

CITY OF ALBUQUERQUE

Planning Department
Brennon Williams, Director



Mayor Timothy M. Keller

February 11, 2020

Rob Rayner
R2 Architectural Design and Consulting LLC.
PO Box 448
Albuquerque, NM 87103

RE: **Master Tech Auto**
304 Candelaria NW
Grading Plan Stamp Date: 2/4/20
Hydrology File: G14D093

Dear Mr. Rayner:

Based on the submittal received on 2/6/20, this project is approved for Building Permit.

PO Box 1293

Prior to Certificate of Occupancy (For Information):

Albuquerque

1. Engineer's Certification, per the DPM Chapter 22.7: *Engineer's Certification Checklist For Non-Subdivision is required.*

NM 87103

2. A Bernalillo County Recorded [Drainage Covenant \(No Public Easement\)](#) is required for the stormwater control pond. The original notarized form, exhibit A (legible on 8.5x11 paper), and recording fee (\$25, payable to Bernalillo County) must be turned into DRC (4th, Plaza del Sol) for routing. Please contact Charlotte LaBadie (clabadie@cabq.gov, 924-3996) regarding the routing and recording process for covenants. The routing and recording process for covenants can take a month or longer; Hydrology recommends beginning this process as soon as possible as to not delay approval for certificate of occupancy.

www.cabq.gov

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

Sincerely,

Dana Peterson, P.E.
Senior Engineer, Planning Dept.
Development Review Services

ZONE	LOCATION
1	West of the Rio Grande
2	Between the Rio Grande and San Mateo
3	Between San Mateo and Eubank, North of Interstate 40; and between San Mateo and the East boundary of Range 4 East, South of Interstate 40
4	East of Eubank, North of Interstate 40; and East of the East boundary of Range 4 East, South of Interstate 40

TREATMENT	LAND CONDITION
A	Soil un-compacted by human activity with 0 to 10 percent slopes Native grasses, weeds and shrubs in typical densities with minimal disturbance to grading, ground cover and infiltration capacity
B	Irrigated lawns, parks and golf courses with 0 to 10 percent slopes. Native grasses, weeds and shrubs, and soil un-compacted by human activity with slopes greater than 10 percent and less than 20 percent.
C	Soil compacted by human activity. Minimum vegetation. Unpaved parking, roads, trails. Most vacant lots. Gravel or rock on plastic (desert landscaping). Irrigated lands and parks with slopes greater than 10 percent. Native grasses, weeds and shrubs, and soil un-compacted by human activity with slopes at 20 percent or greater. Native grass, weed and shrub areas with clay or clay loam soils and other soils of very low permeability as classified by SCS Hydrologic Soil Group D.
D	Impervious areas, pavement and roofs.

ZONE	100-YR..			
	[2-YR., 10-YR.]			
	LAND TREATMENT TYPE			
	A	B	C	D
1	0.44 [0.00, 0.08]	0.67 [0.01, 0.22]	0.99 [0.12, 0.44]	1.97 [0.72, 1.24]
2	0.53 [0.00, 0.13]	0.78 [0.02, 0.28]	1.13 [0.15, 0.52]	2.12 [0.79, 1.34]
3	0.66 [0.00, 0.19]	0.92 [0.06, 0.36]	1.29 [0.20, 0.62]	2.36 [0.89, 1.50]
4	0.8 [0.02, 0.28]	1.08 [0.11, 0.46]	1.46 [0.27, 0.73]	2.64 [1.01, 1.69]

ZONE	100-YR..			
	[2-YR., 10-YR.]			
	INTENSITY			
	A	B	C	D
1	4.7 [1.84, 3.14]			
2	5.05 [2.04, 3.41]			
3	5.38 [2.21, 3.65]			
4	5.61 [2.34, 3.83]			

ZONE	TREATMENT 100-YR.			
	[2-YR., 10-YR.]			
	A	B	C	D
1	1.29 [0.00, 0.24]	2.03 [0.03, 0.76]	2.87 [0.47, 1.49]	4.37 [1.69, 2.89]
2	1.56 [0.00, 0.38]	2.28 [0.08, 0.95]	3.14 [0.60, 1.71]	4.70 [1.86, 3.14]
3	1.87 [0.00, 0.58]	2.60 [0.21, 1.19]	3.45 [0.78, 2.00]	5.02 [2.04, 3.39]
4	2.20 [0.00, 0.87]	2.92 [0.38, 1.45]	3.73 [1.00, 2.26]	5.25 [2.17, 3.57]

