IC	SIA/ RELEASE OF FINANCIAL GUARANTEE
FLEVATION CERTIFICATE		FOUNDATION PERMIT APPROVAL
		GRADING PERMIT APPROVAL
TRAFFIC CIRCULATION LAYOU	T (TCL)	SO-19 APPROVAL
TRAFFIC IMPACT STUDY (TIS)	- ()	GRADING/PAD CEPTIFICATION
OTHER (SPECIFY)		WORK ORDER APPROVAL
PRE-DESIGN MEETING?		CLOMR/LOMR
		FLOODPLAIN DEVELOPMENT PERMIT
		OTHER (SPECIFY)
DATE SUBMITTED:	Bv	

COA STAFF:

ELECTRONIC SUBMITTAL RECEIVED:

FEE PAID:





THIS SITE WAS HISTORICALLY PART OF THE GENERAL ELECTRIC SITE WITH THE EASTERN 2/3RDS OF THAT BEING PARKING AND THE WESTERN 1/3RD OCCUPIED WITH BUILDINGS. THE ATTACHED SHEET CONTAINS A "PRELIMINARY DESIGN FOR PROPOSED DRAINAGE IMPROVEMENTS" PRODUCED IN 1984 BY GE AND UPDATED THROUGH 1988 WITH SITE IMPROVEMENTS UP TO THAT POINT. THE HISTORIC DRAINAGE PATTERN MADE USE OF TWO 50" X 31" CMP SQUASH PIPE INLETS TO THE ADJACENT SAN JOSE DRAIN. THE ENTIRE SITE, WHICH WAS ALMOST EXCLUSIVELY IMPERVIOUS AREA DRAINED FROM WEST TO EAST TO THESE TWO INLETS TO THE DRAIN. FOR THE NORTHERN INLET THERE WAS/IS AN ASPHALT CHANNEL THAT COLLECTS WATER ALONG THE NORTHERN BOUNDARY OF THE PROPERTY AND TRANSPORTS THE FLOW TO THE NORTHERN INLET TO THE DRAIN. THE CMP PIPES AND THE ASPHALT CHANNEL ARE STILL IN PLACE TODAY. THERE IS ALSO AN INLET ON THE MID-EASTERN SIDE OF THE SITE THAT WILL REMAIN IN PLACE. SUBSEQUENTLY THE BUILDINGS ON THE WESTERN 1/3RD OF THE SITE HAVE BEEN DEMOLISHED AND THIS AREA IS NOW COMPACTED EARTH.

THE EXISTING CONDITION WITH THE BUILDINGS REMOVED RESULTS IN A LOWER DISCHARGE RATE AND BASED ON RECENT SURVEY DATA ALSO RESULTS IN PART OF THE WESTERN PORTION DRAINING WEST ONTO A NEIGHBORING PROPERTY AND PART DRAINING NORTH TO DESCANO ROAD SE. (SEE EXISTING SUBBASINS ON THIS SHEET). THE MAJORITY OF THE SITE STILL DRAINS TO THE TWO SAN JOSE DRAIN INLETS MENTIONED ABOVE.

HYDROLOGY CALCULATIONS FOR THE SITE ARE PERFORMED IN ACCORDANCE WITH THE ALBUQUERQUE DEVELOPMENT PROCESS MANUAL (DPM) ARTICLE 6.2 THE REQUIRED WATER QUALITY VOLUME IS CALCULATED BY MULTIPLYING THE IMPERVIOUS AREA BY THE FIRST FLUSH RUNOFF VALUE OF 0.26". ALL HYDROLOGIC AND HYDRAULIC

THE PROPOSED CONDITION, AS SHOWN ON THIS SHEET, INCREASES THE AMOUNT OF IMPERVIOUS AREA RELATIVE TO THE EXISTING CONDITION, BUT APPROXIMATELY MATCHES THE AMOUNT OF IMPERVIOUS AREA RELATIVE TO THE HISTORIC CONDITION. THE INTENT IS TO CONTINUE TO DRAIN THE SITE FROM WEST TO EAST TO THE TWO DRAIN INLETS AND TO ENSURE THAT THE SMALL AREAS DRAINING WEST AND NORTH ARE RESTORED TO THE HISTORIC DRAINAGE PATTERN AND ALSO DRAIN TO THE SAN JOSE DRAIN. THE ASPHALT CHANNEL WOULD STAY IN PLACE AND CONTINUE TO HELP DIRECT RUNOFF FLOWS TO THE NORTHERN INLET. SUBBASIN 1 DRAINS TO THE ASPHALT CHANNEL IN SUBBASIN 2 AND A DRAINAGE EASEMENT WILL NEED TO BE PROVIDED ACROSS SUBBASIN 2 TO ACCOMMODATE THESE FLOWS. THE FLOWRATE FROM SUBBASIN 1 IS 16.4 CFS. A MANNING'S EQUATION CAPACITY CHECK WAS PERFORMED FOR THE CHANNEL AND IS PROVIDED ON THIS SHEET. ULTIMATELY SUBBASINS 1 AND 2 DISCHARGE 33.4 CFS TO THE SAN JOSE DRAIN VIA THE EXISTING 50" X 31" NORTHERN INLET TO THE DRAIN. CAPACITY CALCULATIONS FOR THE NORTHERN

