CITY OF ALBUQUERQUE

February 11, 2015

Ronald R. Bohannan, P.E.
Bohannan-Huston Inc.
7500 Jefferson St. NE Court Yard 1
Albuquerque, New Mexico 87109

RE: **Coyte Law Office/Retail Building**
Grading and Drainage Plan
Engineers Stamp Date 1/8/14 (F16-D005M)

Dear Mr. Bohannan,

Based upon the information provided in your submittal received 10/27/15, this plan cannot be approved for Grading Permit or Building Permit until the following comments are addressed.

- The first flush wording needs to be placed on the G&D plan. Show and label the first flush ponds on the grading plan.
- Provide direction of roof flows.
- Impervious areas should flow into the first flush ponds. Inlets should be relocated to the landscape ponding areas for water quality purposes.
- Provide spot elevations at the entrances to ensure that water blocks are present.
- An ESC plan needs to be accepted before a Grading Permit can be issued.
- The .1cfs/acre needs to be met unless otherwise proven differently. Bob Turners ford was allowed to release .42cfs if the Renaissance Detention pond was enlarged to 0.75ac-ft. At this time hydrology has no way to prove this ever happened. A plan of this area with as-builts will be needed to raise the flow.

If you have any questions, please contact me at 924-3695 or Rudy Rael at 924-3977.

Sincerely,

Curtis Cherne, P.E.
Principal Engineer, Hydrology
Planning Department

RR/CC
C: File

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

City of Albuquerque

Planning Department

Development & Building Services Division

RAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 02/2013)

Project Title: Coyte Law Office/ Retail Building City Drainage #: F16D005M

DRB#: _____ EPC#: _____ Work Order#: _____

Legal Description: TR 1B-1-B-1 and TR 1B-1-C-1 Plat of Renaissance Center

City Address: 1261 Renaissance Blvd NE Albuquerque, NM 87107

Engineering Firm: Tierra West LLC Contact: Ronald R. Bohannan.

Address: 5571 Midway Park Place NE ABQ NM 87109

Phone#: 505-858-3100 Fax#: 505-858-1118. E-mail: rrb@tierrawestllc.com

Owner: Coyte Law Firm Contact: Matt Coyte

Address: 1000 2nd Street NE, Albuquerque NM 87109

Phone#: 505-244-3030 Fax#: _____ E-mail: _____

Architect: Ride Bennett Architects Contact: Rick Bennett

Address: 1104 Park Ave SW, Albuquerque NM 87102

Phone#: 505-242-1859 Fax#: _____ E-mail: _____

Surveyor: _____ Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

Contractor: _____ Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

TYPE OF SUBMITTAL:

- X DRAINAGE REPORT
- X DRAINAGE PLAN 1st SUBMITTAL
- ___ DRAINAGE PLAN RESUBMITTAL
- ___ CONCEPTUAL G & D PLAN
- X GRADING PLAN
- ___ EROSION & SEDIMENT CONTROL PLAN (ESC)
- ___ ENGINEER'S CERT (HYDROLOGY)
- ___ CLOMR/LOMR
- ___ TRAFFIC CIRCULATION LAYOUT (TCL)
- ___ ENGINEER'S CERT (TCL)
- ___ ENGINEER'S CERT (DRB SITE PLAN)
- ___ ENGINEER'S CERT (ESC)
- ___ SO-19
- ___ OTHER (SPECIFY)

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

- ___ SIA/FINANCIAL GUARANTEE RELEASE
- ___ PRELIMINARY PLAT APPROVAL
- ___ S. DEV. PLAN FOR SUB'D APPROVAL
- ___ S. DEV. FOR BLDG. PERMIT APPROVAL
- ___ SECTOR PLAN APPROVAL
- ___ FINAL PLAT APPROVAL
- ___ CERTIFICATE OF OCCUPANCY (PERM)
- ___ CERTIFICATE OF OCCUPANCY (TCL TEMP)
- ___ FOUNDATION PERMIT APPROVAL
- X BUILDING PERMIT APPROVAL
- ___ GRADING PERMIT APPROVAL ___ SO-19 APPROVAL
- ___ PAVING PERMIT APPROVAL ___ ESC PERMIT APPROVAL
- ___ WORK ORDER APPROVAL ___ ESC CERT. ACCEPTANCE
- ___ GRADING CERTIFICATION ___ OTHER (SPECIFY)

RECEIVED
JAN 27 2015
LAND DEVELOPMENT SECTION

Paid $50.00

WAS A PRE-DESIGN CONFERENCE ATTENDED: ___ Yes ___ No ___ Copy Provided

DATE SUBMITTED: 1/23/2015 By: Vinny Perea

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location, and scope to the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the followin

1. **Conceptual Grading and Drainage Plan:** Required for approval of Site Development Plans greater than five (5) acres and Sector Plans
2. **Drainage Plans:** Required for building permits, grading permits, paving permits and site plans less than five (5) acres
3. **Drainage Report:** Required for subdivision containing more than ten (10) lots or constituting five (5) acres or more
4. **Erosion and Sediment Control Plan:** Required for any new development and redevelopment site with 1-acre or more of land disturbing area, including project less than 1-acre than are part of a larger common plan of development

DRAINAGE MANAGEMENT PLAN

For

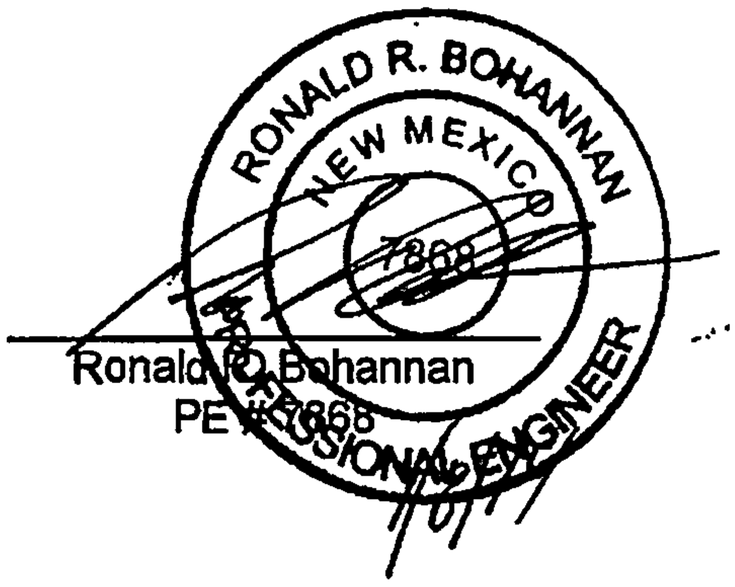
Coyte Law Office/Retail Building
1261 Renaissance Blvd NE
Tracts 1B1B1 & 1B1C1 Renaissance Center
Albuquerque, New Mexico

