

# CITY OF ALBUQUERQUE



July 16, 2012

Fred C. Arfman, P.E.      freda@iacivil.com  
**Isaacson & Arfman, P.A.**  
128 Monroe Street N.E.  
Albuquerque, NM 87108

**Re:    Mountain Mahogany Community School PH II, 5014 4<sup>th</sup> St NW,  
Request for Permanent C.O. –Accepted  
Engineer's Stamp dated: 03-01-12, (F14/D062)  
Certification dated: 07-12-12**

Dear Mr. Arfman,

Based upon the information provided in the Certification received 07-13-12, the above referenced Certification is acceptable for a release of a Permanent Certificate of Occupancy by Hydrology.

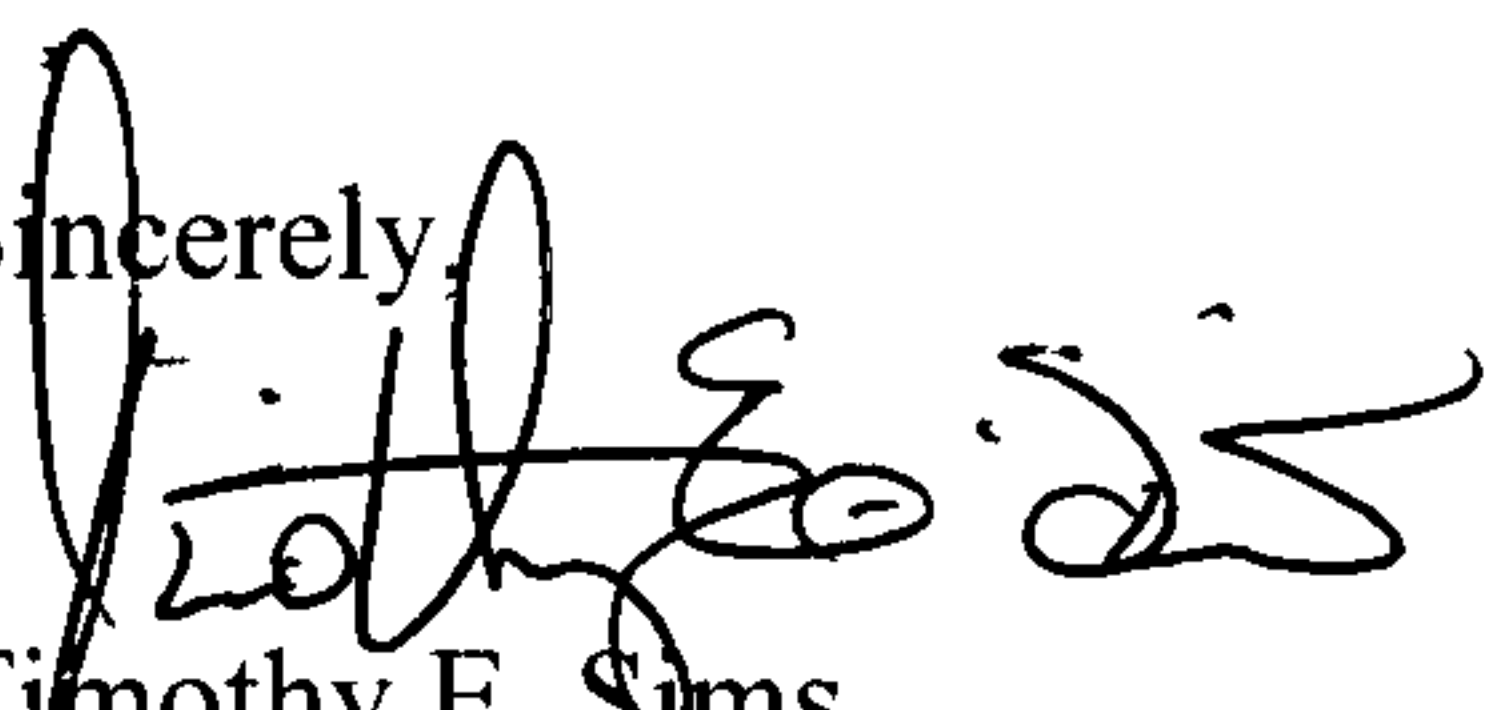
PO Box 1293

Hydrology is asking for an electronic copy, in .pdf format, of this certification for our records. This certification can be e-mailed to me at: [tsims@cabq.gov](mailto:tsims@cabq.gov).

Albuquerque

If you have any questions, you can contact me at 924-3982.

NM 87103

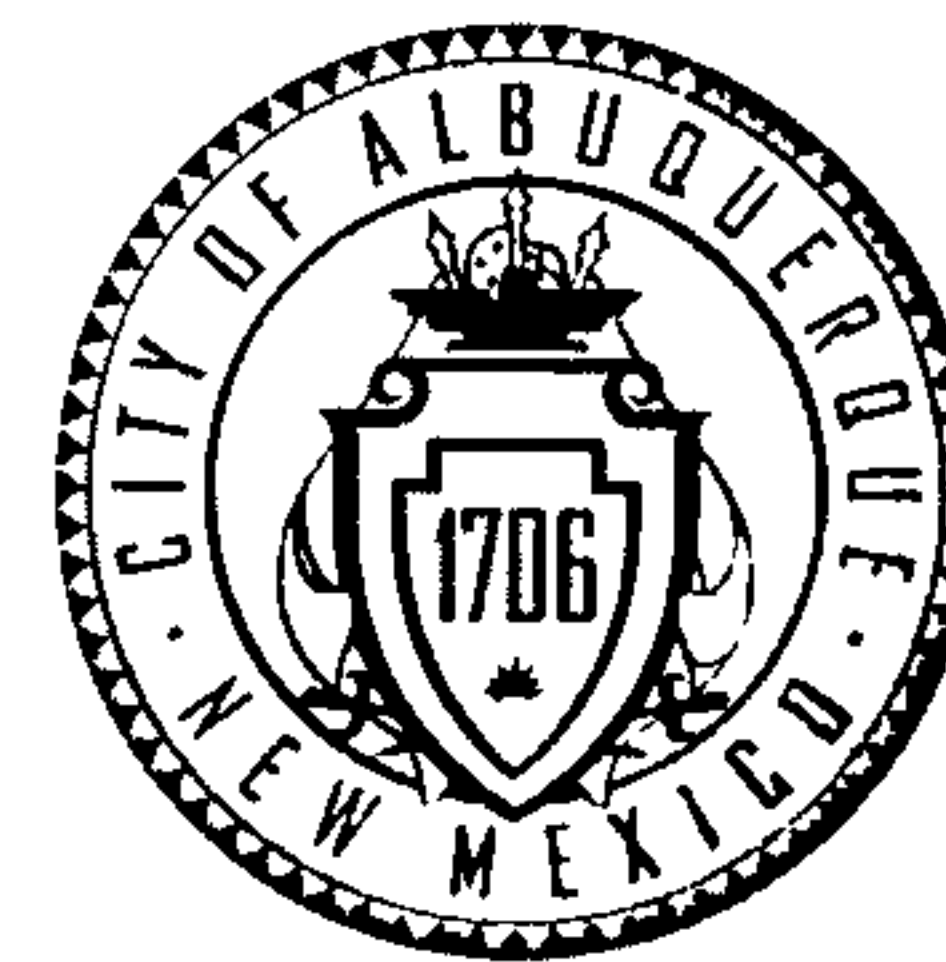
Sincerely,  
  
Timothy E. Sims,  
Plan Checker—Hydrology Section  
Development and Building Services

[www.cabq.gov](http://www.cabq.gov)

C:    CO Clerk—Katrina Sigala  
File

  
[DJ@insightnum.com](mailto:DJ@insightnum.com)

# CITY OF ALBUQUERQUE



March 21, 2012

Fred C. Arfman, P.E.      freda@iacivil.com  
**Isaacson & Arfman, P.A.**  
Albuquerque, NM 87108

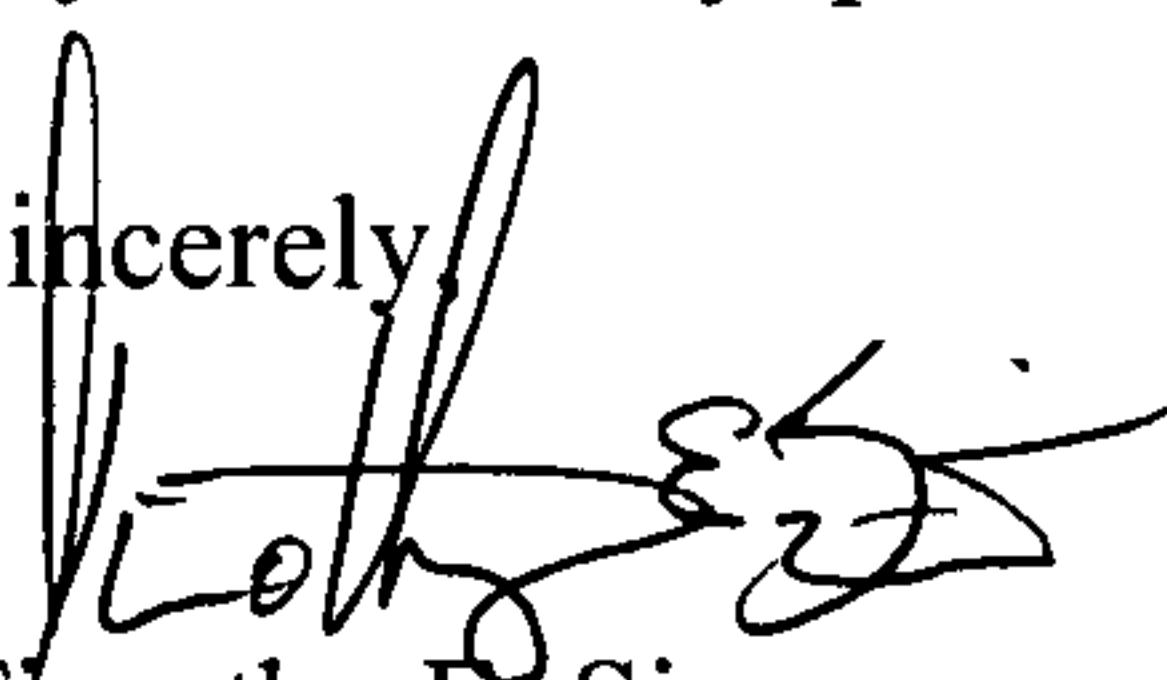
**Re:    Mountain Mahogany Community School Ph I—Protable Relocation,**  
**Request for Permanent C.O. - Approved**  
**Engineer's Stamp dated: 03-01-2012, (F14/D062)**  
**Certification dated: 03-19-12**

Dear Mr. Arfman,

Based upon the information provided in the Certification received 03-21-12, the above referenced Certification is approved for a release of a Permanent Certificate of Occupancy by Hydrology.

Hydrology is asking for an electronic copy, in .pdf format, of this certification for our records. This certification can be e-mailed to me at: [tsims@cabq.gov](mailto:tsims@cabq.gov).

If you have any questions, you can contact me at 924-3982.

Sincerely,  


Timothy E. Sims,  
Plan Checker—Hydrology Section  
Development and Building Services

C:    CO Clerk—Katrina Sigala  
File

PO Box 1293

Albuquerque

NM 87103

[www.cabq.gov](http://www.cabq.gov)

**DRAINAGE AND TRANSPORTATION INFORMATION SHEET**  
(Rev. 12/05)

PROJECT TITLE: Mountain Mahogany Community School PHASE 1 ZONE MAP/DRG. FILE # F-14 / D062  
DRB#: \_\_\_\_\_ EPC#: \_\_\_\_\_ WORK ORDER#: \_\_\_\_\_

LEGAL DESCRIPTION: LOT 'B', LANDS OF HUBERT R. TEAGUE, CITY OF ALBUQUERQUE  
CITY ADDRESS: 5014 4<sup>TH</sup> STREET NW, 87107

ENGINEERING FIRM: ISAACSON & ARFMAN, PA  
ADDRESS: 128 MONROE NE  
CITY, STATE: ALBUQUERQUE, NM

CONTACT: Fred Arfman  
PHONE: 268-8828  
ZIP CODE: 87108

OWNER: Mountain Mahogany Community School  
ADDRESS: \_\_\_\_\_  
CITY, STATE: \_\_\_\_\_

CONTACT: \_\_\_\_\_  
PHONE: \_\_\_\_\_  
ZIP CODE: \_\_\_\_\_

ARCHITECT: Environmental Dynamics Inc.  
ADDRESS: 142 Truman St. NE, Suite A-1  
CITY, STATE: \_\_\_\_\_

CONTACT: Kent Beierle  
PHONE: 242-2851  
ZIP CODE: 87108

SURVEYOR: Anthony Harris NMLS #11463  
ADDRESS: \_\_\_\_\_  
CITY, STATE: \_\_\_\_\_

CONTACT: \_\_\_\_\_  
PHONE: \_\_\_\_\_  
ZIP CODE: \_\_\_\_\_

CONTRACTOR: Anchor Built.  
ADDRESS: \_\_\_\_\_  
CITY, STATE: \_\_\_\_\_

CONTACT: Gilbert  
PHONE: \_\_\_\_\_  
ZIP CODE: \_\_\_\_\_

**TYPE OF SUBMITTAL:**

- ☐ DRAINAGE REPORT  
☐ DRAINAGE PLAN 1<sup>st</sup> SUBMITTAL  
☐ DRAINAGE PLAN RESUBMITTAL  
☐ CONCEPTUAL G & D PLAN  
☐ GRADING PLAN  
☐ EROSION CONTROL PLAN  
☒ ENGINEER'S CERT (HYDROLOGY) PHASE 1  
☐ CLOMR/LOMR  
☐ TRAFFIC CIRCULATION LAYOUT  
☐ ENGINEER/ARCHITECT CERT (TCL)  
☐ ENGINEER/ARCHITECT CERT (DRB S.P.)  
☐ ENGINEER/ARCHITECT CERT (AA)  
☐ OTHER (SPECIFY) \_\_\_\_\_

**CHECK TYPE OF APPROVAL 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  
☐ FOUNDATION PERMIT APPROVAL  
☐ BUILDING PERMIT APPROVAL  
☒ CERTIFICATE OF OCCUPANCY (PERM)  
☐ CERTIFICATE OF OCCUPANCY (TEMP)  
☐ GRADING PERMIT APPROVAL  
☐ PAVING PERMIT APPROVAL  
☐ WORK ORDER APPROVAL  
☐ OTHER (SPECIFY) \_\_\_\_\_

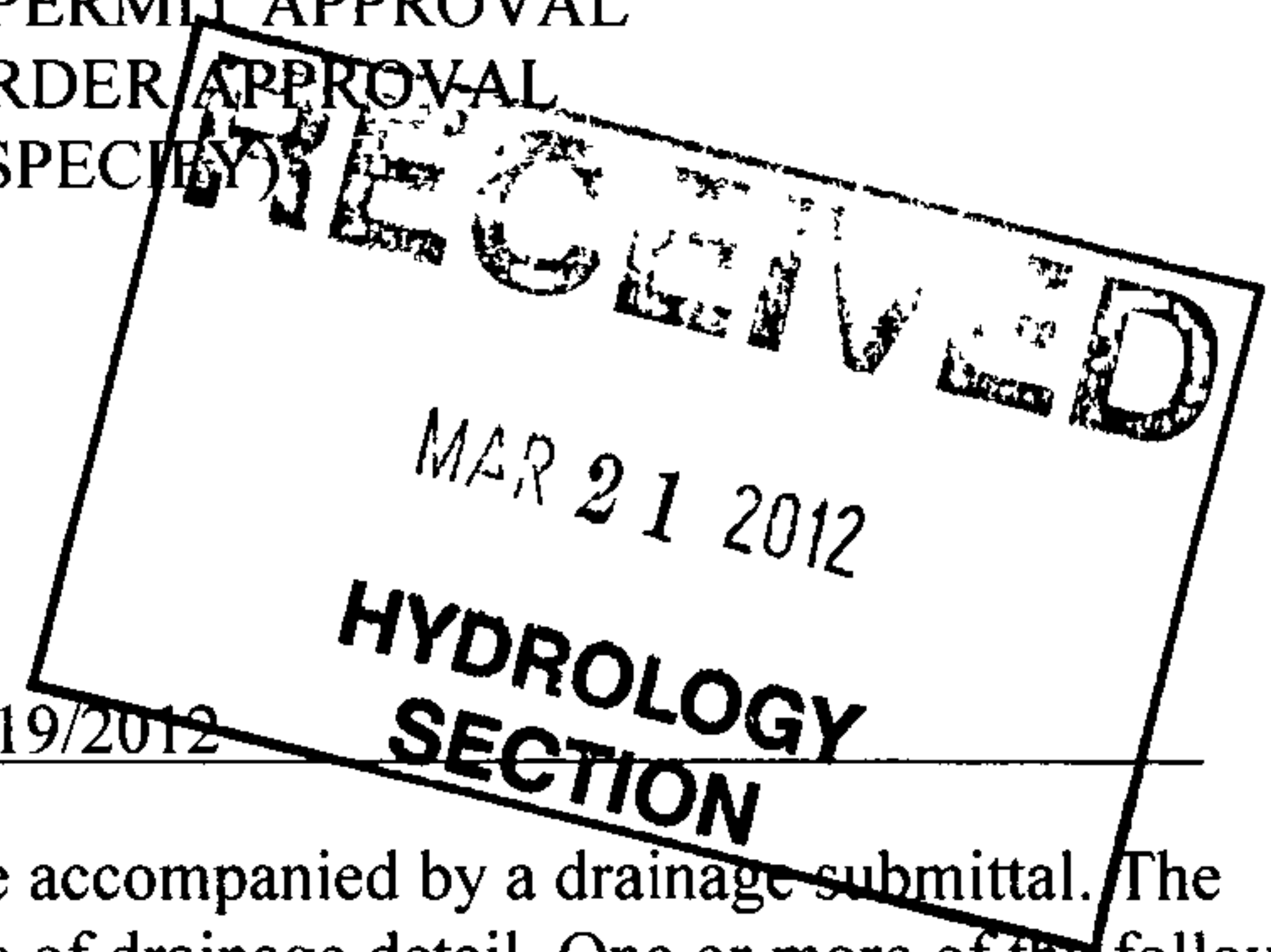
**WAS A PRE-DESIGN CONFERENCE ATTENDED:**

- ☐ YES  
☐ NO  
☐ COPY PROVIDED

SUBMITTED BY: Fred C. Arfman DATE: 3/19/2012  
Isaacson & Arfman, P A

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 define the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

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.



# CITY OF ALBUQUERQUE



March 1, 2012

Fred C. Arfman, P.E.  
Isaacson & Arfman, P.A.  
128 Monroe St. NE  
Albuquerque, NM 87108

**Re: Mountain Mahogany Community School, 5014 4<sup>th</sup> Street NW**  
**Grading and Drainage Plan**  
**Engineer's Stamp date 3-01-12 (F14/D062)**

Dear Mr. Arfman,

Based upon the information provided in your submittal received 3-1-12, the above referenced plan is approved for Building Permit.

PO Box 1293

If  $\frac{3}{4}$  acre or more is being disturbed Topsoil Disturbance Permit will be required.

Albuquerque

Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology. Prior to Certificate of Occupancy release, Engineer Certification per the DPM will be required.

NM 87103

Albuquerque's MS4 Permit became effective March 1<sup>st</sup>, 2012. Grading and Drainage Plans and Drainage Reports will have to comply with the requirements of the new permit. The permit is available online at [www.cabq.gov/Planning/landcoord/Hydrology.html](http://www.cabq.gov/Planning/landcoord/Hydrology.html).

[www.cabq.gov](http://www.cabq.gov)

If you have any questions, you can contact me at 924-3986.

Sincerely,

Curtis Cherne, P.E.  
Principal Engineer, Planning Dept.  
Development and Building Services

C: email



Fast Trax

**DRAINAGE AND TRANSPORTATION INFORMATION SHEET**  
(Rev. 12/05)

finish by  
noon tomorrow  
can fix it  
problem  
ce

PROJECT TITLE: Mountain Mahogany Community School ZONE MAP/DRG. FILE # F-14 / D062  
DRB#: \_\_\_\_\_ EPC#: \_\_\_\_\_ WORK ORDER#: \_\_\_\_\_

LEGAL DESCRIPTION: LOT 'B', LANDS OF HUBERT R. TEAGUE, CITY OF ALBUQUERQUE  
CITY ADDRESS: 5014 4<sup>TH</sup> STREET NW, 87107

ENGINEERING FIRM: ISAACSON & ARFMAN, PA CONTACT: Fred Arfman  
ADDRESS: 128 MONROE NE PHONE: 268-8828  
CITY, STATE: ALBUQUERQUE, NM ZIP CODE: 87108

OWNER: Mountain Mahogany Community School CONTACT: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_ PHONE: \_\_\_\_\_  
CITY, STATE: \_\_\_\_\_ ZIP CODE: \_\_\_\_\_

ARCHITECT: Environmental Dynamics Inc. CONTACT: Kent Beierle  
ADDRESS: 142 Truman St. NE, Suite A-1 PHONE: 242-2851  
CITY, STATE: \_\_\_\_\_ ZIP CODE: 87108

SURVEYOR: Anthony Harris NMLS #11463 CONTACT: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_ PHONE: \_\_\_\_\_  
CITY, STATE: \_\_\_\_\_ ZIP CODE: \_\_\_\_\_

CONTRACTOR: \_\_\_\_\_ CONTACT: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_ PHONE: \_\_\_\_\_  
CITY, STATE: \_\_\_\_\_ ZIP CODE: \_\_\_\_\_

**TYPE OF SUBMITTAL:**

☐ DRAINAGE REPORT  
☐ DRAINAGE PLAN 1<sup>st</sup> SUBMITTAL  
☒ DRAINAGE PLAN RESUBMITTAL  
☐ CONCEPTUAL G & D PLAN  
☒ GRADING PLAN  
☐ EROSION CONTROL PLAN  
☐ ENGINEER'S CERT (HYDROLOGY)  
☐ CLOMR/LOMR  
☐ TRAFFIC CIRCULATION LAYOUT  
☐ ENGINEER/ARCHITECT CERT (TCL)  
☐ ENGINEER/ARCHITECT CERT (DRB S.P.)  
☐ ENGINEER/ARCHITECT CERT (AA)  
☐ OTHER (SPECIFY) \_\_\_\_\_

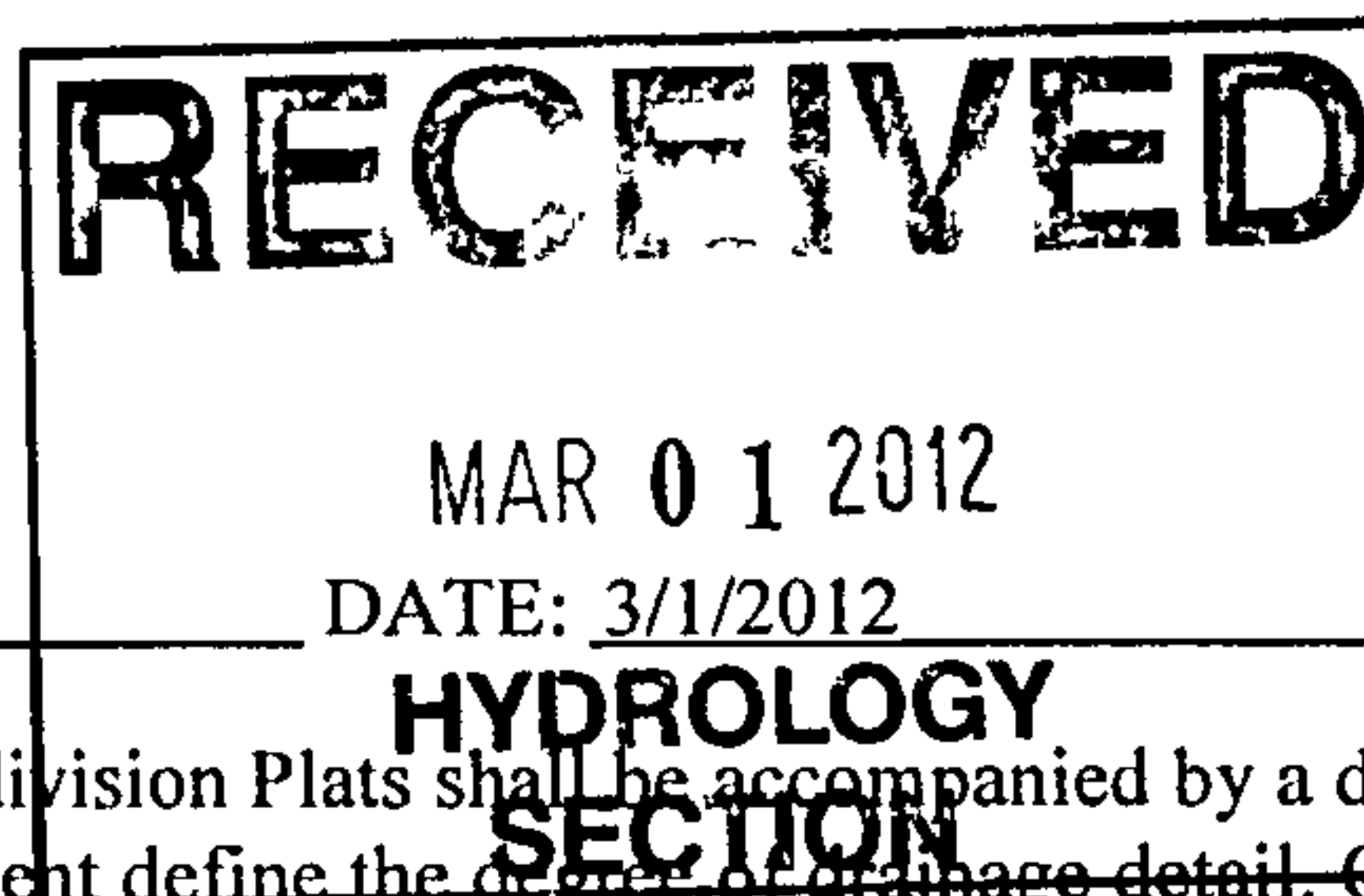
**CHECK TYPE OF APPROVAL SOUGHT:**

☐ 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  
☐ FOUNDATION PERMIT APPROVAL  
☒ BUILDING PERMIT APPROVAL  
☐ CERTIFICATE OF OCCUPANCY (PERM)  
☐ CERTIFICATE OF OCCUPANCY (TEMP)  
☐ GRADING PERMIT APPROVAL  
☐ PAVING PERMIT APPROVAL  
☐ WORK ORDER APPROVAL  
☐ OTHER (SPECIFY) \_\_\_\_\_

WAS A PRE-DESIGN CONFERENCE ATTENDED:

☐ YES  
☐ NO  
☐ COPY PROVIDED

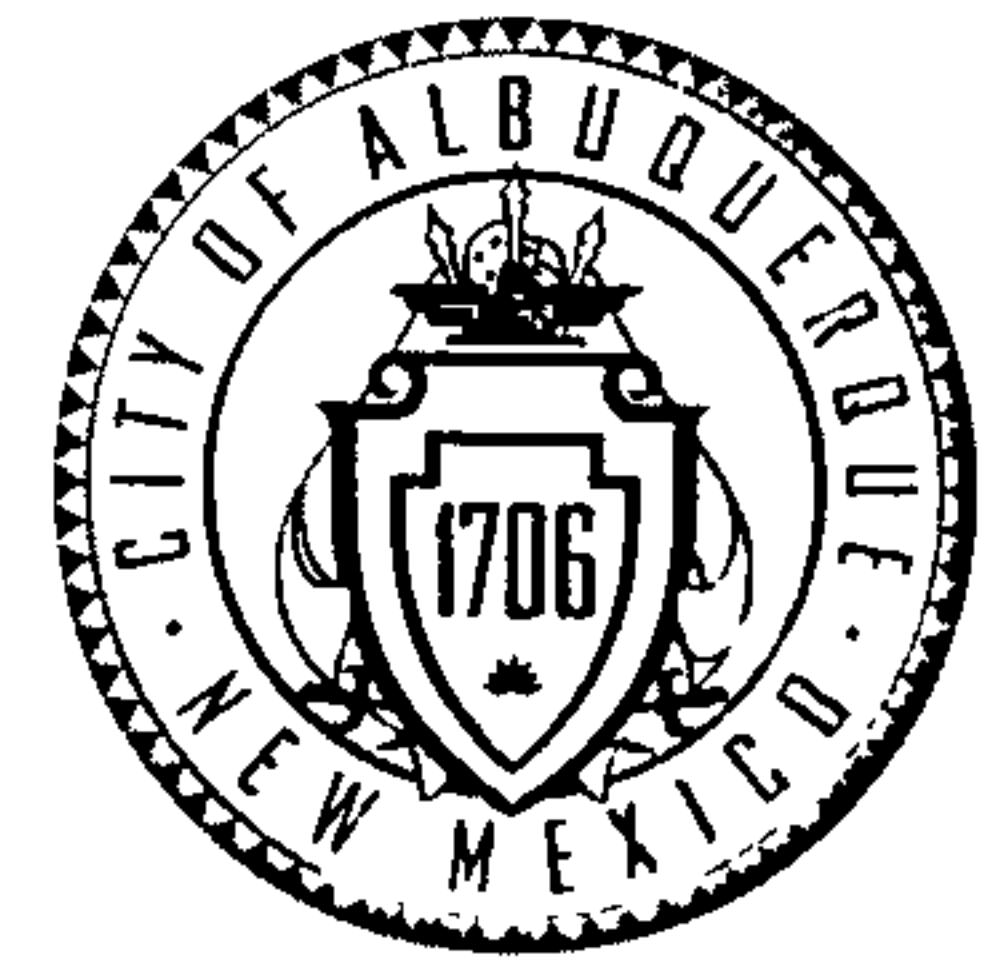
SUBMITTED BY: Bryan J. Bobrick DATE: 3/1/2012  
Isaacson & Arfman, P.A.



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 define the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

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.

# CITY OF ALBUQUERQUE



February 10, 2012

Fred C. Arfman, P.E.  
Isaacson & Arfman, P.A.  
128 Monroe St. NE  
Albuquerque, NM 87108

**Re: Mountain Mahogany Community School, 5014 4<sup>th</sup> Street NW  
Grading and Drainage Plan  
Engineer's Stamp date 02-07-12 (F14-D062)**

Dear Mr. Arfman,

PO Box 1293

Based upon the information provided in your submittal received 02-08-12, the above referenced plan is approved for Building Permit.

Albuquerque

If  $\frac{3}{4}$  acre or more is being disturbed Topsoil Disturbance Permit will be required. If one acre or more is being disturbed this project requires a National Pollutant Discharge Elimination System (NPDES) permit for storm water discharge.

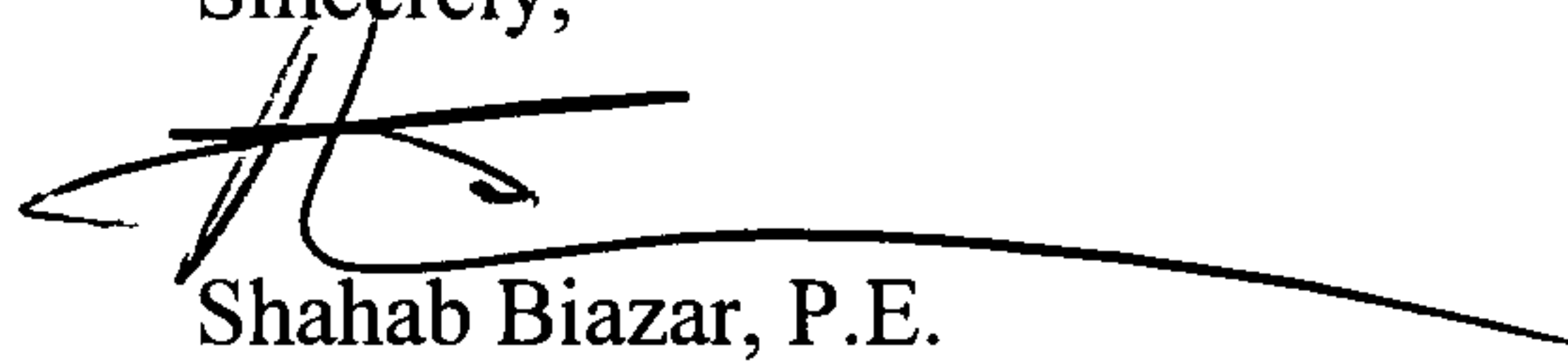
NM 87103

Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology. Prior to Certificate of Occupancy release, Engineer Certification per the DPM will be required.

www.cabq.gov

If you have any questions, you can contact me at 924-3695.

Sincerely,

  
Shahab Biazar, P.E.  
Senior Engineer, Planning Dept.  
Development and Building Services

C: emailed

**DRAINAGE AND TRANSPORTATION INFORMATION SHEET**  
(Rev. 12/05)

PROJECT TITLE: Mountain Mahogany Community School ZONE MAP/DRG. FILE # F-14 / D062  
DRB#: \_\_\_\_\_ EPC#: \_\_\_\_\_ WORK ORDER#: \_\_\_\_\_

LEGAL DESCRIPTION: LOT 'B', LANDS OF HUBERT R. TEAGUE, CITY OF ALBUQUERQUE  
CITY ADDRESS: 5014 4<sup>TH</sup> STREET NW, 87107

ENGINEERING FIRM: ISAACSON & ARFMAN, PA CONTACT: Fred Arfman  
ADDRESS: 128 MONROE NE PHONE: 268-8828  
CITY, STATE: ALBUQUERQUE, NM ZIP CODE: 87108

OWNER: Mountain Mahogany Community School CONTACT: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_ PHONE: \_\_\_\_\_  
CITY, STATE: \_\_\_\_\_ ZIP CODE: \_\_\_\_\_

ARCHITECT: Environmental Dynamics Inc. CONTACT: Kent Beierle  
ADDRESS: 142 Truman St. NE, Suite A-1 PHONE: 242-2851  
CITY, STATE: \_\_\_\_\_ ZIP CODE: 87108

SURVEYOR: Anthony Harris NMLS #11463 CONTACT: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_ PHONE: \_\_\_\_\_  
CITY, STATE: \_\_\_\_\_ ZIP CODE: \_\_\_\_\_

CONTRACTOR: \_\_\_\_\_ CONTACT: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_ PHONE: \_\_\_\_\_  
CITY, STATE: \_\_\_\_\_ ZIP CODE: \_\_\_\_\_

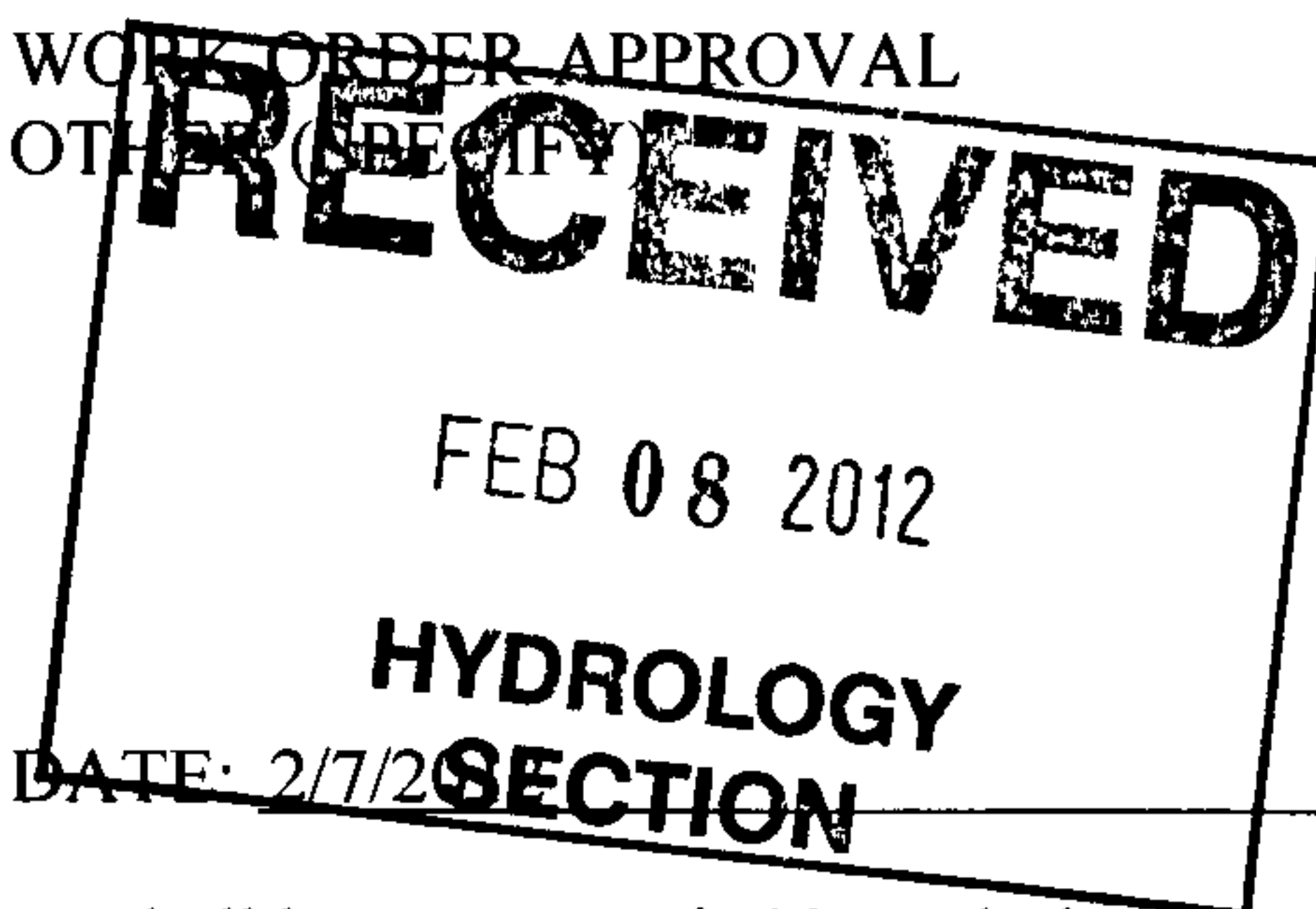
TYPE OF SUBMITTAL:  
\_\_\_\_ DRAINAGE REPORT  
\_\_\_\_ DRAINAGE PLAN 1<sup>st</sup> SUBMITTAL  
☒ DRAINAGE PLAN RESUBMITTAL  
\_\_\_\_ CONCEPTUAL G & D PLAN  
☒ GRADING PLAN  
\_\_\_\_ EROSION CONTROL PLAN  
\_\_\_\_ ENGINEER'S CERT (HYDROLOGY)  
\_\_\_\_ CLOMR/LOMR  
\_\_\_\_ TRAFFIC CIRCULATION LAYOUT  
\_\_\_\_ ENGINEER/ARCHITECT CERT (TCL)  
\_\_\_\_ ENGINEER/ARCHITECT CERT (DRB S.P.)  
\_\_\_\_ ENGINEER/ARCHITECT CERT (AA)  
\_\_\_\_ OTHER (SPECIFY) \_\_\_\_\_

CHECK TYPE OF APPROVAL SOUGHT:  
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\_\_\_\_ PRELIMINARY PLAT APPROVAL  
\_\_\_\_ S. DEV. PLAN FOR SUB'D APPROVAL  
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\_\_\_\_ SECTOR PLAN APPROVAL  
\_\_\_\_ FINAL PLAT APPROVAL  
\_\_\_\_ FOUNDATION PERMIT APPROVAL  
☒ BUILDING PERMIT APPROVAL  
\_\_\_\_ CERTIFICATE OF OCCUPANCY (PERM)  
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\_\_\_\_ PAVING PERMIT APPROVAL  
\_\_\_\_ WORK ORDER APPROVAL  
\_\_\_\_ OTHER (SPECIFY) \_\_\_\_\_

WAS A PRE-DESIGN CONFERENCE ATTENDED:  
\_\_\_\_ YES  
\_\_\_\_ NO  
\_\_\_\_ COPY PROVIDED

*DWB 5/27/12*

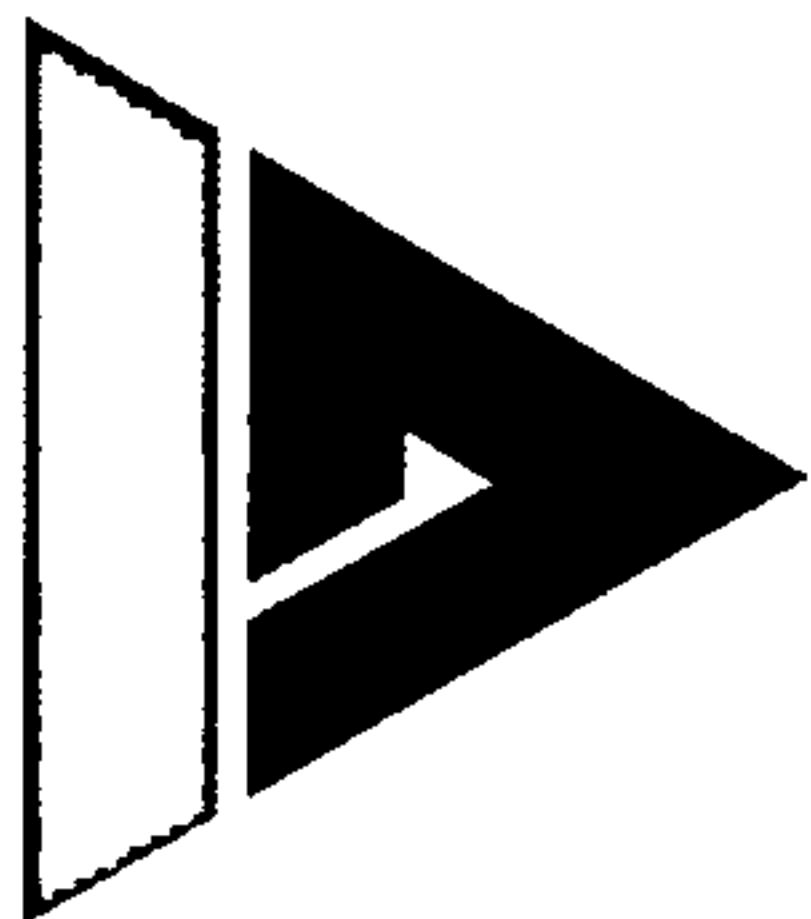
SUBMITTED BY: Bryan J. Bobrick DATE: 2/7/2012  
Isaacson & Arfman, P.A.



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 define the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

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3. **Drainage Report:** Required for subdivision containing more than ten (10) lots or constituting five (5) acres or more.





## A Transmittal From

**Isaacson & Arfman, P.A.**

Consulting Engineering Associates

**TO:** Shahab Biazar, PE  
City of Albuquerque  
Hydrology

**DATE:** 7 February 2012  
**JOB NO:** 1903

**FROM:** Bryan Bobrick

**REFERENCE:** Mountain Mahogany Community School

**WE ARE SENDING YOU ATTACHED THE FOLLOWING ITEMS:**

1 copy of the revised plans

1 copy of the supplemental information packet

**THIS INFORMATION IS TRANSMITTED:**

☐ As per your request

☐ For your files

☒ For your review and approval

☐ For your use

☐ For your information

☐ Please review and return

☐ For your attention

☐ For return to your files

☐ For your signature

☐ Please advise

☐

☐

**COMMENTS:**

Mr. Biazar, In response to your review comments dated January 27, 2012, I have made the following revisions to the plan:

1. A pond volume analysis is included in the supplemental information to address the proposed construction as well as to provide for some additional future improvements.
2. We have called for the installation of six percolation pits within the various ponds to assist with draining the ponds. There is a shallow clay lens (within the upper 4 feet).

Please let me know if you need anything else. Thank you.

Bryan Bobrick

**COPIES TO:** File



FEBRUARY 7, 2012

# SUPPLEMENTAL INFORMATION

FOR

Mountain Mahogany Community School

IA Project No. 1903

BY



The Mountain Mahogany Charter School site is a developed school property located within C.O.A. Vicinity Map F-14. The site is bound by 4<sup>th</sup> Street to the west, the Gallegos Lateral to the east and developed residential properties to the north and south. The proposed construction includes a new administration building and classroom additions with associated site walks and landscaping.

Off-site: no off-site drainage affects this property.

Flood hazard: per Bernalillo County FIRM Map #35001C0119G, dated September 26, 2008, the site is located within Floodzone 'X' (shaded) designated as 'areas of 0.2% annual chance flood; areas of 1% chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

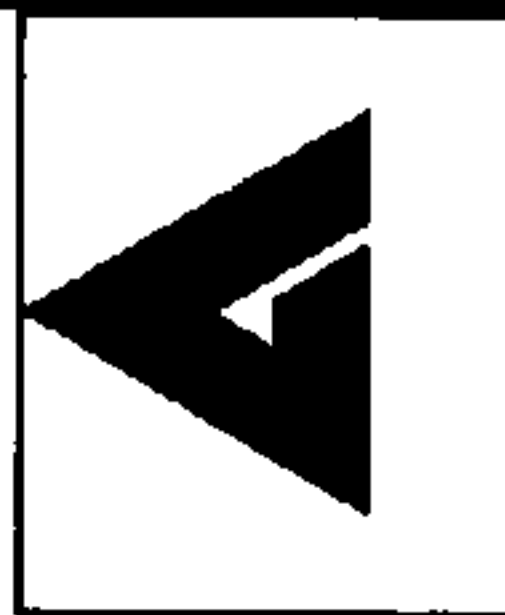
Drainage plan concept: the Mountain Mahogany Charter School site utilizes retention ponds throughout the site to store the 100-year, 10-day storm event as required. In addition, every building discharges roof drainage to large above ground rain barrels totaling over 8,000 gallons (=1,070 CF = 40 CY). Although these rain barrels do not count towards stormwater storage, they will assuredly have an impact. The proposed site demolition and new construction will not alter existing drainage patterns significantly. Site discharge will continue to be captured within localized water harvesting basins with all overflow passing to the east recreation field / retention pond.

This analysis includes calculations for the EXISTING condition, the PROPOSED condition and also provides a conceptual analysis for FUTURE additions to show that there is adequate volume available should the school seek to add additional impervious area.

In order to generate the volumes required for each of the conditions, land treatment areas were calculated (see Land Treatment Maps) and the resulting percentages were entered into the DPM calculations to obtain the volume generated for the 100-year 6-hour storm event. The 100-year 10-day volume was then calculated per the DPM to determine the required ponding volume.

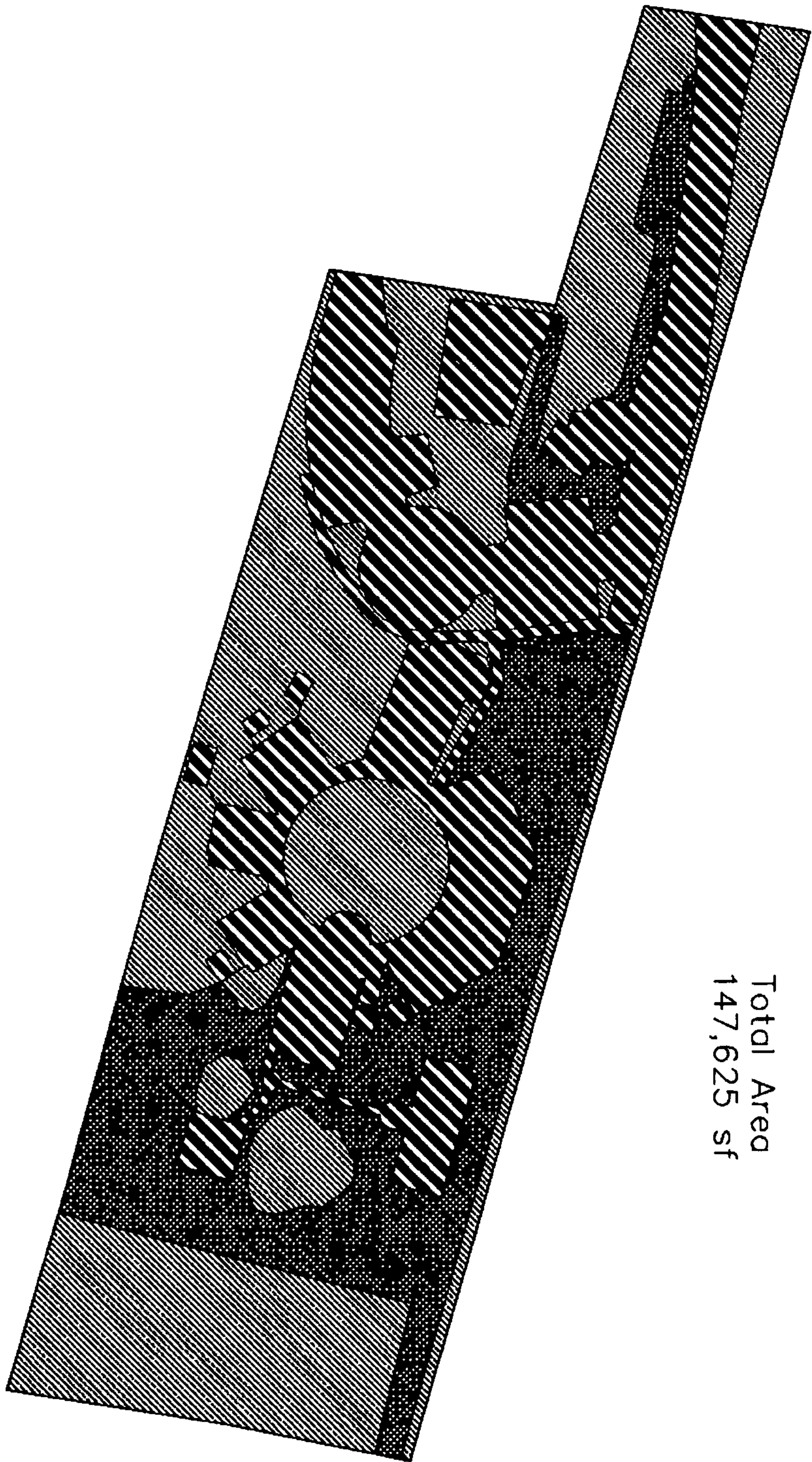
Site pond depths were calculated using Civil 3D as follows. A surface was generated based on the provided topographic survey. A second surface (a level plane) was generated to represent water surface elevation and moved vertically until the required volume was achieved. See the attached Volume maps for the portions of ponding .

In summary, the existing condition provides a pond volume of at a water surface elevation of 4972.4.



ISAACSON & ARFMAN, P.A.  
Consulting Engineering Associates  
Albuquerque, New Mexico  
1803 C-701-LAND AREA 07.2012

PROJECT Mountain Mahogany Private School  
JOB NO. 1903 BY BJB DATE Feb. 3, 2012



Total Area  
147,625 sf

42.2%	Treatment B	62320 sf
25%	Treatment C	36,893 sf
32.8%	Treatment D	48412 sf

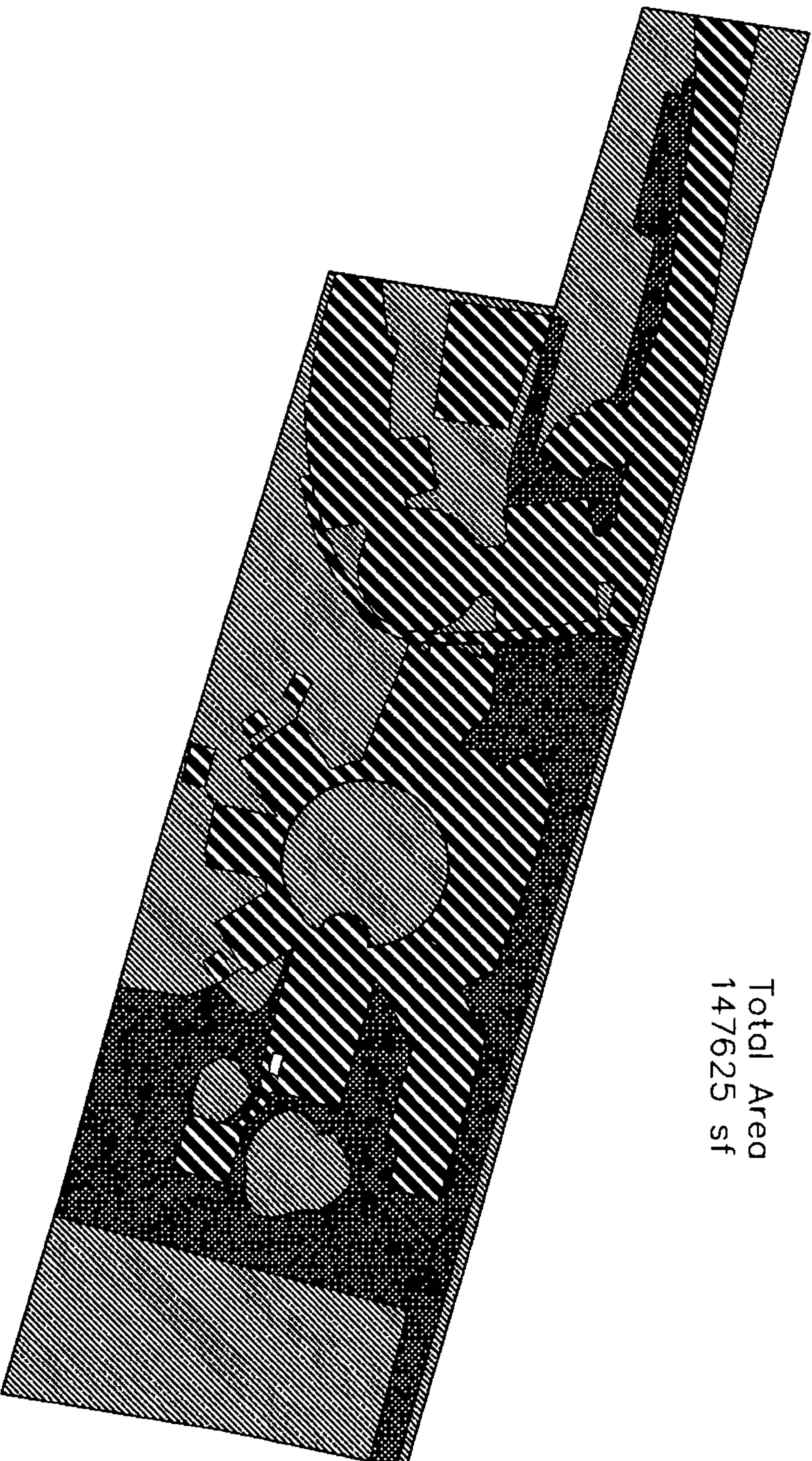
EXISTING CONDITIONS





ISAACSON & ARMAN, P.A.  
Consulting Engineering Associates  
Albuquerque, New Mexico  
1903 C-701-LAND AREA 07.2012

PROJECT Mountain Mahogany Private School  
JOB NO 1903 BY BJB DATE Feb 3, 2012



Total Area  
147625 sf

42.1%	Treatment B	62119 sf
22.9%	Treatment C	33814 sf
35%	Treatment D	51692 sf

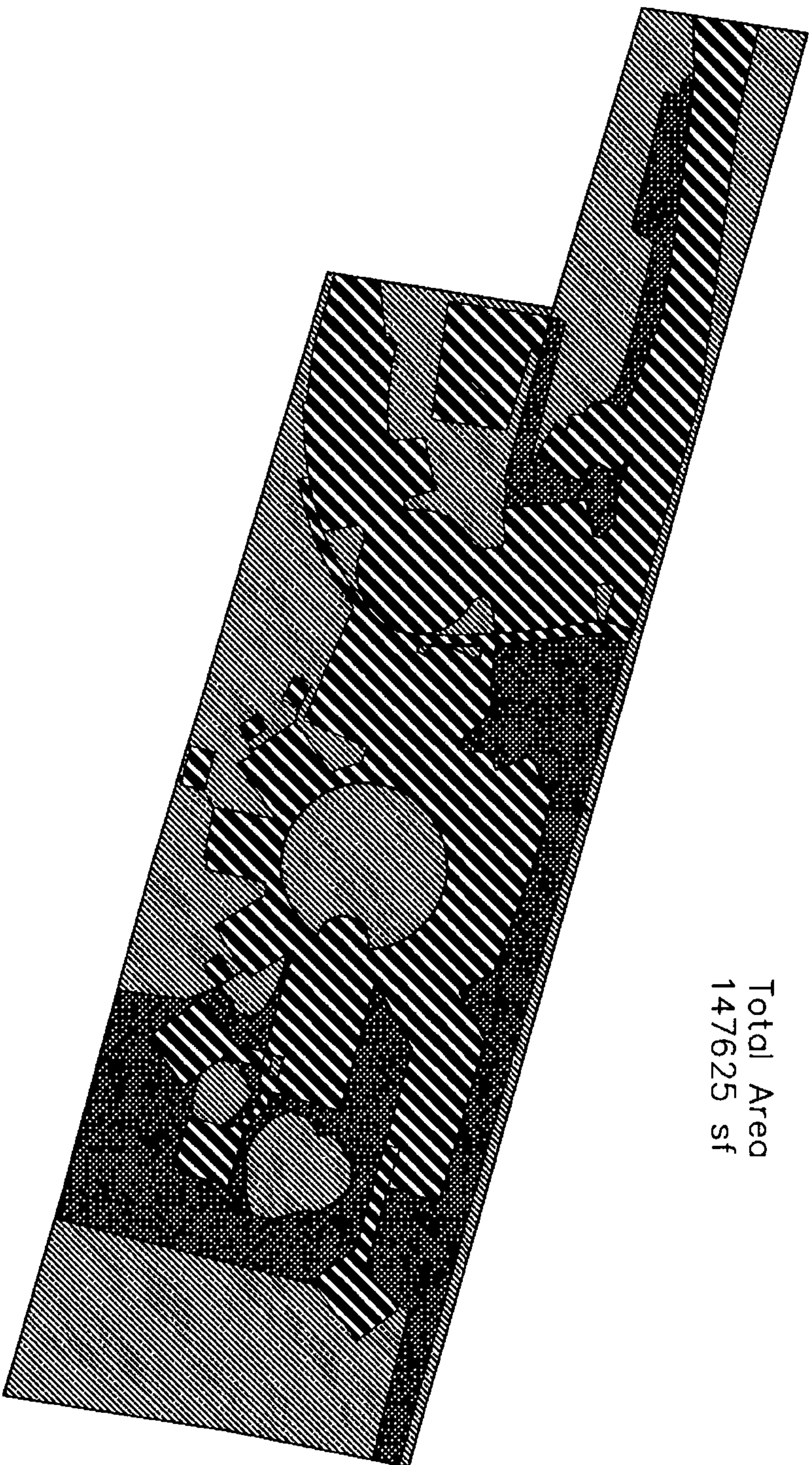
## PROPOSED CONDITIONS





ISAACSON & ARFMAN, P.A.  
Consulting Engineering Associates  
Albuquerque, New Mexico  
1805 C-701-LAND AREA 07.2012

PROJECT: Mountain Mahogany Private School  
JOB NO. 1903 BY BJB DATE Feb. 3, 2012



Total Area  
147625 sf

40.3%	Treatment B	59428 sf
21.3%	Treatment C	31517 sf
38.4%	Treatment D	56680 sf

FUTURE CONDITIONS

The 100-year 6-hour storm event for EXISTING, PROPOSED and FUTURE impervious conditions are provided in the table below.

EXISTING CONDITIONS		DESCRIPTION		Approximately 33% impervious
Area of basin flows =	147624	SF	=	3.4 Ac.
The following calculations are based on Treatment areas as shown in table to the right				LAND TREATMENT
Sub-basin Weighted Excess Precipitation (see formula above)				A = 0%
Weighted E =				B = 42%
Sub-basin Volume of Runoff (see formula above)				C = 25%
V <sub>360</sub> =				D = 33%
Sub-basin Peak Discharge Rate: (see formula above)				
Q <sub>p</sub> =				11.1 cfs
PROPOSED CONDITIONS		DESCRIPTION		Approximately 35% impervious
Area of basin flows =	147624	SF	=	3.4 Ac.
The following calculations are based on Treatment areas as shown in table to the right				LAND TREATMENT
Sub-basin Weighted Excess Precipitation (see formula above)				A = 0%
Weighted E =				B = 42%
Sub-basin Volume of Runoff (see formula above)				C = 23%
V <sub>360</sub> =				D = 35%
Sub-basin Peak Discharge Rate: (see formula above)				
Q <sub>p</sub> =				11.3 cfs
FUTURE CONDITIONS		DESCRIPTION		Approximately 38% impervious
Area of basin flows =	147624	SF	=	3.4 Ac.
The following calculations are based on Treatment areas as shown in table to the right				LAND TREATMENT
Sub-basin Weighted Excess Precipitation (see formula above)				A = 0%
Weighted E =				B = 40%
Sub-basin Volume of Runoff (see formula above)				C = 21%
V <sub>360</sub> =				D = 38%
Sub-basin Peak Discharge Rate: (see formula above)				
Q <sub>p</sub> =				11.5 cfs

The required storage volume for the site is based on the 100-year 10-day storm event. The following tables and graphics will clearly show that this site has ponding volume available in it's existing condition to store a significant volume without impacting the surrounding properties

EXISTING CONDITIONS: 32.8% D

100-year 10-day

V <sub>360</sub> (from previous calculation)		16079
Area Treatment D (SF)		48421
Zone		2
For 10 Day Storms: V <sub>10day</sub> = V <sub>360</sub> + A <sub>D</sub> * (P <sub>10day</sub> - P <sub>360</sub> )*43560 SF/AC		
V <sub>360</sub>	=	16079
A <sub>D</sub> (SF)	=	48421
Zone	=	2
P <sub>10day</sub>	=	3.95
P <sub>360</sub>	=	2.35
V <sub>360</sub>	=	16079
+ imp. area	=	6456
Total Pond Volume (V <sub>10 day</sub> )	=	22535

22,535 CF = 835 CY

Water Surface Elevation = 4972.4

PROPOSED CONDITIONS: 35.0% D

100-year 10-day

V <sub>360</sub> (from previous calculation)		16351
Area Treatment D (SF)		51668
Zone		2
For 10 Day Storms: V <sub>10day</sub> = V <sub>360</sub> + A <sub>D</sub> * (P <sub>10day</sub> - P <sub>360</sub> )*43560 SF/AC		
V <sub>360</sub>	=	16351
A <sub>D</sub> (SF)	=	51668
Zone	=	2
P <sub>10day</sub>	=	3.95
P <sub>360</sub>	=	2.35
V <sub>360</sub>	=	16351
+ imp. area	=	6889
Total Pond Volume (V <sub>10 day</sub> )	=	23240

23,240 CF = 861 CY

Water Surface Elevation = 4972.5

MAXIMUM CONDITIONS: 38.4% D

100-year 10-day

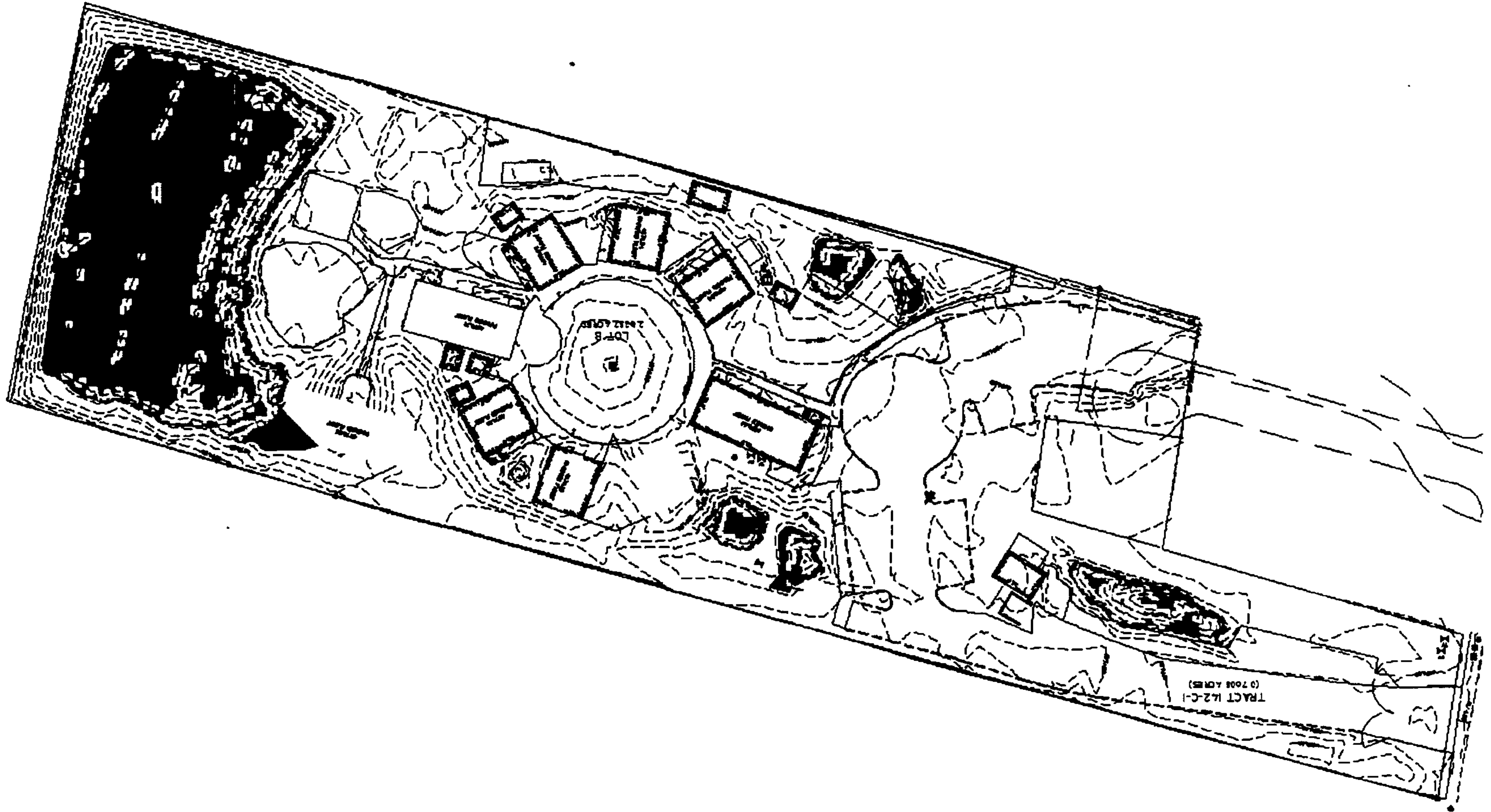
V <sub>360</sub> (from previous calculation)		16843
Area Treatment D (SF)		56688
Zone		2
For 10 Day Storms: V <sub>10day</sub> = V <sub>360</sub> + A <sub>D</sub> * (P <sub>10day</sub> - P <sub>360</sub> )*43560 SF/AC		
V <sub>360</sub>	=	16843
A <sub>D</sub> (SF)	=	56688
Zone	=	2
P <sub>10day</sub>	=	3.95
P <sub>360</sub>	=	2.35
V <sub>360</sub>	=	16843
+ imp. area	=	7558
Total Pond Volume (V <sub>10 day</sub> )	=	24401

24,401 CF = 904 CY

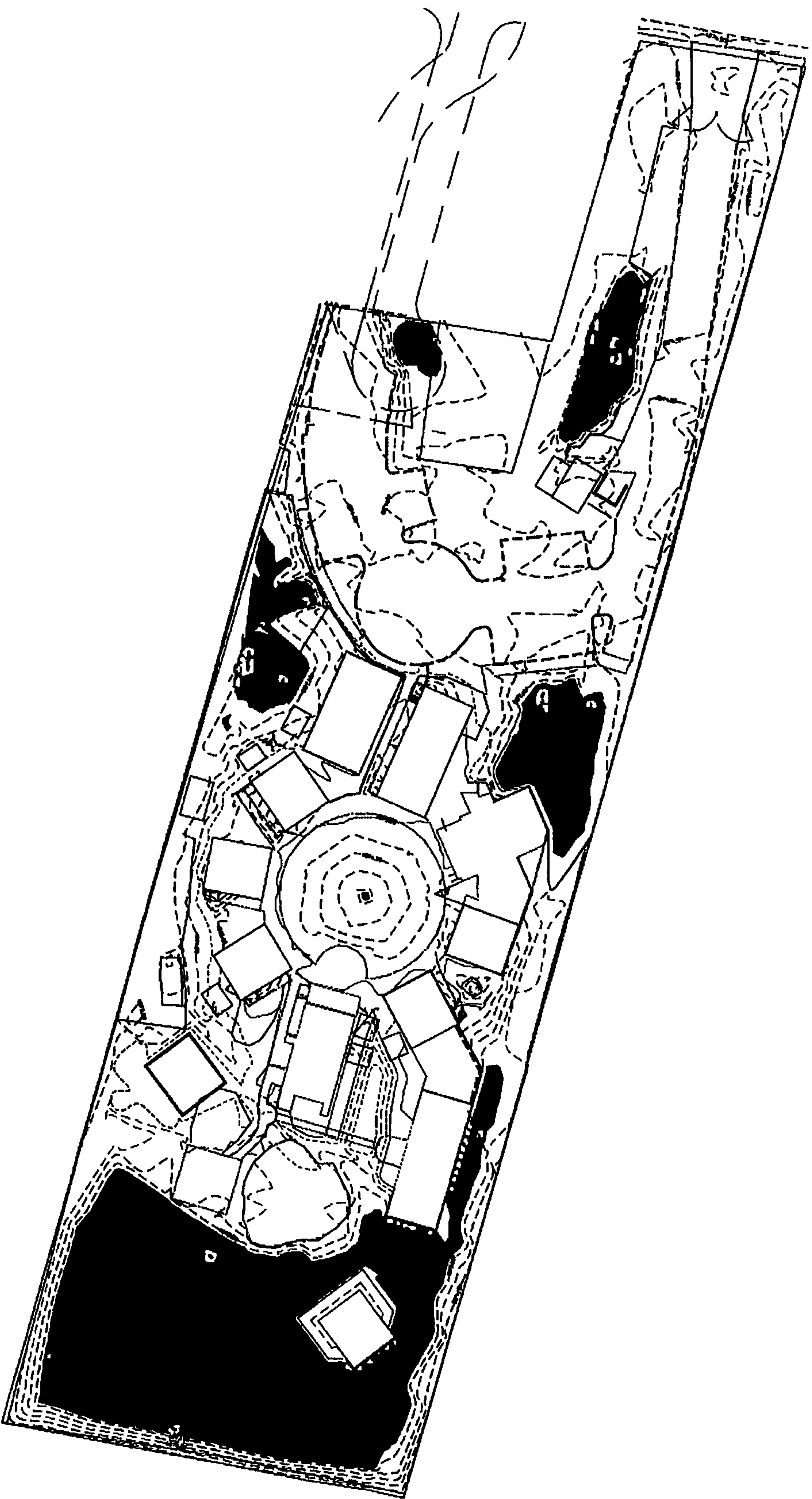
Water Surface Elevation = 4972.7



Existing Conditions (32.8% impervious):  
Required 100-year 10-day volume = 22,535 CF = 835 CY  
Water Surface Elevation = 4972.4







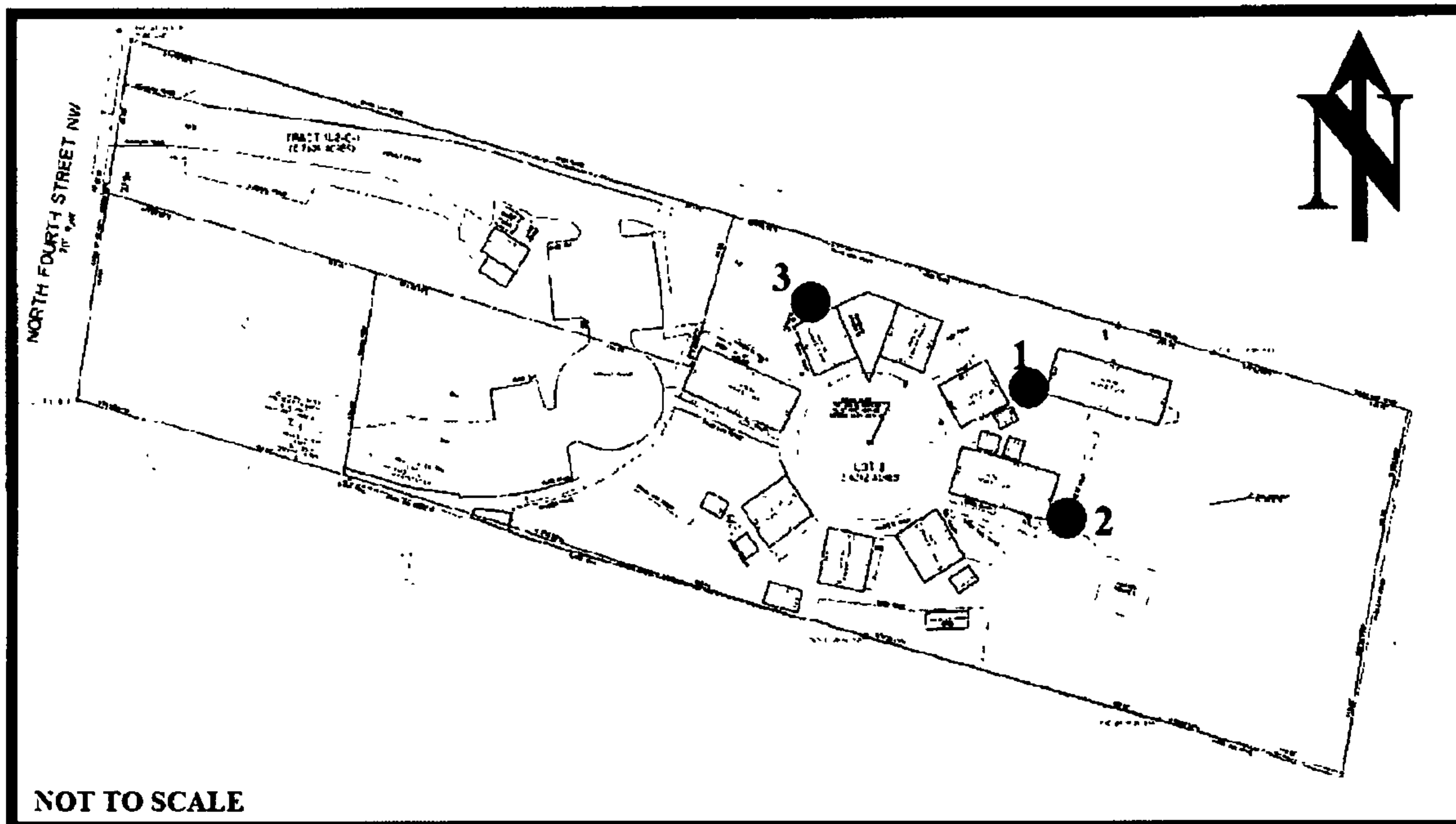
*Future Conditions (38.4% impervious):*

*Required 100-year 10-day volume = 24,401 cf = 904 cy*

*Water Surface Elevation = 4972.7*

In conclusion, the Mountain Mahogany Charter School site, based on existing topographic survey information, has volume available to store the 100-year 10-day storm event for the proposed condition as well as future additions shown. All of the existing and proposed buildings are elevated at least 2.0' above the future condition water surface elevation of 4972.7.

It is important to note that the future condition water surface elevation of 4972.7 does not take into account the existing french drains and proposed percolation pits which will improve the infiltration rate of the ponded waters through the shallow clay lenses to the sand strata below. See the following pages for excerpts from the soils report.



# SITE PLAN

● TEST HOLE LOCATION

## LOG OF TEST HOLE NO.: 1

<b>Project:</b>	5014 4th St NW, Albuquerque, NM
<b>Date Drilled:</b>	1.13.2012
<b>Drilling Method:</b>	Hand Auger
<b>Surface Elevation:</b>	Not Available
<b>Depth to Groundwater:</b>	Not Encountered
<b>Bottom of Hole:</b>	Test Hole 1: 10 ft    Test Hole 2: 10 ft

Depth (feet)	N-Value (blows/ft)	Sample Type	Unified Class.	Description	Dry Density (pcf)	Moisture Content (%)
		B	SM	SAND, silty, fine to medium grained, moist, brown		12.5
2						
		B	CL	CLAY, sandy, fine grained, moist, dark-brown		28.5
5		B	SP- SM	SAND, slightly silty, fine to coarse grained, moist, light-brown to gray		6.7
				- lenses of very moist, gray, smelly clay		
				- dry sand at 8 ft		
		B				4.0
10						
				Bottom of Hole at 10 Feet		



LOG OF TEST HOLE NO.: 2

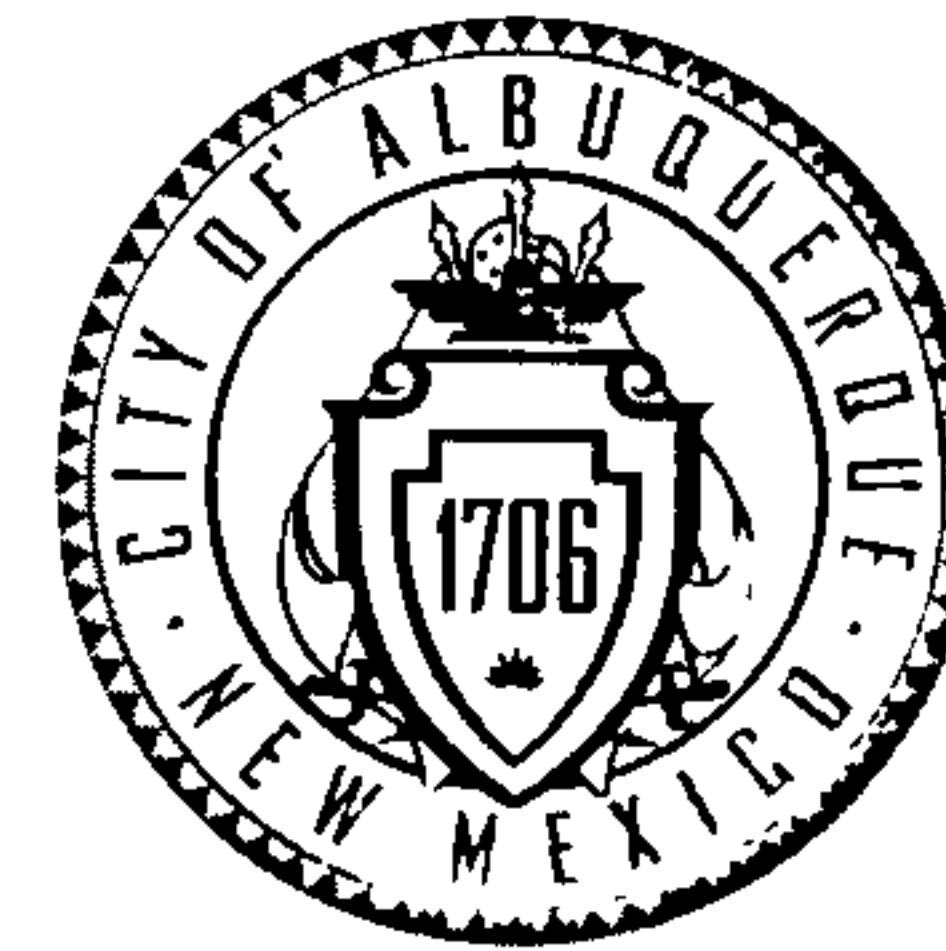
		B	CL	CLAY with lenses of sand		20.0
2						
		B				24.3
5			SP-SM	SAND, slightly silty, fine to medium grained, medium moist, light-brown		3.1
		B				
			SM	SAND, fine to medium grained, medium moist, light-brown, trace caliche		
						3.1
10		B				
				Bottom of Hole at 10 Feet		

LOG OF TEST HOLE NO.: 3

Project:	5014 4th St NW, Albuquerque, NM
Date Drilled:	1.13.2012
Drilling Method:	Hand Auger
Surface Elevation:	Not Available
Depth to Groundwater:	Not Encountered
Bottom of Hole:	5 ft

Depth (feet)	N-Value (blows/ft)	Sample Type	Unified Class.	Description	Dry Density (pcf)	Moisture Content (%)
		B	CH	CLAY with lenses of sand		23.9
2						
			SP	SAND, fine to medium grained, slightly moist, light-brown		
5				Bottom of Hole at 5 Feet		
10						

# CITY OF ALBUQUERQUE



January 27, 2012

Fred C. Arfman, P.E.  
Isaacson & Arfman, P.A.  
128 Monroe St. NE  
Albuquerque, NM 87108

**Re: Mountain Mahogany Community School, 5014 4<sup>th</sup> Street NW, Grading and Drainage Plan**

**Engineer's Stamp date 01-13-12 (F14-D062)**

Dear Mr. Arfman,

Based upon the information provided in your submittal received 01-17-12, the above referenced plan cannot be approved for Building Permit until the following comments are addressed:

PO Box 1293

Albuquerque

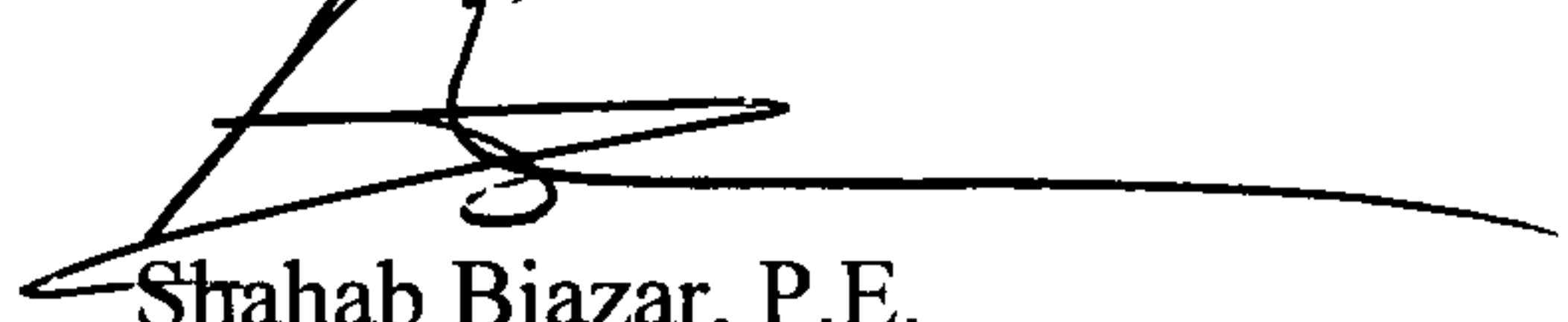
NM 87103

- An approved Grading and Drainage plan is on file for this property and the proposed grading appears to impact the on-site retention ponds that were approved to contain the 100 yr, 10 day storm event.
- One of the existing structures was previously built without a permit and encroaches on one of the approved retention ponds.
- The proposed structures also appear to encroach on another on-site retention pond.
- Provide pond volume calculations to ensure proper water retention is maintained.

If you have any questions, you can contact me at 924-3695.

[www.cabq.gov](http://www.cabq.gov)

Sincerely,

  
Shahab Biazar, P.E.  
Senior Engineer, Planning Dept.  
Development and Building Services

C: file  
CJH/SB

**DRAINAGE AND TRANSPORTATION INFORMATION SHEET**  
(Rev. 12/05)

PROJECT TITLE: Mountain Mahogany Community School ZONE MAP/DRG. FILE # F-14 / 2062  
DRB#: \_\_\_\_\_ EPC#: \_\_\_\_\_ WORK ORDER#: \_\_\_\_\_

LEGAL DESCRIPTION: LOT 'B', LANDS OF HUBERT R. TEAGUE, CITY OF ALBUQUERQUE  
CITY ADDRESS: 5014 4<sup>TH</sup> STREET NW, 87107

ENGINEERING FIRM: ISAACSON & ARFMAN, PA CONTACT: Fred Arfman  
ADDRESS: 128 MONROE NE PHONE: 268-8828  
CITY, STATE: ALBUQUERQUE, NM ZIP CODE: 87108

OWNER: Mountain Mahogany Community School CONTACT: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_ PHONE: \_\_\_\_\_  
CITY, STATE: \_\_\_\_\_ ZIP CODE: \_\_\_\_\_

ARCHITECT: Environmental Dynamics Inc. CONTACT: Kent Beierle  
ADDRESS: 142 Truman St. NE, Suite A-1 PHONE: 242-2851  
CITY, STATE: \_\_\_\_\_ ZIP CODE: 87108

SURVEYOR: Anthony Harris NMLS #11463 CONTACT: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_ PHONE: \_\_\_\_\_  
CITY, STATE: \_\_\_\_\_ ZIP CODE: \_\_\_\_\_

CONTRACTOR: \_\_\_\_\_ CONTACT: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_ PHONE: \_\_\_\_\_  
CITY, STATE: \_\_\_\_\_ ZIP CODE: \_\_\_\_\_

**TYPE OF SUBMITTAL:**

☐ DRAINAGE REPORT  
☒ DRAINAGE PLAN 1<sup>st</sup> SUBMITTAL  
☐ DRAINAGE PLAN RESUBMITTAL  
☐ CONCEPTUAL G & D PLAN  
☒ GRADING PLAN  
☐ EROSION CONTROL PLAN  
☐ ENGINEER'S CERT (HYDROLOGY)  
☐ CLOMR/LOMR  
☐ TRAFFIC CIRCULATION LAYOUT  
☐ ENGINEER/ARCHITECT CERT (TCL)  
☐ ENGINEER/ARCHITECT CERT (DRB S.P.)  
☐ ENGINEER/ARCHITECT CERT (AA)  
☐ OTHER (SPECIFY) \_\_\_\_\_

**CHECK TYPE OF APPROVAL 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  
☐ FOUNDATION PERMIT APPROVAL  
☒ BUILDING PERMIT APPROVAL  
☐ CERTIFICATE OF OCCUPANCY (PERM)  
☐ CERTIFICATE OF OCCUPANCY (TEMP)  
☐ GRADING PERMIT APPROVAL  
☐ PAVING PERMIT APPROVAL  
☐ WORK ORDER APPROVAL  
☐ OTHER (SPECIFY) \_\_\_\_\_

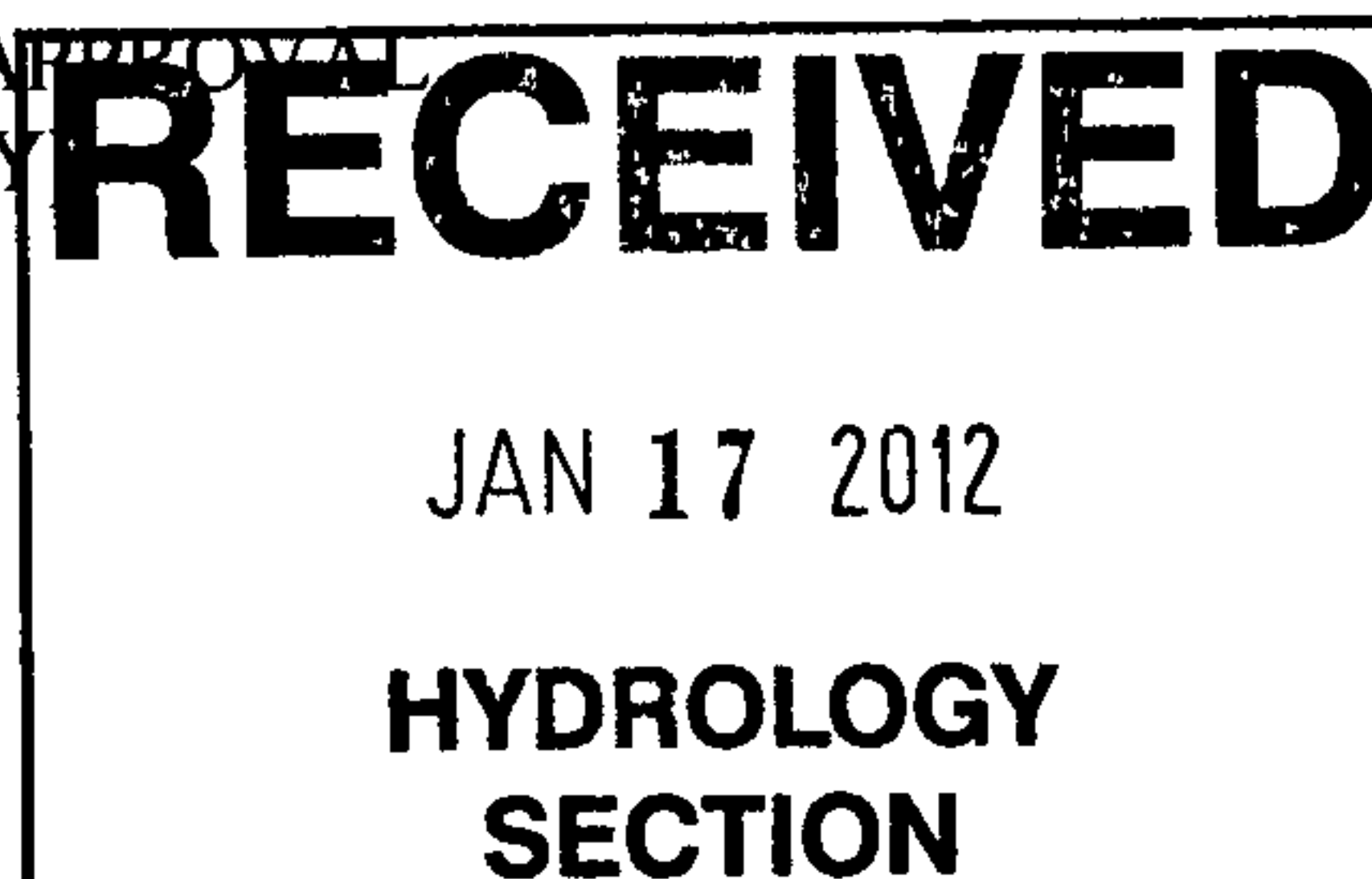
**WAS A PRE-DESIGN CONFERENCE ATTENDED:**

☐ YES  
☐ NO  
☐ COPY PROVIDED

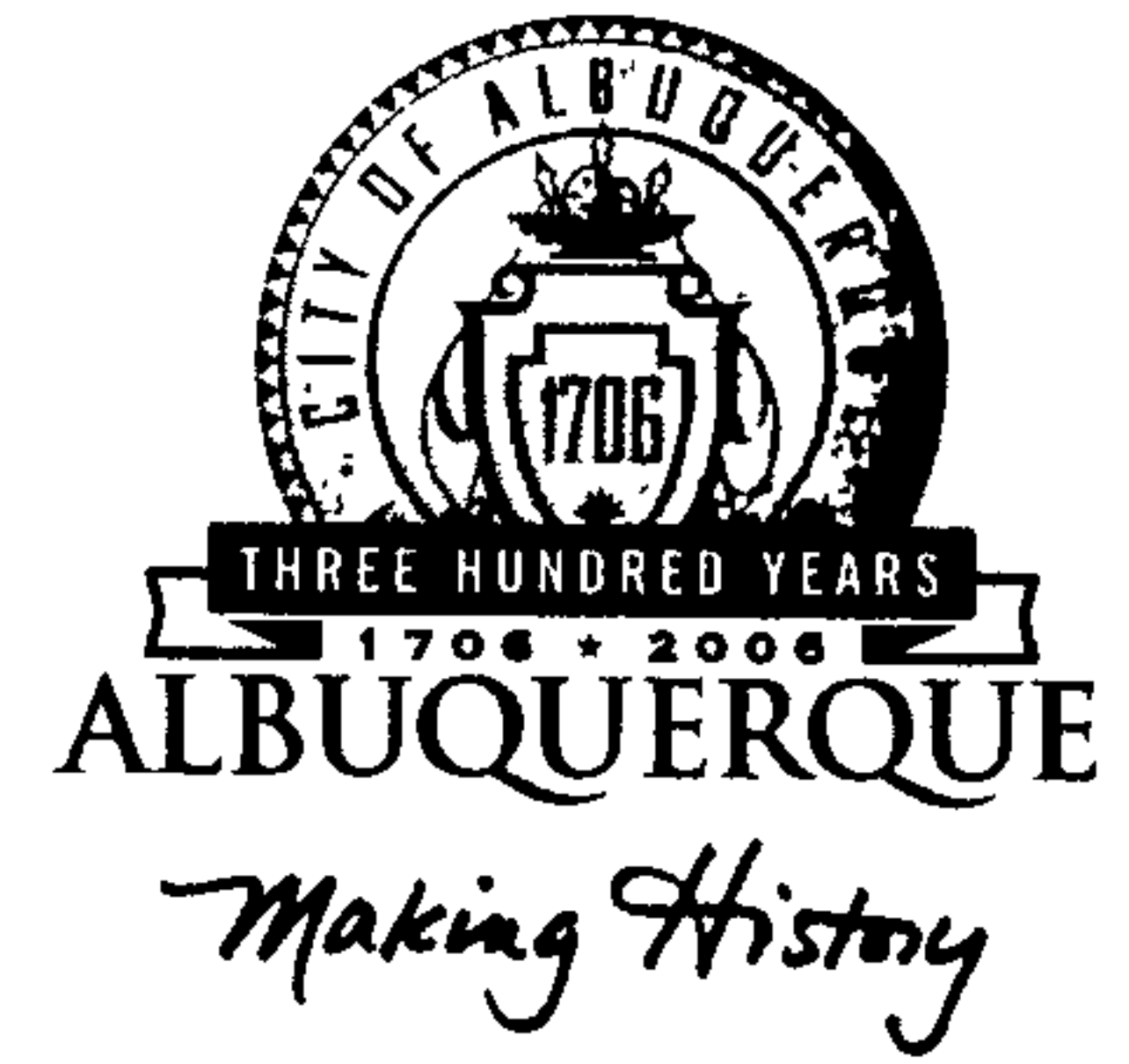
SUBMITTED BY: Bryan J. Bobrick DATE: 1/17/2012  
Isaacson & Arfman, P.A.

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 define the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

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.



# CITY OF ALBUQUERQUE



May 18, 2005

Elvidio Diniz, PE  
Resource Technology, Inc.  
5501 Jefferson Blvd. NE – Suite 200  
Albuquerque, NM 87106

**Re: Mountain Mahogany Charter School, 5010 4<sup>th</sup> Street, Grading & Drainage  
Plan - Engineer's Stamp dated 5-6-05 (F14-D62)**

Dear Mr. Diniz,

Based upon the information provided in your submittal dated 5-6-05, the above referenced plan is approved for Grading Permit and Paving Permit. Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

This project requires a National Pollutant Discharge Elimination System (NPDES) permit. Refer to the attachment that is provided with this letter for details. If you have any questions please feel free to call the Municipal Development Department, Hydrology section at 768-3654 (Charles Caruso).

Also, at the completion of the project please provide Certified As-builts for the file.

If you have any questions, you can contact me at 924-3990.

Sincerely,

Phillip J. Lovato, E.I.  
Engineering Associate, Planning Dept.  
Development and Building Services

C: Charles Caruso, DMD  
file



**DRAINAGE REPORT**  
**FOR**  
**MOUNTAIN MAHOGANY CHARTER SCHOOL**

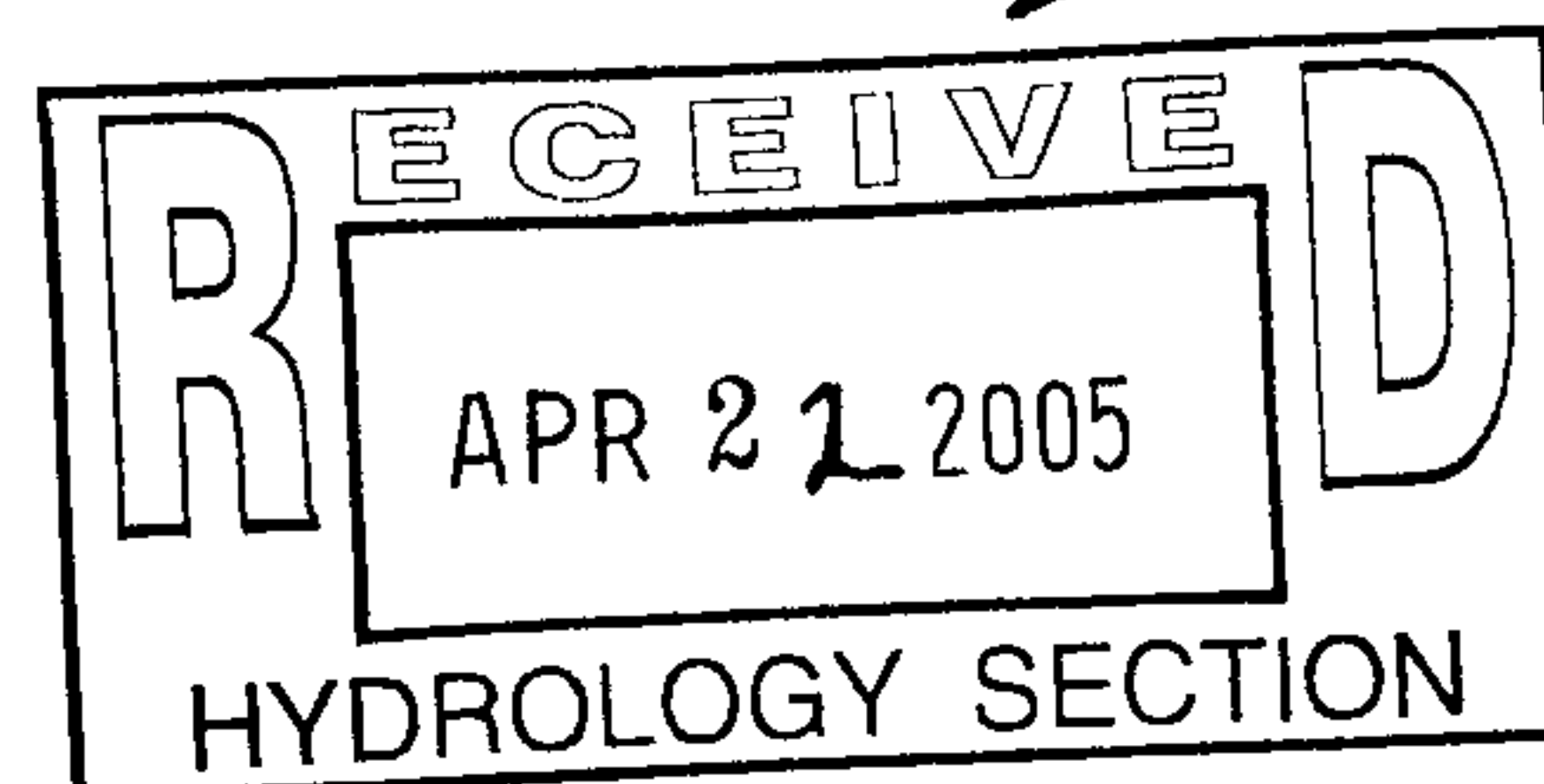
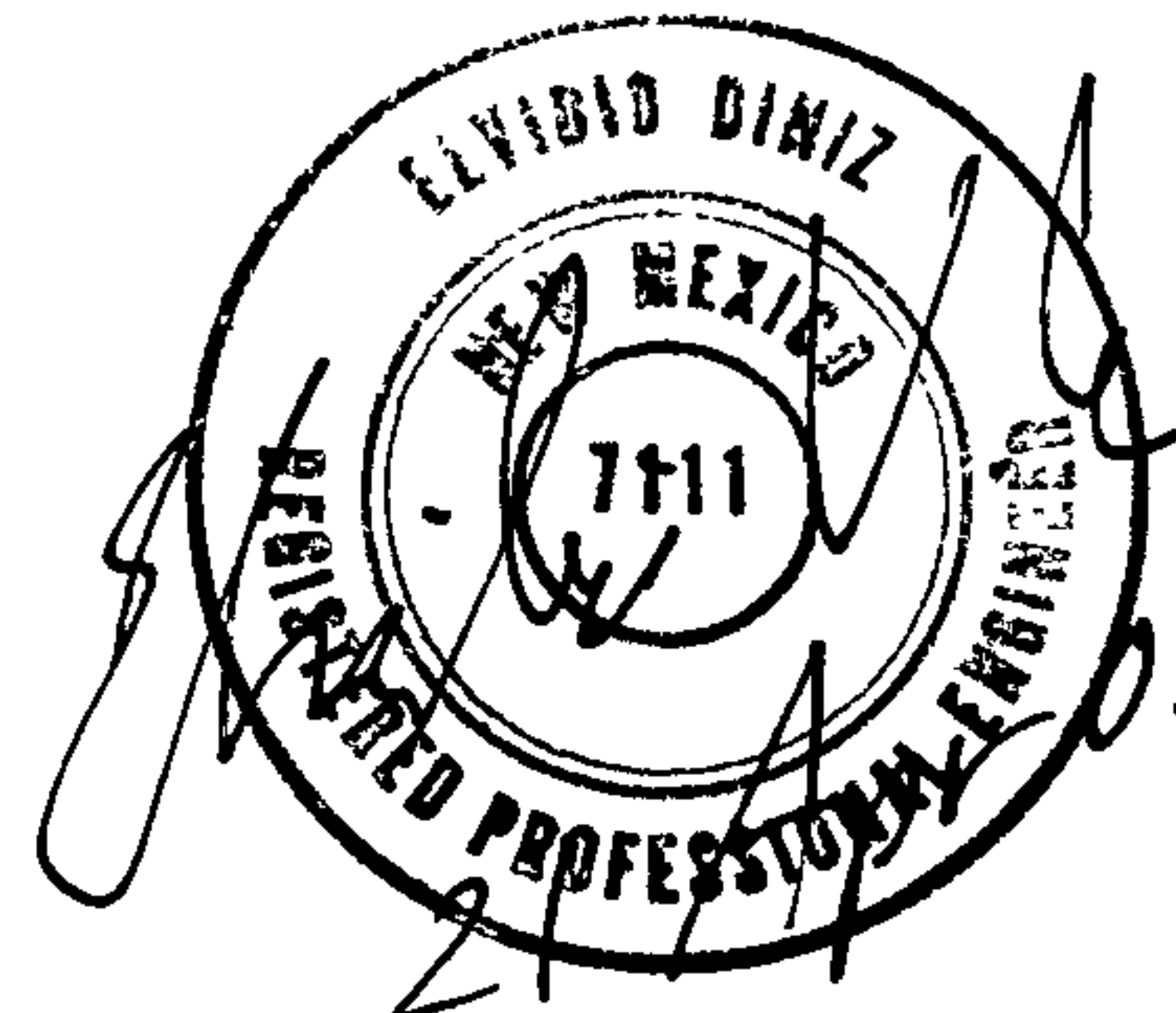
Prepared for:  
Village Architects  
120 Main Street  
P.O. Box 328  
Los Lunas, NM 87031

Prepared By:



5501 Jefferson Blvd. NE. Suite 200  
Albuquerque, NM. 87106  
(505) 243-7300  
(505) 243-7400 (Fax)  
[rti@nm.net](mailto:rti@nm.net)

**April 2005**



## **1.1 Introduction**

This report provides the supporting hydrologic and hydraulic data for the 3.4 acre site of the proposed Mountain Mahogany Charter School. The detailed computations are provided in the appendices to this report and the results are also summarized on the Grading and Drainage Plan sheet.

Grading and drainage was determined so as to accommodate the site and landscaping plan provided by Village Architects. Plans are to direct and retain on-site surface runoff to areas where trees or grass will be planted, using a series of small retention ponds and swales.

The 100-year, 6-hour storm is the basis for design of all drainage features. In addition to the five retention ponds scattered throughout the project site, a retention pond on the eastern portion of the project site was designed to hold the 100-year, 10-day runoff volume for the total drainage area.

Appendix A provides miscellaneous back-up data for hydrologic and hydraulic analysis for existing and developed conditions.

## **1.2 Existing Site Description**

The 3.4 acre lot is located between 2<sup>nd</sup> and 4<sup>th</sup> streets, north of Griegos Road and south of Montano Road. The Alameda Drain runs along the east side of the project site. It is shown in the southeast corner of Zone Atlas map F-14-Z. The boundary survey plat, prepared by Southwest Surveyors, LLC, is entitled "Tract 142-C-1, M.R.G.C.D. map No 32, Together with Lot B, Lands of Hurbert Teague: Section 32, T.11N., R.3E., N.M.P.M, City of Albuquerque, Bernalillo County, New Mexico, January 2001". Figure A is a copy of the plat. Remnants of what used to be the Cavalier Motel (concrete pads and what looks like an old swimming pool) are scattered throughout the northwest lot (Lot B) under a 6-inch layer of dirt.

### **1.3 Proposed Site Description**

The site will be the location for the Mountain Mahogany Charter School. Several portable buildings were purchased for the school; the ground under the buildings will be graded at 1% slope to drain away from the buildings which will be set on I-beams supported on concrete pilasters at the corners. Paving and landscaping plans were provided by Village Architects. Road and parking lot dimensions are shown on the Site Plan, prepared by Village Architects. A landscaping plan was also developed by Village Architects and includes plans for planting a mixture of native trees, an orchard, a garden, and a play area/field. The Grading and Drainage Plan was designed to allow surface runoff to drain to developed landscape features (i.e. proposed trees, grass, orchard, and garden). Existing concrete slabs from what used to be the Cavalier Motel will have to be removed.

### **1.3 Hydrology Method**

Hydrology computations were performed using the 40-Acre-Or-Less Method presented in Chapter 22 (Part A) of the City of Albuquerque's Developmental Process Manual (COA DPM). The site is located in Precipitation Zone 2, between the Rio Grande and San Mateo Blvd. Precipitation depths for the 100-year, 6-hour ( $P_{360}$ ) and 10-day ( $P_{10D}$ ) storms in Zone 2 are 2.35 inches and 3.95 inches respectively (Table A-2, Chapter 22, COA DPM). Land Treatments (Table A-4, Chapter 22, COA DPM) for the 100-year, 6-hour storm in Zone 2 have excess precipitation (E) values of 0.53 inch, 0.92 inch, 1.13 inch, and 2.12 inch for land treatments A, B, C, and D, respectively (Table A-8, Chapter 22, COA DPM). Both existing and developed conditions were analyzed. Proposed drainage features were designed to accommodate the developed condition 100-year 10-day volume ( $V_{10D}$ , acre-feet) and peak flow ( $Q_{100}$ , cfs).

### **2.0 Existing Condition Runoff**



### Existing Condition Sub-Basins

Basin and sub-basin boundaries were drawn along appropriate ridges, high ground, and drains within the project area using field surveys supplemented by the 1999 Bernalillo County topographic mapping. Sub-basin boundaries for existing conditions are shown on Figure B.

### Existing Condition Hydrologic Results

The existing condition total site peak 100-year runoff is 11.42 cfs and the 100-year, 10-day volume is 0.34 acre-feet. In comparison, the developed condition values are 12.3 cfs peak flow and 0.51 acre-feet volume. Hydrologic results for existing conditions are summarized in Table 1.

**TABLE 1**  
**HYDROLOGIC RESULTS FOR EXISTING CONDITIONS**

Area (ft <sup>2</sup> )	Land Treatment				Peak Q (cfs)		Volume (acre-feet)	
	A (%)	B (%)	C (%)	D (%)	Q <sub>10</sub>	Q <sub>100</sub>	V <sub>10-10day</sub>	V <sub>100-10day</sub>
158014	0	0	99.60	0.40	6.23	11.42	0.16	0.34
Area		Land Treatment						
Sub-Basin	(ft <sup>2</sup> )	A (%)	B (%)	C (%)	D (%)			
A1	150882	0	0	99.6	0.4			
A2	7132	0	0	100	0			

### 3.0 Developed Condition Runoff

A series of retention ponds, swales, and an 8-inch outlet pipe will distribute stormwater runoff to areas where water harvesting and infiltration were desired, according to the landscaping plan. Swales and ponds are shown on Figure C. Pond F was designed to hold the 100-year, 10-day volume for the total contributing area. Developed Condition hydrologic results are summarized in Table 2. Detailed computations are included in Appendix A.

#### Developed Condition Sub-Basins

The contributing area to each pond was determined according to the proposed Grading and Drainage Plan. Sub-Basin boundaries for developed conditions are shown on Figure C. Sub-basin data for developed conditions is summarized in Table 2.

#### Developed Condition Hydrologic Results

The developed condition total site peak 100-year runoff is 12.3 cfs peak flow and 0.51 acre-feet volume. Hydrologic Results for developed conditions are summarized in Table 2. Computations are included in Appendix B.

**TABLE 2**  
**HYDROLOGIC RESULTS FOR DEVELOPED CONDITIONS**

OFF SITE

Area (ft <sup>2</sup> )	Land Treatment				Peak Q (cfs)		Volume (acre-feet)		
	A (%)	B (%)	C (%)	D (%)	Q <sub>10</sub>	Q <sub>100</sub>	V <sub>10-10day</sub>	V <sub>100-10day</sub>	
158014	0	13	64	23	7.0	12.3	0.250	0.508	
	Area	Land Treatment				Peak Q (cfs)		Volume (acre-feet)	
Sub-Basin	(ft <sup>2</sup> )	A (%)	B (%)	C (%)	D (%)	Q <sub>10</sub>	Q <sub>100</sub>	V <sub>10-10day</sub>	V <sub>100-10day</sub>
A1	5652	0	0	59	41	0.3	0.5	0.012	0.024
A2	16884	0	0	57	44	0.9	1.5	0.037	0.073
A3	16118	0	0	91	9	0.7	1.2	0.020	0.040
A4	34783	0	42	59	0	1.1	2.2	0.028	0.066
A5	30334.5	0	0	68	32	1.9	2.9	0.088	0.167
A6	15343	0	39	17	45	0.7	1.2	0.032	0.063
A7	38899	0	0	78	22	1.8	3.1	0.063	0.127

0.51 ACRE-FT

### 3.1 Sizing the Retention Ponds

The retention ponds were designed to hold the total  $V_{10D}$  resulting from their contributing areas. Proposed ponds (Ponds A through F) are shown on Figure C. They vary in depths from 1 foot to 2 feet, using side slopes varying from 5H:1V to 10H:1V. Pertinent data regarding the ponds are summarized in Table 3. Calculations are included in Appendix C of this report.

Volumes were computed using the prismoidal area method ( $\text{Volume} = 1/6 (A_1 + 4A_m + A_2)$ ). The field and play area on the east side of the project site will act as an ultimate single retention pond, assuming all other ponds are full. A desilting basin, located between the play area and the field, will allow suspended sediment to settle, and keep it from burying grass on the field. This pond was sized to accommodate the 100-year, 6-hour peak flow and 10-day volume for the total contributing area. The 100-year 10-day ponding elevation is 4972.7 feet, which covers the entire grass field. Available freeboard ranges from 0.3 feet to 3.3 feet. The pond will hold 0.8 acre-feet.

**TABLE 3  
POND SUMMARY**

	Pond Elevation		Side Slopes (H:V)	Pond Depth (ft)	Available Storage (ac-ft)	W.S. Elev 100-Year, 10-Day (ft)	Available Freeboard (ac-ft)
	Top (ft)	Bottom (ft)					
<b>Pond A</b>	4972.9	4970.9	5:1	2.0	0.1670	4972.9	0.0
<b>Pond B</b>	4973.5	4971.5	5:1	2.0	0.0650	4973.5	0.0
<b>Pond C</b>	4973.5	4971.5	5:1	2.0	0.0580	4972.7	0.8
<b>Pond D</b>	4975.0	4973.5	10:1 - 5:1	1.5	0.1245	4974.3	0.7
<b>Pond E</b>	4973.0	4972.0	10:1	1.0	0.0824	4972.8	0.2
<b>Pond F*</b>	4973.0	4970.5	5:1	2.5	0.8000	4972.7	0.3

\*W.S. Elevation is for 100-year, 10-day Volume for Total Contributing Area

### 3.2 Sizing the Swales

The swales were sized to hold  $Q_{100}$  using Haestad's Methods' FlowMaster program. They are typically 0.5 foot deep, using 7H:1V side slopes. A running slope of 0.5% was used. Proposed swales are shown on Figure C and on the Grading and Drainage Plan sheet. Swale hydraulics are summarized in Table 4.

**TABLE 4**  
**SWALE HYDRAULICS**

	Swale Invert		Type (H:V)	Side Slopes (H:V)	Running Slope (ft/ft)	Swale Width (ft)	Flow Q100 (cfs)	Velocity V100 (ft/s)	Depth D100 (ft)
	Upstream (ft)	Downstream (ft)							
<b>Swale A</b>	4973.3	4972.5	Earthen/Gravel	Varies	0.005	20'	3.18	1.17	0.61
<b>Swale B</b>	4972.5	4972.2	Earthen	7:1	0.005	7	3.18	1.87	0.49
<b>Swale C</b>	4972.1	4971.9	Earthen	7:1	0.005	7	3.18	1.87	0.49
<b>Swale D</b>	4972.7	4971.7	Earthen	7:1	0.010	7	2.22	2.21	0.38
<b>Swale E</b>	4972.8	4971.7	Earthen	7:1	0.010	7	3.12	1.86	0.49
<b>Swale F</b>	4972.7	4971.8	Earthen	7:1	0.005	7	2.22	2.21	0.38
<b>Rundown A</b>	4973.5	4972.9	Rip Rap	7:1	0.043	7	2.92	2.89	0.38
<b>Rundown B</b>	4974.0	4972.9	Earthen	7:1	0.028	7	2.92	3.49	0.35
<b>Rundown C</b>	4973.2	4972.5	Rip Rap	7:1	0.140	7	2.92	4.59	0.31

### 3.3 Grate Inlet and 8-inch Outlet Pipe

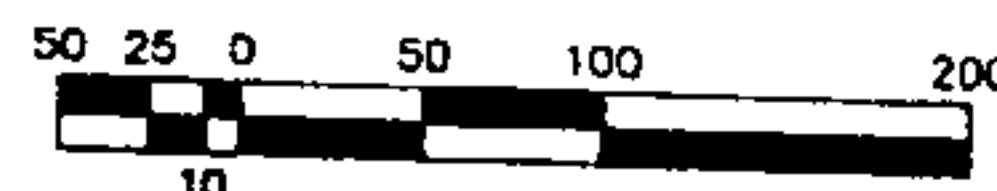
A drop inlet and 8-inch outlet pipe will drain Pond E to Pond F. The proposed grate is a Neenah R-4360.A Cast Iron Grate and Frame (or an equivalent size). The grate is detailed on the Grading and Drainage Plan sheet. The 8-inch outlet pipe should have no less than 6 inches of cover. The top of the grate will be at elevation 4973.5 feet. The upstream invert of the 8-inch outlet pipe will be at elevation 4972.3 feet. With a running slope of 0.5%, the downstream invert of the 8-inch outlet pipe will be at elevation 4971.4 feet, which is 0.9 feet above the bottom of Pond F.



# AMENDED BOUNDARY SURVEY PLAT

TRACT 142-C-1, M.R.G.C.D MAP No.32,  
TOGETHER WITH LOT B, LANDS OF HUBERT TEAGUE  
SECTION 32, T. 11 N., R. 3 E., N.M.P.M.  
CITY OF ALBUQUERQUE,  
BERNALILLO COUNTY, NEW MEXICO  
JANUARY 2001

1" = 100'  
PROJECT NO. 0101KH10  
DRAWN BY KRH  
ZONE ATLAS T-14-Z  
TEAGUE CDS



SCALE: 1" = 100'

## AMENDMENT NOTE

THIS PLAT IS AMENDED TO CORRECT LANGUAGE  
IN THE EASEMENT NOTE FOR THE PUBLIC WATER  
AND SEWER AND PRIVATE ACCESS EASEMENT

## LEGAL DESCRIPTION

Lot lettered "B" of THE LANDS OF HUBERT R. TEAGUE, being a replat of Tracts 142-C-2, 145-A, and 146-A, M.R.G.C.D. Map No. 32, as the same is shown and designated on the plat thereof, filed in the office of the County Clerk of Bernalillo County, New Mexico on August 8, 1986 in plat Book C31, folio 55

AND  
A certain tract of land in Section 32, T. 11 N., R. 3 E., N.M.P.M., City of Albuquerque, Bernalillo County, New Mexico, designated as Tract 142-C-1 on M.R.G.C.D. Property Map No. 32, and being more particularly described by metes and bounds as follows: Beginning at the Northeast corner of the tract herein described, being the Northwest corner of Lot B, Lands of Hubert R. Teague, as shown and designated on the plat thereof, filed in the office of the County Clerk of Bernalillo County, New Mexico on August 8, 1986, thence, S. 15° 58' 00" W., 93.67 feet to the Southeast corner, thence, N. 73° 12' 21" W., 361.90 feet to the Southwest corner, thence, N. 09° 22' 09" E., 89.00 feet to the Northwest corner, thence, S. 74° 02' 19" E., 372.09 feet to the point of beginning and containing 0.7666 acre, more or less

## NOTES

1. Basis of bearings south line of Tract 142-C-1, Map 32 per description provided in warranty deed
2. Bearings and distances in parentheses ( ) are record, where they differ from measured bearings and distances
3. Property lies within Flood Zone X, areas outside the 500-year flood plane, according to the Flood Insurance Rate Map of Bernalillo County, New Mexico and incorporated areas, Map Panel No. 35001C0119D, effective date Sept. 20 1998
4. Documents used
  - a. Plat of Lots A and B, Lands of Hubert R. Teague filed August 8, 1986 in plat Book C31, folio 55
  - b. Warranty Deed filed July 30, 1988 in Book 9813, Pg. 3487
  - c. Warranty Deed filed Sept. 24, 1984 in Book D222-A, Pg. 375
  - d. First American Title Company commitment No. 01992025, dated June 3, 1989

## SURVEYOR'S CERTIFICATE

I, GARY E. GRITSKO, A NEW MEXICO PROFESSIONAL SURVEYOR HEREBY CERTIFY THAT THIS BOUNDARY SURVEY PLAT WAS PREPARED FROM AN ACTUAL GROUND SURVEY PERFORMED BY ME OR UNDER MY SUPERVISION, THAT I AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT THIS BOUNDARY SURVEY PLAT AND THE FIELD SURVEY UPON WHICH IT IS BASED MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO, AND THAT THIS SURVEY IS NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT. THIS IS A BOUNDARY SURVEY PLAT OF AN EXISTING TRACT OR TRACTS

*Gary E. Gritsko* Jan 24, 2001  
GARY E. GRITSKO, N.M.P.S. NO. 8686  
Amended FEB 2, 2001 DATE



## SYMBOLS LEGEND

- \* = LIGHT POLE
- x- = FENCE
- o = SATELLITE DISH

## MONUMENT LEGEND

- - FOUND No. 4 REBAR P.S. No. 6446
- ⊙ - SET 1/2" REBAR W/YELLOW PLASTIC CAP STAMPED "G GRITSKO, PLS 8686" UNLESS OTHERWISE NOTED
- - FOUND No. 4 REBAR (WITHOUT CAP)

## INDEXING INFORMATION FOR COUNTY CLERK

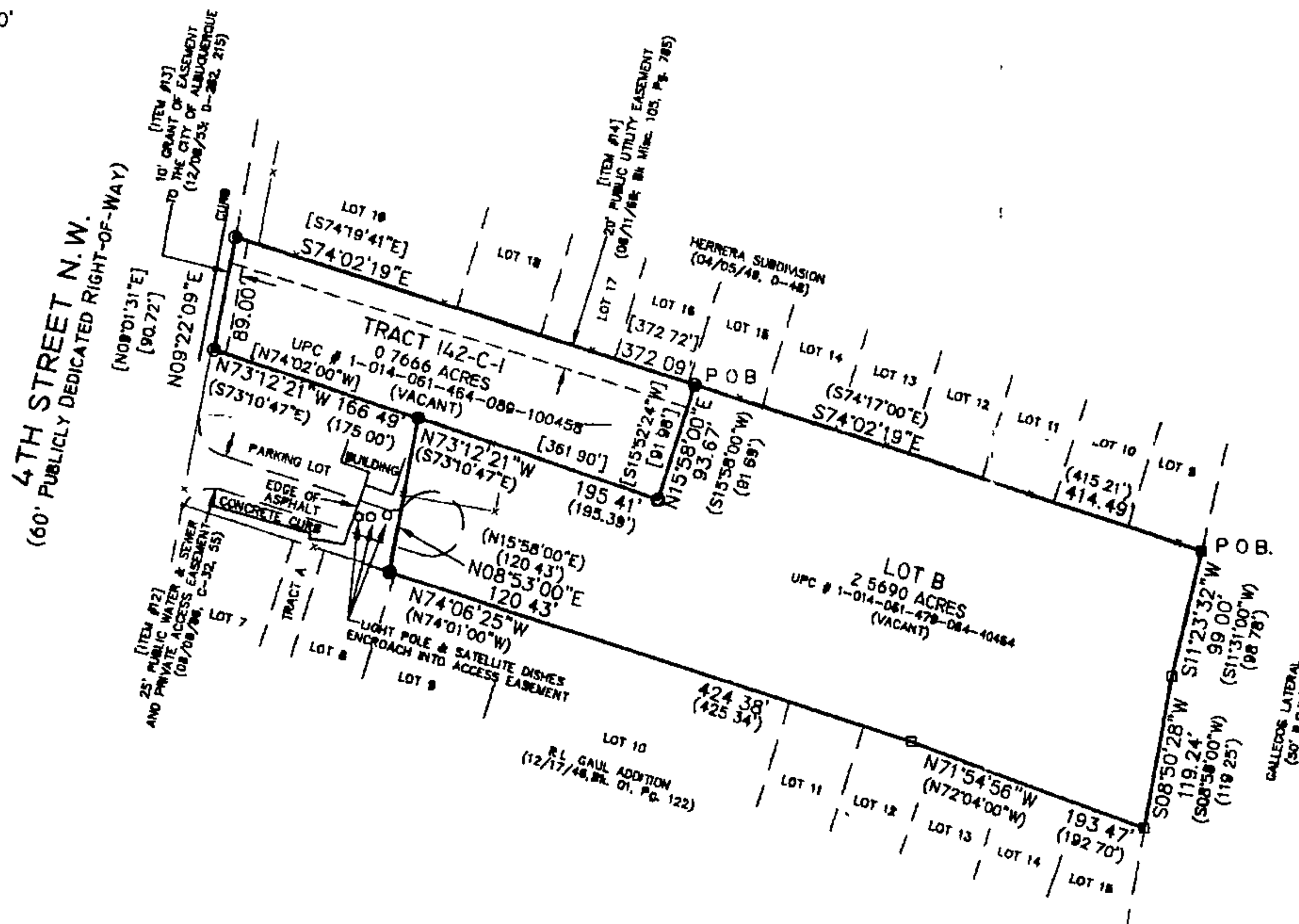
THOMAS McALLEN OWNER
T11N R3E SEC. 32 LOCATION
TEAGUE ADDITION SUBDIVISION

## SURVEYS SOUTHWEST LTD.

333 LOMAS BLVD., N.E.  
ALBUQUERQUE, NEW MEXICO  
87102

PHONE: (505) 998-0303  
FAX: (505) 998-0306

T11N R3E SEC. 32





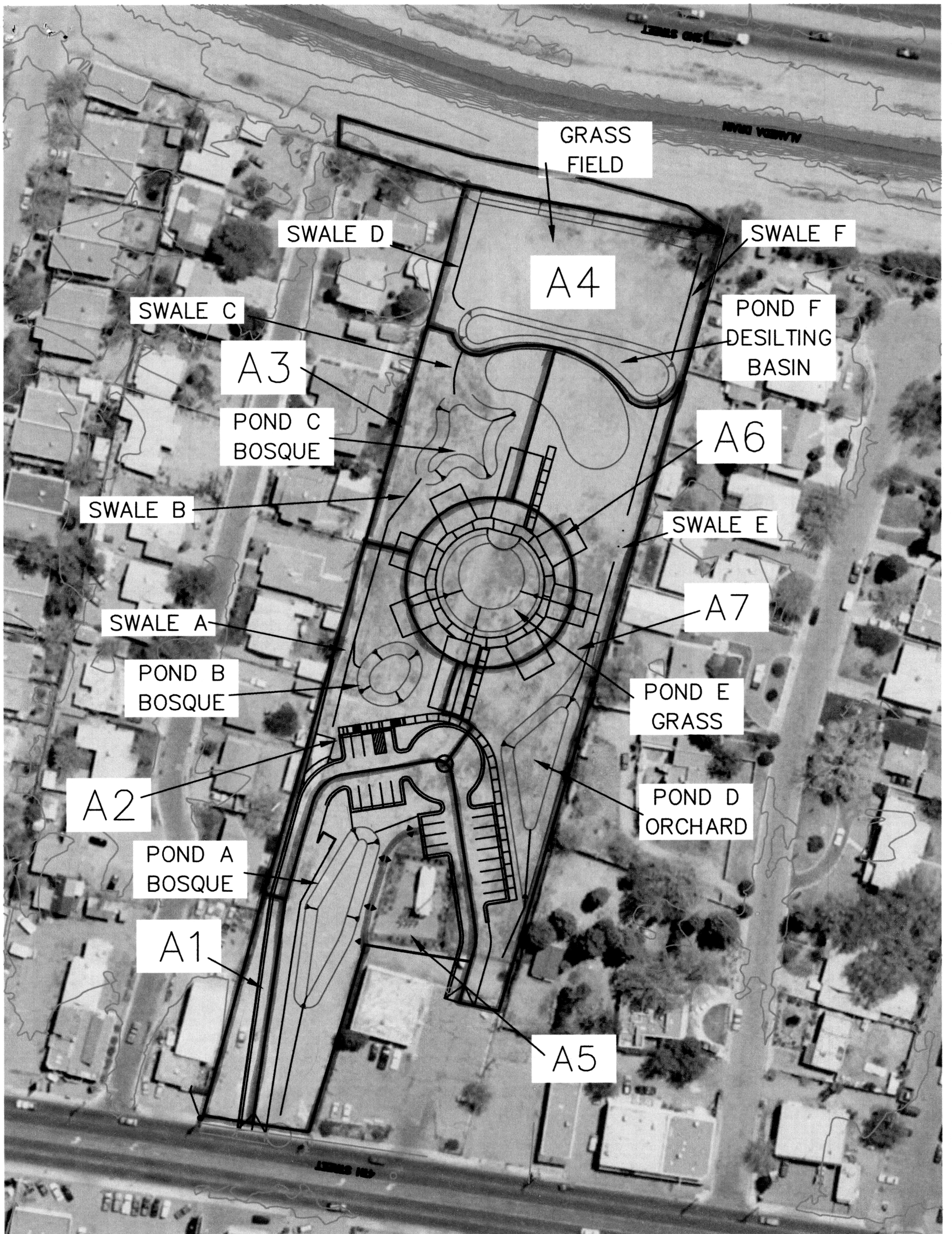


FIGURE C: PROPOSED CONDITIONS SUB-BASIN AREAS  SCALE: 1"= 100'