SUBBASIN 3 WILL DRAIN THROUGH SUBBASIN 4, THROUGH A STORM DRAIN THAT TIES TO THE SOUTHERN 50" X 31" CMP INLET TO THE DRAIN. THE STORM DRAIN WILL NEED TO CONVEY 15.7 CFS AND THE TOTAL FLOW FROM BOTH SUBBASINS WILL BE 30.9 CFS TO THE SOUTHERN INLET. CAPACITY CALCS ARE PROVIDED ON THIS SHEET. THE PROPOSED ROADWAY TO SUPPORT THIS SUBDIVISION WILL PROVIDE AN INLET TO COLLECT THE WATER FROM SUBBASIN 3 INTO THE PROPOSED STORM DRAIN. SUBBASIN 4 WILL DRAIN TO THE EXISTING INLET AND CMPA PRESENT IN THAT SUBBASIN. FLOW FROM SUBBASINS 3 AND 4 (30.9 CFS) WILL DISCHARGE TO THE SAN JOSE DRAIN VIA THE EXISTING 50"X31" CMPA INLET INTO THE DRAIN. CONCEPTUAL GRADING IS SHOWN ON THIS SHEET. THIS GRADING COULD BE ADJUSTED AS DEFINITIVE. USERS ARE PLACED ON THE SITE IN THE

IT IS PROPOSED THAT THE DEVELOPMENT PROVIDE FOR THE WATER QUALITY REQUIREMENTS BY PAYING A "FEE IN LIEU" DUE TO THE SITES PROXIMITY TO AND DIRECT DISCHARGE TO THE SAN JOSE DRAIN WHICH IS AN UNLINED CHANNEL DOWNSTREAM FROM THIS SITE. A PERMEABLE BOTTOM CHANNEL LIKE THE SAN JOSE DRAIN SHOULD BE

V - Shaped Asphalt Channel (V-DITCH) - Manning's Capacity					
Input					
1st side slope, rise/run (s1 - ft/ft), enter 0.0 for vertical slope	0.33				
2nd side slope, rise/eun (s2 - ft/ft), enter 0.0 for vertical slope	0.33				
Depth of flow in channel (d - ft)	2				
Slope of energy grade line, rise/run (S - ft/ft)	0.0045				
Manning's Roughness Coefficient (n)	0.015				

Width of the water surface (w) =	12.121 ft
Area (A) =	12.121 sf
Wet perimeter (Wp) =	12.764 ft
Hydraulic Radius (R) =	0.950 ft
Discharge, Q =	77.824cfs

Existing Hydrolo	gy Calculations

The following calculations are based on Albuquerque's Development Process Manual (DPM), Article 6-2. Runoff Rate:

Treatment Type Areas

Existing Subbas	in AreaA (ac)	AreaB (ac)	AreaC (ac)	AreaD (ac)	Total (ac)
1	0.00	0.00	1.62	4.86	6.48
1A	0.00	0.00	0.37	0.00	0.37
2	0.00	0.00	1.94	5.80	7.74
2A	0.00	0.00	0.81	0.00	0.81

100-yr Peak Discharge values based on Zone 2 from Table 6.2.14							
	QA (cfs/ac)	QB (cfs/ac)	QC (cfs/ac)	QD (cfs/ac)			
	1.71	2.36	3.05	4.34			
Peak Discharge calculation for a 100-yr, 24-hour storm event from equation 6.6							

Existing Subbasin	Discharge (cfs)
1	26.0
1A	1.1
2	31.1
2A	2.5

Proposed Hydrology Calculations

The following calculations are based on Albuquerque's Development Process Manual (DPM), Article 6-2. Runoff Rate:

Treatment Type Areas					
Proposed Subbasin	AreaA (ac)	AreaB (ac)	AreaC (ac)	AreaD (ac)	Total (ac)
1	0.00	0.20	0.20	3.53	3.93
2	0.00	0.20	0.20	3.66	4.06
3	0.00	0.19	0.19	3.39	3.77
4	0.00	0.18	0.18	3.28	3.64
Peak Discharge calculation	n for a 100-yr,	24-hour storm	event from ed	quation 6.6	
Proposed Subbasin	Discharge (cfs)				
1	16.4				
2	17	' .0			
3	15	5.7			
4	15	5.2			
Water Quality:					
Required Water Quality vo	lume for first fl	ush of 0.26" p	er DPM, Articl	e 6-12	
Proposed Subbasin	Req Volur	me (cu. ft.)	Provided Vo	lume (cu.ft.)	Net Volume (cu. ft
1	3.3	132		n	0

