

DRAINAGE INFORMATION SHEET

CITY OF ALBUQUERQUE, N.M.

PROJECT TITLE: Bell Apartments ZONE ATLAS/DRNG. FILE #: E11/347 ^{P24}
LEGAL DESCRIPTION: Lot 11, Block 1, Volcano Cliffs Subdivision, Unit 3
CITY ADDRESS: Don't have.

ENGINEERING FIRM: Louis Gross & Assoc. Inc. CONTACT: Louis Gross

ADDRESS: 925 6th St. N.W. PHONE: 243-6353

OWNER: Richard Bell CONTACT: Richard Bell

ADDRESS: 200 Jefferson N.E. PHONE: 268-3457

ARCHITECT: Bill Buckley CONTACT: Bill Buckley

ADDRESS: 6805 Guadalupe Tr N.W. PHONE: 344-1565

SURVEYOR: Louis Gross & Assoc. Inc. CONTACT: _____

ADDRESS: _____ PHONE: _____

CONTRACTOR: Not selected yet CONTACT: _____

ADDRESS: _____ PHONE: _____

PRE-DESIGN MEETING:

☒ YES

☐ NO

☒ COPY OF CONFERENCE RECAP
SHEET PROVIDED

DRB NO. _____
EPC NO. _____
PROJ. NO. _____

RECEIVED
DEC 28 1988
HYDROLOGY SECTION

TYPE OF SUBMITTAL:

☐ DRAINAGE REPORT

☒ DRAINAGE PLAN

☐ CONCEPTUAL GRADING & DRAINAGE PLAN

☒ GRADING PLAN

☒ EROSION CONTROL PLAN

☐ ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:

☐ SKETCH PLAT APPROVAL

☐ PRELIMINARY PLAT APPROVAL

☐ SITE DEVELOPMENT PLAN APPROVAL

☐ FINAL PLAT APPROVAL

☒ BUILDING PERMIT APPROVAL

☒ FOUNDATION PERMIT APPROVAL

☐ CERTIFICATE OF OCCUPANCY APPROVAL

☒ ROUGH GRADING PERMIT APPROVAL

☐ GRADING/PAVING PERMIT APPROVAL

☐ OTHER _____ (SPECIFY)

DATE SUBMITTED: 12/15/88

BY: _____

Louis W. Gross

Rem 12/27/88

FILE COPY



KEN SCHULTZ
MAYOR

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

January 10, 1989

Louis Gross, P.E.
Louis Gross & Associates, Inc.
925 Sixth Street, NW Suite 3
Albuquerque, New Mexico 87102

RE: REVISED DRAINAGE PLAN FOR BELL APARTMENTS
(E-11/DN) REVISION DATED DECEMBER 23, 1988
024

Dear Mr. Gross:

Based on the information provided on your resubmittal of December 28, 1988, the above referenced plan is approved for Building Permit.

Be advised that a separate permit is required for construction within City right-of-way. A copy of this approval letter must be on hand when applying for the excavation permit.

Also, the permanent Certificate of Occupancy will not be released until the street grades on Kiva Street are established and the parking lot paving adjacent to Kiva Street are adjusted accordingly.

Please attach a copy of this plan to the construction sets prior to sign-off by Hydrology.

If I can be of further assistance, please feel free to call me at 768-2650.

Cordially,

Bernie J. Montoya, C.E.
Engineering Assistant

BJM/bsj
(WP+973)

DRAINAGE PLAN

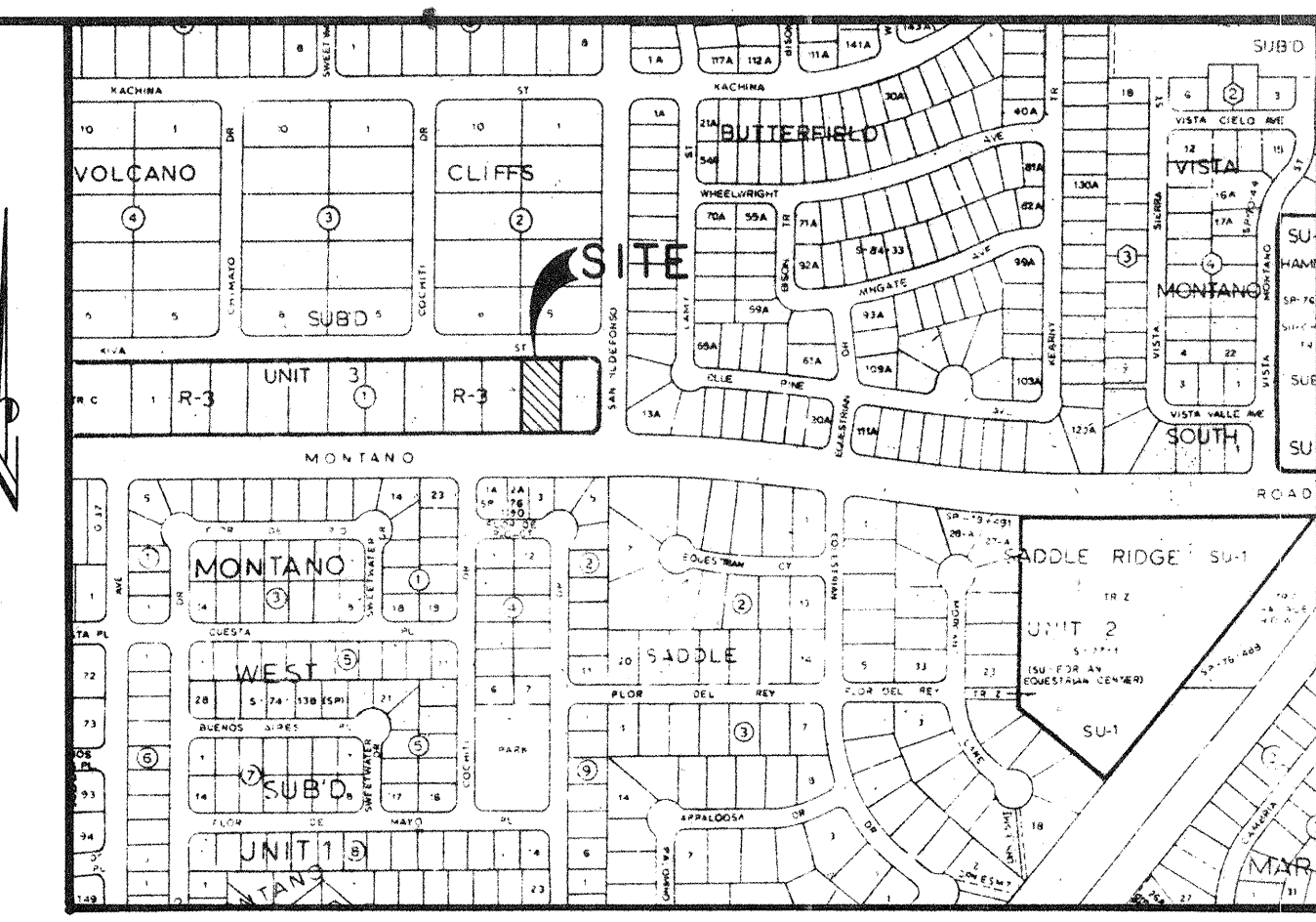
LOT 11, BLOCK 1
VOLCANO CLIFFS SUBDIVISION, UNIT 3
ALBUQUERQUE, NEW MEXICO

ZONE MAP E-11, BENCHMARK "8-E10" ELEV.=5143.13
(S.W. Corner of Montano Rd. & Whiteman Dr. N.W.)
FLOOD MAP 14, SOIL TYPE "B"
FILE N° E11/ APPROVED

NOTICE TO CONTRACTOR

- An excavation/construction permit will be required before beginning any work within City right-of-way. An approved copy of these plans must be submitted at the time of application for this permit.
- All work detailed on these plans to be performed, except as otherwise stated or provided herein, shall be constructed in accordance with the City of Albuquerque Standard Specifications for Public Works Construction 1986.
- Two working days prior to any excavation, contractor must contact Line Locating Service, 763-1234, for location of existing utilities.
- Prior to construction, the contractor shall excavate and verify the horizontal and vertical locations of all obstructions. Should a conflict exist, the contractor shall notify the engineer so that the conflict can be resolved with a minimum amount of delay.
- Backfill compaction shall be according to arterial street use.
- Maintenance of these facilities will be the responsibility of the Owner of the property served.

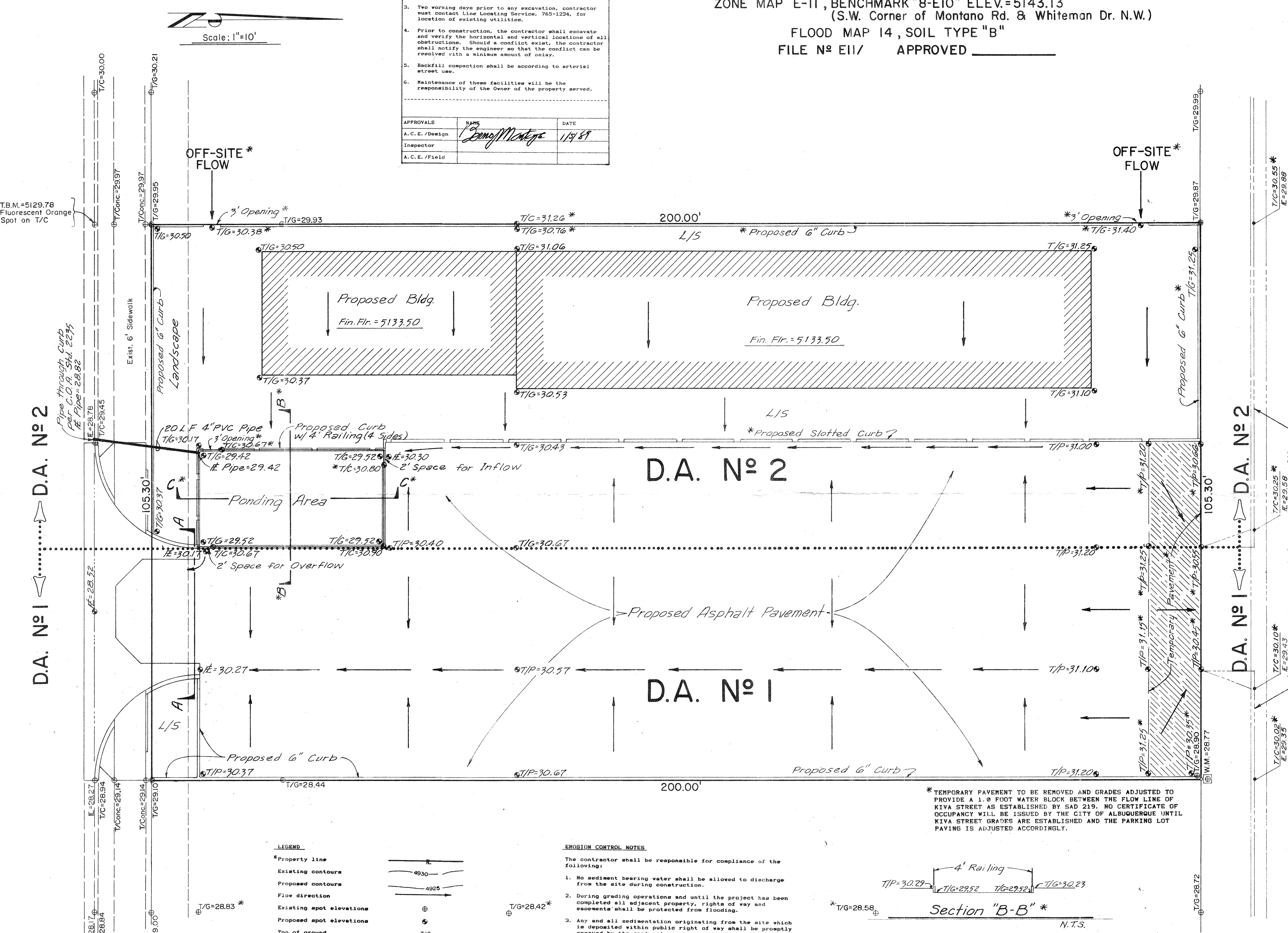
APPROVALS	NAME	DATE
A.C.E./Design	James M. Gross	11/9/87
Inspector		
A.C.E./Field		



VICINITY MAP

Zone Map E-11-Z

Scale: 1"=500'



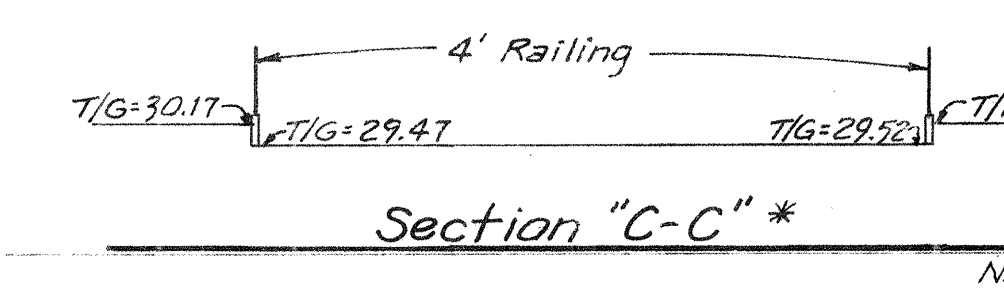
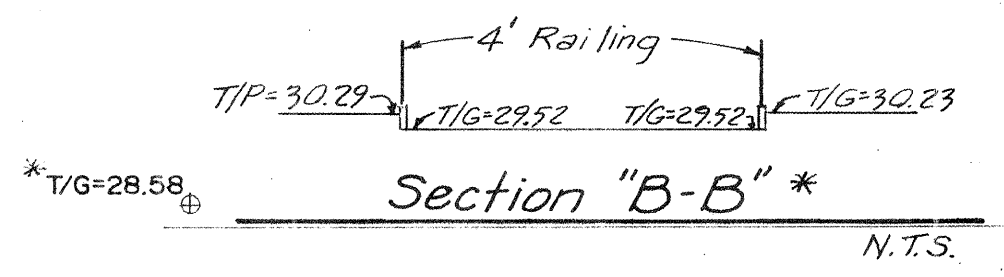
LEGEND

Property line	—
Existing contours	—
Proposed contours	—
Flow direction	→
Existing spot elevations	⊕
Proposed spot elevations	⊙
Top of ground	T/G
Top of pavement	T/P
Top of concrete	T/Conc.
Top of curb	T/C
Flowline Gutter or a/e	EL

EROSION CONTROL NOTES

The contractor shall be responsible for compliance of the following:

- No sediment bearing water shall be allowed to discharge from the site during construction.
- During grading operations and until the project has been completed all adjacent property, rights of way and easements shall be protected from flooding.
- Any and all sedimentation originating from the site which is deposited within public right of way shall be promptly removed by the contractor.
- Control of sediment laden waters will be accomplished by use of a compacted earth berm of adequate height. The berm shall be located along the downstream perimeter of the property.



HYDROLOGY

Total area = 21,060 sf = 0.483 ac

100 yr - 6hr Rainfall = 2.2 in

$I = 2.2 \times 6.84 / 10 = 0.51$

$I = 4.65 \text{ in/hr}$

Allowable discharge with a C = 0.58

$Q (\text{allowable}) = 0.58 \times 4.65 \times 0.483 = 1.3 \text{ cfs}$

D.A. No. 1

Direct discharge to Montano Rd. through driveway.

Area = 200 X 40 = 8,000 sf = 0.20 ac

Asphalt = 8,610 X 0.95 = 8,180

L/S = 190 X 0.25 = 48

8,800

8,228

$C = 8,228 / 8,800 = 0.93$

$Q = 0.93 \times 4.65 \times 0.20 = 0.86 \text{ cfs}$

CN = 95 Direct Run Off = 1.7 in

$V = 1.7 / 12 \times 8,800 = 1,247 \text{ cf}$

D.A. No. 2

Discharge through pond with a pipe outlet to Montano Rd.

Area = 61.3 X 200 = 12,260 sf = 0.28 ac

Roof = 3,977 X 0.90 = 3,580

Asphalt = 5,100 X 0.95 = 2,945

L/S = 5,183 X 0.25 = 2,945

12,260

7,821

$C = 7,821 / 12,260 = 0.64$

$Q = 0.64 \times 4.65 \times 0.28 = 0.83 \text{ cfs}$

CN = 85 Direct Run Off = 0.90 in

$V = 0.90 / 12 \times 12,260 = 920 \text{ cf}$

Allowable flow from D. A. No. 2 equals flow from total lot using C = 0.58 less the flow from D. A. No. 1.

$Q (\text{allowable}) = 1.30 - 0.86 = 0.44 \text{ cfs}$

Try an 18 ft X 35 ft pond and solve for depth.

Using $Q = 0.83 \text{ CFS}$ for peak flow, 920 cf for volume and a triangular hydrograph to compute incremental incoming flows.

$T_c = 10 \text{ min.}$ $T_d = 2 V / Q = 2 \times 920 / 0.83 = 2,217 \text{ sec}$

$T = 37 \text{ min}$

For outflow through 4" PVC pipe use $Q = 0.6 A (2gh)^{0.5}$

Time	Q in	dV in	dV out	V store	h ave
0	0.00	0	0	0	0.000
5	0.41	62	28	34	0.049
10	0.83	187	57	130	0.202
15	0.68	226	84	306	0.440
20	0.52	180	101	385	0.629
25	0.36	132	107	410	0.713
30	0.22	86	108	388	0.719
37	0.00	47	144	291	0.653

Maximum h = 0.719 ft

$Q_{\text{max}} = 0.6 \times 0.088 (2 \times 32.2 \times 0.719)^{0.5} = 0.36 \text{ cfs O.K.}$

Barrel Control

$A = 0.087 P = 1.05 R = 0.083 R = 0.19$

$S = 0.03 S' = 0.173$

$Q = 0.087 \times 1.486 / 0.013 \times 0.19 \times 0.173 = 0.33 \text{ cfs O.K.}$

Construct 18 ft X 35 ft X 0.75 ft pond

Leave 2 ft opening in curb for inflow and overflow.

Section A-A

Check capacity.

$A = 4.8 P = 24.4 R = 0.197 R = 0.34$

$S = 0.005 S' = 0.071$

$Q = 4.8 \times 1.486 / 0.017 \times 0.34 \times 0.071 = 10.1 \text{ cfs}$

Off Site Drainage

Some off site drainage from the west is intercepted by this project. There are no established flow patterns, therefore, the flow is classified as overland. The natural ground slopes from West to East is approximately minus 0.008. From these slopes and the 200 ft of the intercepted flow the East-West leg of the off site area along Montano Rd. is computed to be 1600 ft. This forms a triangle with an area of 200 X 1600 / 2 = 160,000 sf or 3.7 ac.

From DPM Sheet 22-2B-1 $V = 0.5 \text{ ft/sec}$

$T_c = 1600 / 0.5 \times 60 = 53 \text{ min}$

$I = 2.2 \times 6.84 / 53 = 1.96 \text{ in/hr}$

$Q = 0.40 \times 1.96 \times 3.7 = 2.93 \text{ cfs}$

This flow will enter the project through the curb openings provided then go through the pond. The flow will exit through the 4" pipe or overflow through the drive to Montano Rd.

12/15/88

* Revised 12/23/88