CITY OF ALBUQUERQUE

Planning Department
Brennon Williams, Director

Mayor Timothy M. Keller

January 29, 2020

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

RE: **Master Tech Auto**
304 Candelaria NW
Grading Plan Stampa Date: 1/15/20
Hydrology File: G14D093

Dear Mr. Rayner:

Based on the submittal received on 1/21/20, this project cannot be approved until the following corrections are made:

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

Prior to Building Permit:

1. Remove the "Drainage Certification" language. This will be required later at Certificate of Occupancy.
2. The drawing needs to be scaled to a common Engineer's Scale, such as 1:20; include a scale bar.
3. Include project datum; all existing survey, proposed grades, and benchmarks must be provided in NAVD 88.
4. In sections B-B and C-C, include the property line, existing and proposed walls, and grade changes, and channel lining. In accordance with DPM Ch.22, section 5 part B, grading and wall construction near the property line may not endanger adjacent property or constrain its use.
5. Provide hydraulic calculations for the section C-C and B-B swales, to ensure they can pass the 100 flows to the rear-yard pond without endangering the neighboring properties. Please divert the water around the dumpster pad as well.
6. Please label the pond with the stormwater quality volume and elevation, the 100-year volume and elevation, the pond crest elevation, add finished floor elevations to both buildings and ensure freeboard.

Prior to Certificate of Occupancy (For Information):

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

8. 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.

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

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TABLE 1. PRECIPITATION ZONES

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

TABLE 2. LAND TREATMENTS

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.

TABLE 3. EXCESS PRECIPITATION — E (Inches) - 6 Hour Storm

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]

TABLE 4. PEAK INTENSITY (IN/ HR at tc= 0.2 hour)

ZONE	100-YR.. [2-YR., 10-YR.] INTENSITY
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]

TABLE 5. PEAK DISCHARGE (cfs/ acre)

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.	1.71 cfs/ac.
TREATMENT B	0.78 in.	2.36 cfs/ac.
TREATMENT C	1.13 in.	3.05 cfs/ac.
TREATMENT D	2.12 in.	4.34 cfs/ac.

	EXISTING CONDITIONS AREA	PROPOSED CONDITIONS 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 + 2.28x 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 = 6634 CU. FT.

GENERAL NOTES:

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

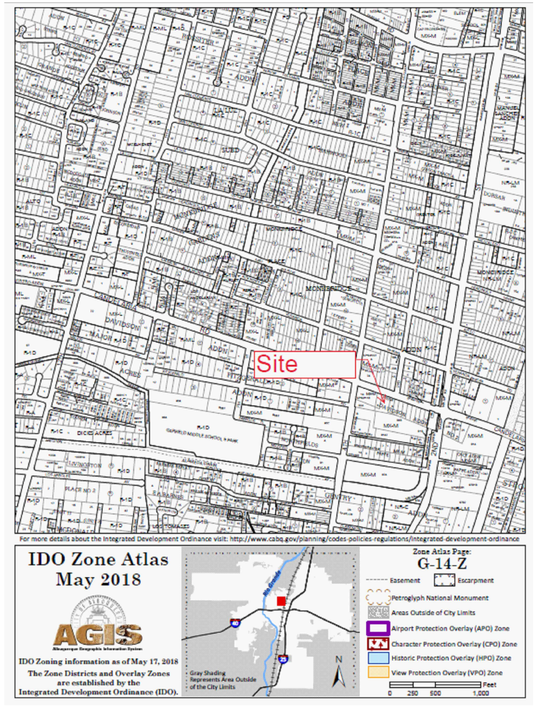
EROSION CONTROL NOTES:

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

1. 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.
2. INSTALL TEMPORARY SILT FENCE AT LOW POINT AROUND THE PROPERTY DURING CONSTRUCTION.
3. 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.
4. 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:

1. 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.
2. 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.
3. 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.
4. ALL CONSTRUCTION WITHIN PUBLIC STREET RIGHT-OF-WAY(S) SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE/ BERNALILLO COUNTY STANDARDS AND PROCEDURES.
5. ADJUST ALL CLEAN OUT RIMS, MANHOLE COVERS, AND VALVE AND METER BOXES TO FINISHED GRADE.
6. CONTRACTOR SHALL NOTIFY ENGINEER IF EXISTING GROUND CONDITIONS VARY FROM THOSE SHOWN ON PLANS.
7. THE CONTRACTOR SHALL GRADE ALL AREAS TO POSITIVELY DRAIN AWAY FROM BUILDINGS.
8. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DEWATER AND STABILIZE ANY SOFT SOILS AS NEEDED TO REACH OPTIMUM SOIL CONDITIONS.
9. ALL DISTURBED AREAS SHALL BE SODDED. CONTRACTOR SHALL BE RESPONSIBLE UNTIL GROWTH IS ESTABLISHED.
10. THE EARTHWORK CONTRACTOR IS ULTIMATELY RESPONSIBLE TO IMPORT OR EXPORT MATERIAL AS NECESSARY TO ACHIEVE THE GRADES SHOWN ON THE CIVIL ENGINEER'S DOCUMENTS.
11. ANY FILL MATERIAL SHALL BE PLACED IN LOOSE LIFTS NOT TO EXCEED 6" AND SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY.
12. IT IS RECOMMENDED TO HAVE A GEOTECHNICAL INVESTIGATION TO DETERMINE THE SOIL CLASSIFICATION FOR THE POND, PERMEBILITY TEST OF EXSITING SOILS AND DETERMINE IF THER IS A NEED FOR LINING (USUALLY FAT CLAYS) AND COMPACTION REQUIREMENTS TO 95% OF THE PROCTORS.



DRAINAGE CERTIFICATION:

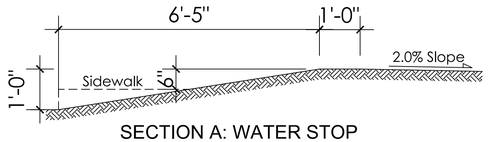
I, MAHMOUD R. TAHA, NEW MEXICO P.E. NO. 25641, HEREBY CERTIFY THAT THIS PROJECT HAS BEEN GRADED AND WILL DRAINED IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH DESIGN INTENT OF THE APPROVED PLAN DATED *January 15 , 2020* . THE RECORD INFORMATION EDITED ONTO THE ORIGINAL DESIGN DOCUMENT HAS BEEN OBTAINED BY ME OR UNDER MY DIRECT SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS CERTIFICATION IS SUBMITTED IN SUPPORT OF A REQUEST FOR *CERTIFICATION OF ACCURACY (PERMANENT)*

THE RECORD INFORMATION PRESENTED HEREON IS NOT NECESSARILY COMPLETE AND INTENDED ONLY TO VERIFY SUBSTANTIAL COMPLIANCE OF THE GRADING AND DRAINAGE ASPECTS OF THIS PROJECT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE USING IT FOR ANY OTHER PURPOSES.

MAHMOUD R. TAHA, NEW MEXICO P.E. NO. 25641

01/15/2020
DATE

SEAL



SECTION A: WATER STOP

LEGAL DESCRIPTION: LT 7-A PLAT OF LOT 7-A DAVIDSON ADDITION NO. 2CONT
.4897 AC
UPC 101406039509640822.

BENCH MARK REFERENCE: VRS "Trimble Now" Network.

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

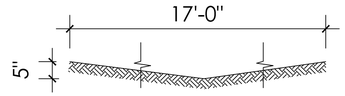
DRAINAGE COMMENTS:

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.

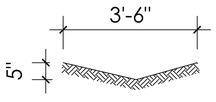
THE SUBJECT SITE IS PRESENTLY AN UNDEVELOPED PROPERTY; THE PROPOSED PLN AS SHOWN HEREON IS TO CONSTRUCT A 2900 SQ. FT. OFFICE BUILDING AND A 4000 SQ. FT. SHOP BUILDING IN ADDITION TO THE PARKING LOT.

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) DOES NOT CONTRIBUTE OFFSITE FLOW TO ADJACENT PROPERTIES, 4) WILL PROVIDE A RETENTION POND FOR THE "FIRST FLUSH" STORM VOLUME.

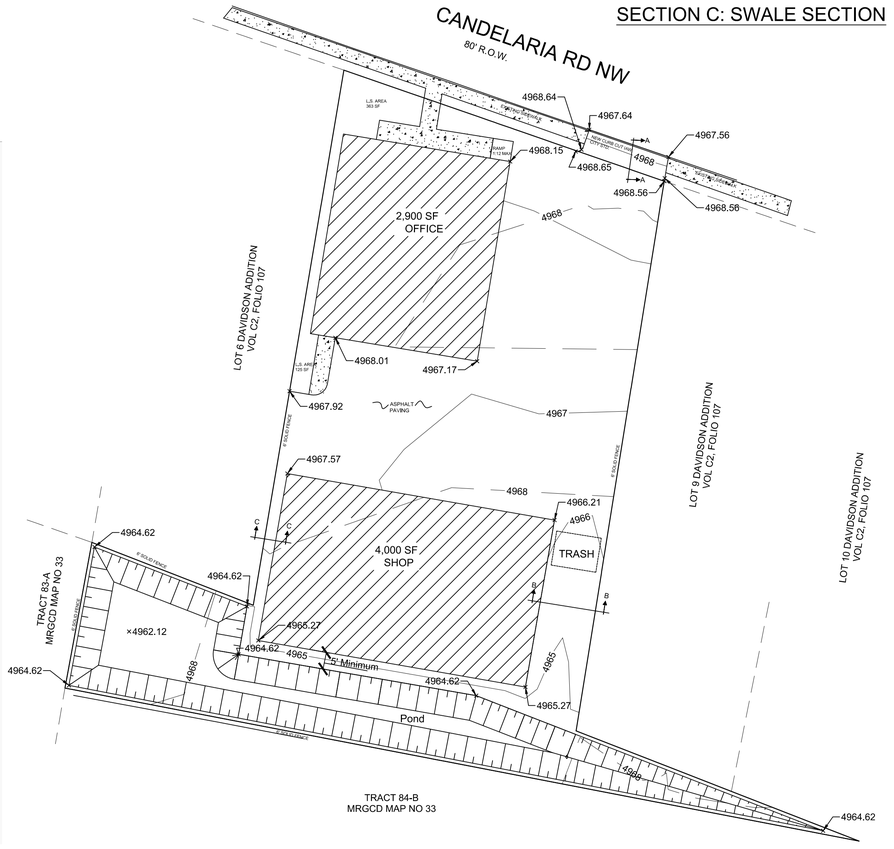
DRAINAGE CALCULATIONS ARE PER SECTION 22.2, HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL, VOLUME 2, DESIGN CRITERIA FOR THE CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO.



SECTION B: SWALE SECTION



SECTION C: SWALE SECTION



PROJECT NAME:

304 Candelaria Rd.

PROJECT ADDRESS:

Albuquerque, NM 87107

AIMT

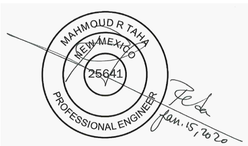
AIMT Engineering Service Inc.
8100 Wyoming Blvd. NE, STE M4.
Albuquerque, NM 87113
Phone: (505) 385-8930
www.AMITengineering.com

△	DATE	REVISION

DWG TITLE:

GRADING AND DRAINAGE PLAN

SEAL & SIGNATURE:



DATE: 01/15/2020

SCALE: 1/4" = 1'-0"

DRAWING NO: DR-100

DOB BSCAN: