



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

January 5, 2004

John MacKenzie, P.E.
Mark Goodwin & Associates, PA
P.O. Box 90606
Albuquerque, NM 87199

**Re: Lava Trails Subdivision Tract A, Preliminary Plat, Site Development Plan
Engineer's Stamp dated 11-26-03 (F10/D11)**

Dear Mr. MacKenzie,

Based upon the information provided in your submittal received 12-11-03, the above referenced plan is approved for Site Development Plan for Subdivision and Building Permit action by the DRB and Preliminary Plat action by the DRB.

If you have any questions, you can contact me at 924-3981.

Sincerely,

Kristal D. Metro
Engineering Associate, Planning Dept.
Development and Building Services

BLB

C: Bradley Bingham, DRB
file



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

February 7, 2002

John MacKenzie PE
Mark Goodwin & Associates
P.O. Box 90606
Albuquerque, NM 87199

Re: Lava Trails Conceptual Grading and Drainage Plan
Engineer stamp dated 2-1-02 (F10/D11)

Dear Mr. MacKenzie,

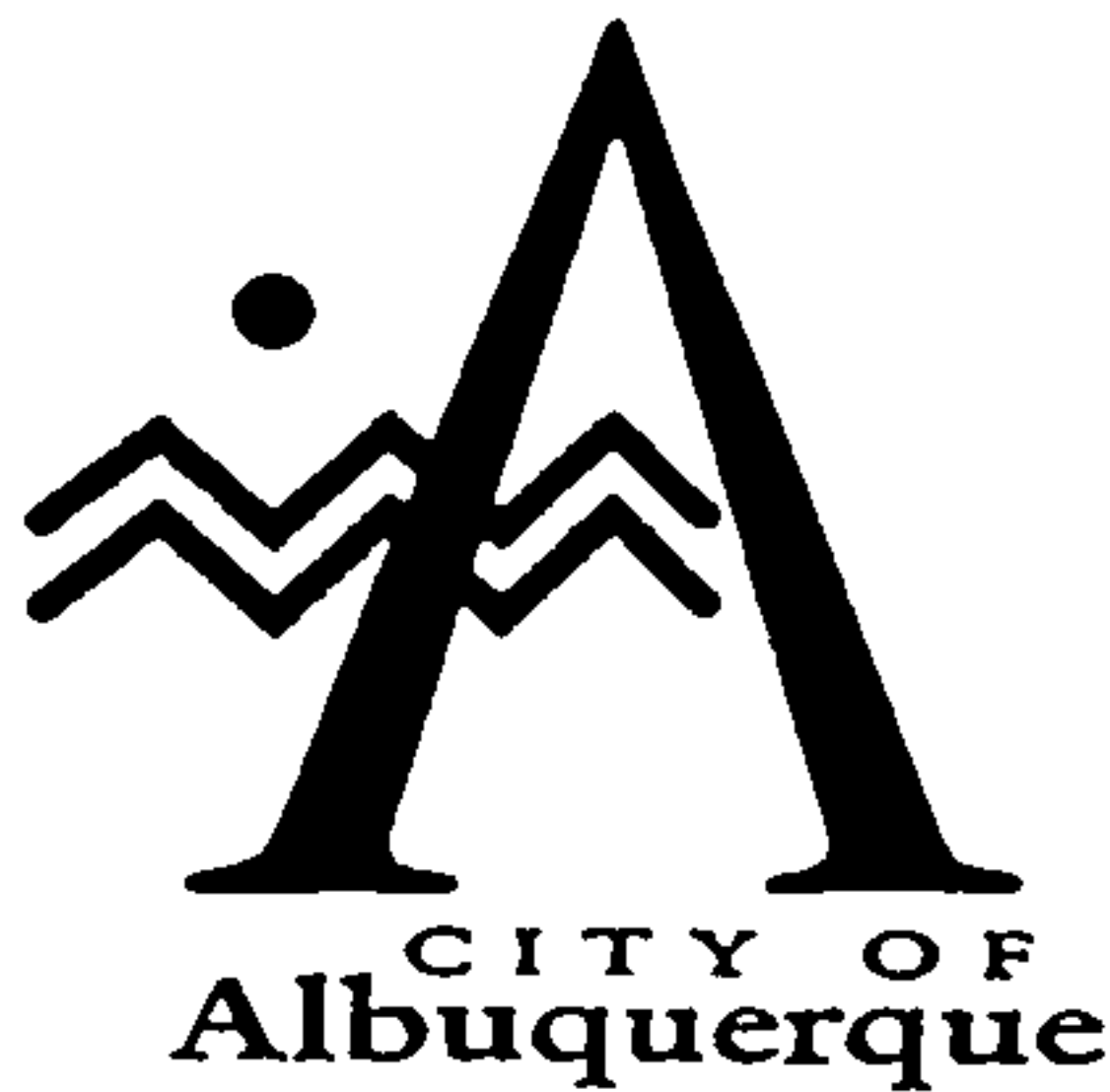
Based on information contained in your submittal dated 2-1-02, the above referenced plan is approved for Site Development Plan for Subdivision and Preliminary Plat action by the DRB.

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

Sincerely,

Bradley L. Bingham, PE
Sr. Engineer, PWD
Development and Building Services

C: file



February 24, 1998

Mr. Monther S. Madanat
Michael Baker Jr., Inc.
3601 Eisenhower Avenue, Suite 600
Alexandria, Virginia 22304-6439

RE: Request for A Letter of Map Revision for Unser Boulevard South, Rinconada Arroyo and Ponds 16A and B, City of Albuquerque, New Mexico, Community No. 350002, FIRM Panels 0113 and 0114.

Dear Mr. Madanat:

The purpose of this letter is to request a Letter of Map Revision for the above referenced project. This request consists of the relocation of flood hazard areas into existing ponds and an existing channel. These improvements were constructed by the City of Albuquerque in conjunction of the extension of Unser Boulevard. No submittal was made to FEMA for a request for the Conditional Letter of Map Revision for this project.

Enclosed with this letter are the Application and Certification forms for requesting revisions to the National Flood Insurance Program (NFIP) maps. Along with the forms are the As-Built drawings and other related information which should facilitate an efficient review. These have been enclosed along with the initial review fee of \$3700.00.

The City of Albuquerque has reviewed and approved the drainage improvements submitted in this request. Our Community would greatly appreciate your prompt response and approval for this Letter of Map Revision. If you have any questions concerning this submittal, please call me at (505) 924-3982.

Sincerely,

Susan M. Calongne, P.E.
City/County Floodplain Administrator

Attachments

c: Steve Boberg, P.E., City of Albuquerque, Public Works, Hydrology Division (Letter only)
Mark S. Holstad, P.E., URS Greiner, Inc. (Letter only)
File

Good for You, Albuquerque!

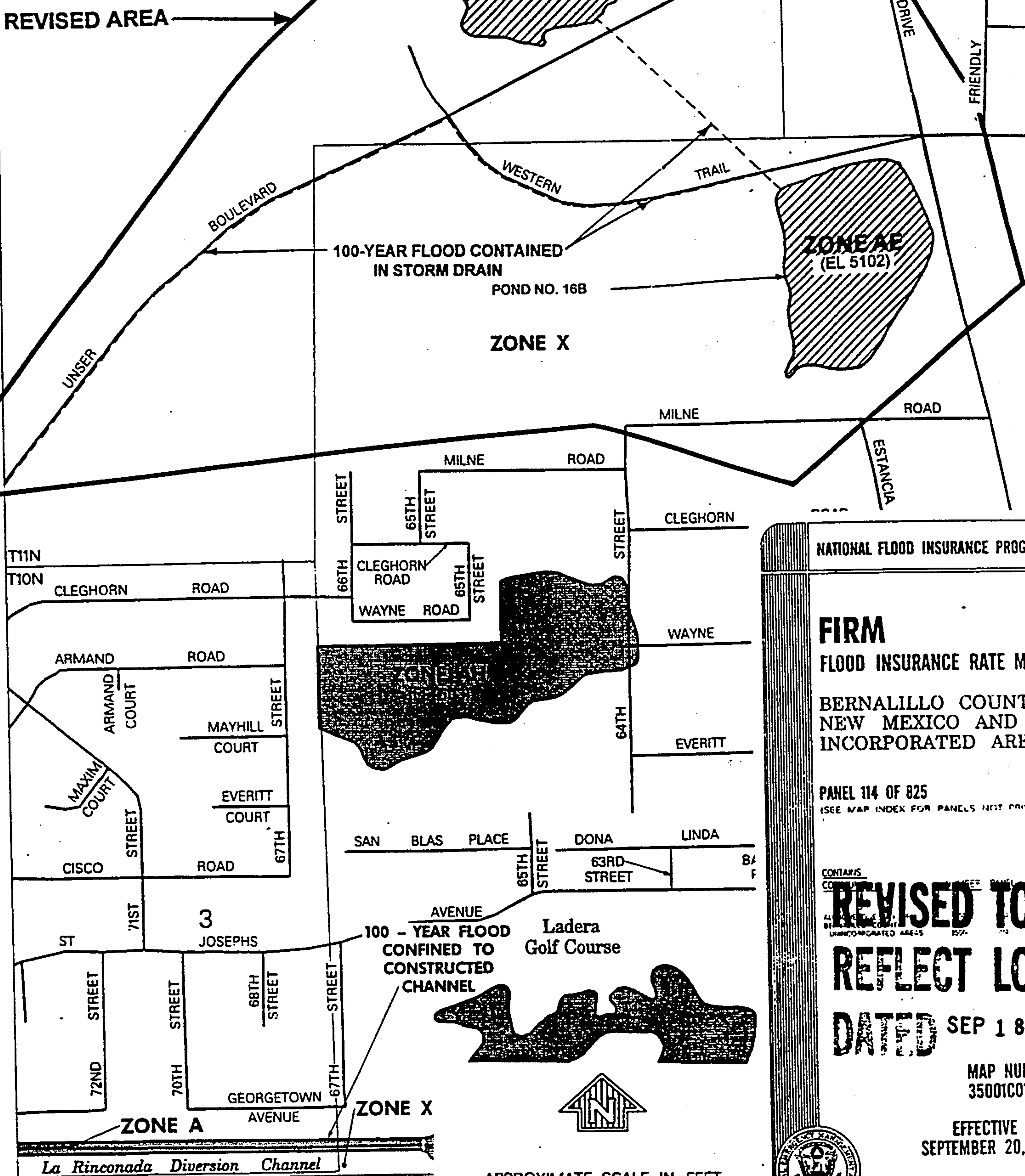


MAP LEGEND



Revised 100-Year Floodplain

REVISED AREA



NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP
BERNALILLO COUNTY,
NEW MEXICO AND
INCORPORATED AREAS

PANEL 114 OF 825
(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS
COMBINED
ALL FLOOD ZONES
BERNALILLO COUNTY
UNINCORPORATED AREAS
**REVISED TO
REFLECT LON**
DATED SEP 18 19

MAP NUMBER
35001C0114 I

EFFECTIVE DATE
SEPTEMBER 20, 199



Federal Emergency Management Agency

043'07"

APPROXIMATE SCALE IN FEET



Table 3. Summary of Discharges for Shallow Flooding Areas (Cont'd)

<u>Flooding Source and Location</u>	<u>Drainage Area (square miles)</u>	<u>100-Year Peak Discharges (cfs)</u>
REVISED DATA		
La Rinconada Arroyo At Unser Boulevard Crossing	1.98	814
Sacate Blanco Arroyo ¹ At confluence with Amole Arroyo	0.43	238 ⁴
Arroyo De San Antonio-Middle ¹ At Atrisco Drive	2.61	1,324
At Atrisco Drive Crossing	4.03	1,970
At Coors Boulevard	-- ³	2,170
South Glenwood Hills Channel ² At Tramway Boulevard	0.426	727
At confluence with Piedra Lisa	-- ³	844

**REVISED TO
REFLECT LOMR
DATED SEP 18 1998**

¹Flows from Matotan, 1975

²Flows from Albuquerque Master Drainage Study - Volume III - Bohannon-Huston, Inc. Appendix E

³Drainage areas not applicable because of interbasin transfer via roads and storm sewers

⁴By Regression Analysis

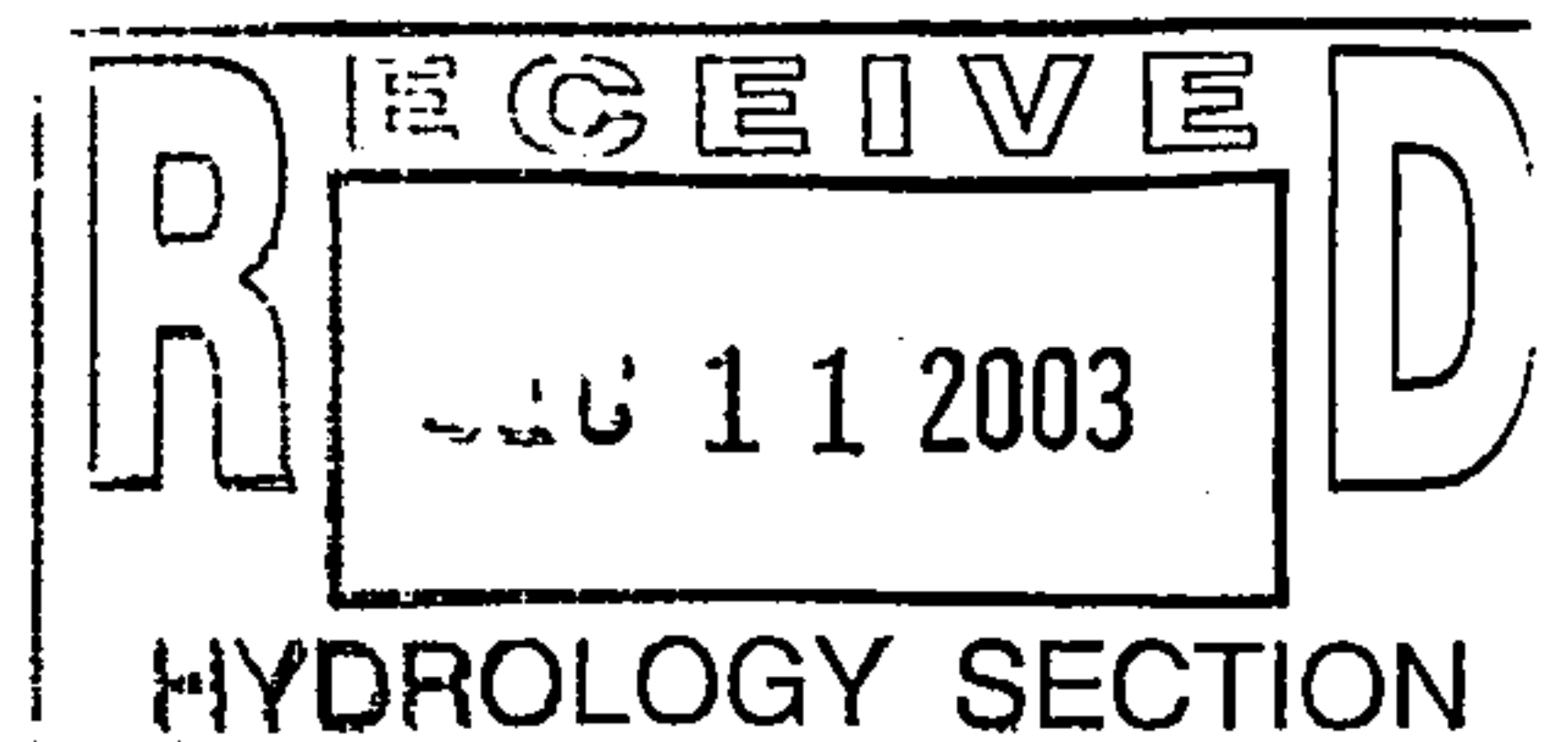
CONCEPTUAL GRADING & DRAINAGE PLAN
for
TRACT A, LAVA TRAILS SUBDIVISION

Prepared for:

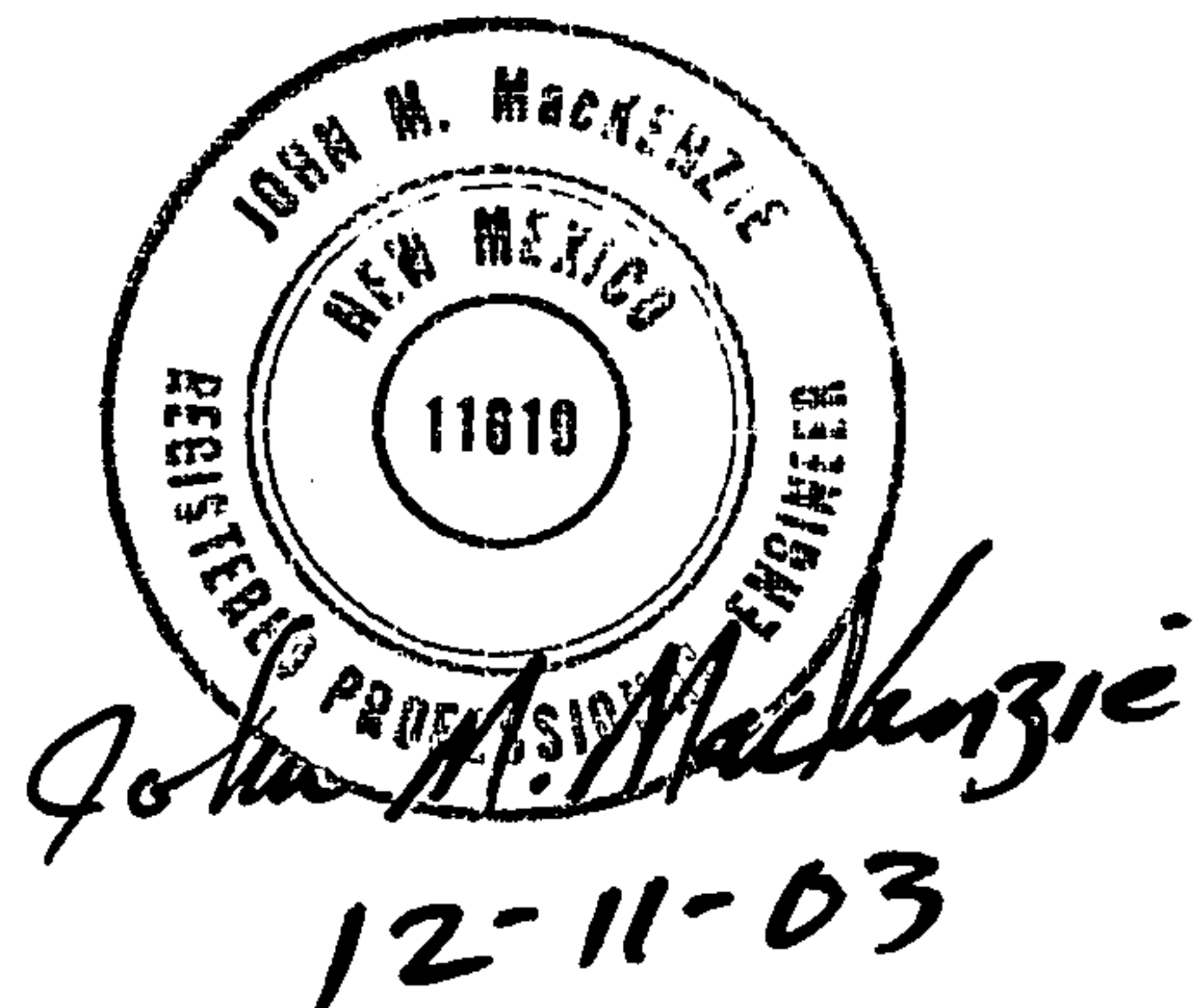
*Clifford Capitol Fund
P.O. Box 35640
2403 San Mateo NE, Suite W-24
Albuquerque, NM 87176*

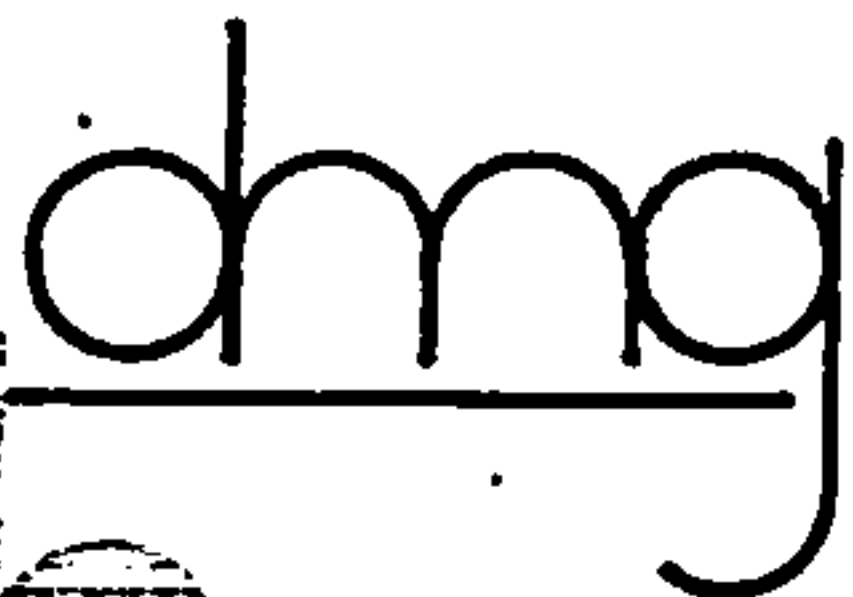
Prepared by:

*John M. MacKenzie, PE
Mark Goodwin & Associates, PA
PO Box 90606
Albuquerque, NM 87199*



December 11, 2003





D. MARK GOODWIN & ASSOCIATES, P.A.
CONSULTING ENGINEERS & SURVEYORS

PROJECT Lava Trails Tr. A-1
SUBJECT Drainage
BY gmm DATE 11/10/03
CHECKED _____ DATE _____
SHEET _____ OF _____

PONDING STORAGE CALCULATION

Tract A-1 is 0.98 acres in size with 15% Type B and 85% Type D. A Ten day storm is to be used to size the temporary pond. $P_{360} = 2.65$ in

$$P_{10 \text{ days}} = 10.0 - (24.9 / (P_{360})^{1.4})$$

$$P_{10 \text{ days}} = 10.0 - (24.9 / (2.65)^{1.4}) = 3.64 \text{ in}$$

$$V_{10 \text{ day}} = V_{360} + A_D (P_{10 \text{ day}} - P_{360}) 12 \text{ in/ft}$$

$$V_{10 \text{ day}} = 0.1438 + 0.833 (3.64 - 2.65) 12 \text{ in/ft}$$

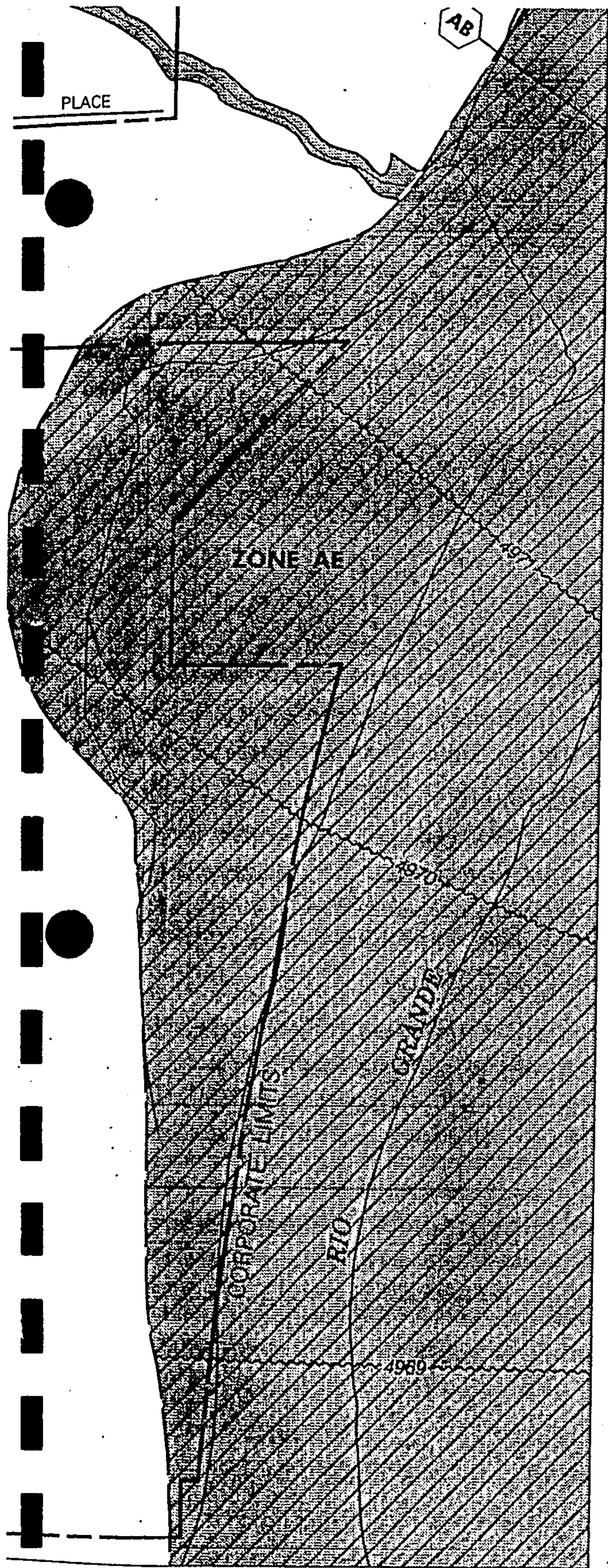
$$V_{10 \text{ day}} = 0.2125 \text{ AF or } 9,257 \text{ CF}$$

ELEV.	AREA (SF)	AVG. AREA (SF)	DEPTH (FT.)	VOLUME (CF)
10.00	4,032			
6.50	1,369	2,700	3.3	9,452

$$9,452 \text{ CF} > 9,257 \text{ CF} \Rightarrow \text{OK}$$

$$(0.217 \text{ AF vs.}$$

$$0.2125 \text{ AF})$$



35°07'30"
106°41'15"

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE DATE shown on this map to determine when actuarial rates apply to structures in zones where elevations or depths have been established.

To determine if flood insurance is available, contact an insurance agent or call the National Flood Insurance Program at (800) 638-6620.



APPROXIMATE SCALE IN FEET



NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

BERNALILLO COUNTY, NEW MEXICO AND INCORPORATED AREAS

PANEL 114 OF 825

(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS: COMMUNITY

ALBUQUERQUE, CITY OF
BERNALILLO COUNTY,
UNINCORPORATED AREAS

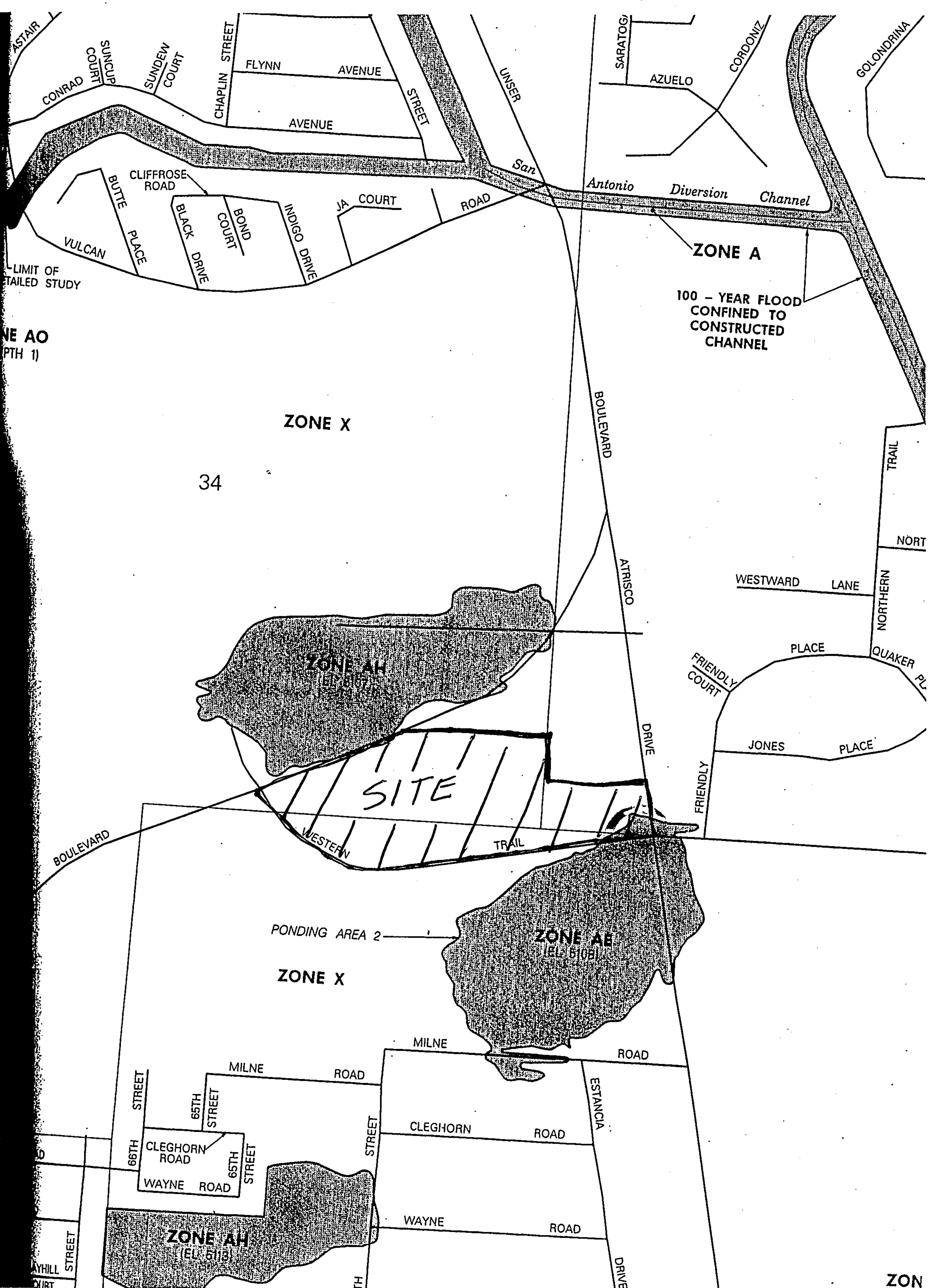
NUMBER	PANEL	SUFFIX
350002	0114	D
350001	0114	D

MAP NUMBER
35001C0114 D

EFFECTIVE DATE:
SEPTEMBER 20, 1996



Federal Emergency Management Agency



NE AO
PTH 1)

ZONE X

34

ZONE A

100 - YEAR FLOOD
CONFINED TO
CONSTRUCTED
CHANNEL

ZONE X

SITE

ZONE AH
(EL. 5107)

ZONE AE
(EL. 5108)

ZONE AH
(EL. 5113)

ZON

TH

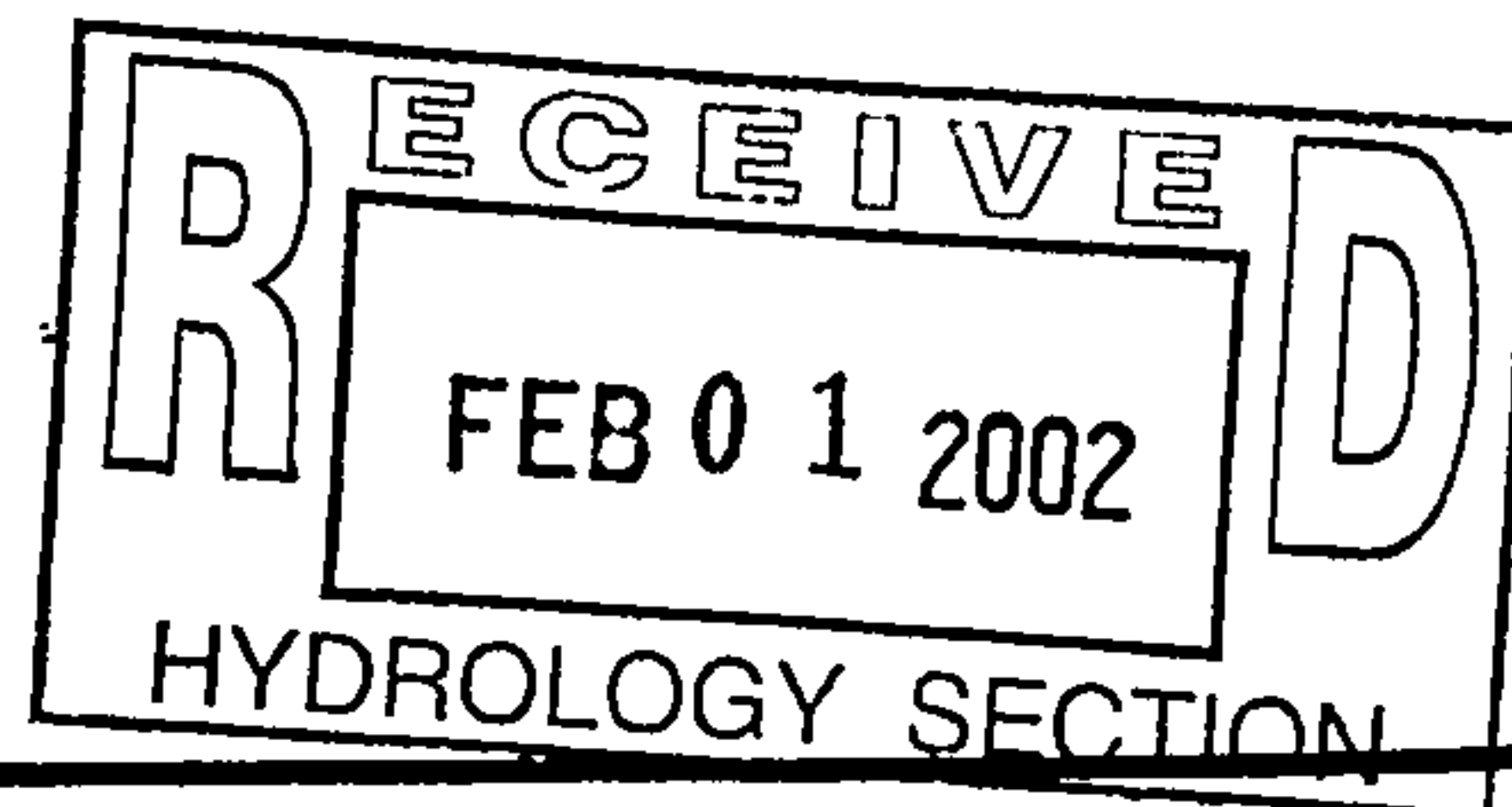
4-6-88

Purpose: Size culvert under Unser
@ 149+57.50 (Lagarto Rd)

Ref :

1. "Conc Pipe design manual"
by ACPA 1985

2. "Handbook of Hydraulics"
by King & Brater; 6th 1976



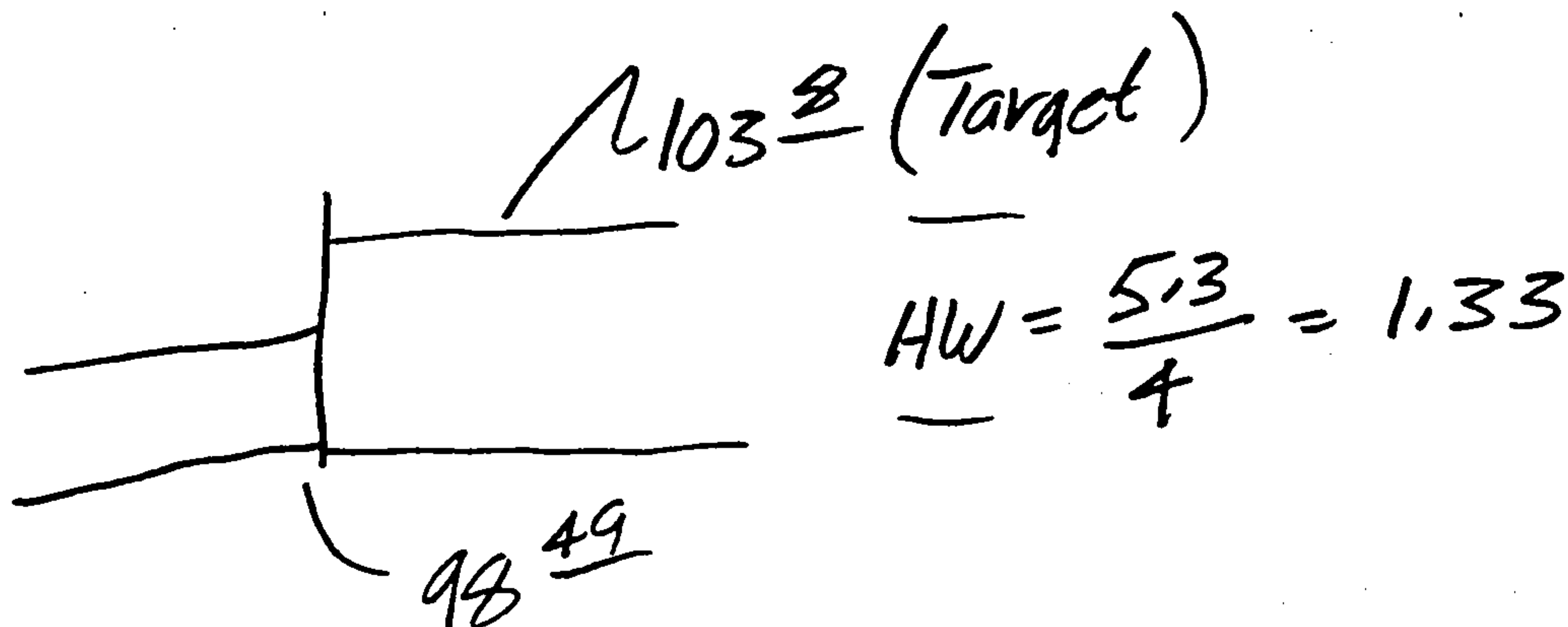
☐ DENVER, COLORADO
☐ COLORADO SPRINGS, COLORADO
☐ ALBUQUERQUE, NEW MEXICO
☐ KEMMERER, WYOMING

PROJECT _____
 JOB NUMBER _____ SHEET 2 OF 3
 CALCULATED BY _____ DATE _____
 CHECKED BY _____ DATE _____

CALL for clearance max size
is 38x60 which is

48" rnd equiv
Design
Flow = 90 cfs

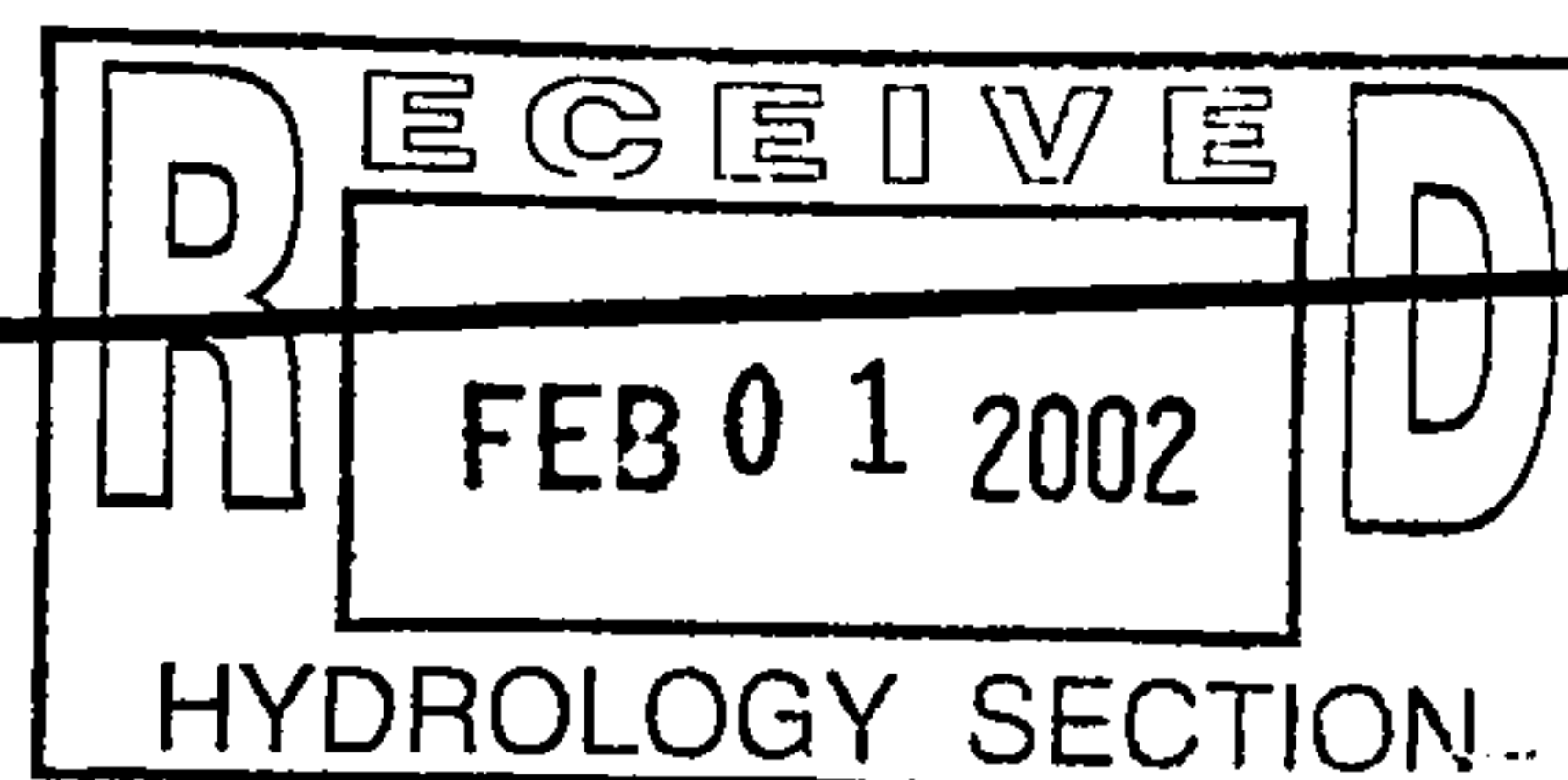
Inlet Control



$Q = 95 \text{ cfs}$
 $Q_{\text{actual}} \Rightarrow \text{OK}$ (ref 1 pg 231)

check pressure flow on 48" equiv

$$H_L = 4.66 (u)^2 \frac{(L)(Q)^2}{(d)^{16/3}} \quad (\text{ref 2 pg 6-15})$$



Greiner Engineering

- ☐ DENVER, COLORADO
- ☐ COLORADO SPRINGS, COLORADO
- ☐ ALBUQUERQUE, NEW MEXICO
- ☐ KEMMERER, WYOMING

PROJECT _____
JOB NUMBER _____ SHEET 3 OF 3
CALCULATED BY _____ DATE _____
CHECKED BY _____ DATE _____

$$H_L = 4.66 (0.013)^2 \frac{(1)(90)^2}{(4)^{16/3}} = 0.004 \text{ ft/ft}$$

From original design

$$\begin{aligned} \text{HGL @ MH Sta } 5+75 \\ = 103.26 \end{aligned}$$

$$103.26 + (148)(0.004) = 103.85$$

which matches that
shown on original dwg

⇒ OK

USE
38x60 elliptical

