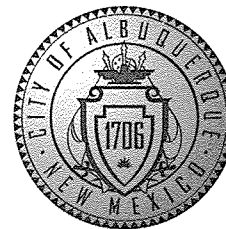


# CITY OF ALBUQUERQUE



March 26, 2012

J. Arthur Blessen, P.E.  
J. Arthur Blessen Engineering  
11930 Menaul Blvd NE, Suite 109  
Albuquerque, NM 87112

**Re: Gate of Heaven Cemetery  
Site Grading Plan  
Engineer's Stamp dated 3-26-12 (D19/D001A)**

Dear Mr. Blessen,

Based upon the information provided in your submittal received 3-27-12, the above referenced plan is approved for Grading Permit and Building Permit. 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 checklist will be required.

**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](http://www.cabq.gov/Planning/landcoord/Hydrology)

If you have any questions, you can contact me at 924-3986 or Rudy Rael at 924-3977.

Sincerely,

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

C: RER/CAC  
file

PO Box 1293

Albuquerque

NM 87103

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

March 26, 2012

Conscious Design for the Environment

re: Gate of Heaven Cemetery  
file D19/D001A

Curtis Cherne PE  
Principal Engineer, Planning Department, City of Albuquerque  
PO Box 1293  
Albuquerque, NM 87103

Dear Mr. Cherne,

I have received your letter of March 26, 2012. The drainage plan has been revised to limit the combined discharge to Bob White Lane at 13.7 cfs. The discharge from the existing pond B (7.1 cfs) has been corrected on the grading plan. The design of pond C has been revised to limit the rate of discharge from Basin C to limited to 6.6 cfs.

Pond C discharge:

bottom of pond elevation 64.5 ft  
surface of water elevation 66.75 ft  
depth of pond  $66.75 - 64.5 = 2.25$  ft  
dia of pipe 14" (1.167 ft) Area pipe = 1.07 sf  
 $h = \text{pond depth} - \frac{1}{2} \text{ Pipe dia} = 2.25 - 0.58 = 1.67$  ft

$$Q_{\text{pipe}} = 0.6 A (2 * 32.2 * h)^{0.5} = 6.6 \text{ cfs}$$

Pond C volume calculation:

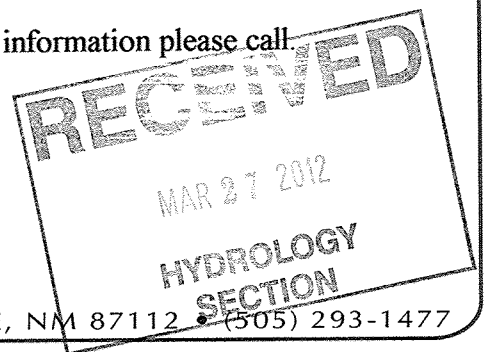
Area bottom of pond 64.5 = 1188 sf  
Area elev 65 = 3784 sf  
Area elev 66 = 5598 sf  
Area water surface 66.75 ft = 7034 sf

$$\text{Vol} = 0.5 * 0.5 * (1188 + 3784) + 0.5 * (3784 + 5598) + 0.75 * 0.5 * (5598 + 7034)$$
$$\text{Vol} = 10671 \text{ cf at } 66.75 \text{ ft}$$

Should you have any questions or require addition information please call.

  
J. Arthur Blessen PE

attached revised basin C calculations



Page 1 of 1

11930 MENAUL NE, SUITE 109 • ALBUQUERQUE, NM 87112 • (505) 293-1477

NEW MEXICO • NEVADA • ARIZONA • ILLINOIS

# Drainage Calculation

City of Albuquerque DPM 1997 edition

## Gate of Heaven Basin C - Revised

Precipitation Zone 3  
Basin Area = 5.802 acres

### Existing

#### Treatment

Area of A = 252756 sf 100%  
Area of B = 0 sf 0%  
Area of C = 0 sf 0%  
Area of D = 0 sf 0%

### Improved Conditions

#### Treatment

Area of A = sf 0%  
Area of B = 157511 sf 62%  
Area of C = 68068 sf 27%  
Area of D = 27177 sf 11%