DESIGN CALCULATIONS:

SITE AREA = 21291 SQ. FT. = 0.489 ACRE
ZONE: TWO (2)

	EXCESS PRECIPITATION	PEAK DISCHARGE
TREATMENT A	0.53 in.	1.56 cfs/ac.
TREATMENT B	0.78 in.	2.28 cfs/ac.
TREATMENT C	1.13 in.	3.14 cfs/ac.
TREATMENT D	2.12 in.	4.70 cfs/ac.

	EXISTING CONDITIONS	PROPOSED CONDITIONS
	AREA	AREA
TREATMENT A	0.000 ac.	0.000 ac.
TREATMENT B	0.000 ac.	0.000 ac.
TREATMENT C	0.489 ac.	0.067 ac.
TREATMENT D	0.000 ac.	0.422 ac.

EXISTING EXCESS PRECIPITATION

Weighted E = [0.53 x 0.00 + 0.78 x 0.00 + 1.13 x 0.489 + 2.12 x 0.00] / 0.489 = 1.13 in.
V100-360 = 1.13 x 0.489/12 = 0.046 ac-ft = 2003.76 cf.

EXISTING PEAK DISCHARGE

Q100 = 1.56 x 0.00 + 2.28 x 0.00 + 3.14 x 0.489 + 4.70 x 0.00 = 1.54 cfs

PROPOSED EXCESS PRECIPITATION

Weighted E = [0.53 x 0.00 + 0.78 x 0.00 + 1.13 x 0.019 + 2.12 x 0.470] / 0.489 = 2.08 in.
V100-360 = 2.08 x 0.489/12 = 0.084 ac-ft = 3659.0 cf.
V100-10days = 0.084 + 0.489(3.95-2.35)/12 = 0.149 ac-ft = 6490.4 cf.

PROPOSED PEAK DISCHARGE

Q100 = 1.56 x 0.00 + 2.28 x 0.00 + 3.14 x 0.019 + 4.70 x 0.470 = 2.27 cfs

INCREASE

Q100 = 2.27 - 1.54 = 0.73 cfs
V100-360 = 3659.0 - 2003.7 = 1655.3 cf

NOTE:

Required Retention pond volume = V100-10days = 6490 CU. FT.

Provided Retention pond volume = 7381 CU. FT.

Freeboard = 3 in.

GENERAL NOTES:

- NO PERIMETER BOUNDARY CORNERS HAVE BEEN FIELD ESTABLISHED PER THIS SURVEY OF THE SUBJECT PROPERTY.
- NO SEARCH HAS BEEN MADE FOR EASEMENTS OF RECORD OTHER THAN SHOWN HERON.
- BUILDING ENTRANCE ELEVATION SHOULD BE AT LEAST 2 FEET HIGHER THAN THE HIGHEST GROUND ELEVATION AROUND THE BUILDING.
- NEW CONTOURS DENOTE TOP OF EXISTING GRADED AREA AS INDICATED.

EROSION CONTROL NOTES:

THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR MANAGEMENT OF STORM RUNOFF DURING CONSTRUCTION; HE SHALL ENSURE THAT THE FOLLOWING MEASURES ARE TAKEN:

- ADJACENT PROPERTY SHALL BE PROTECTED AT ALL TIMES BY CONSTRUCTION OF BERMS, DIKES, SWALES, PONDS, AND OTHER TEMPORARY GRADING AS REQUIRED TO PREVENT STORM RUNOFF FROM LEAVING THE SUBJECT SITE AND ENTERING ADJACENT PROPERTIES.
- INSTALL TEMPORARY SILT FENCE AT LOW POINT AROUND THE PROPERTY DURING CONSTRUCTION.
- ADJACENT PUBLIC RIGHT-OF-WAYS SHALL BE PROTECTED AT ALL TIMES FROM STORM WATER RUNOFF FROM THE SUBJECT SITE. NO SEDIMENT BEARING WATER SHALL BE PERMITTED TO ENTER PUBLIC STREET RIGHT-OF-WAYS.
- THE CONTRACTOR SHALL IMMEDIATELY AND THOROUGHLY REMOVE ANY AND ALL SEDIMENT FROM PUBLIC STREETS THAT HAS BEEN ERODED FROM THE SUBJECT SITE AND DEPOSITED THEREON.