1	3,332	0	0
2	3,454	0	0
3	3,199	0	0
4	3,096	0	0

Summary Cumulative Discharge:						
Subbasin	Discharge in San Jose Drain(cfs)					
Proposed	64.3					
Existing	60.7					
Historic	63.9					





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J				
1.1	2.5	5.0	-	

NATIONS (LAND AREA SHOWN)			REVISIONS			
AGE SWALES	<u>NO.</u>	DATE	DESCRIPTION	<u>NO.</u>	DESC	CRIPTION
D FLOW S TO SAN JOSE DRAIN, PLUGGED	Â	4-3-8 5	BUILDING 14-F, 1000 S.F. SHED ROOF ADDITION TO BUILDING 14-DD OVER EXISTING PAVED AREA.	Â	10-10-87	STORAGE YARD, 18,171 S.F. OVER EXISTING DIRT. SITE IMPERVIOUS IN DRAINAGE STU
D SOLID COVERS		4-4-85	5440 S.F. SHED ROOF ADDITION TO SOUTH OF BUILDING 14-C &, 14-D REPLACING 2 EXISTING EQUIPMENT SHEDS.			DRAIN SITE TO EAST TO NEW TO MANHOLE 108. THEREFORE BE TO THE ONSITE AREA 100
	3	7-15-86	450 S.F. SHED ROOF ADDITION TO WEST SIDE OF BUILDING 21-D OVER EXISTING PAVED AREA.	12	7-14-88	YF120, 3,132 SF ADDITION T OVER 100% IMPERVIOUS AREA. EAST AND SOUTH TO INLET 30
LOCAL OR POTENTIAL MAJOR	4	7-15-86	BUILDING 21-BB, 9410 S.F. PITCHED ROOF ADDITION OVER EXISTING PAVED AREA. ROOF GUTTER BETWEEN BUILDINGS 21-D AND 21-BB IS LINKED DIRECTLY TO AREA INLET 808.			PREVENTED FROM ENTERING TH CURBING.
RELEASES TO DRAINS	È	7-25-86	MAINTENANCE TRAINING BUILDING, 1792 S.F. LOCATED OVER 100% IMPERVIOUS AREA BUILDING HAS BEEN RELOCATED SEE			
ES TION	Â	7-25-86	CMMC, 8000 S.F. ADDITION TO BUILDING 14- D, OVER EXISTING PAVED AREA. (SEE EARLIER SUBMITTAL, DATED 6-30-86, REGARDING 100-YEAR FLOOD PLAIN.)			
2F	A	11-4-86	MAINTENANCE TRAINING BUILDING, 1792 S.F., LOCATED OVER 100% IMPERVIOUS AREA.			
	8	1-5-87	AUTOCLAVE PHASES I & II, 1638 S.F., LOCATED OVER 100% IMPERVIOUS AREA.			B
NTAINMENT ENT, CAPACITY RELATED ENT, MAINTENANCE & CAPACITY RELATED		3-24-87	REFRIGERATED TRAILER AREA, 6020 S.F. ADDITIONAL PAVING OVER EXISTING DIRT. SITE CONSIDERED AS 100% IMPERVIOUS IN DRAINAGE STUDY SO NO ADDITIONAL FLOWS ARE GENERATED. SITE SLOPES TO EAST AND DRAINS TO THE ONSITE AREA 100 STORM DRAIN SYSTEM.			
		11-1-87	AUTOCLAVES 5 & 6, 1780 S.F., LOCATED OVER 100% IMPERVIOUS AREA. STORM DRAIN REROUTED AS SHOWN. SUBDRAINAGE AREAS REVISED AS SHOWN TO MAINTAIN SITE DRAINAGE.			ALL MAT
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T MARKEN										encosan a ()-	
.1											
		1. STOR	M DRAIN ELI	Rim or	Main I	ine	Other Invert	Flevetions			
		AREA 100	Facility	Elevation	Downstream	28.53	and Commen	ts			
I ED KON SWALES		101 101A 102A 102B 103 103A 104 105 105A 106 106A 107 107A 108 108A 109 109A 109B 109C 109D 109F 109G	UUTTAII CB MH CB CB CB CB GR MH CB MH CB MH CB MH CB CB CB CB CB CB CB CB CB CB CB CB CB	39.27 39.38 38.29 39.44 38.66 38.37 38.45 37.90 38.22 37.95 40.54 340.54 340.56 39.21 38.49 39.29 39.41 38.94 38.95	34.92 37.74 30.76± 35.04 30.91± 31.02 35.21 32.00 36.22 33.64 36.29 34.76 37.54 35.81 36.63 37.29 38.31	20.53 35.39 30.76± 30.91± 31.22 32.00 33.79 34.76 35.87E. 36.74 37.29	in steam cle 34.27 NE 33.47 NE, 35 34.34 ENE, 3 34.88 ENE 34.61 NE two	aning bldg .62 N to CB 5.84 ENE to C pipes, 35.87	18 • SE		