Prepared by:

Tierra West, LLC
5571 Midway Park Place NE
Albuquerque, New Mexico 87109

January 7, 2015

I certify that this report was prepared under my supervision, and I am a registered professional engineer in the State of New Mexico in good standing.



Ronald R. Bohannan
PE #7868

Job No 2014068

TABLE OF CONTENTS

Appendices

PURPOSE

The purpose of this report is to provide a drainage management plan for the proposed Law Office and Retail Building located at 1261 Renaissance Boulevard NE, Albuquerque, New Mexico. This plan will be utilized for the development of a 20,514 square foot building and associated parking facilities located on the 1.58 acre undeveloped lot. This plan is in accordance with the DPM, Chapter 22, Hydrology Section. The drainage analysis and management plan are included in this report to act as a detailed record for future use.

INTRODUCTION

The subject of this report, as shown on *Exhibit A – Vicinity Map*, is a 1.58 acre parcel of land located at the northwest corner of the Renaissance Boulevard NE and Union Way Drive NE. The site appears on zone atlas page F-16-Z. As shown on *Exhibit B – FIRM Map 35001C0138H*, the subject property is outside mapped flood zones. A previous drainage report for the Bob Turner's Ford Used Car Dealership (F16/D5C) includes the subject site within the report.

Exhibit B – FIRM Map 35001C0138H

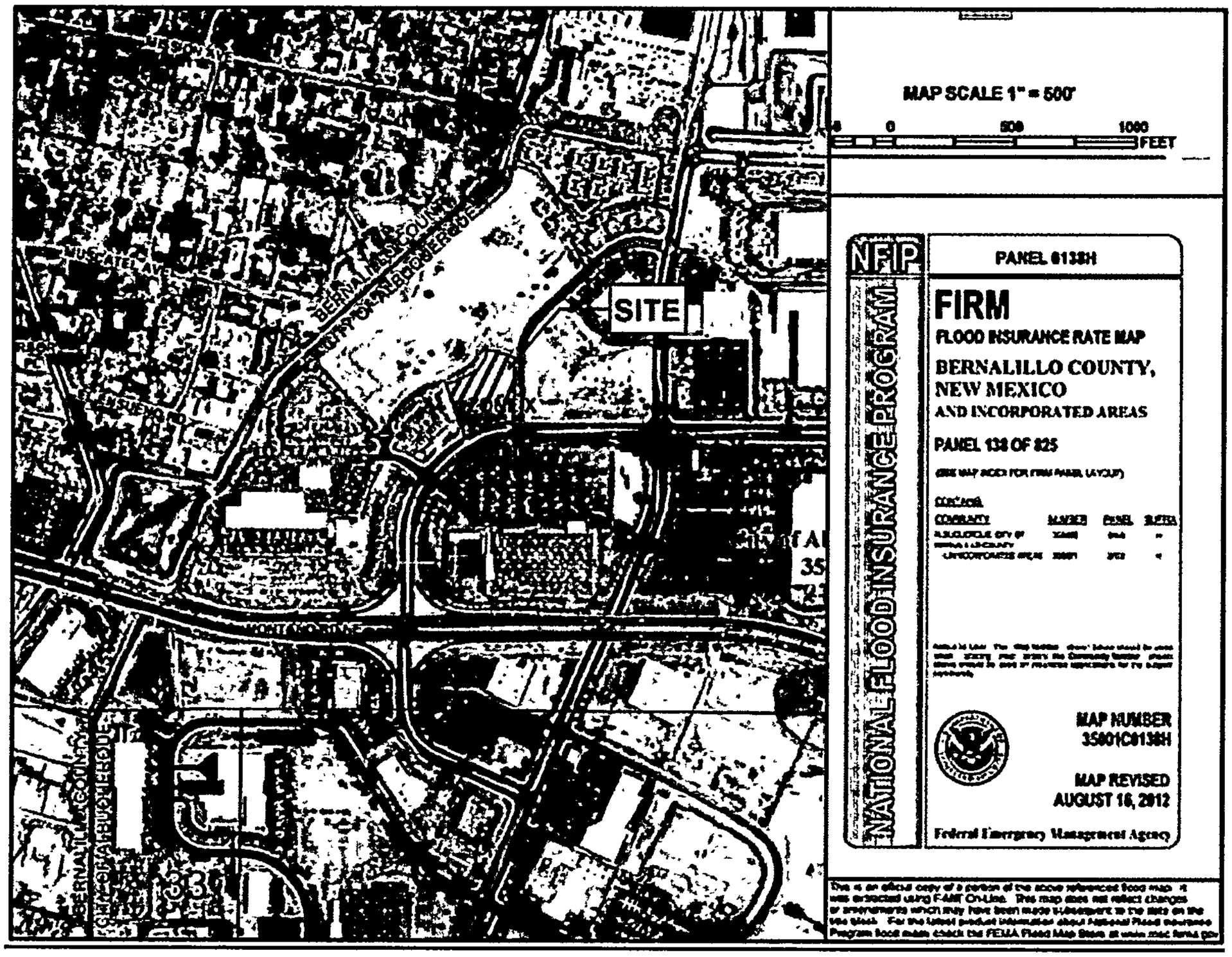
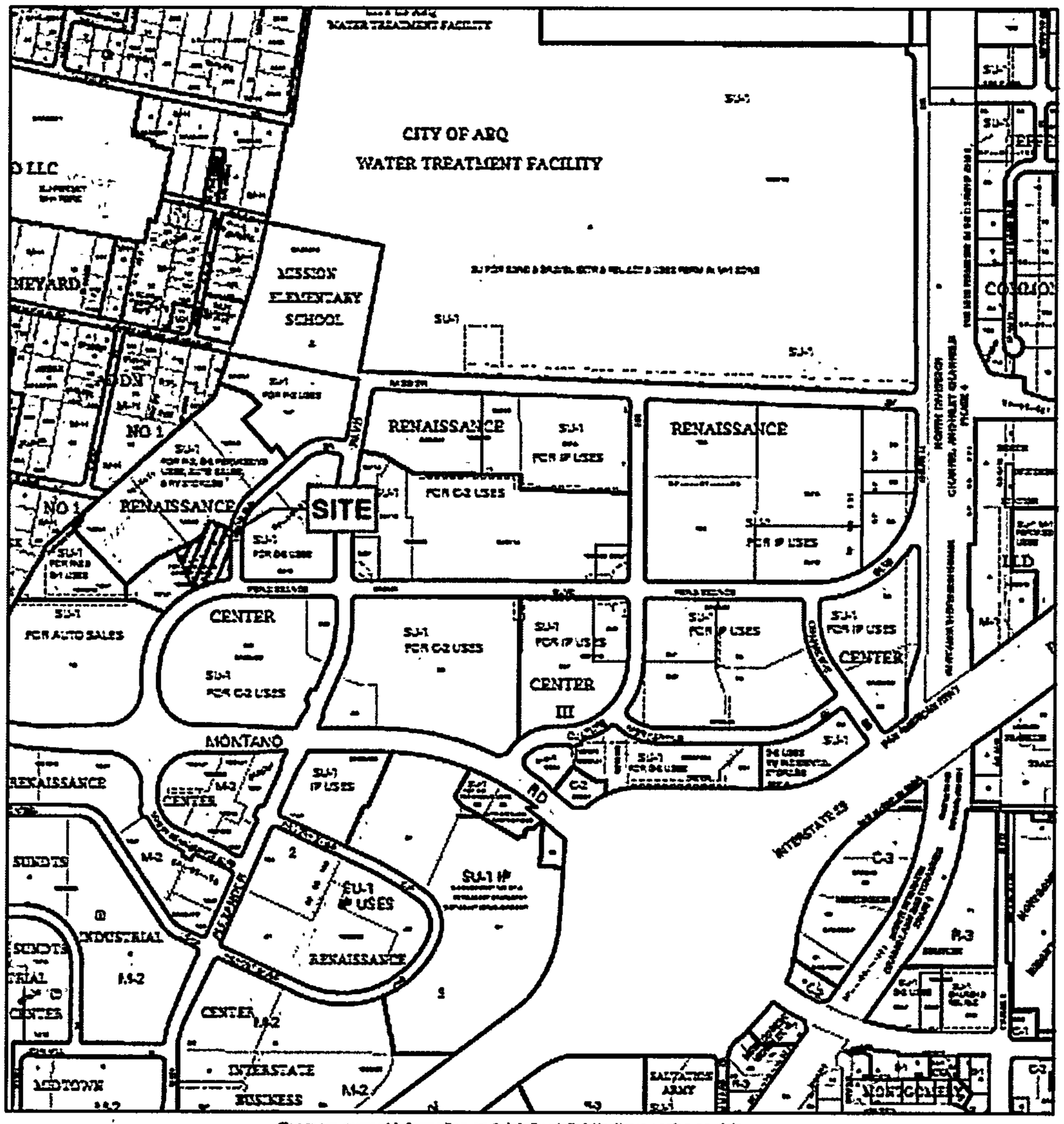


