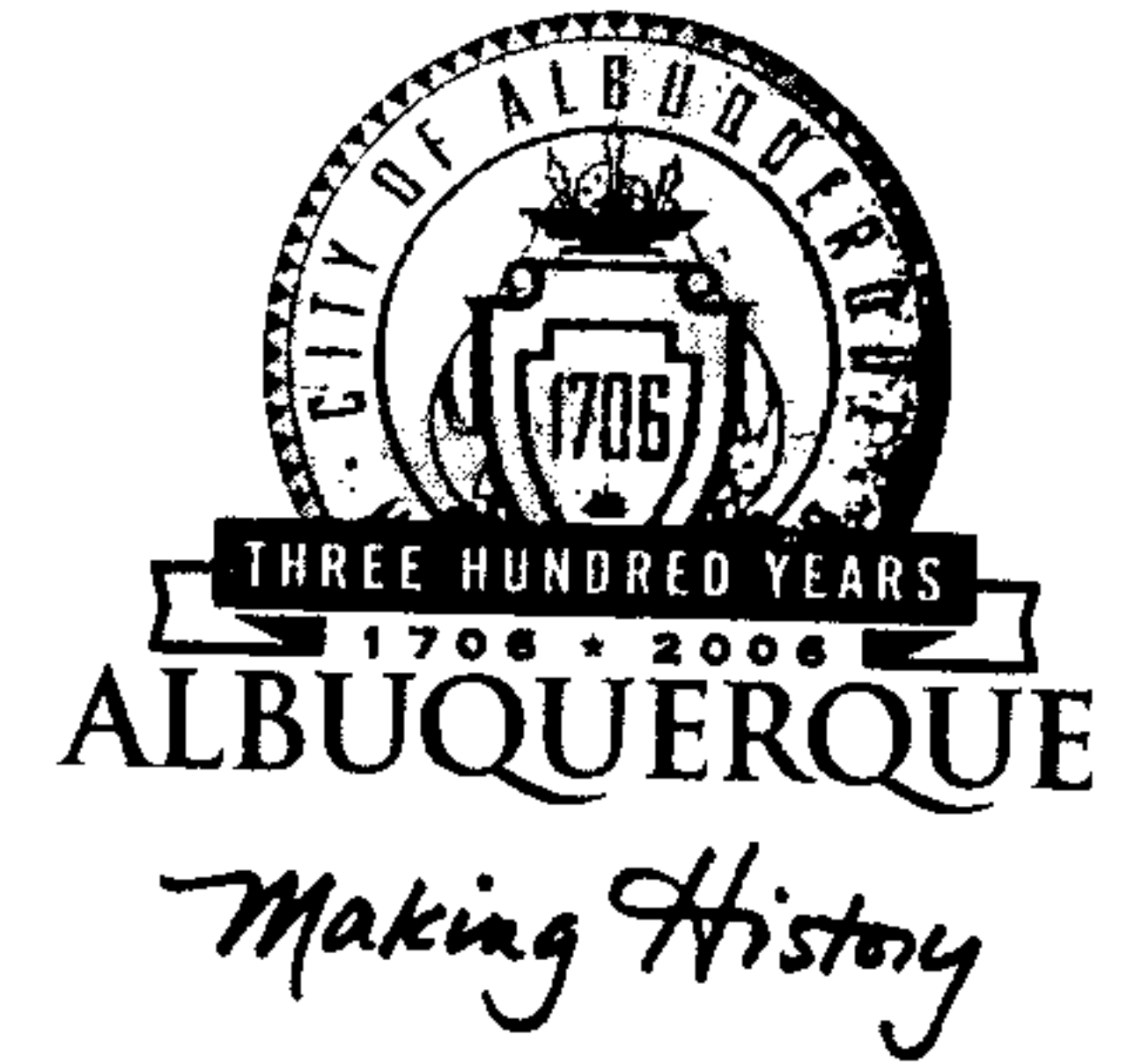


CITY OF ALBUQUERQUE



April 15, 2005

Mr. Kenneth R. Muller, PE
MOLZEN-CORBIN & ASSOCIATES
2701 Miles Road SE
Albuquerque, NM 87106

Re: WASTWATER LIFT STATION NO. 24
4800 Westbank Road NW
Approval of Permanent Certificate of Occupancy (C.O.)
Engineer's Stamp dated 04/02/2003(F-12/D3)
Certification dated 04/13/2005

P.O. Box 1293

Dear Ken,

Albuquerque

Based upon the information provided in your submittal received 04/14/2005, the above referenced certification is approved for release of Permanent Certificate of Occupancy by Hydrology.

New Mexico 87103

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

www.cabq.gov

Sincerely,

Arlene V. Portillo
Plan Checker, Planning Dept. - Hydrology
Development and Building Services

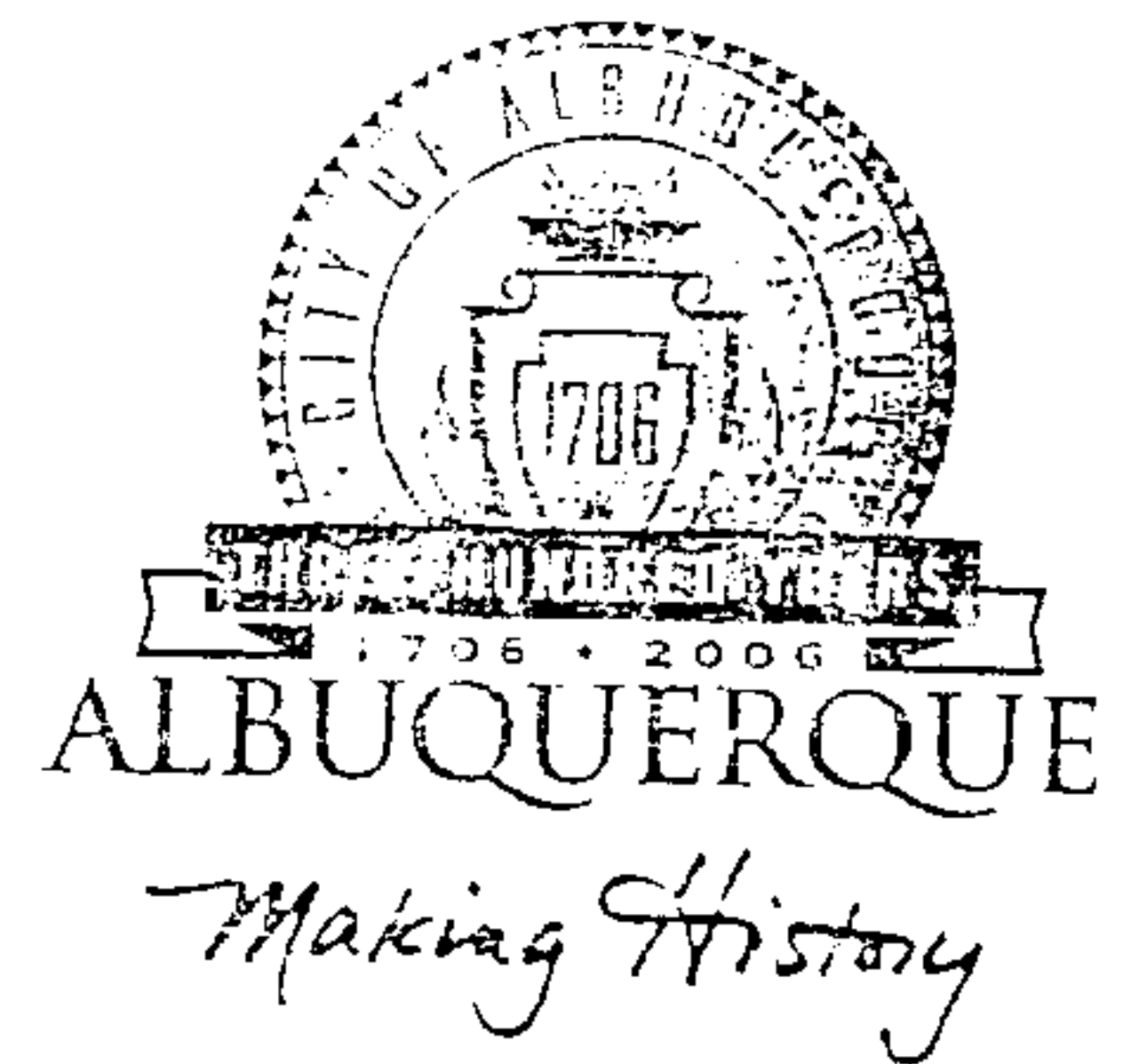
C: Phyllis Villanueva
File

CITY OF ALBUQUERQUE

Original Sent To
Main File

RECEIVED

MAR 17 2005



MOLZEN-CORBIN & ASSOCIATES

March 15, 2005

Ken Muller, PE
Molzen-Corbin & Associates
2701 Miles Rd SE
Albuquerque, NM 87106

Re: Lift Station 24 Engineering Certification
Engineer's Stamp dated 3-3-05, (F12/D3)

Dear Mr. Muller,

Based upon the information provided in your submittal dated 3-4-05, the above referenced certification cannot be approved for the following reasons.

- The plan dated 5-21-02 by Kent Frier, PE, was approved by the City on 6-25-02. However, a revised plan (dated 4-2-03) was submitted by your office on 3-26-03 and approved by the City on 4-9-03. It is *that* plan that must be certified for Certificate of Occupancy.
- The plan submitted on this certification is actually the one that was disapproved by the City in a letter dated 5-9-02.

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

Sincerely,

Bradley L. Bingham
Bradley L. Bingham, PE
Principal Engineer, Planning Dept.
Development and Building Services

Sheet C-101
AS-Bid drawing.
Submitted w/ certification
C: file 4/12/05

Ken Muller
Submitted sht. C-101 with as-bid stamp
& signature

Ken Muller 4/13/05

P.O. Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov



City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

MOLZEN-CORBIN & ASSOCIATES

June 25, 2002

Ken Muller
Molzen-Corbin & Associates
2701 Miles Road, SE
Albuquerque, NM 87106

**RE: Wastewater Lift Station 24 Grading and Drainage Plan (F12-D3)
Engineer's Stamp Dated May 21, 2002 by Kent Freier**

Dear Mr. Muller:

The above referenced grading and drainage plan received May 29, 2002 is approved for Building Permit and Work Order action at DRC.

If you have any questions please call me at 924-3982

Sincerely,

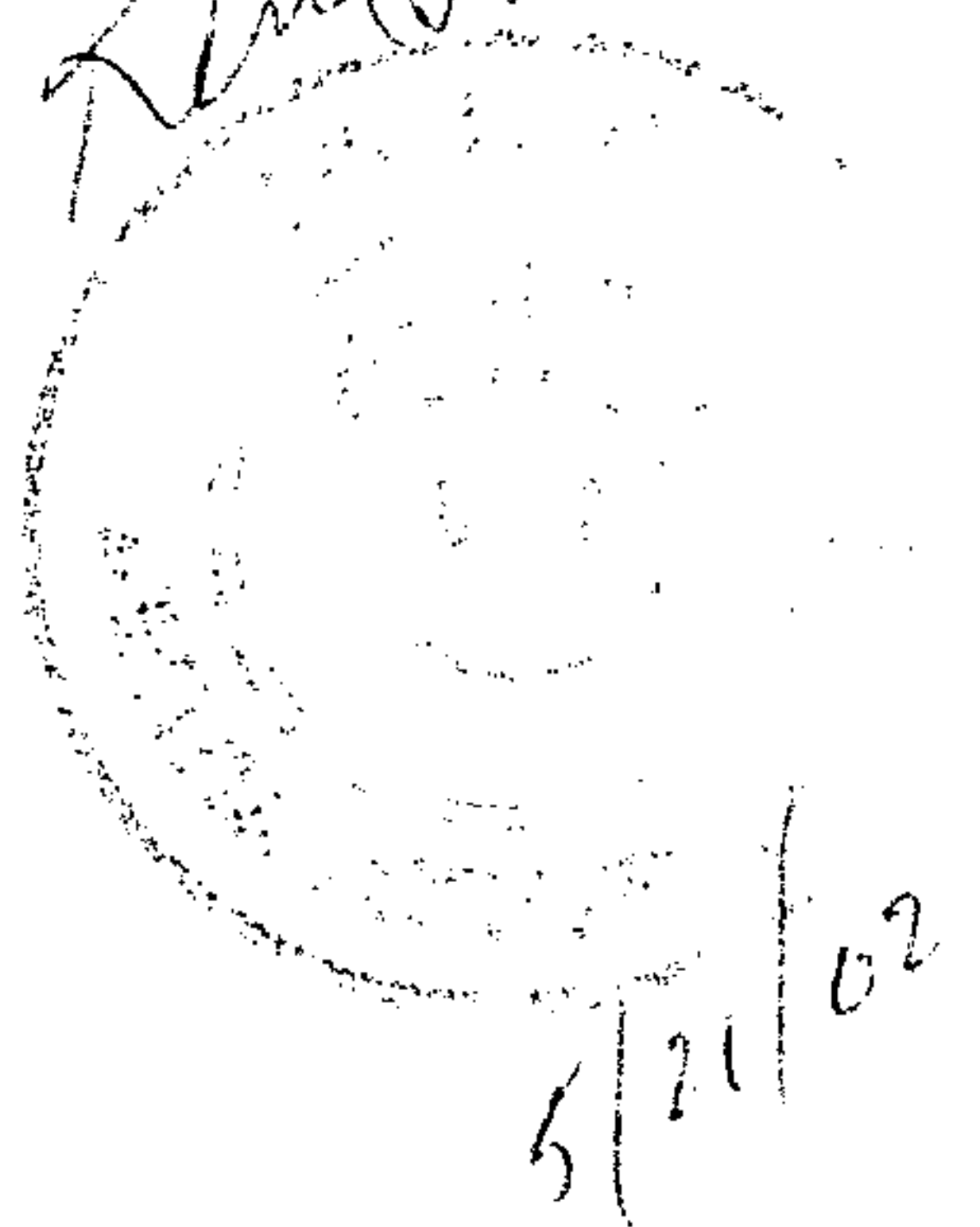
Carlos A. Montoya
City Floodplain Administrator

CITY OF ALBUQUERQUE, NEW MEXICO

LIFT STATION NO. 24 IMPROVEMENTS

DRAINAGE REPORT

May 2002

Kim Hume

5/21/02

2701 Miles Rd. SE
Albuquerque, NM 87111
505-242-5700
Fax 242-0673

MOLZEN-CORBIN
& Associates

1.0 INTRODUCTION

The Wastewater Utility Division of the City of Albuquerque Public Works Department is proposing to construct improvements to Wastewater Lift Station No. 24. These improvements include a new Electrical Building and concrete pads for a new Diesel Generator, a new Transformer, and a new Transfer Switch.

2.0 HYDROLOGY

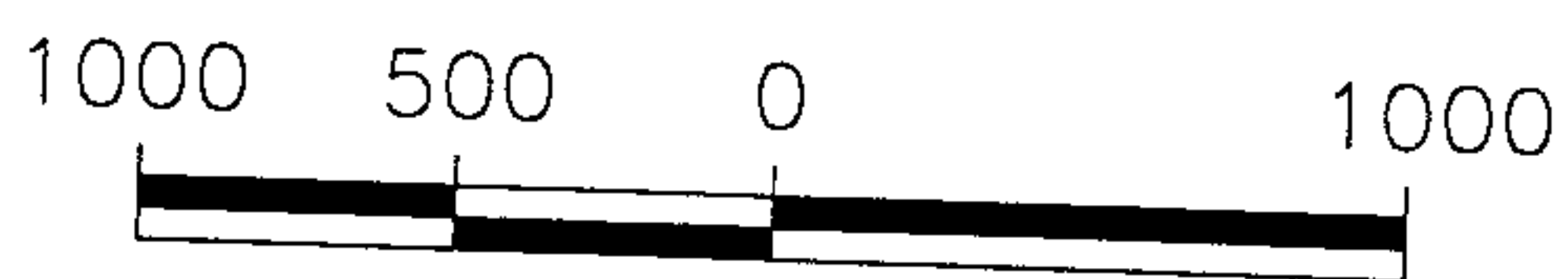
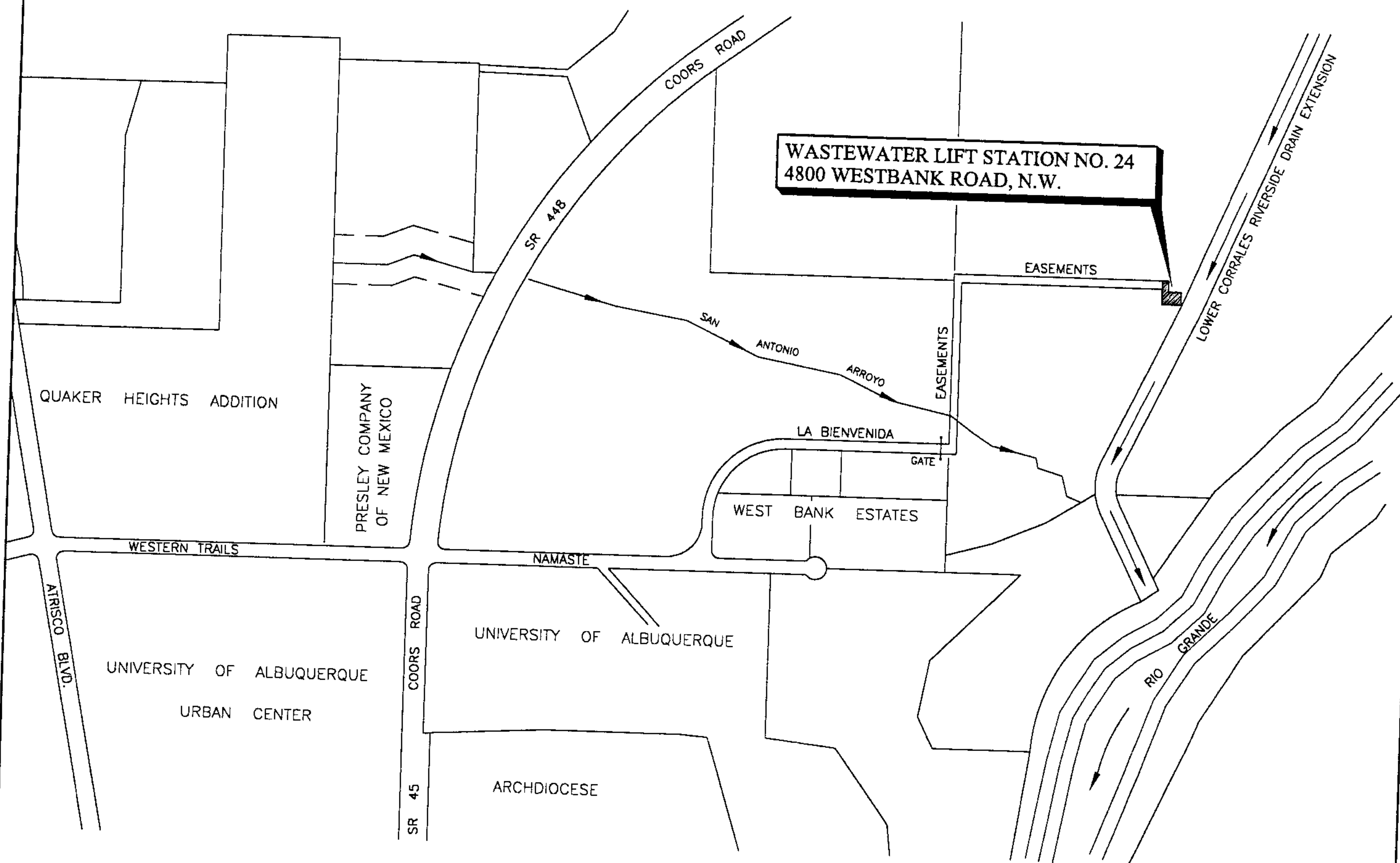
All hydrologic calculations and analysis have been performed in accordance with the City of Albuquerque Development Process Manual, Section 22.2, "Hydrology", 1993. For the purpose of analysis, this site is considered to be in Bernalillo County Precipitation Zone 1. See Appendix A.

3.0 EXISTING CONDITIONS

The site is located approximately one half of a mile east of Coors Boulevard (SR 448) along the western edge of the Lower Corrales Riverside Drain (see Figure 1). Access to the site is gained from Coors to Namaste Road and from there down La Bienvenida and down existing easements to the property.

The site is divided into two separate drainage basins (see Figure 2) based on the site grading. Basin A contains the northern portion of the site including the Ferrous Chloride (FeCl) Tank Enclosure and the Chem Building. The majority of Basin A is asphalt pavement and runoff sheet flows from west to east. Some of the runoff flows into the Lower Corrales Riverside Drain, however, the majority of the runoff is intercepted by a trench drain designed to capture chemical spills. The trench drain discharges into Sanitary Manhole No. 423.

Basin B, in the southern section of the site, is a combination of asphalt pavement and natural ground. The lift station, transformer, and generator with the associated buildings are also located



GRAPHIC SCALE
1" = 1000'

FIGURE 1: LOCATION MAP



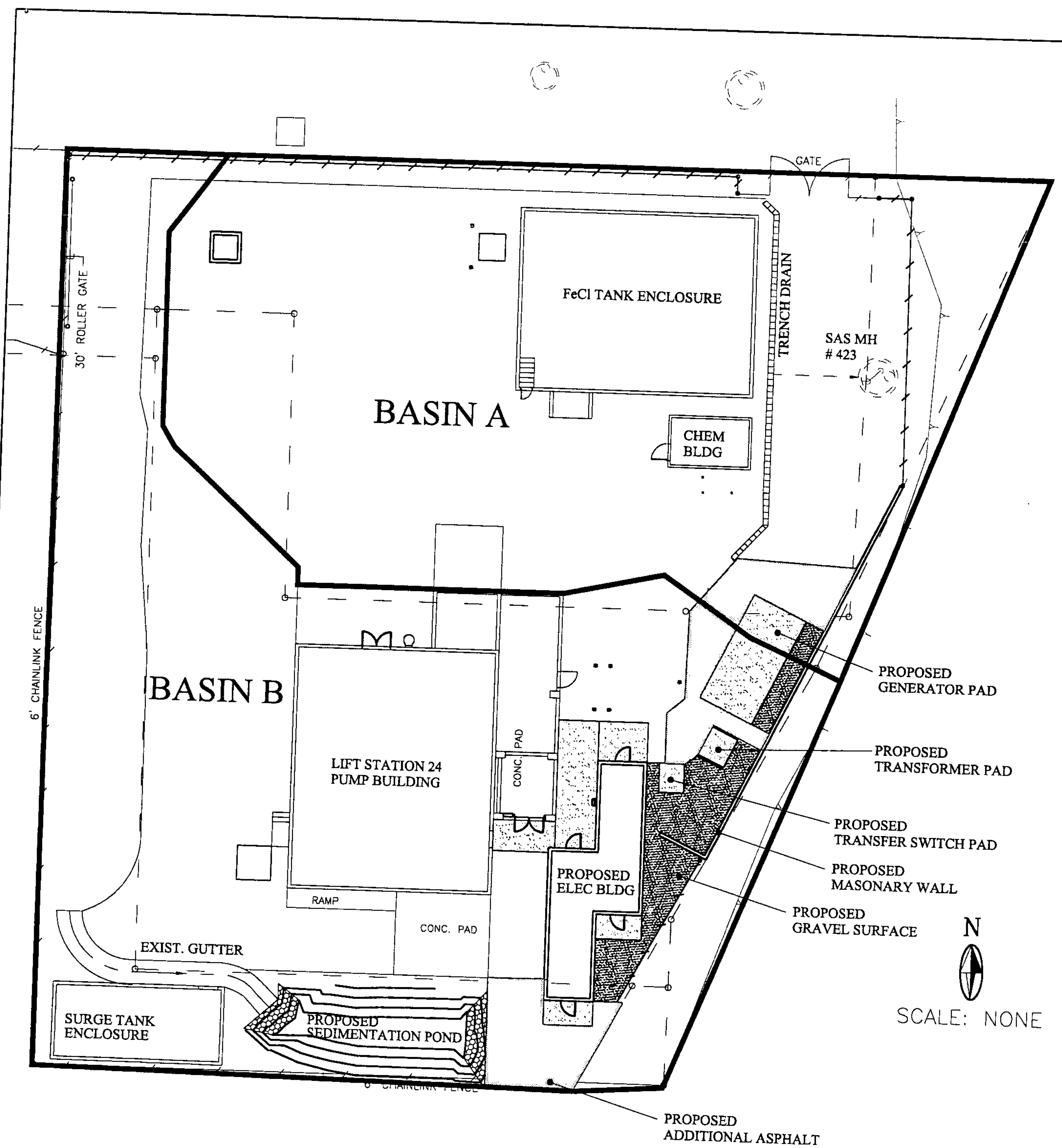


FIGURE 2: DRAINAGE BASINS

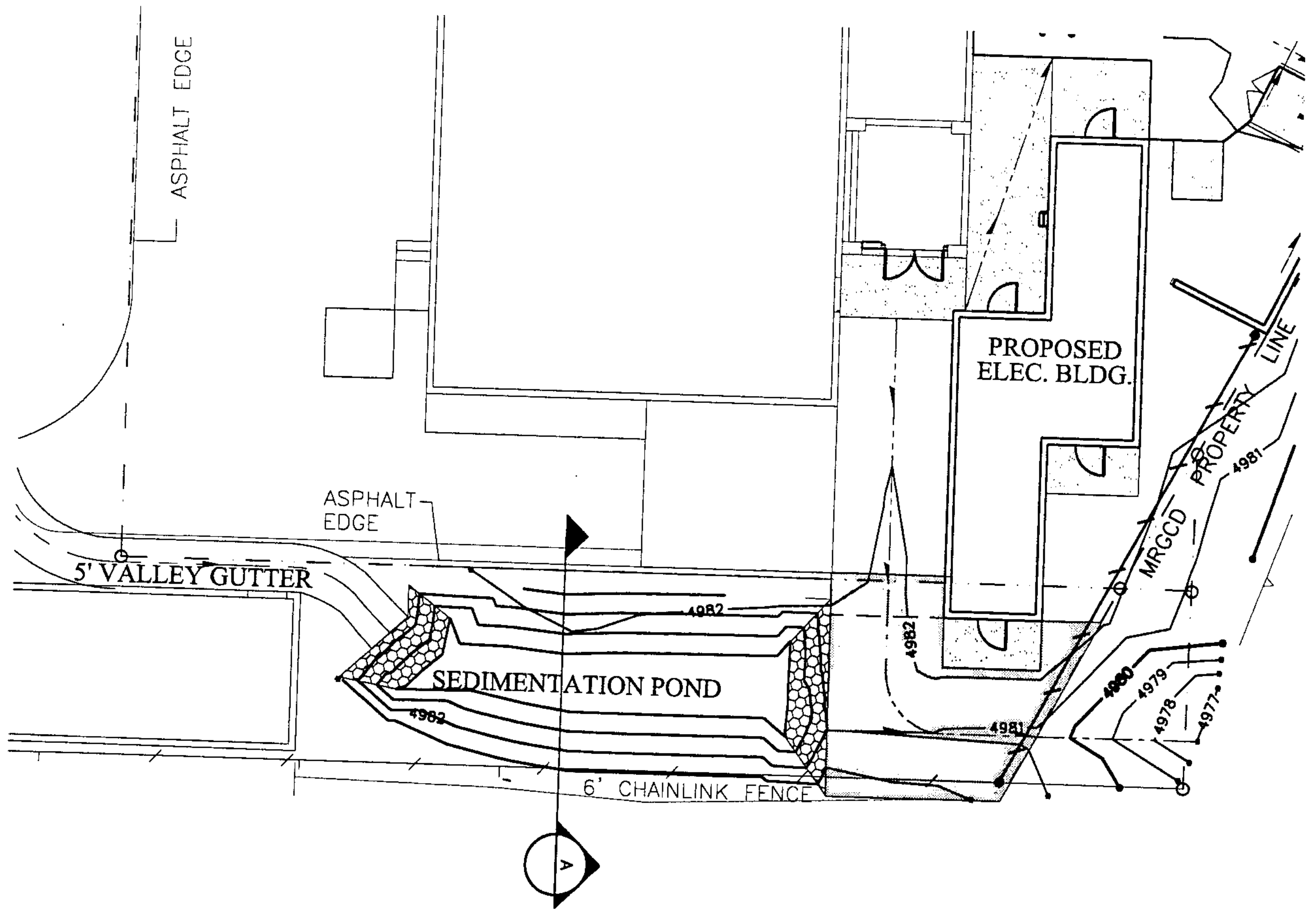
in Basin B. As flows develop in this basin, they run south and are captured in a concrete valley gutter and conveyed east to an earthen ditch and out to the Lower Corrales Riverside Drain.

4.0 PROPOSED CONDITIONS

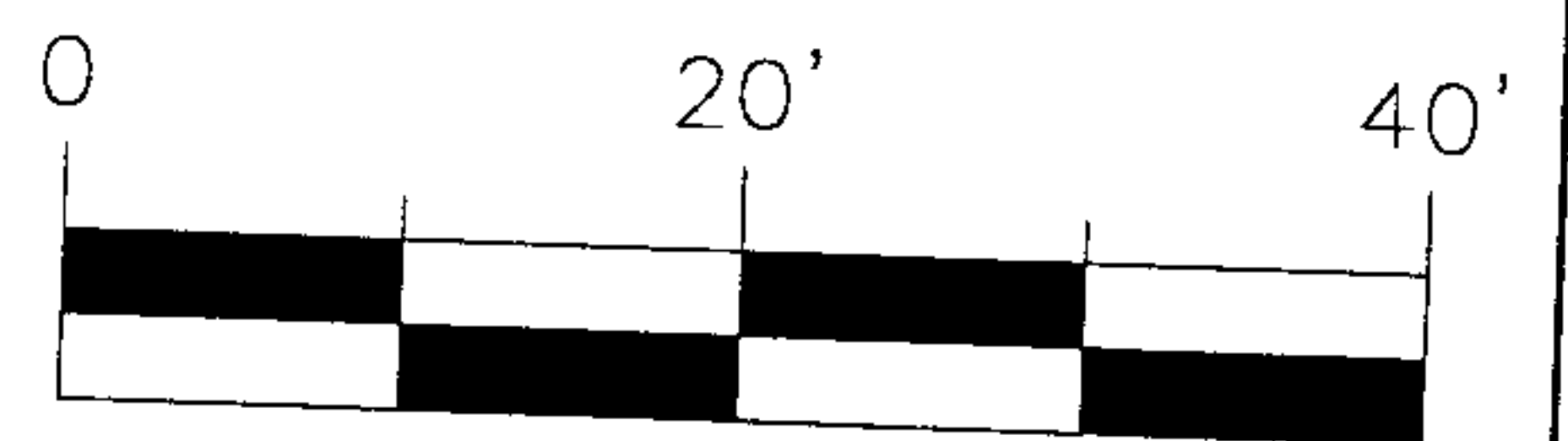
The new Electrical Building and new concrete pads are located primarily in drainage Basin B with only a partial overlap of the concrete pad for the Diesel Generator in Basin A. The new asphalt pavement will affect both basin areas. Much of the areas not paved on the east side of the site will receive a layer of gravel mulch. The mulch will allow the non-paved areas to slow the runoff and still keep the area from becoming impervious.

The runoff for Basin A will increase very slightly with the addition of asphalt and concrete, but with an increase of only about 0.0015-cfs for the 100-yr 6-hr event, this will not create any noticeable effects. There is no re-grading taking place in Basin A, so runoff will flow the same as before.

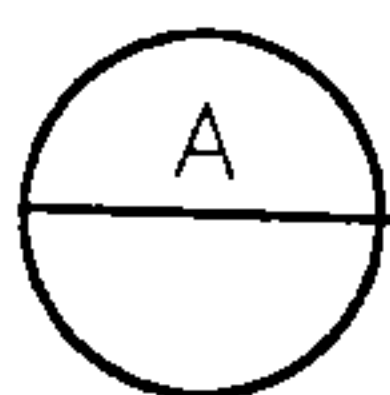
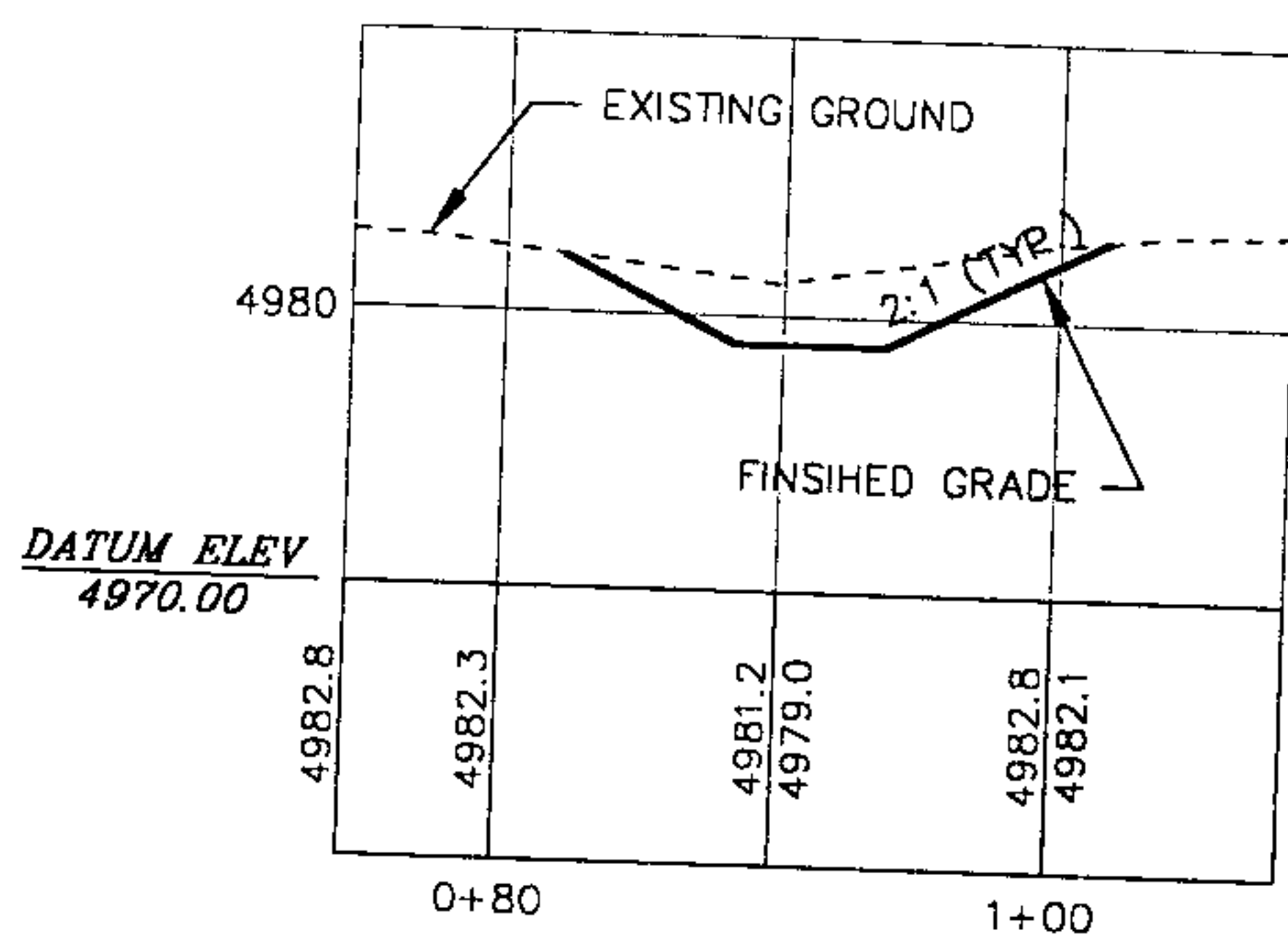
With most of the construction taking place in Basin B, the runoff in this area will increase more than the flows for Basin A. This increase amounts to 0.0968-cfs for the 100-yr 6-hr event and is, again, small enough to be considered negligible. In order to reduce the amount of sediment running into the Lower Corrales Riverside Drain, a small sedimentation pond will be added at the end of the concrete valley gutter (see Figure 3). The sedimentation pond will have riprap placed at the inlet and outlet of the pond to control erosion. The pond will overflow into an asphalt lined ditch and outfall into the Lower Corrales Riverside Drain. The pond will also have the effect of reducing the amount of runoff in Basin B, as it will act as a detention pond. It should be noted that the sedimentation pond is not considered a detention pond because it will only hold 60% of the 100-yr. 6-hr. event. The City of Albuquerque DPM requires detention ponds to hold the full 100-yr. 6-hr. event.



PLAN



1" = 20'
GRAPHIC SCALE



SECTION

FIGURE 3: SEDIMENTATION POND



Albuquerque Lift Station #24 - Basin A
Albuquerque, New Mexico
28-Aug-01

Reference: Development Process Manual, Section 22.2, Hydrology
 Applicable Bernalillo County Precipitation Zone: 1

Precipitation Depths_{100-Year} [inches]:

P ₆₀	P ₃₆₀	P ₁₄₄₀	P _{4days}	P _{10days}
1.87	2.2	2.66	3.12	3.67

Peak Discharge_{100Year/6Hour} [cfs/acre]:

A	B	C	D
1.29	2.03	2.87	4.37

for $t_c = .2$ hour
Zone 1 Peak Intensity [in/hr]:
 I = 4.7

Existing Conditions:

Land Treatment	Area [ft ²]	Area [acre]	% of Total Area	Excess Prec. ₁₀₀₋₆ [in]	Weighted E [in]	Volume ₃₆₀ [acre-ft]	Volume ₁₄₄₀ [acre-ft]	Volume _{10day} [acre-ft]	Q _{100Year/6Hour} [cfs]	Rational Method, C	Rational Method, Q [cfs]
A		0.0000	0.00%	0.44	--	0.0000	--	--	0.0000	0.27	0.0000
B		0.0000	0.00%	0.67	--	0.0000	--	--	0.0000	0.43	0.0000
C		0.0253	8.01%	0.99	--	0.0040	--	--	0.0726	0.61	0.0725
D		0.2904	91.99%	1.97	--	0.0458	--	--	1.2690	0.93	1.2693
Totals	0.0000	0.3157	100.00%	--	1.8915	0.0498	0.0609	0.0853	1.3417	--	1.3419

check: 0.0498
 Volume₃₆₀ [CF] = 2167.60 2652.5 = Volume₁₄₄₀ [CF]

Proposed Conditions:

Land Treatment	Area [ft ²]	Area [acre]	% of Total Area	Excess Prec. ₁₀₀₋₆ [in]	Weighted E [in]	Volume ₃₆₀ [acre-ft]	Volume ₁₄₄₀ [acre-ft]	Volume _{10day} [acre-ft]	Q _{100Year/6Hour} [cfs]	Rational Method, C	Rational Method, Q [cfs]
A		0.0000	0.00%	0.44	--	0.0000	--	--	0.0000	0.27	0.0000
B		0.0000	0.00%	0.67	--	0.0000	--	--	0.0000	0.43	0.0000
C		0.0146	4.62%	0.99	--	0.0023	--	--	0.0419	0.61	0.0419
D		0.3011	95.38%	1.97	--	0.0483	--	--	1.3158	0.93	1.3161
Totals	0.0000	0.3157	100.00%	--	1.9247	0.0506	0.0622	0.0875	1.3577	--	1.3580

check: 0.0506
 Volume₃₆₀ [CF] = 2205.66 2708.4 = Volume₁₄₄₀ [CF]

Albuquerque Lift Station #24 - Basin B
Albuquerque, New Mexico
28-Aug-01

Reference: Development Process Manual, Section 22.2, Hydrology
 Applicable Bernalillo County Precipitation Zone: 1

Precipitation Depths_{100-Year} [inches]:

P ₆₀	P ₃₆₀	P ₁₄₄₀	P _{4days}	P _{10days}
1.87	2.2	2.66	3.12	3.67

Peak Discharge_{100Year/6Hour} [cfs/acre]:

A	B	C	D
1.29	2.03	2.87	4.37

for $t_c = .2$ hour
Zone 1 Peak Intensity [in/hr]:
 I = 4.7

Existing Conditions:

Land Treatment	Area [ft ²]	Area [acre]	% of Total Area	Excess Prec. ₁₀₀₋₆ [in]	Weighted E [in]	Volume ₃₆₀ [acre-ft]	Volume ₁₄₄₀ [acre-ft]	Volume _{10day} [acre-ft]	Q _{100Year/6Hour} [cfs]	Rational Method, C	Rational Method, Q [cfs]
A		0.0000	0.00%	0.44	--	0.0000	--	--	0.0000	0.27	0.0000
B		0.0000	0.00%	0.67	--	0.0000	--	--	0.0000	0.43	0.0000
C		0.1294	32.99%	0.99	--	0.0178	--	--	0.3714	0.61	0.3710
D		0.2628	67.01%	1.97	--	0.0361	--	--	1.1484	0.93	1.1487
Totals	0.0000	0.3922	100.00%	--	1.6467	0.0538	0.0639	0.0860	1.5198	--	1.5197

check: 0.0538
 Volume₃₆₀ [CF] = 2344.33 2783.2 = Volume₁₄₄₀ [CF]

Proposed Conditions:

Land Treatment	Area [ft ²]	Area [acre]	% of Total Area	Excess Prec. ₁₀₀₋₆ [in]	Weighted E [in]	Volume ₃₆₀ [acre-ft]	Volume ₁₄₄₀ [acre-ft]	Volume _{10day} [acre-ft]	Q _{100Year/6Hour} [cfs]	Rational Method, C	Rational Method, Q [cfs]
A		0.0000	0.00%	0.44	--	0.0000	--	--	0.0000	0.27	0.0000
B		0.0000	0.00%	0.67	--	0.0000	--	--	0.0000	0.43	0.0000
C		0.0649	16.55%	0.99	--	0.0098	--	--	0.1863	0.61	0.1861
D		0.3273	83.45%	1.97	--	0.0493	--	--	1.4303	0.93	1.4306
Totals	0.0000	0.3922	100.00%	--	1.8078	0.0591	0.0716	0.0992	1.6166	--	1.6167

check: 0.0591
 Volume₃₆₀ [CF] = 2573.79 3120.3 = Volume₁₄₄₀ [CF]

Calculated By E. Arroyo Date 8/30/01
Checked By [Signature] Date _____
Sheet No. 1 Of 1

Client City of Albuquerque Project No. AB091-11
Project Lift Station No. 24 Improvements
Subject Drainage Report - Sedimentation Pond Volume

<u>Contour</u>	<u>Area (SF)</u>	<u>Volume (CF)</u>
4982	792.02	
4981	608.40	702.71
4980	407.53	507.97
4979	217.06	<u>312.30</u>

$$\text{Volume} = (A_1 + A_2)/2 \times C_1 - C_2 \Rightarrow C_1 - C_2 = 1$$
$$\Rightarrow (A_1 + A_2)/2$$

Total = 1522.97 (CF)

☐ = .25 inch²