-	Filedon a trada a	109H 109I 109J 109K 109L	CB CB CB CB CB	39.31 38.69 38.90 38.91 38.96	36.46* 37.45 37.52 37.71	36.67 37.50 37.66	*two pipes	in second			
PRIORITY I		109M AREA 200 201 202	CB Outlet CB	34.62	32.17	33.87				-	
POTUTO		203 204 205	Outlet CB Outlet	37.86	36.06	35.25					
o to		301 302 302 302A 302B 303 304 305 306 T AREA 400	Outlet GR MH CB Gr MH GR MH rench Dr rench Dr Outlet	38.16 38.09 39.01 38.39 38.55 39.44 39.89	30.76 36.47 37.58 32.34 32.80 38.01 38.89	29.76 30.84 32.34 36.80 38.01 	35.26 S, 35, 37.56 E 33.59 W	.01 N			
		402 AREA 500 501 502 503 504 504A 1 504B 1 505 1 506	CB Outlet Gr MH CB Trench Dr Trench Dr Trench Dr CB	38.71 38.81 39.27 39.65 39.71 39.45 39.45	32.51± 33.01± 36.12 37.25 38.21 37.47 38.01	31.36 32.51± 33.01±				a france of the	
		507 508 509 510 AREA 600 AREA 700	CB Outlet CB CB	39.65 36.75 38.80	38.55 32.63 S 34.70 S 37.07	32.67 C 34.60 C	ent. 32.78 N ent. 34.65 N No G.E. fac:	lities	C Distance		
		701 702 703 704 T 705 T 706 706A 706B 706C 706D T 707 708 709 709A	Outlet C6 MH rench Dr mhh CB CB CB CB rench Dr CB MH CB CB CB	36.75 37.63 38.36 38.07 37.83 38.31 38.26 38.28 , 37.62 37.98 37.99 38.05	33.15 33.03 34.67 37.17 33.73 36.70 36.42 36.41 34.46 35.89 36.35	31.53 33.14 32.98 S 34.67 33.87 35.30 35.64 	33.19 N 33.90 W				
DNAL PAVING		AREA 800 801 801A 802 803 804 805 806 805 806 805 808 Notes:	Outlet Inlet Outlet CB Inlet Outlet MH CB	35.73 35.81 37.62 37.87	32.76 32.86 33.41 33.79 34.58 33.87 34.88	32.37 33.41 33.86 32.89 33.87 34.88					
NO ADDITIONAL RADES WILL INLET TIED DRAINAGE WILL DRAIN SYSTEM. DING 7, LOCAT	ED	MH - Gr M CB - Blar ± er 2. RECU	Manhole - HH - Grated Catch Bas k entries entries in tries are JRRING RELE	solid cove cover manh in indicate not dicate not from measur ASES TO STO	r ole odata acquire applicable. rements at cen DRM DRAINS FKU	d. ter of man M BUILDING	holes. S			and the second second	
ASTERLY FLOW JOSE DRAIN BY	IS	Loc. No.	Heat exch	Source anger in Bu	ilding 14CC	Type o 6 cubic	f Flow feet per minu	te		autor .	
		2 3. DES	Between M	H 302 and 3 D STATUS, (303)THER DRAINAGE	Trickle FACILITIE	S				
Ţ.		Loc. P No. 5 1 4 2 4 3 4 4 8 5 4 6 5 7 4 8 4 9 4 10 1-	pe ize Ap Filt Catc Form Buil Air Air Wate Clea 1/4" Unkn	parent Sour er washer o h Basins at er pavement ding 10 ding 10 compressor compressor r reservoir ning vats, own	cce doorway doain cooling water cooling water sand trap building 7	Current Into'san No longe Inlet no Plugged Frequent Frequent In use Unknown Plugged	Status itary sewer r used t evident at outlet flows flows at outlet	JUL 15 19			
ED FIELD QUIRED FOR	SURVEYS	WILL SIGNS.			EXH	IIBIT	NO. 2				
HERWISE SPECIFIED	TYPE	CNATURE				GENER	AL 🛞 E	LECTRIC			
	SI BRAWN CHECKED ENGRG INFG INFG INFTL	J.C.D. H.N.P. H.N.P	J	INLY 7,1984 IULY 7,1984 IULY 7,1974	PROPOS		INARY AINAGE	DESI IMPRO	GN /EMENTS		
USE ONLY					SCALE	182		SHEET			
and the second states of the s						ACTUAL		- I-men			