



# Federal Emergency Management Agency

Washington, D.C. 20472

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OFFICE

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

The Honorable Martin Chavez  
Mayor, City of Albuquerque  
P.O. Box 1293  
Albuquerque, New Mexico 87103

IN REPLY REFER TO:

Case No.: 94-06-036P

Community: City of Albuquerque,  
New Mexico

Map Panel No.: 350002 0016 C

Effective Date of

This Revision: **JAN 28 1994**

102-D

Dear Mayor Chavez:

This is in response to a request for a revision to the effective Flood Insurance Study and National Flood Insurance Program (NFIP) map for your community. Specifically, this responds to a letter dated October 29, 1993, from Mr. Gilbert Aldaz, P.E., L.S., City/County Floodplain Administrator, City of Albuquerque, regarding the effective Flood Insurance Rate Map (FIRM) for the the City of Albuquerque, New Mexico.

In his letter, Mr. Aldaz requested that we revise the effective FIRM to show the effects of the construction of the following four culverts along Vineyard Arroyo (in series starting from upstream and proceeding downstream): 72" and 84" diameter reinforced concrete culverts and 10' X 7' and 12' X 8' concrete box culverts. The recently constructed culverts are connected to existing 24", 42", and 48" diameter reinforced concrete culverts. All of the data required to complete our review of this request were submitted with Mr. Aldaz's letter. A Conditional Letter of Map Revision was issued for this project on July 1, 1993.

All fees necessary to process this Letter of Map Revision (LOMR), a total of \$970, have been received.

We have completed our review of the submitted data and the flood data shown on the effective FIRM, and have revised the FIRM to modify the floodplain boundary delineations and zone designations of a flood having a 1-percent probability of being equaled or exceeded in any given year (base flood) along Vineyard Arroyo, from the entrance road of Albuquerque Six Drive-In Movie Theater to Jefferson Street, NE. The 100-year discharge will be contained in the recently constructed 72" and 84" diameter reinforced concrete culverts and 10' X 7' and 12' X 8' concrete box culverts and the existing 24", 42", and 48" diameter reinforced concrete culverts. The Special Flood Hazard Area is decreasing along the entire revision area.

The modifications are shown on the enclosed annotated copy of FIRM Panel 0016 C for the City of Albuquerque, New Mexico. This LOMR hereby revises this panel of the effective FIRM dated October 14, 1983.

Because this revision does not involve any floodway changes, we are not enclosing an annotated Flood Boundary and Floodway Map (FBFM); unless a subsequent physical map revision involves floodway changes for FBFM Panel 0016, we will not revise it to show the changes made by this LOMR.

The revisions are effective as of the date of this letter; however, a review of the determination made by this LOMR and any requests to alter this determination should be made within 30 days. Any request to alter the determination must be based on scientific or technical data.

We are now incorporating the modifications described in this LOMR into FIRM panels for Bernalillo County and Incorporated Areas as a physical map revision.

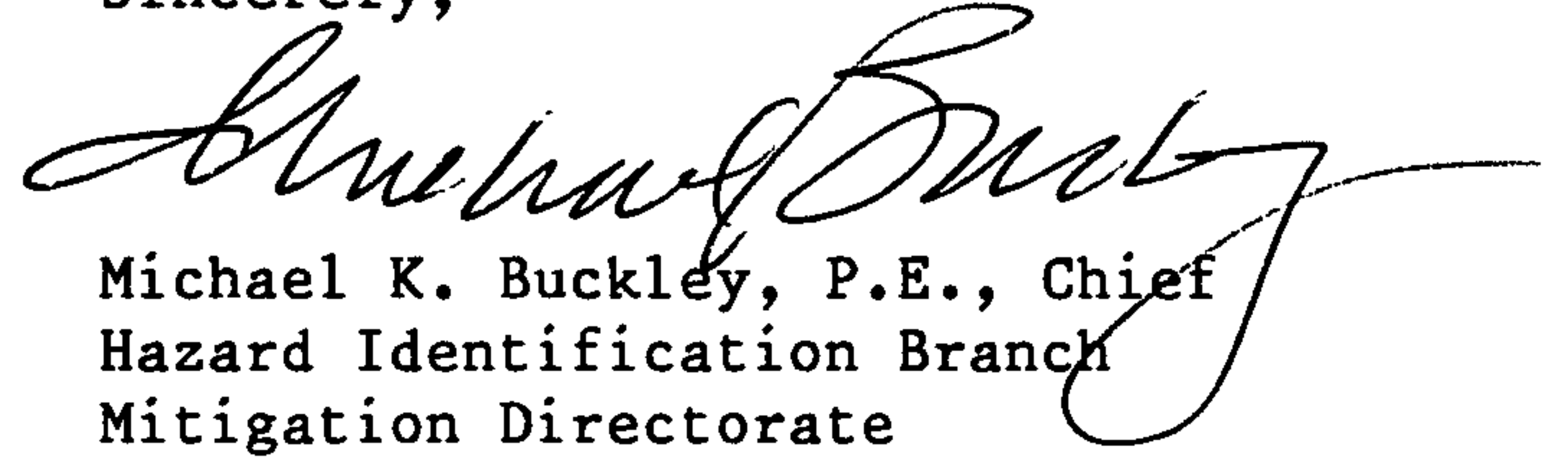
The basis of this LOMR is a channel-modification project. NFIP regulations, as cited in Paragraph 60.3(b)(7), require that communities assure that the flood-carrying capacity within the altered or relocated portion of any watercourse is maintained. This provision is incorporated into your community's existing floodplain management regulations. Consequently, the ultimate responsibility for maintenance of the channel modification rests with your community.