CONSTRUCTION NOTES:

- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICES AT 260-1990 FOR THE ACTUAL FIELD LOCATION OF THE EXISTING SURFACE OF SUB-SURFACE UTILITIES.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION(S) OF ALL POTENTIAL OBSTRUCTIONS; SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM OF DELAY.
- ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE, STATE, AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
- ALL CONSTRUCTION WITHIN PUBLIC STREET RIGHT-OF-WAY(S) SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE/ BERNALILLO COUNTY STANDARDS AND PROCEDURES.
- ADJUST ALL CLEAN OUT RIMS, MANHOLE COVERS, AND VALVE AND METER BOXES TO FINISHED GRADE.
- CONTRACTOR SHALL NOTIFY ENGINEER IF EXISTING GROUND CONDITIONS VARY FROM THOSE SHOWN ON PLANS.
- THE CONTRACTOR SHALL GRADE ALL AREAS TO POSITIVELY DRAIN AWAY FROM BUILDINGS.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DEWATER AND STABILIZE ANY SOFT SOILS AS NEEDED TO REACH OPTIMUM SOIL CONDITIONS.
- ALL DISTURBED AREAS SHALL BE SODDED. CONTRACTOR SHALL BE RESPONSIBLE UNTIL GROWTH IS ESTABLISHED.
- THE EARTHWORK CONTRACTOR IS ULTIMATELY RESPONSIBLE TO IMPORT OR EXPORT MATERIAL AS NECESSARY TO ACHIEVE THE GRADES SHOWN ON THE CIVIL ENGINEER'S DOCUMENTS.
- ANY FILL MATERIAL SHALL BE PLACED IN LOOSE LIFTS NOT TO EXCEED 6" AND SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY.
- IT IS RECOMMENDED TO HAVE A GEOTECHNICAL INVESTIGATION TO DETERMINE THE SOIL CLASSIFICATION FOR THE POND, PERMEABILITY TEST OF EXISTING SOILS AND DETERMINE IF THER IS A NEED FOR LINING (USUALLY FAT CLAYS) AND COMPACTION REQUIREMENTS TO 95% OF THE PROCTORS.

SWALE DESIGN

DRAINAGE AREA = 11280 SQ. FT. = 0.259 ACRE
Q100 = 4.70 x 0.259 = 1.22 cfs

SWALE CAPACITY (Critical Section D)

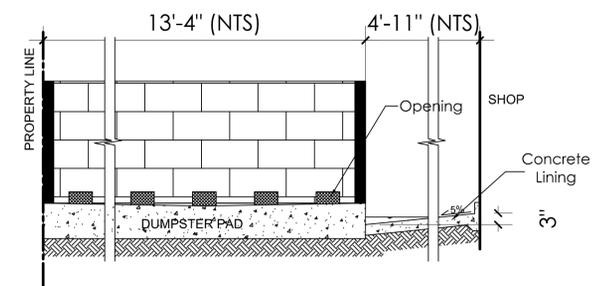
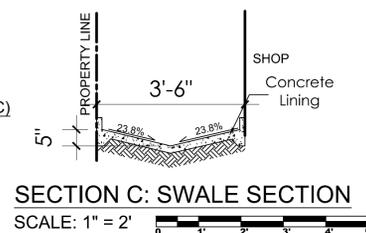
$Q = (K_p/n)(S_x)^{1.67}(S_w)^{0.5}(T)^{2.67}$
n=0.013 (Concrete Lining)
K_p=0.56
S_w=2%
S_x=5%
T=4'-11"
Q=2.88 cfs

SWALE CAPACITY (Section C)

$Q = 2(K_p/n)(S_x)^{1.67}(S_w)^{0.5}(T)^{2.67}$
n=0.013 (Concrete Lining)
K_p=0.56
S_w=2%
S_x=23.8%
T=1'-7"
Q=3.78 cfs