Excess Precipitation, E (inches) 6 hr - 100 yr storm table A-8

### Existing Conditions

Treatment	% of Area	En
A	1.00 x 0.66 =	0.66
B	0.00 x 0.912 =	0.00
C	0.00 x 1.29 =	0.00
D	0.00 x 2.36 =	0.00
	E =	0.66

### Improved Conditions

Treatment	% of Area	En
A	0.00 x 0.66 =	0.00
B	0.62 x 0.912 =	0.57
C	0.27 x 1.29 =	0.35
D	0.11 x 2.36 =	0.25
	E =	1.17

Volume V = E A / 12

Ve =	0.660 x 5.8025 / 12 =	0.319 acre ft	13902 cf
Vi =	1.169 x 5.8025 / 12 =	0.565 acre ft	24633 cf

Discharge Rate, Q (cfs / acre) 100 yr storm table A-9

Treatment	% of Area	Q
A	1.00 x 1.87 =	1.87
B	0.00 x 2.6 =	0.00
C	0.00 x 3.45 =	0.00
D	0.00 x 5.02 =	0.00
	q =	1.87

Treatment	% of Area	Q
A	0.00 x 1.87 =	0.00
B	0.62 x 2.6 =	1.62
C	0.27 x 3.45 =	0.93
D	0.11 x 5.02 =	0.54
	q =	3.09

Peak Rate Qp = q A

Qp(e) =	1.87 x 5.8025 =	10.85 cfs
Qp(i) =	3.09 x 5.8025 =	17.92 cfs

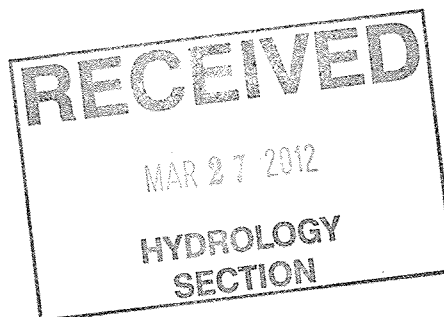
Excess Volume = 0.246 acre ft  
Excess Rate = 7.07 cfs

tc = 0.2 hr  
tb = (2.107 \* E \* At / Qp) - (0.25 \* Ad / At) = 0.771 hr  
tp = (0.7 \* tc) + ((1.6 - (Ad / At)) / 12) = 0.264 hr

Discharge Rate 6.63 cfs 1.14 cfs/ac

Volume 25736 cf  
Discharged - 15114 cf

Pond Volume 10623 cf



**DRAINAGE AND TRANSPORTATION INFORMATION SHEET**  
(REV 12/2005)

PROJECT TITLE: GATE OF HEAVEN CEMETERY ZONE MAP: D19/001A  
DRB#: \_\_\_\_\_ EPC#: \_\_\_\_\_ WORK ORDER#: \_\_\_\_\_

LEGAL DESCRIPTION: Lots A, B, & C of Rancho de Palomas Manufactured Housing  
CITY ADDRESS: 7999 Wyoming Blvd. NE

ENGINEERING FIRM: Soleil West Architects CONTACT: Arthur Blessen  
ADDRESS: 11930 Menaul NE Suite 109 PHONE: 293-1477  
CITY, STATE: Albuquerque, NM 87112 ZIP CODE: 87112

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

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

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

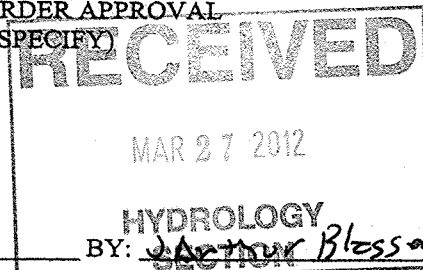
CONTRACTOR: \_\_\_\_\_ CONTACT: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_ PHONE: \_\_\_\_\_  
CITY, STATE: \_\_\_\_\_ ZIP CODE: \_\_\_\_\_

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'S CERT (TCL)  
\_\_\_\_ ENGINEER'S CERT (DRB SITE PLAN)  
\_\_\_\_ 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

DATE SUBMITTED: 3-27-12



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 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 26, 2012

J. Arthur Blessen, P.E.  
J. Arthur Blessen Engineering  
11930 Menaul Blvd NE, Suite 109  
Albuquerque, NM 87112

**Re: Gate of Heaven Cemetery  
Site Grading Plan  
Engineer's Stamp dated 3-5-12 (D19/D001A)**

Dear Mr. Blessen,

Based upon the information provided in your submittal received 3-06-12, the above referenced plan cannot be approved for Building Permit until the following comments are addressed.

- Per approved grading plans dated 6/4/2002 and 11/21/94 ponds B & C drained into Bob White Lane at a rate of 13.7cfs. This rate should remain unless it is proven that the rate of 24.2cfs will not cause adverse effects to the drainage system in Bob White Lane.
- Provide discharge calculations for pond C.

**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](http://www.cabq.gov/Planning/landcoord/Hydrology)

If you have any questions, you can contact me at 924-3986 or Rudy Rael at 924-3977.

Sincerely,

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

C: RER/CAC  
file

March 5, 2012

re: Gate of Heaven Cemetery  
file D19/D001A

Curtis Cherne PE  
Principal Engineer, Planning Department, City of Albuquerque  
PO Box 1293  
Albuquerque, NM 87103

Dear Mr. Cherne,

I have received your letter of March 2, 2012. The grading plan has been revised to include a discharge pipe from Pond C to the existing culvert discharging to Bob White Lane. The rate of discharge from Basin C has been limited to 10.6 cfs established by the approved master plan for the site. The total discharge to Bob White Lane when the discharge for Basin C is combined with the existing discharge from Basin B (13.7 cfs) will be 24.2 cfs.

The discharge from Pond C will remain 10.6 cfs, therefore the required pond volume will be the same as previously calculated. The size of the discharge pipe and depth of pond C will also remain the same as previously proposed. The revised pond C volume calculation are as follows:

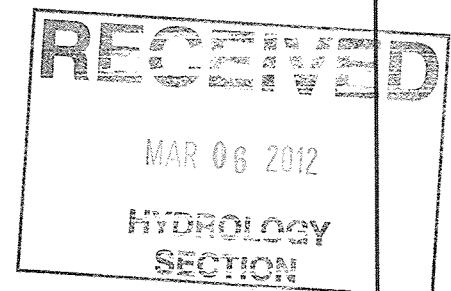
Invert depth 5364.5 ft top of water elevation 5367 ft

Volume =  $(0.5)(3902 + (2)(2020) + 1008) + (0.5)(.05)(1008) = 4727 \text{ cf}$

Should you have any questions or require addition information please call.

  
J Arthur Blessen PE

Page 1 of 1



**DRAINAGE AND TRANSPORTATION INFORMATION SHEET**  
(REV 12/2005)

PROJECT TITLE: GATE OF HEAVEN CEMETERY ZONE MAP: D19/001A  
DRB#: \_\_\_\_\_ EPC#: \_\_\_\_\_ WORK ORDER#: \_\_\_\_\_

LEGAL DESCRIPTION: LOTS A, B, & C of Rancho de Palomas Manufactured Housing  
CITY ADDRESS: 7999 Wyoming Blvd. NE.

ENGINEERING FIRM: Soleil West Architects CONTACT: Arthur Blesser  
ADDRESS: 11930 Menaul NE Suite 109 PHONE: 293-1477  
CITY, STATE: Albuquerque, NM 87112 ZIP CODE: 87112

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

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

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

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

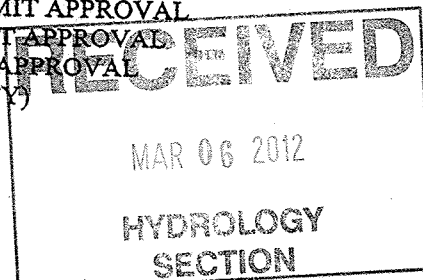
TYPE OF SUBMITTAL:  
\_\_\_\_ DRAINAGE REPORT  
\_\_\_\_ DRAINAGE PLAN 1<sup>st</sup> SUBMITTAL  
☒ DRAINAGE PLAN RESUBMITTAL  
\_\_\_\_ CONCEPTUAL G & D PLAN  
\_\_\_\_ GRADING PLAN  
\_\_\_\_ EROSION CONTROL PLAN  
\_\_\_\_ ENGINEER'S CERT (HYDROLOGY)  
\_\_\_\_ CLOMR/LOMR  
\_\_\_\_ TRAFFIC CIRCULATION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

DATE SUBMITTED: 3-6-12

BY: J Arthur Blesser



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 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.