Exhibit A – Vicinity Map



EXISTING CONDITIONS

The site is located in Tracts 1B-1-B-1 and 1B-1-C-1 in the Renaissance Center and is part of an approved drainage plan for the Bob Turner's Ford Used Car Dealership (F16/D5C). The site consists of undeveloped land with two existing drop inlets that were constructed as part of the Bob Turner's Used Car Lot Master Plan, and a paved access road that wraps around the northern portion of the site. Runoff flows from all portions of the site are directed towards these drop inlets for discharge. The site also collects offsite flows from the north access road adjacent to the Used Car Lot. The drop inlets connect to a storm drain pipe system that connects to a manhole located on the access road north of the site. Per the approved drainage plan for the Used Car Lot, total discharge from the site through the storm drain system is 0.44 cfs.

PROPOSED CONDITIONS

The subject site will continue to collect the mentioned offsite flows and discharge via storm drain system; however, the existing drop inlets and pipe system will be removed and abandoned respectively due to the building placement and new drainage plan. The proposed conditions will create five drainage basins for the site (See Appendix A for Basin Map) with three basins directed toward a Single D drop inlet and two basins used for retention in landscaped areas. Due to the constraints of discharge allowed to leave the site, each basin with a drop inlet will consist of surface ponding above each drop inlet before discharging through an orifice plate.

Basin B1 will collect flows from the north side of the building; this includes drainage from the access road (onsite and offsite) as well as the parking lot on the northwest side. All flows from this basin will be directed towards a Single D drop inlet located near the trash enclosure and pond on the surface (Pond 1). The maximum water surface elevation of this surface pond is

5035.19, giving a pond depth of 0.91 feet. Due to the grading of this basin, the maximum water surface depth in parking areas will be no more than 8 inches to allow clearance for car doors. A 1.9" orifice plate will be installed in the catch basin to allow a maximum discharge of 0.2 cfs through the storm drain towards a new proposed manhole on the access road that will connect to the existing storm pipe beneath the road.

Basin B2 will collect flows from the northeast parking area, the eastern parking lot, and roof drainage for the phase 1 and phase 2 buildings. All flows from this basin will be directed towards a Single D drop inlet located in the eastern parking lot and pond on the surface (Pond 2). The maximum water surface elevation of this surface pond is 5037.90, giving a pond depth of 0.9 feet. Due to the grading of this basin, the maximum water surface depth in the parking stalls will be no more than 8 inches to allow clearance for car doors. A 1.5" orifice plate will be installed in the catch basin to allow a maximum discharge of 0.13 cfs through the storm drain leaving Basin B2.

Basin B3 will collect flows from the southern parking lots as well as the roof drainage for the phase 3 building. All flows from this basin will be directed towards a single D drop inlet located in the southernmost parking area and pond on the surface (Pond 3). The maximum water surface elevation of this surface pond is 5035.04, giving a pond depth of 0.91 feet. Due to the grading of this basin, the maximum water surface depth in the parking stalls will be no more than 8 inches to allow clearance for car doors. A 1.4" orifice plate will be installed in the catch basin to allow a maximum discharge of 0.11 cfs through the storm drain leaving Basin B3.

The total discharge from the onsite storm drain system to the new proposed manhole on the north access road is 0.44 cfs, which is the allowed discharge rate per the approved Grading Plan for the Bob Turner's Ford Used Car Lot master plan. All parking lot surface ponding calculations were determined through AHYMO modeling and can be found in Appendix C.

Basins B4 and B5 consist mostly of landscaped areas where retention ponding will occur to meet the first flush requirements for the City of Albuquerque Drainage Ordinance.

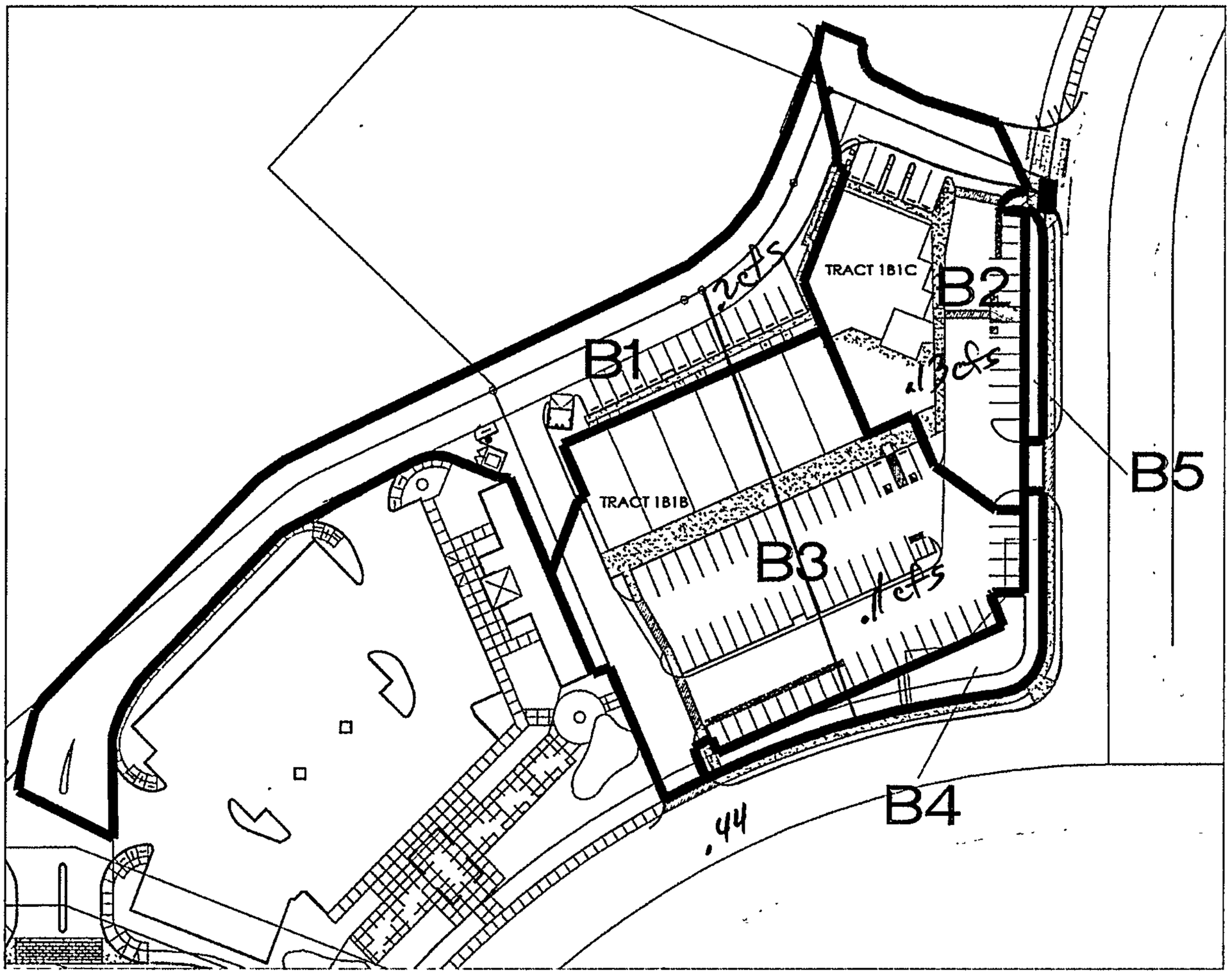
SUMMARY AND RECOMMENDATIONS

Per the Bob Turner's Ford Used Car Dealership Drainage Report, all required drainage infrastructure was constructed to accommodate the developed condition of this tract. The proposed grading and drainage plan will accommodate the proposed development and not adversely impact the historic drainage patterns. The development of this site is consistent with the DPM, Chapter 22, Hydrology section as well as AHYMO Modeling. It is recommended this development be approved for Grading and Site Plan for Building Permit.

APPENDIX A

Drainage Basin Map

BASIN MAP



APPENDIX B

Hydrologic and Hydraulic Analysis

DPM Weighted E Method

Precipitation Zone 2

Renaissance Center, Albuquerque NM

Coyte Law Office/Retail Building @ Renaissance Blvd. and Union Way NE

TWLLC **1/6/2015**

Existing Conditions

Basin Descriptions												100-Year, 6-Hr			10-Year, 6-Hr		
Basin	Area	Area	Area	Treatment A		Treatment B		Treatment C		Treatment D		Weighted E	Volume	Flow	Weighted E	Volume	Flow
ID	(sf)	(acres)	(sq miles)	%	(acres)	%	(acres)	%	(acres)	%	(acres)	(ac-ft)	(ac-ft)	cfs	(ac-ft)	(ac-ft)	cfs
B1	68,831.07	1.580	0.00247	96%	1.517	0%	0.000	4%	0.063	0%	0.000	0.556	0.073	2.56	0.146	0.019	0.68

Proposed Conditions

Basin Descriptions												100-Year, 6-Hr			10-Year, 6-Hr		
Basin	Area	Area	Area	Treatment A		Treatment B		Treatment C		Treatment D		Weighted E	Volume	Flow	Weighted E	Volume	Flow
ID	(sf)	(acres)	(sq miles)	%	(acres)	%	(acres)	%	(acres)	%	(acres)	(ac-ft)	(ac-ft)	cfs	(ac-ft)	(ac-ft)	cfs
B1	24,674.55	0.566	0.00089	0%	0.000	7%	0.040	0%	0.000	93%	0.527	2.026	0.096	2.57	1.266	0.060	1.69
B2	17,187.03	0.395	0.00062	0%	0.000	5%	0.020	0%	0.000	95%	0.375	2.053	0.068	1.81	1.287	0.042	1.20
B3	35309.00	0.811	0.00127	0%	0.000	4%	0.032	0%	0.000	96%	0.778	2.066	0.140	3.73	1.298	0.088	2.47
B4	4383.45	0.101	0.00016	0%	0.000	98%	0.099	0%	0.000	2%	0.002	0.807	0.007	0.23	0.301	0.003	0.10
B5	1106.07	0.025	0.00004	0%	0.000	100%	0.025	0%	0.000	0%	0.000	0.780	0.002	0.06	0.280	0.001	0.02

Pond 1
Volume Calculations

A_b - Bottom Of The Pond Surface Area
A_t - Top Of The Pond Surface Area
D - Water Depth
D_t - Total Pond Depth
C - Change In Surface Area / Water Depth

$$\text{Volume} = A_b * D + 0.5 * C * D^2$$
$$C = (A_t - A_b) / D_t$$

A_b =	6.80	ft^2
A_t =	6,993.40	ft^2
D_t =	1.00	ft
C =	6986.60	

ACTUAL ELEVATION	DEPTH (ft)	VOLUME (ac-ft)	Q (cfs)	Note
5030.28	0	0	0.0000	
5030.78	0.5	0.0001	0.0385	
5031.28	1.0	0.0002	0.0773	
5031.78	1.5	0.0002	0.1023	
5032.28	2.0	0.0003	0.1223	
5032.78	2.5	0.0004	0.1395	
5033.28	3.0	0.0005	0.1548	
5033.78	3.5	0.0005	0.1687	
5034.28	4.0	0.0006	0.1815	Top of Grate
5034.78	4.5	0.0201	0.1935	
5035.28	5.0	0.0804	0.2048	MWSE

Orifice Equation

$$Q = CA(2gH)^{1/2}$$

C =	0.6
Diameter (in)	1.9
Area (ft^2)=	0.020
g =	32.2
H (ft) =	Depth of water above center of orifice
Q (cfs)=	Flow

Pond 2
Volume Calculations

A_b - Bottom Of The Pond Surface Area
A_t - Top Of The Pond Surface Area
D - Water Depth
D_t - Total Pond Depth
C - Change In Surface Area / Water Depth

$$\text{Volume} = A_b * D + 0.5 * C * D^2$$
$$C = (A_t - A_b) / D_t$$

A_b	=	6.80	ft^2
A_t	=	5,573.41	ft^2
D_t	=	0.86	ft
C	=	6472.80	

ACTUAL ELEVATION	DEPTH (ft)	VOLUME (ac-ft)	Q (cfs)	Note
5033.10	0	0	0.0000	
5033.60	0.5	0.0001	0.0240	
5034.10	1.0	0.0002	0.0482	
5034.60	1.5	0.0002	0.0638	
5035.10	2.0	0.0003	0.0762	
5035.60	2.5	0.0004	0.0869	
5036.10	3.0	0.0005	0.0965	
5036.60	3.5	0.0005	0.1051	
5037.10	4.0	0.0006	0.1131	Top of Grate
5037.60	4.5	0.0187	0.1206	
5037.96	4.9	0.0551	0.1257	MWSE

Orifice Equation

$$Q = CA(2gH)^{1/2}$$

C =	0.6
Diameter (in)	1.5
Area (ft^2)=	0.012
g =	32.2
H (ft) =	Depth of water above center of orifice
Q (cfs)=	Flow

Pond 3
Volume Calculations

A_b - Bottom Of The Pond Surface Area
A_t - Top Of The Pond Surface Area
D - Water Depth
D_t - Total Pond Depth
C - Change In Surface Area / Water Depth

$$Volume = A_b * D + 0.5 * C * D^2$$

$$C = (A_t - A_b) / D_t$$

A_b	=	6.80	ft^2
A_t	=	12,349.00	ft^2
D_t	=	1.00	ft
C	=	12342.20	

ACTUAL ELEVATION	DEPTH (ft)	VOLUME (ac-ft)	Q (cfs)	Note
5030.13	0	0	0.0000	
5030.63	0.5	0.0001	0.0209	
5031.13	1.0	0.0002	0.0420	
5031.63	1.5	0.0002	0.0556	
5032.13	2.0	0.0003	0.0664	
5032.63	2.5	0.0004	0.0757	
5033.13	3.0	0.0005	0.0840	
5033.63	3.5	0.0005	0.0916	
5034.13	4.0	0.0006	0.0985	Top of Grate
5034.63	4.5	0.0355	0.1050	
5035.13	5.0	0.1418	0.1112	MWSE

Orifice Equation

$$Q = CA(2gH)^{1/2}$$

C =	0.6
Diameter (in)	1.4
Area (ft^2)=	0.011
g =	32.2
H (ft) =	Depth of water above center of orifice
Q (cfs)=	Flow

Pipe Capacity (Based On FlowMaster Analysis)

Pipe ID	Q Required (CFS)	Pipe Size	Q Allow (CFS)	Result
B1 Grate to MH 1	0.2	8" PVC @ 4.7%	3.71	Capacity OK
B2 Grate to MH 2	0.13	8" PVC @ 1.4%	2.03	Capacity OK
MH 2 to MH 3	0.13	8" PVC @ 1.2%	1.88	Capacity OK
B3 Grate to MH 3	0.11	8" PVC @ 0.46%	1.16	Capacity OK
MH 3 to MH 1	0.24	8" PVC @ 0.51%	1.22	Capacity OK

APPENDIX C

AHYMO INPUT AND OUTPUT

```
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             RUN DATE (MON/DAY/YR) = 01/06/2015
             START TIME (HR:MIN:SEC) = 10:13:34     USER NO.=
AHYMO_Temp_User:20122010
             INPUT FILE = Z:\2014\2014068 Lots 1B1B1 and 1B1C1 Renaissance
Center\Drainage\hymo.txt

     ********************************************************************************
     *      RENAISSANCE CENTER LOT 1B1B1 & 1B1C1, ALBUQUERQUE, NM      *
     ********************************************************************************
     *  100-YEAR 24-HR STORM (UNDER PROPOSED CONDITIONS) W/ ROUTING  *
     ********************************************************************************
     START                   TIME=0.0
     *
     *
     RAINFALL                TYPE=2 RAIN QUARTER=0.0 IN
                             RAIN ONE=2.01 IN RAIN SIX=2.35 IN
                             RAIN DAY=2.75 IN DT=0.05 HR

                      24-HOUR RAINFALL DIST. - BASED ON NOAA ATLAS 14 FOR CONVECTIVE
AREAS (NM & AZ) - D1
                      DT =   0.050000 HOURS       END TIME =    24.000002 HOURS
                        0.0000  0.0023  0.0046  0.0071  0.0099  0.0127  0.0159
                        0.0203  0.0272  0.0347  0.0424  0.0509  0.0595  0.0684
                        0.0776  0.0870  0.0974  0.1084  0.1204  0.1437  0.1728
                        0.2117  0.2559  0.3104  0.3831  0.4649  0.6062  0.8258
                        1.2021  1.4666  1.6752  1.7800  1.8719  1.9379  1.9905
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                        2.1722  2.1803  2.1879  2.1953  2.2025  2.2084  2.2118
                        2.2152  2.2186  2.2217  2.2247  2.2278  2.2307  2.2336
                        2.2363  2.2391  2.2417  2.2443  2.2469  2.2494  2.2518
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                        2.3753  2.3765  2.3778  2.3790  2.3803  2.3815  2.3828
                        2.3840  2.3853  2.3865  2.3878  2.3890  2.3903  2.3915
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                        2.4692  2.4704  2.4716  2.4728  2.4740  2.4752  2.4764
                        2.4775  2.4787  2.4799  2.4811  2.4822  2.4834  2.4846
                        2.4858  2.4869  2.4881  2.4893  2.4905  2.4916  2.4928
                        2.4940  2.4951  2.4963  2.4975  2.4986  2.4998  2.5010
                        2.5021  2.5033  2.5044  2.5056  2.5068  2.5079  2.5091
                        2.5102  2.5114  2.5125  2.5137  2.5148  2.5160  2.5171
                        2.5183  2.5194  2.5206  2.5217  2.5229  2.5240  2.5252
                        2.5263  2.5274  2.5286  2.5297  2.5309  2.5320  2.5331
                        2.5343  2.5354  2.5365  2.5377  2.5388  2.5399  2.5411
```

2.5422	2.5433	2.5445	2.5456	2.5467	2.5478	2.5490
2.5501	2.5512	2.5523	2.5535	2.5546	2.5557	2.5568
2.5579	2.5590	2.5602	2.5613	2.5624	2.5635	2.5646
2.5657	2.5668	2.5679	2.5691	2.5702	2.5713	2.5724
2.5735	2.5746	2.5757	2.5768	2.5779	2.5790	2.5801
2.5812	2.5823	2.5834	2.5845	2.5856	2.5867	2.5878
2.5889	2.5899	2.5910	2.5921	2.5932	2.5943	2.5954
2.5965	2.5976	2.5986	2.5997	2.6008	2.6019	2.6030
2.6040	2.6051	2.6062	2.6073	2.6084	2.6094	2.6105
2.6116	2.6126	2.6137	2.6148	2.6159	2.6169	2.6180
2.6191	2.6201	2.6212	2.6223	2.6233	2.6244	2.6254
2.6265	2.6276	2.6286	2.6297	2.6307	2.6318	2.6328
2.6339	2.6350	2.6360	2.6371	2.6381	2.6392	2.6402
2.6413	2.6423	2.6433	2.6444	2.6454	2.6465	2.6475
2.6486	2.6496	2.6506	2.6517	2.6527	2.6538	2.6548
2.6558	2.6569	2.6579	2.6589	2.6600	2.6610	2.6620
2.6630	2.6641	2.6651	2.6661	2.6672	2.6682	2.6692
2.6702	2.6712	2.6723	2.6733	2.6743	2.6753	2.6763
2.6774	2.6784	2.6794	2.6804	2.6814	2.6824	2.6834
2.6844	2.6854	2.6865	2.6875	2.6885	2.6895	2.6905
2.6915	2.6925	2.6935	2.6945	2.6955	2.6965	2.6975
2.6985	2.6995	2.7005	2.7015	2.7025	2.7034	2.7044
2.7054	2.7064	2.7074	2.7084	2.7094	2.7104	2.7114
2.7123	2.7133	2.7143	2.7153	2.7163	2.7172	2.7182
2.7192	2.7202	2.7211	2.7221	2.7231	2.7241	2.7250
2.7260	2.7270	2.7280	2.7289	2.7299	2.7309	2.7318
2.7328	2.7338	2.7347	2.7357	2.7366	2.7376	2.7386
2.7395	2.7405	2.7414	2.7424	2.7433	2.7443	2.7452
2.7462	2.7472	2.7481	2.7491	2.7500		

```
*
* BASIN B1
*
    COMPUTE NM HYD       ID=1 HYD NO=100.1 AREA=0.00087 SQ MI
                         PER A=0.00 PER B=7.00 PER C=0.00 PER D=93.00
                         TP=-0.1333 HR MASS RAINFALL=-1

          K =  0.072649HR    TP =  0.133300HR    K/TP RATIO =  0.545000     SHAPE
CONSTANT, N =  7.106428
          UNIT PEAK =   3.1944    CFS   UNIT VOLUME =   0.9959       B =   526.28
 P60 = 2.0100
          AREA =     0.000809 SQ MI    IA =   0.10000 INCHES    INF =   0.04000
INCHES PER HOUR
          RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000


          K =  0.132088HR    TP =  0.133300HR    K/TP RATIO =  0.990905     SHAPE
CONSTANT, N =  3.562974
          UNIT PEAK =  0.14844    CFS   UNIT VOLUME =   0.9143       B =   324.90
 P60 = 2.0100
          AREA =     0.000061 SQ MI    IA =   0.50000 INCHES    INF =   1.25000
INCHES PER HOUR
          RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000

    PRINT HYD            ID=1 CODE=1

                                        PARTIAL HYDROGRAPH   100.10

          RUNOFF VOLUME =      2.39649 INCHES      =        0.1112 ACRE-FEET
          PEAK DISCHARGE RATE =        2.61 CFS  AT    1.500 HOURS   BASIN AREA =
```

0.0009 SQ. MI.

```
     *
     *
     * BASIN B2
     *
     COMPUTE NM HYD       ID=2 HYD NO=101.1 AREA=0.00062 SQ MI
                          PER A=0.00 PER B=5.00 PER C=0.00 PER D=95.00
                          TP=-0.1333 HR MASS RAINFALL=-1

          K =  0.072649HR     TP =  0.133300HR     K/TP RATIO =  0.545000     SHAPE
CONSTANT, N =  7.106428
          UNIT PEAK =   2.3254     CFS   UNIT VOLUME =   0.9941       B =   526.28
 P60 = 2.0100
          AREA =      0.000589 SQ MI     IA =   0.10000 INCHES     INF =   0.04000
INCHES PER HOUR
          RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000


          K =  0.132088HR     TP =  0.133300HR     K/TP RATIO =  0.990905     SHAPE
CONSTANT, N =  3.562974
          UNIT PEAK =  0.75559E-01CFS   UNIT VOLUME =   0.8744       B =   324.90
 P60 = 2.0100
          AREA =      0.000031 SQ MI     IA =   0.50000 INCHES     INF =   1.25000
INCHES PER HOUR
          RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000

     PRINT HYD            ID=2 CODE=1

                                   PARTIAL HYDROGRAPH   101.10

          RUNOFF VOLUME =      2.42753 INCHES      =        0.0803 ACRE-FEET
          PEAK DISCHARGE RATE =        1.88 CFS  AT   1.500 HOURS   BASIN AREA =
0.0006 SQ. MI.


     *
     *
     * BASIN B3
     *
     COMPUTE NM HYD       ID=3 HYD NO=102.1 AREA=0.00127 SQ MI
                          PER A=0.00 PER B=4.00 PER C=0.00 PER D=96.00
                          TP=-0.1333 HR MASS RAINFALL=-1

          K =  0.072649HR     TP =  0.133300HR     K/TP RATIO =  0.545000     SHAPE
CONSTANT, N =  7.106428
          UNIT PEAK =   4.8135     CFS   UNIT VOLUME =   0.9971       B =   526.28
 P60 = 2.0100
          AREA =      0.001219 SQ MI     IA =   0.10000 INCHES     INF =   0.04000
INCHES PER HOUR
          RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000


          K =  0.132088HR     TP =  0.133300HR     K/TP RATIO =  0.990905     SHAPE
CONSTANT, N =  3.562974
          UNIT PEAK =  0.12382     CFS   UNIT VOLUME =   0.8894       B =   324.90
```

P60 = 2.0100
AREA = 0.000051 SQ MI IA = 0.50000 INCHES INF = 1.25000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

PRINT HYD ID=3 CODE=1

PARTIAL HYDROGRAPH 102.10

RUNOFF VOLUME = 2.44304 INCHES = 0.1655 ACRE-FEET
PEAK DISCHARGE RATE = 3.86 CFS AT 1.500 HOURS BASIN AREA = 0.0013 SQ. MI.

*
*
*ROUTE BASIN B1 THROUGH PARKING LOT POND 1
*
ROUTE RESERVOIR ID=11 HYD NO=200.1 INFLOW ID=1 CODE=24

OUTFLOW(CFS)	STORAGE(AC-FT)	ELEVATION(FT)
0.0000	0.0000	5030.28
0.0385	0.0001	5030.78
0.0773	0.0002	5031.28
0.1023	0.0002	5031.78
0.1223	0.0003	5032.28
0.1395	0.0004	5032.78
0.1548	0.0005	5033.28
0.1687	0.0005	5033.78
0.1815	0.0006	5034.28
0.1935	0.0201	5034.78
0.2048	0.0804	5035.28

* * * * * * * * * * * * * * * * * * * *

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
0.00	0.00	5030.28	0.000	0.00
1.20	0.39	5034.31	0.002	0.18
2.40	0.08	5035.18	0.068	0.20
3.60	0.00	5035.03	0.050	0.20
4.80	0.01	5034.87	0.031	0.20
6.00	0.01	5034.59	0.013	0.19
7.20	0.01	5030.45	0.000	0.01
8.40	0.01	5030.45	0.000	0.01
9.60	0.01	5030.44	0.000	0.01
10.80	0.01	5030.44	0.000	0.01
12.00	0.01	5030.44	0.000	0.01
13.20	0.01	5030.44	0.000	0.01
14.40	0.01	5030.43	0.000	0.01
15.60	0.01	5030.43	0.000	0.01
16.80	0.01	5030.43	0.000	0.01
18.00	0.01	5030.42	0.000	0.01
19.20	0.01	5030.42	0.000	0.01
20.40	0.01	5030.42	0.000	0.01
21.60	0.01	5030.42	0.000	0.01
22.80	0.01	5030.41	0.000	0.01
24.00	0.01	5030.41	0.000	0.01

PEAK DISCHARGE = 0.203 CFS - PEAK OCCURS AT HOUR 2.15
MAXIMUM WATER SURFACE ELEVATION = 5035.190

MAXIMUM STORAGE = 0.0696 AC-FT INCREMENTAL TIME= 0.050000HRS

*

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 200.10

RUNOFF VOLUME = 2.39612 INCHES = 0.1112 ACRE-FEET
PEAK DISCHARGE RATE = 0.20 CFS AT 2.150 HOURS BASIN AREA = 0.0009 SQ. MI.

*
*
*ROUTE BASIN B2 THROUGH PARKING LOT POND 2
*

ROUTE RESERVOIR ID=22 HYD NO=201.1 INFLOW ID=2 CODE=24

OUTFLOW(CFS)	STORAGE(AC-FT)	ELEVATION(FT)
0.0000	0.0000	5033.10
0.0240	0.0001	5033.60
0.0482	0.0002	5034.10
0.0638	0.0002	5034.60
0.0762	0.0003	5035.10
0.0869	0.0004	5035.60
0.0965	0.0005	5036.10
0.1051	0.0005	5036.60
0.1131	0.0006	5037.10
0.1206	0.0187	5037.60
0.1257	0.0551	5037.96

* * * * * * * * * * * * * * * * * * * *

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
0.00	0.00	5033.10	0.000	0.00
1.20	0.29	5037.13	0.002	0.11
2.40	0.06	5037.92	0.051	0.13
3.60	0.00	5037.81	0.040	0.12
4.80	0.01	5037.70	0.028	0.12
6.00	0.01	5037.56	0.017	0.12
7.20	0.01	5037.26	0.006	0.12
8.40	0.01	5033.30	0.000	0.01
9.60	0.01	5033.29	0.000	0.01
10.80	0.01	5033.29	0.000	0.01
12.00	0.01	5033.29	0.000	0.01
13.20	0.01	5033.28	0.000	0.01
14.40	0.01	5033.28	0.000	0.01
15.60	0.01	5033.27	0.000	0.01
16.80	0.01	5033.27	0.000	0.01
18.00	0.01	5033.27	0.000	0.01
19.20	0.01	5033.27	0.000	0.01
20.40	0.01	5033.26	0.000	0.01
21.60	0.01	5033.26	0.000	0.01
22.80	0.01	5033.25	0.000	0.01
24.00	0.01	5033.25	0.000	0.01

PEAK DISCHARGE = 0.125 CFS - PEAK OCCURS AT HOUR 2.15
MAXIMUM WATER SURFACE ELEVATION = 5037.930
MAXIMUM STORAGE = 0.0521 AC-FT INCREMENTAL TIME= 0.050000HRS

*

PRINT HYD ID=22 CODE=1

PARTIAL HYDROGRAPH 201.10

RUNOFF VOLUME = 2.42706 INCHES = 0.0803 ACRE-FEET
PEAK DISCHARGE RATE = 0.13 CFS AT 2.150 HOURS BASIN AREA = 0.0006 SQ. MI.

*
*ROUTE BASIN B3 THROUGH PARKING LOT POND 3
*
ROUTE RESERVOIR ID=33 HYD NO=202.1 INFLOW ID=3 CODE=24

OUTFLOW(CFS)	STORAGE(AC-FT)	ELEVATION(FT)
0.0000	0.0000	5030.13
0.0209	0.0001	5030.63
0.0420	0.0002	5031.13
0.0556	0.0002	5031.63
0.0664	0.0003	5032.13
0.0757	0.0004	5032.63
0.0840	0.0005	5033.13
0.0916	0.0005	5033.63
0.0985	0.0006	5034.13
0.1050	0.0355	5034.63
0.1112	0.1418	5035.13

* * * * * * * * * * * * * * * * *

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
0.00	0.00	5030.13	0.000	0.00
1.20	0.59	5034.19	0.005	0.10
2.40	0.13	5035.03	0.122	0.11
3.60	0.01	5035.00	0.113	0.11
4.80	0.01	5034.95	0.103	0.11
6.00	0.02	5034.91	0.094	0.11
7.20	0.02	5034.86	0.085	0.11
8.40	0.02	5034.82	0.077	0.11
9.60	0.02	5034.78	0.068	0.11
10.80	0.02	5034.74	0.059	0.11
12.00	0.02	5034.70	0.050	0.11
13.20	0.02	5034.66	0.042	0.11
14.40	0.02	5034.60	0.033	0.10
15.60	0.02	5034.47	0.025	0.10
16.80	0.02	5034.35	0.016	0.10
18.00	0.02	5034.23	0.008	0.10
19.20	0.02	5030.67	0.000	0.02
20.40	0.02	5030.52	0.000	0.02
21.60	0.02	5030.51	0.000	0.02
22.80	0.02	5030.50	0.000	0.02
24.00	0.02	5030.49	0.000	0.02

PEAK DISCHARGE = 0.110 CFS - PEAK OCCURS AT HOUR 2.45
MAXIMUM WATER SURFACE ELEVATION = 5035.035
MAXIMUM STORAGE = 0.1216 AC-FT INCREMENTAL TIME= 0.050000HRS

*
PRINT HYD ID=33 CODE=1

PARTIAL HYDROGRAPH 202.10

RUNOFF VOLUME = 2.44280 INCHES = 0.1655 ACRE-FEET
PEAK DISCHARGE RATE = 0.11 CFS AT 2.450 HOURS BASIN AREA = 0.0013 SQ. MI.

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*
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FINISH
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NORMAL PROGRAM FINISH END TIME (HR:MIN:SEC) = 10:13:34