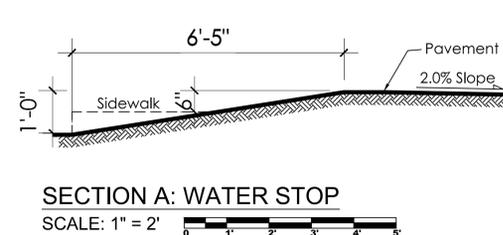
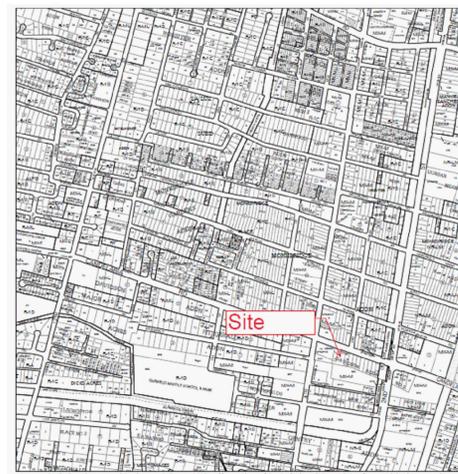
LEGEND:

- 4968 --- EXISTING CONTOUR
- 4968 — PROPOSED CONTOUR
- — — — — PROPERTY LINE



SECTION D: DUMPSTER PAD

SCALE: 1" = 2'



SECTION A: WATER STOP

SCALE: 1" = 2'

LEGAL DESCRIPTION: LT 7-A PLAT OF LOT 7-A DAVIDSON ADDITION NO. 2CONT

.4897 AC

UPC 101406039509640822.

BENCH MARK REFERENCE: NAVD 88

POINT NUMBER	NORTHING	EASTING	POINT ELEVATION
40001	1499000.4510'	1522739.0090'	4968.305'
40009	1498820.4240'	1522758.7930'	4967.886'
40011	1498802.5070'	1522804.1010'	4968.349'

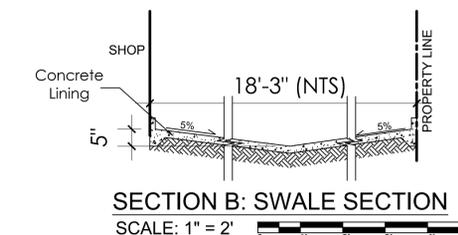
DRAINAGE COMMENTS:

AS SHOWN IN THE VICINITY MAP HEREON, THE SUBJECT SITE IS LOCATED AT THE SOUTHWEST CORNER OF CANDELARIA ROAD. N.W. AND 4TH STREET. N.W., ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO.

THE SUBJECT SITE IS PRESENTLY AN UNDEVELOPED PROPERTY; THE PROPOSED PLN AS SHOWN HEREON IS TO CONSTRUCT A 2900 SQ. FT. OFFICE BUILDING AND A 4000 SQ. FT. SHOP BUILDING IN ADDITION TO THE PARKING LOT.

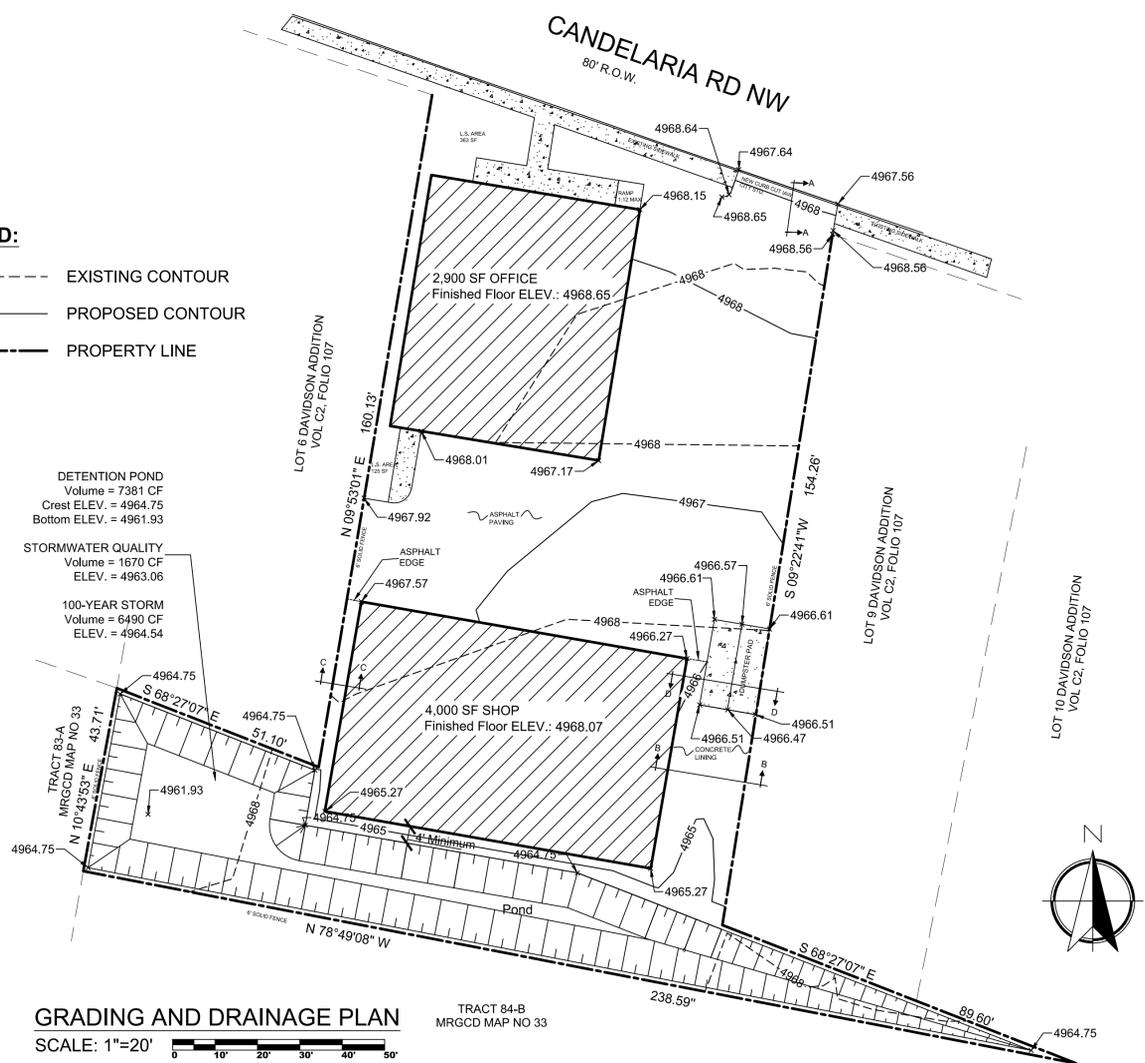
THE SUBJECT SITE, 1) DOES NOT LIE WITHIN A DESIGNATED FLOODPLAIN, (RE: F.E.M.A. FIRM PANEL 35001C0342G, EFFECTIVE SEPTEMBER 26, 2008), 2) DOES NOT ACCEPT OFFSITE FLOWS FROM ADJACENT PROPERTIES, 3) WILL NOT CONTRIBUTE OFFSITE FLOW TO ADJACENT PROPERTIES, 4) WILL PROVIDE A RETENTION POND FOR THE "FIRST FLUSH" STORM VOLUME.

DRAINAGE CALCULATIONS ARE PER SECTION 22.2, HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL, VOLUME 2, DESIGN CRITERIA FOR THE CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO.



SECTION B: SWALE SECTION

SCALE: 1" = 2'



GRADING AND DRAINAGE PLAN

SCALE: 1"=20'

PROJECT NAME:

304 Candelaria Rd.

PROJECT ADDRESS:

Albuquerque, NM 87107



AIMT Engineering Service Inc.
8100 Wyoming Blvd. NE, STE M4.
Albuquerque, NM 87113
Phone: (505) 385-8930
www.AMITEngineering.com

△	DATE	REVISION

DWG TITLE:

GRADING AND DRAINAGE PLAN

SEAL & SIGNATURE:

DATE: 02/04/2020

SCALE: -

DRAWING NO: DR-100

DOB BSCAN: