CITY OF ALBUQUERQUE

Planning Department
David Campbell, Director

Mayor Timothy M. Keller

February 22, 2019

Richard Dourte, P.E.
RHD Engineering, LLC
4305 Purple Sage Ave NW
Albuquerque, NM, 87120

RE: Medical Clinic
7439 Alameda Blvd NE
Grading and Drainage Plan
Engineer's Stamp Date: 02/04/19
Hydrology File: C19D067

Dear Mr. Dourte:

Based upon the information provided in your submittal received 02/05/2019, the Grading and Drainage Plan is approved for Building Permit and SO-19 Permit.

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 (Curtis Cherne, PE, ccherne@cabq.gov, 924-3420) 14 days prior to any earth disturbance.

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 approval in support of Permanent Release of Occupancy by Hydrology, Engineer Certification per the DPM checklist will be required.

Please provide Drainage Covenant per Chapter 17 of the DPM prior to Permanent Release of Occupancy for the stormwater quality pond. Please submit these to the 4th floor of Plaza de Sol. A $25 fee for each will be required.

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

Sincerely,

Renée C. Brissette

Renée C. Brissette, P.E. CFM
Senior Engineer, Hydrology
Planning Department

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

DRAINAGE NARRATIVE:

1. THIS SITE IS LOCATED WITHIN AN X FLOOD PLAIN. REFER TO THE FEMA EXCERPT THIS SHEET.

2. THIS SITE IS IN A FREE DISCHARGE AREA.

3. LANDSCAPED AREA = 33%
   IMPERVIOUS AREA = 67%

4. THE VOLUME OF WATER GENERATED BY THIS SITE FOR THE 100YR 6HR RAIN FALL EVENT IS 5644CF.

5. THE STORM WATER QUALITLY PONDING REQUIREMENT IS 657CF, THE PONDING PROVIDED.

6. OFFSITE FLOWS ON ARE DIRECTED TO ALAMEDA. ON THE NORTH BY THE CURB AND BY THE WATER BLOCKS AT THE PARKING LOT ENTRANCES.

7. THIS SITE IS IN THE NORTH ALBUQUERQUE ACRES DRAINAGE MASTER PLAN AREA THAT ALLOWS 3.9CFS PER ACRE.

8. THERE IS AN EXISTING STORM DRAIN INLET JUST EAST OF EAGEL FEATHER DRIVE ON ALAMEDA. THE INLET IS A TYPE A WITH 2 GRATES.

9. THE UPSTREAM LOTS (NO. 17 THRU 20) TO THIS SITE (BASIN LIMIT IS WYOMING BLVD.) HAS AN AREA OF 3.1 ACRES (OBTAINED BY THE COUNTY ASSESSOR). 3.1 ACRES X 3.9 CFS/ACRE(NAA ALLOWABLE FLOW RATE)=12.1 CFS. THE GRATE CAPACITY FOR THE EXISTING INLET(TYPE A WITH 2 GRATES FROM DPM) IS APPROX. 16CFS (SEE DETAIL ON SHEET 2). 16CFS−12.1CFS=3.9CFS, THIS SITE IS PROPOSED TO GENERATE 3.5CFS, THUS THE INLET SHOULD BE ABLE TO ACCEPT THIS FLOW. NOTE, THE 10' CURB OPENING IS NOT UTILIZED IN THIS CALCULATION.

S.O.19 : NOTICE TO CONTRACTORS

1	AN EXCAVATION / CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN THE CITY RIGHT−OF −WAY.
2	ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED, EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986 EDICTION AS REVISED THRU UPDATE #8.
3	TWO WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM (CALL 811) FOR LOCATION OF EXISTING UTILITIES.
4	PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL CONSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIBY THE ENGINEER SO THAT THE CONFLICT CAN BE RESLOVED WITH A MINIMUM AMOUNT OF DELAY.
5	BACKFILL SOMPACTION SHALL BE ACCORDING TO TRAFFIC / STREET USE.
6	MAINTENANCE OF THESE FACILITIES SHALL BE TE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
7	WORK ON ARTERIAL STREETS SHALL BE PERFORMED ON A 24−HOUR BASIS.
8	THE WORK IN THE CITY ROW MUST BE INSPECTED AND ACCEPTED. THE CONTRACTOR MUST CONTACT JASON RODRIQUEZ AT 235−8016 AND CONSTRUCTION COORDINATION AT 924−3416 TO SCHEDULE INSPECTIONS.

GENERAL NOTES:

1. THIS SITE IS NOT LOCATED IN A FEMA FLOOD HAZARD ZONE (REFER TO THE FIRM MAP 35001C0141G, EXCERPT ATTACHED).

2. RHD ENGINEERING, LLC RECOMMENDS THAT THE OWNER OBTAIN A GEOTECHNICAL REPORT PRIOR TO DESIGN OF BUILDING FOOTING/FOUNDATION.

3. SLOPE STABILAZATION SHALL BE USED ON SLOPES GREATER THAN A 3:1 SLOPE, PER MANUFACTURER RECOMMENDATIONS.

4. MODIFICATIONS OR ADJUSTMENTS TO EXISTING DRAINAGE STRUCTURES/EROSION MITIGIATION IMPROVEMENTS SHALL BE DONE IN THE SAME MANNER AS THE ORIGINAL IMPROVEMENT.

5. ALL SWPPP REQUIREMENTS SHALL BE ADHERED TO.

6. ALL WORK ON THIS PLAN SHALL BE DONE IN ACCORDANCE WITH CITY OF ALBUQUERQUE STANDARDS. ALL APPLICABLE PERMITS SHALL BE OBTAINED PRIOR TO WORK COMMENCING.

7. ALL WORK IN THE RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH CITY OF ALBUQUERQUE STANDARDS.

8. THE SURVEY INFORMATION WAS PROVIDED BY CONSTRUCTION SURVEY TECHNOLOGIES, INC.

9. FOR SITE DIMENSIONS, BUILDING AND INFRASTRUCTURE LOCATION REFER TO THE SITE PLAN.

10. CONSTRUCT 2-2' SIDEWALK CULVERT PER STD DWG. 2236 (SO-19 REQUIRED, SEE NOTES ON SHEET 2) INV. IN = 64.3, INV. OUT = 63.90± MATCH EXST. FL, EXTEND STEEL COVER PLATE 1' PAST PROPERTY LINE, TACK WELD TIE DOWN BOLTS.

11. DO NOT PLACE ADDITIONAL FILL OR LOADING ON ADJACENT WALLS WITHOUT APPROVAL OF A STRUCTURAL ENGINEER. CONTACT A STRUCTURAL ENGINEER FOR ADEQUACY OF THE EXISTING PERIMETER WALLS W/RESPECT TO THIS GRADING PLAN.

EROSION CONTROL NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TOPSOIL DISTURBANCE PERMIT PRIOR TO BEGINNING WORK.

2. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING RUN−OFF ON SITE DURING CONSTRUCTION.

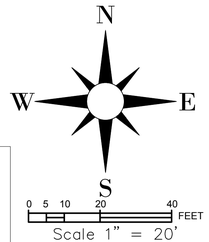
3. CONTRACTOR IS RESPONSIBLE FOR CLEANING ALL SEDIMENT THAT GETS INTO EXISTING RIGHT−OF−WAY.

4. REPAIR OF DAMAGED FACILITIES AND CLEANUP OF SEDIMENT ACCUMULATIONS ON ADJACENT PROPERTIES AND IN PUBLIC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.

5. ALL EXPOSED EARTH SURFACES MUST BE PROTECTED FROM WIND AND WATER EROSION PRIOR TO FINAL ACCEPTANCE OF ANY PROJECT.

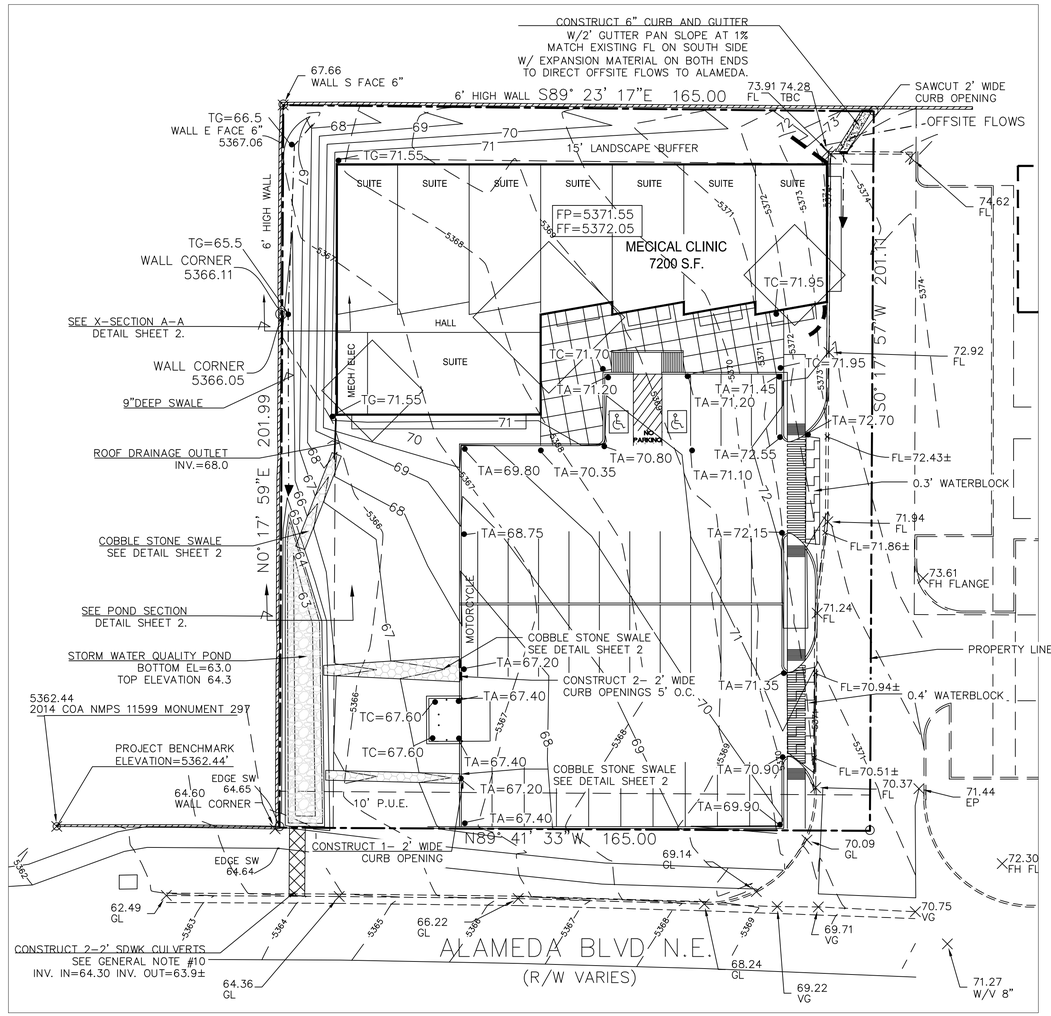
CAUTION:

EXISTING UTILITIES ARE NOT SHOWN. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO ANY EXCAVATION TO DETERMINE THE ACTUAL LOCATION OF UTILITIES & OTHER IMPROVEMENTS.



0 5 10 20 40 FEET

Scale 1" = 20'



WEIR CALCULATIONS

Q=CLH^3/2
C=3.2
L=2.0'
H=0.5'
Q=3.2(2.0)((0.5)^1.5)= 2.3CFS PER SIDEWALK CULVERT

THIS SITE GENERATES 3.6CFS IN THE 100YR, 6HR EVENT, THUS 2 SIDEWALK CULVERTS (4.6CFS) ARE NEEDED.

Project: 7439 Alameda NE - Medical Office Blds
Drainage Calculations - Zone 3

Depth (inches) at 100yr Storm

Zone	P_{60}	P_{360}	P_{1440}	P_{4days}	P_{10days}
1	1.87	2.20	2.66	3.12	3.67
2	2.01	2.35	2.75	3.30	3.95
3	2.14	2.60	3.10	3.95	4.90
4	2.23	2.90	3.65	4.70	5.95

Excess Precipiation, E(inches) - 6 HR

	Treatment			
Zone	A	B	C	D
1	0.44	0.67	0.99	1.97
2	0.53	0.78	1.13	2.12
3	0.66	0.92	1.29	2.36
4	0.80	1.08	1.46	2.64

Weighted E= $((E_A*A_A)+(E_B*A_B)+(E_C*A_C)+(E_D*A_D))/(A_A+A_B+A_C+A_D)$
V_{360}=(Weighted E *P_{360})/12 in/ft
V_{1440}= V_{360}+A_D*(P_{1440}-P_{360})/12in/ft
V_{4days}=V_{360}+A_D*(P_{4day}-P_{360})/12in/ft
V_{10days}=V_{360}+A_D*(P_{10days}-P_{360})/12in/ft

Peak Discharge (CFS/ACRE) 100 YR

	Treatment			
Zone	A	B	C	D
1	1.29	2.03	2.87	4.37
2	1.56	2.28	3.14	4.70
3	1.87	2.60	3.45	5.02
4	2.20	2.92	3.73	5.25

**********EXISTING CONDITIONS**********

Area	SQ. FT	Acres	% Total
A=	0	0.000	0%
B=	0	0.000	0%
C=	30675	0.704	92%
D=	2580	0.059	8%
Total	33255	0.763	100%
Weighted E=	1.373		

Design Flows (100YR)

Area	SQ. FT	Acres	Peak Discharge (CFS)
A=	0	0.000	0.00
B=	0	0.000	0.00
C=	30675	0.704	2.43
D=	2580	0.059	0.30
Total (CFS)			2.73

	V_{360}	V_{1440}	V_{4days}	V_{10days}
Cubic feet	3805	3912	4095	4299
Acre-ft	0.09	0.09	0.09	0.10

**********PROPOSED CONDITIONS**********

Area	SQ. FT	Acres	% Total
A=	0	0.000	0%
B=	0	0.000	0%
C=	10053	0.231	30%
D=	23202	0.533	70%
Total	33255	0.763	100%
Weighted E=	2.037		

Design Flows (100YR)

Area	SQ. FT	Acres	Peak Discharge (CFS)
A=	0	0.000	0.00
B=	0	0.000	0.00
C=	10053	0.231	0.80
D=	23202	0.533	2.67
Total (CFS)			3.47

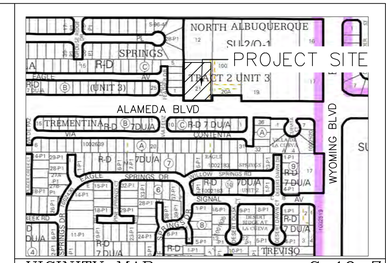
	V_{360}	V_{1440}	V_{4days}	V_{10days}
Cubic feet	5644	6611	8254	10091
Acre-ft	0.13	0.15	0.19	0.23

The 100 year peak flows for this developed site is 3.5 CFS and the existing flows are 2.7 CFS for an increase of 0.8 CFS. The 100 year 6 hr volume increase is 5644-3805 = 1839CF.

Storm Water Quality Ponding Requirement = Ao *0.34 in/12in/ft = 657 CF

I, RICHARD DOURTE HAVE PERSONALLY INSPECTED THE PROPERTY ON 1−29−19. NO EARTHWORK HAS BEEN PERFORMED AND THE SITE IS CONSISTENT WITH THE TOPO SHOWN.

Richard Dourte
RICHARD DOURTE P.E. #10854
DATE



VICINITY MAP: C−19−Z

FIRM MAP: 35001C0141G

LEGAL DESCRIPTION:

LOT 21, BK 3, NORTH ALBUQUERQUE ACRES, TRACT 2, UNIT 3
CITY OF ALBUQUERQUE
BERNALILLO COUNTY, NEW MEXICO

NOTES:

1. ALL SPOT ELEVATIONS REPRESENT FLOWLINE ELEVATION UNLESS OTHERWISE NOTED.

2. RETAIN THE FIRST .34" OF STORM RUNOFF FROM ENTIRE DEVELOPMENT TO CONFORM TO THE WATER QUALITY REQURIEMENTS

LEGEND

- 46.00 — PROPOSED SPOT ELEVATION
- TW=44.00 — TOP OF WALL ELEVATION / BOTTOM OF WALL ELEVATION
- 5601 — EXISTING CONTOUR
- 5600 — EXISTING INDEX CONTOUR
- 5601 — PROPOSED CONTOUR
- 5600 — PROPOSED INDEX CONTOUR
- LOT LINE
- RIGHT−OF−WAY
- PROPOSED RETAINING WALL (DESIGN BY OTHERS)
- PROPOSED ROCK FACE WALL
- EXISTING CURB AND GUTTER
- PROPOSED CURB AND GUTTER
- PROPOSED FLOWLINE
- EXISTING WALL
- PROPOSED BASIN BOUNDARY
- PROPOSED WATER BLOCK
- TG=XXX

ENGINEER'S SEAL

RICHARD H. DOURTE NEW MEXICO 10854 REGISTERED PROFESSIONAL ENGINEER

2−04−19

Richard Dourte
P.E. #10854

Title MEDICAL CLINIC
7439 ALAMEDA BLVD NE

GRADING AND DRAINAGE PLAN

DRAWN BY

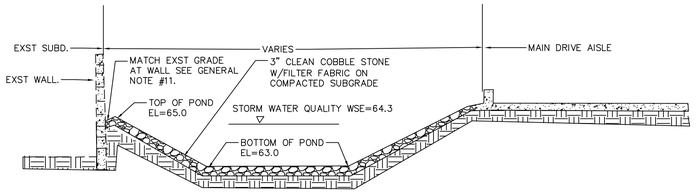
DATE

D.Dwg

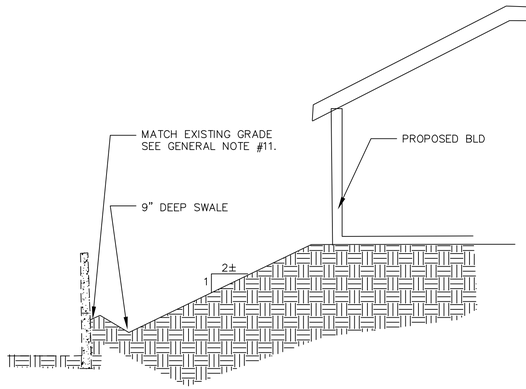
SHEET # 1 of 2

JOB #

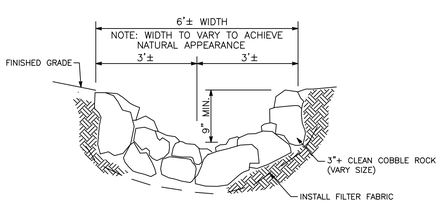
RHD Engineering, LLC
4305 Purple Sage Ave. NW
ALBUQUERQUE, NM. 87120
(505) 288−1621



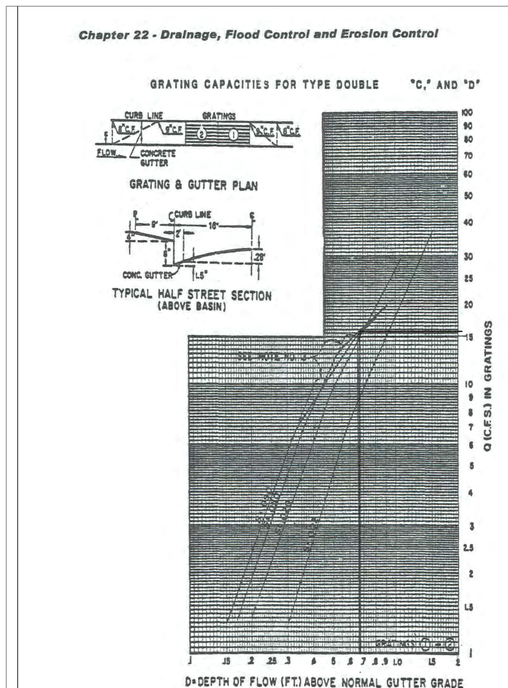
POND X–SECTION



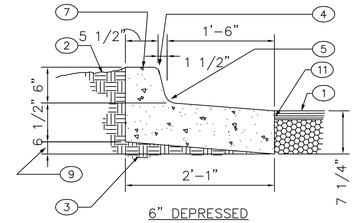
X–SECTION A–A



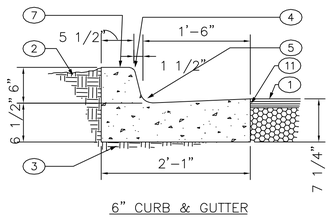
COBBLE SWALE



GRATE CAPACITY CHART FROM DPM
REFERENCE DRAINAGE NARRATIVE NOTE #9



6" DEPRESSED
CURB & GUTTER



6" CURB & GUTTER

KEYED NOTES:

1. Pavement section per drawings and specs.
2. Finished grade.
3. Prepared subgrade.
4. 3/4" radius.
5. 1 1/2" radius.
6. Not used.
7. Concrete curb.
8. Not used.
9. Varies, depress as needed.
10. Not used.
11. Tack coat.

CURB & GUTTER CONSTRUCTION NOTES:

A. Curbs, gutters & cut–off walls to be constructed of 3500 psi P.C.C unless otherwise noted.

B. Edges not specifically dimensioned shall be edged with a 3/8" edging tool.

C. Remove & replace 12" wide strip of pavement beyond lip of gutter when constructing curb & gutter adjacent to existing a.c. pavement.

D. Dimensions at rounded corners measured to intersection of straight lines.

E. For 6" curb & gutter provide control jts. @ 6' o.c. max, also provide 1/2" expansion jts. at 30' o.c. max, at curb returns, & at each side of driveways.

F. For all other curbing provide control jts. @ 10' o.c., provide expansion jts. @ 50' o.c. & adjacent to buildings and walls.

CURB AND GUTTER DETAILS

ENGINEER'S SEAL

RICHARD H. DOURTE NEW MEXICO 10854 REGISTERED PROFESSIONAL ENGINEER

2–04–19

Richard Dourte
P.E. #10854

Title: MEDICAL CLINIC
7439 ALAMEDA BLVD NE

GRADING AND DRAINAGE PLAN
DETAILS

RHD Engineering, LLC
4305 Purple Sage Ave. NW
ALBUQUERQUE, NM 87120
(505) 288–1621

DRAWN BY

DATE

G&D.dwg

SHEET #
2 of 2

JOB #
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