Because this LOMR will not be printed and distributed to primary users, such as local insurance agents and mortgage lenders, your community will serve as a repository for the new data. We encourage you to disseminate the information reflected by this LOMR widely throughout the community, so that interested persons, such as property owners, insurance agents, and mortgage lenders, may benefit from the information. We also encourage you to give consideration to preparing an article for publication in your community's local newspaper. This article should describe the changes that have been made and the assistance your community will give in providing the data and interpreting the NFIP maps.

This determination has been made pursuant to Section 206 of the Flood Disaster Protection Act of 1973 (P.L. 93-234) and is in accordance with the National Flood Insurance Act of 1968, as amended (Title XIII of the Housing and Urban Development Act of 1968, P.L. 90-448), 42 U.S.C. 4001-4128, and 44 CFR Part 65. Pursuant to Section 1361 of the National Flood Insurance Act of 1968, as amended, communities participating in the NFIP are required to adopt and enforce floodplain management regulations that meet or exceed NFIP criteria. These criteria are the minimum requirements and do not supersede any State or local requirements of a more stringent nature. This includes adoption of the effective FIRM to which the regulations apply and the modifications made by this LOMR.

Should you have any questions regarding this matter, please contact the Chief, Natural and Technological Hazards Division of FEMA in Denton, Texas, at (817) 898-5127, or Mr. John Magnotti of our staff in Washington, DC, at (202) 646-3932, or by facsimile at (202) 646-3445.

Sincerely,



Michael K. Buckley, P.E., Chief  
Hazard Identification Branch  
Mitigation Directorate

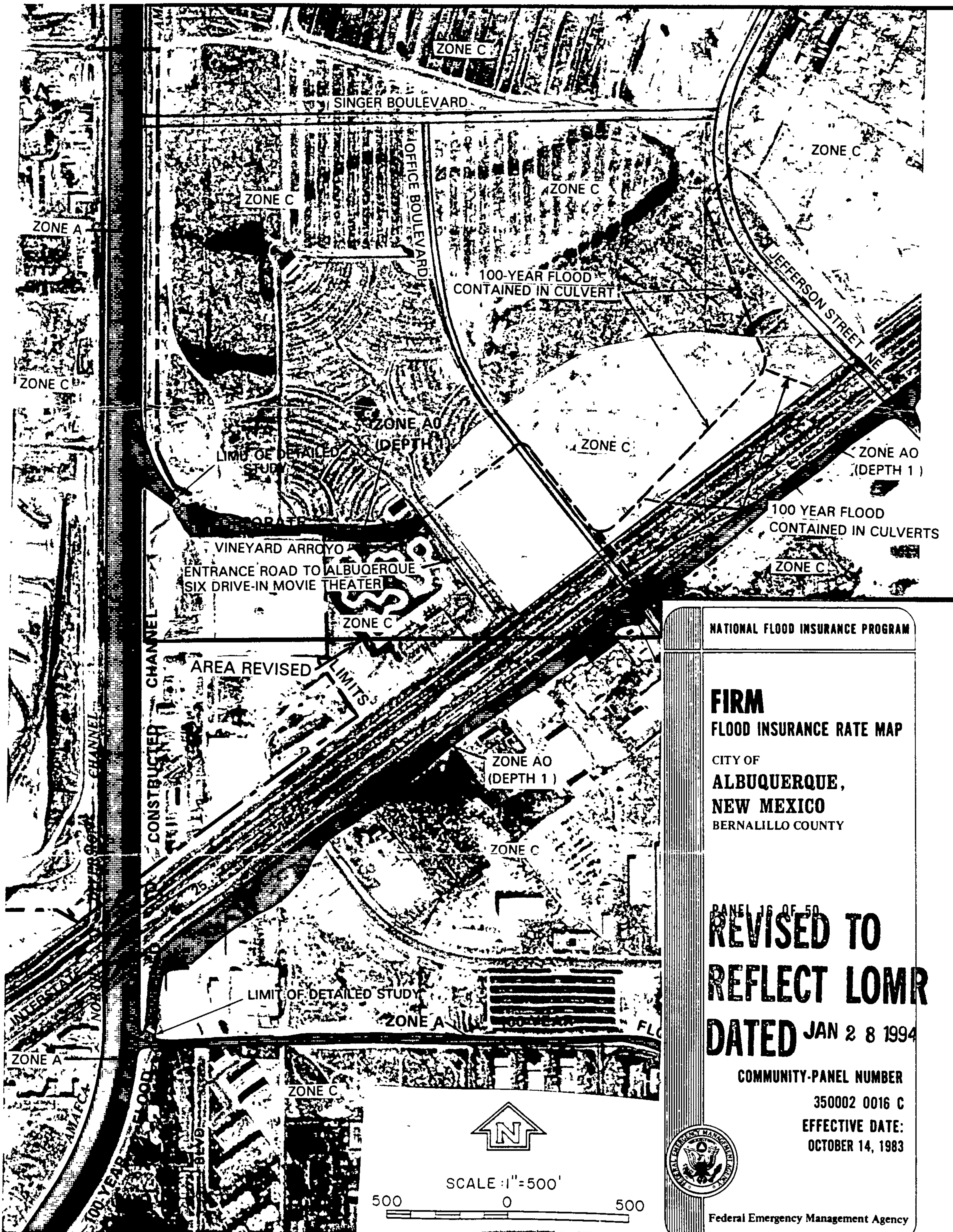
Enclosure

cc: Mr. Gilbert Aldaz, P.E., L.S.  
City/County Floodplain Administrator  
City of Albuquerque

Mr. Mark S. Holstad, P.E.  
Project Manager  
Greiner Engineering

Mr. Larry A. Blair, P.E.  
Executive Engineer  
AMAFCA





NATIONAL FLOOD INSURANCE PROGRAM

**FIRM**  
FLOOD INSURANCE RATE MAP

CITY OF  
**ALBUQUERQUE,**  
**NEW MEXICO**  
BERNALILLO COUNTY

PANEL 16 OF 50  
**REVISED TO**  
**REFLECT LOMR**  
**DATED** JAN 28 1994

COMMUNITY-PANEL NUMBER

350002 0016 C

EFFECTIVE DATE:

OCTOBER 14, 1983



Federal Emergency Management Agency





# Federal Emergency Management Agency

Washington, D.C. 20472

JUL 1 1993

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

IN REPLY REFER TO:  
Case No.: 93-06-199R

The Honorable Louis Saavedra  
Mayor, City of Albuquerque  
P.O. Box 1293  
Albuquerque, New Mexico 87103

Community: City of Albuquerque,  
New Mexico  
Community No.: 350002

104

Dear Mayor Saavedra:

This is in response to a letter dated February 26, 1993, from Mr. Gilbert Aldaz, P.E., L.S., City/County Floodplain Administrator, City of Albuquerque, to the Federal Emergency Management Agency (FEMA) regarding the Flood Insurance Study (FIS) and Flood Insurance Rate Map (FIRM) for the City of Albuquerque. Mr. Aldaz requested that FEMA evaluate the effects that the proposed construction of 72" and 84" diameter reinforced concrete pipes and 10' x 7' and 12' x 8' concrete box culverts along Vineyard Channel would have on the effective FIS and FIRM.

All data required by FEMA to evaluate this request were submitted by Mr. Aldaz with his letter dated February 26, 1993. This submittal included a sedimentation analysis entitled "Sediment Issues Related to Vineyard Channel Improvements West of I-25," performed by Mr. Richard J. Heggen, Water Resources Engineering, Inc. In addition, Mr. Mark Holstad, P.E., Project Manager, Greiner Engineering, submitted data with his letters dated May 5 and May 10, 1993. All fees necessary to process this ~~Conditional Letter of Map~~ ~~Revision~~ (CLOMR) (a total of \$1,435) have been received.

We have reviewed the data submitted with respect to the data used to prepare the effective FIRM for the City of Albuquerque. We believe that if the proposed project is constructed as described in the report entitled "Vineyard Channel West of I-25, Albuquerque, New Mexico," prepared by Greiner Engineering, dated February 1993, and as shown on the plan sheets entitled "Vineyard Channel West of I-25," prepared by Greiner Engineering, dated December 1992, then the 100-year floodplain will be delineated as shown on the topographic work map entitled "AMAFCA, Vineyard Channel West of I-25 Topographic Work Map, Exhibit 1," prepared by Greiner Engineering, dated September 1992.

Upon completion of the project and receipt of the data listed below, we will make a final determination on revising the FIS report and FIRM.

- Certification that all fill placed in the currently effective 100-year floodplain and below the proposed base flood elevation is compacted to 95 percent of the maximum density obtainable with the Standard Proctor Test method issued by the American Society for Testing and Materials (ASTM Standard D-698) for all areas to be removed from the 100-year floodplain

121000

- As-built plans, certified by a registered professional engineer, of all proposed project elements
- The appropriate initial fee (currently \$200) as required by Section 72.3 of the National Flood Insurance Program (NFIP) regulations

The basis of this CLOMR is a proposed channel-modification project. Paragraph 60.3(b)(7) of the NFIP regulations requires that communities "assure that the flood-carrying capacity within the altered or relocated portion of any watercourse is maintained." This provision is incorporated into your community's existing floodplain management regulations. Consequently, your community must agree to accept responsibility for the maintenance of the modified channel before allowing its construction.

This response to Mr. Aldaz's request is based on minimum floodplain management criteria established under the NFIP. Your community is responsible for approving all proposed floodplain development, including this request, and for assuring that the necessary permits required by Federal or State law have been received. State and community officials, based on knowledge of local conditions and in the interest of human safety, may set higher standards for construction or may limit development in floodplain areas. If the State of New Mexico or the City of Albuquerque has adopted more restrictive or comprehensive floodplain management criteria, those criteria take precedence over the minimum NFIP requirements.

Should you have any questions regarding this matter, please contact the Chief, Natural and Technological Hazards Division of FEMA in Denton, Texas, at (817) 898-5127, or Mr. John Magnotti of my staff in Washington, DC, at (202) 646-3932, or by facsimile at (202) 646-3445.

Sincerely,



William R. Locke  
Chief, Risk Studies Division  
Federal Insurance Administration

cc: Mr. Larry Blair, P.E.  
Executive Engineer  
AMAFCA

Mr. Mark S. Holstad  
Project Manager  
Greiner Engineering

Mr. Gilbert Aldaz, P.E., L.S.  
City/County Floodplain  
Administrator  
City of Albuquerque



# Federal Emergency Management Agency

Washington, D.C. 20472

JUN 04 1993

Mr. Gilbert Aldaz, P.E., L.S.  
City/County Floodplain Administrator  
City of Albuquerque  
P.O. Box 1293  
Albuquerque, New Mexico 87103

IN REPLY REFER TO:  
Case No.: 93-06-199R  
Community: City of Albuquerque,  
New Mexico  
Community No.: 350002

316-I

Dear Mr. Aldaz:

The Federal Emergency Management Agency has completed its review of your request for a conditional Letter of Map Revision (CLOMR) for Vineyard Arroyo in the above-referenced community. Prior to commencement of our review, we received the required initial fees of \$735.

Review and processing costs associated with this request total \$1,435. Please forward payment of \$700, representing the additional costs, to:

Federal Emergency Management Agency  
Revisions Fee-Collection System Administrator  
P.O. Box 3173  
Merrifield, Virginia 22116

Please note that the initial fees of \$735 will only be applied to this request if we receive the required fees within 90 days of the date of this letter. After 90 days, the request will be treated as an original submittal and the total review and processing fees of \$1,435 will be required before the requested CLOMR will be issued.

Payment must be in the form of a check or money order made payable to the National Flood Insurance Program. For identification purposes, the case number referenced above must be included on your check or money order. Please note that we will not issue our determination until this payment is received.

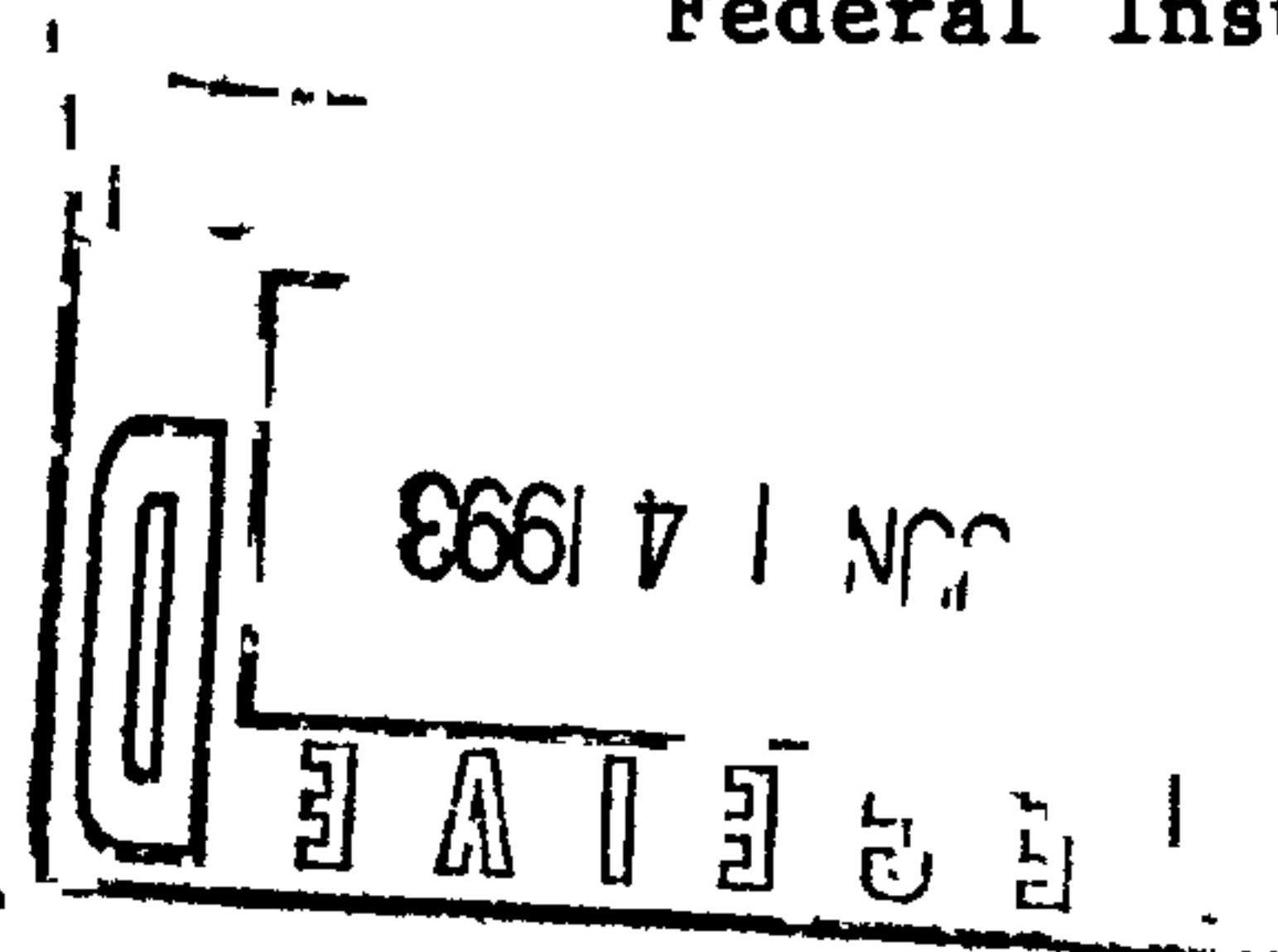
If you have any questions regarding this matter, please contact Mr. John Magnotti of my staff in Washington, DC, at (202) 646-3932, or by facsimile at (202) 646-3445.

Sincerely,

William R. Locke  
Chief, Risk Studies Division  
Federal Insurance Administration

cc: Mr. Mark Holstad, P.E.  
Project Manager  
Greiner Engineering

Mr. Larry Blair, P.E.  
Executive Engineer  
AMAFCA







FEMA USE ONLY

FORM 1

REVISION REQUESTOR AND COMMUNITY OFFICIAL FORM

1. The basis for this revision request is (are): (check all that apply)

☒ Physical change

☒ Existing

Project Completed August 3, 1993

☐ Proposed

☐ Improved methodology

☐ Improved data

☐ Floodway revision

☐ Other

Explain

2. Flooding Source: Vineyard Arroyo, (not labelled on FIRM)

3. Project Name/Identifier: Vineyard Channel West of I-25

4. FEMA zone designations affected: AO

(example: A, AH, AO, A1-A30, A99, AE, V, V1-V30, VE, B, C, D, X)

5. The NFIP map panel(s) affected for all impacted communities is (are):

Community No.	Community Name	County	State	Map No.	Panel No.	Effective Date
EX: 480301	Katy, City	Harris, Fort Bend	TX	480301	0005D	02/08/83
480287	Harris County	Harris	TX	48201C	0220G	09/28/90
350002	Albuquerque	Bernalillo	N.M.	350002	0016	10/14/83

6. The submitted request encompasses the following types of flooding, structures, and associated disciplines: (check all that apply)

Types of Flooding

☐ Riverine

☐ Coastal

☐ Alluvial Fan

☒ Shallow Flooding

☐ Lakes

Affected by

wind/wave action

☐ Yes

☐ No

☐ Other (describe)

Structures

☒ Channelization

☐ Levee/Floodwall

☐ Bridge/Culvert

☐ Dam

☐ Coastal

☐ Fill

☐ Pump Station

☐ None

☐ Other (describe)

Disciplines\*

☒ Water Resources

☒ Hydrology

☒ Hydraulics

☒ Sediment Transport

☐ Interior Drainage

☐ Structural

☐ Geotechnical

☒ Land Surveying

☐ Other (describe)

\* Attach completed "Certification by Registered Professional and/or Land Surveyor" Form for each discipline checked. (Form 2)



## REVISION REQUESTOR AND COMMUNITY OFFICIAL FORM

### Floodway Information

- Does the affected flooding source have a floodway designated on the effective FIRM or FBFM?  
☐ Yes ☒ No
- Does the revised floodway delineation differ from that shown on the effective FIRM or FBFM?  
☐ Yes ☐ No

If yes, give reason: \_\_\_\_\_

Attach request to revise the floodway from community CEO or designated official.

Attach copy of either a public notice distributed by the community stating the community's intent to revise the floodway or a statement by the community that it has notified all affected property owners and affected adjacent jurisdictions.

Does the State have jurisdiction over the floodway or its adoption by communities participating in the NFIP? ☐ Yes ☐ No

If yes, attach a copy of a letter notifying the appropriate State agency of the floodway revision and documentation of the approval of the revised floodway by the appropriate State agency.

### Proposed Encroachments

With floodways:

- 1A. Does the revision request involve fill, new construction, substantial improvement, or other development in the floodway? ☐ Yes ☒ No
- 1B. If yes, does the development cause the 100-year water surface elevation increase at any location by more than 0.000 feet? ☐ Yes ☐ No

Without floodways:

- 2A. Does the revision request involve fill, new construction, substantial improvement, or other development in the 100-year floodplain? ☒ Yes ☐ No
- 2B. If yes, does the cumulative effect of all development that has occurred since the effective SFHA was originally identified cause the 100-year water surface elevation increase at any location by more than one foot (or other surcharge limit if community or state has adopted more stringent criteria)? ☐ Yes ☒ No

If answer to either Items 1B or 2B is yes, please provide documentation that all requirements of Section 65.12 of the NFIP regulations have been met.

### Revision Requestor Acknowledgement

- Having read NFIP Regulations, 44 CFR Ch. I, parts 59, 60, 61, 65, and 72, I believe that the proposed revision ☒ is ☐ is not in compliance with the requirements of the aforementioned NFIP Regulations.

### Community Official Acknowledgement

- Was this revision request reviewed by the community for compliance with the community's adopted floodplain management ordinances? ☒ Yes ☐ No
- Does this revision request have the endorsement of the community? ☒ Yes ☐ No

If no to either of the above questions, please explain: \_\_\_\_\_

Please note that community acknowledgement and/or notification is required for all requests as outlined in Section 65.4 (b) of the NFIP Regulations.

# REVISION REQUESTOR AND COMMUNITY OFFICIAL FORM

## Operation and Maintenance

- Does the physical change involve a flood control structure (e.g., levees, floodwalls, channelization, basins, dams)? ☒ Yes ☐ No

If yes, please provide the following information for each of the new flood control structures:

- Inspection of the flood control project will be conducted periodically by AMAFCA, City of Albuquerque/ NMSHTD (entity) with a maximum interval of 12 months between inspections.
- Based on the results of scheduled periodic inspections, appropriate maintenance of the flood control facilities will be conducted by AMAFCA, City of Albuquerque, or NMSHTD. See CLOMR submittal as ~~approved~~ to ensure the integrity and degree of flood protection of the structure.
- A formal plan of operation, including documentation of the flood warning system, specific actions and assignments of responsibility by individual name or title, and provisions for testing the plan at intervals not less than one year, ☒ has ☐ has not been prepared for the flood control structure. See CLOMR submittal as approved
- The community is willing to assume responsibility for ☒ performing ☒ overseeing compliance with the maintenance and operation plans of the (Name) flood control structure. If not performed promptly by an owner other than the community, the community will provide the necessary services without cost to the Federal government.

Attach operation and maintenance plans See approved CLOMR submittal

## Requested Response from FEMA

- After examining the pertinent NFIP regulations and reviewing the document entitled "Appeals, Revisions, and Amendments to Flood Insurance Maps: A Guide for Community Officials," dated January 1990, this request is for a:

- CLOMR A letter from FEMA commenting on whether a proposed project, if built as proposed, would justify a map revision (LOMR or PMR), or proposed hydrology changes (see 44 CFR Ch. I, Parts 60, 65, and 72).
- ☒ LOMR A letter from FEMA officially revising the current NFIP map to show changes to floodplains, floodways, or flood elevations. LOMRs typically depict decreased flood hazards. (See 44 CFR Ch. I, Parts 60 and 65.)
- PMR A reprinted NFIP map incorporating changes to floodplains, floodways, or flood elevations. Because of the time and cost involved to change, reprint, and redistribute an NFIP map, a PMR is usually processed when a revision reflects increased flood hazards or large-scope changes. (See 44 CFR Ch. I, Parts 60 and 65.)
- Other: Describe \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



## REVISION REQUESTOR AND COMMUNITY OFFICIAL FORM

### Forms Included

Form 2 entitled "Certification By Registered Professional Engineer And/Or Land Surveyor" must be submitted.

The following forms should be included with this request if (check the included forms):

- |  |   |
|--|---|
| • Hydrologic analysis for riverine flooding differs from that used to develop FIRM                             | <input type="checkbox"/> Hydrologic Analysis Form (Form 3)        |
| • Hydraulic analysis for riverine flooding differs from that used to develop FIRM                              | <input type="checkbox"/> Riverine Hydraulic Analysis (Form 4)     |
| • The request is based solely on updated topographic information   | <input type="checkbox"/> Riverine/Coastal Mapping (Form 5)        |
| • The request involves any type of channel modification  | <input type="checkbox"/> Channelization (Form 6)                  |
| • The request involves new bridge or culvert or revised analysis of an existing bridge or culvert              | <input type="checkbox"/> Bridge/Culvert Form (Form 7)             |
| • The request involves a new or revised levee/floodwall system   | <input type="checkbox"/> Levee/Floodwall System Analysis (Form 8) |
| • The request involves analysis of coastal flooding  | <input type="checkbox"/> Coastal Analysis Form (Form 9)           |
| • The request involves coastal structures credited as providing protection from the 100-year flood             | <input type="checkbox"/> Coastal Structures Form (Form 10)        |
| • The request involves an existing, proposed, or modified dam  | <input type="checkbox"/> Dam Form (Form 11)                       |
| • This request involves structures credited as providing protection from the 100-year flood on an alluvial fan | <input type="checkbox"/> Alluvial Fan Flooding Form (Form 12)     |

### Initial Review Fee

- The minimum initial review fee for the appropriate request category has been included.

☒ Yes ☐ No

If yes, the amount submitted is \$ 200.00


or

- This request is for a project that is for public benefit and is intended to reduce the flood hazard to existing development in identified flood hazard areas as opposed to planned floodplain development.

☐ Yes ☐ No

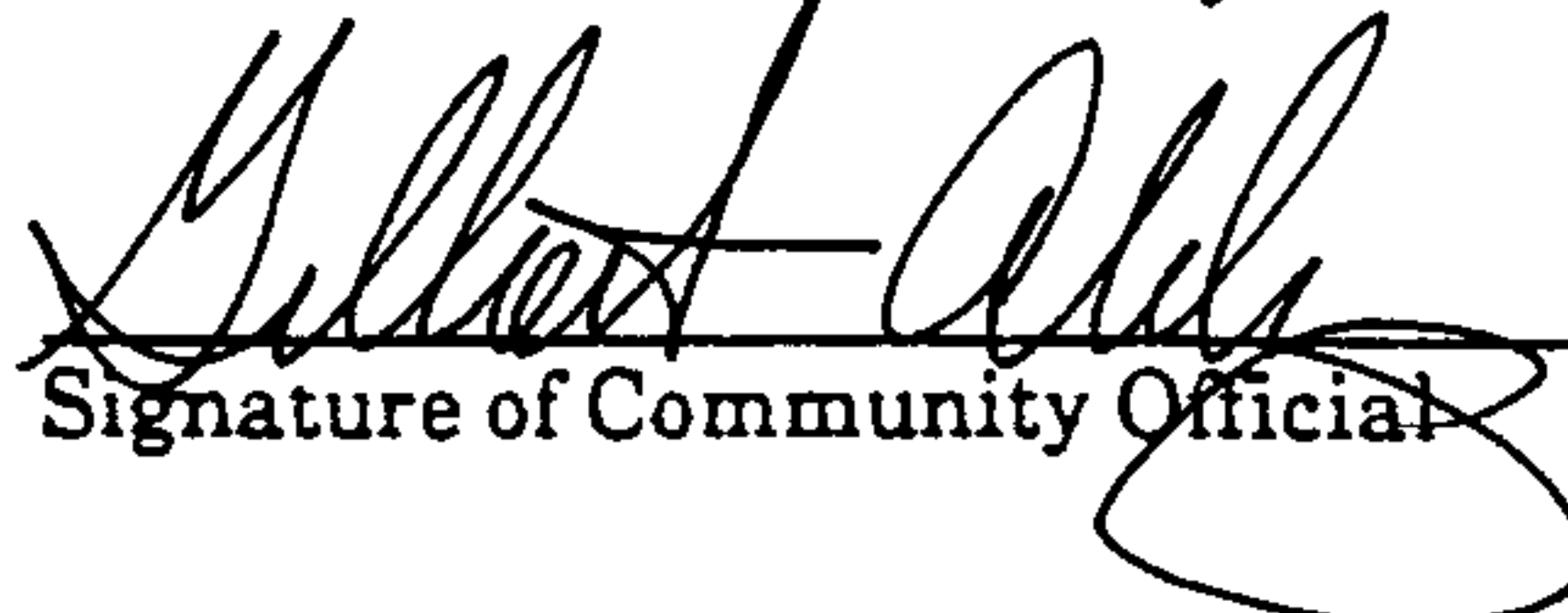
REVISION REQUESTOR AND COMMUNITY OFFICIAL FORM

Note: I understand that my signature indicates that all information submitted in support of this request is correct.

  
\_\_\_\_\_  
Signature of Revision Requestor

Larry A. Blair, Executive Engr.  
Printed Name and Title of Revision Requestor

Note: Signature indicates that the community understands, from the revision requestor, the impacts of the revision on flooding conditions in the community.

  
\_\_\_\_\_  
Signature of Community Official

Gilbert Aldaz, Flood Plain Administrator  
Printed Name and Title of Community Official

Albuquerque Metropolitan Arroyo  
Company Name Flood Control Authority

City of Albuquerque, Bernalillo County, N.M.  
Community Name

Date 15 October 1993

Date 10-28-93

Attach letters from all affected jurisdictions acknowledging revision request and approving changes to floodway, if applicable.

Note: Although a photograph of physical changes is not required, it may be helpful for FEMA's review.





FEMA USE ONLY

CERTIFICATION BY REGISTERED PROFESSIONAL ENGINEER  
AND/OR LAND SURVEYOR

FORM 2

1. This certification is in accordance with 44 CFR Ch. I, Section 65.2.
2. I am licensed with an expertise in Hydrology, hydraulics  
[example: water resources (hydrology, hydraulics, sediment transport, interior drainage)\*  
structural, geotechnical, land surveying.]
3. I have 9 years experience in the expertise listed above.
4. I have ☒ prepared ☒ reviewed the attached supporting data and analyses related to my expertise.
5. I ☒ have ☐ have not visited and physically viewed the project.
6. In my opinion, the following analyses and/or design, were performed in accordance with sound engineering practices:  
See text
7. Based upon the following review, the modifications in place have been constructed in general accordance with plans and specifications.

Basis for above statement: (check all that apply)

- a. ☒ Viewed all phases of actual construction.
  - b. ☐ Compared plans and specifications with as-built survey information.
  - c. ☐ Examined plans and specifications and compared with completed projects.
  - d. ☐ Other \_\_\_\_\_
8. All information submitted in support of this request is correct to the best of my knowledge. I understand that any false statement may be punishable by fine or imprisonment under Title 18 of the United States Code, Section 1001.

Name: Mark S. Holstad  
(please print or type)

Title: Project Manager  
(please print or type)

Registration No. 7288 Expiration Date: 12-31-93

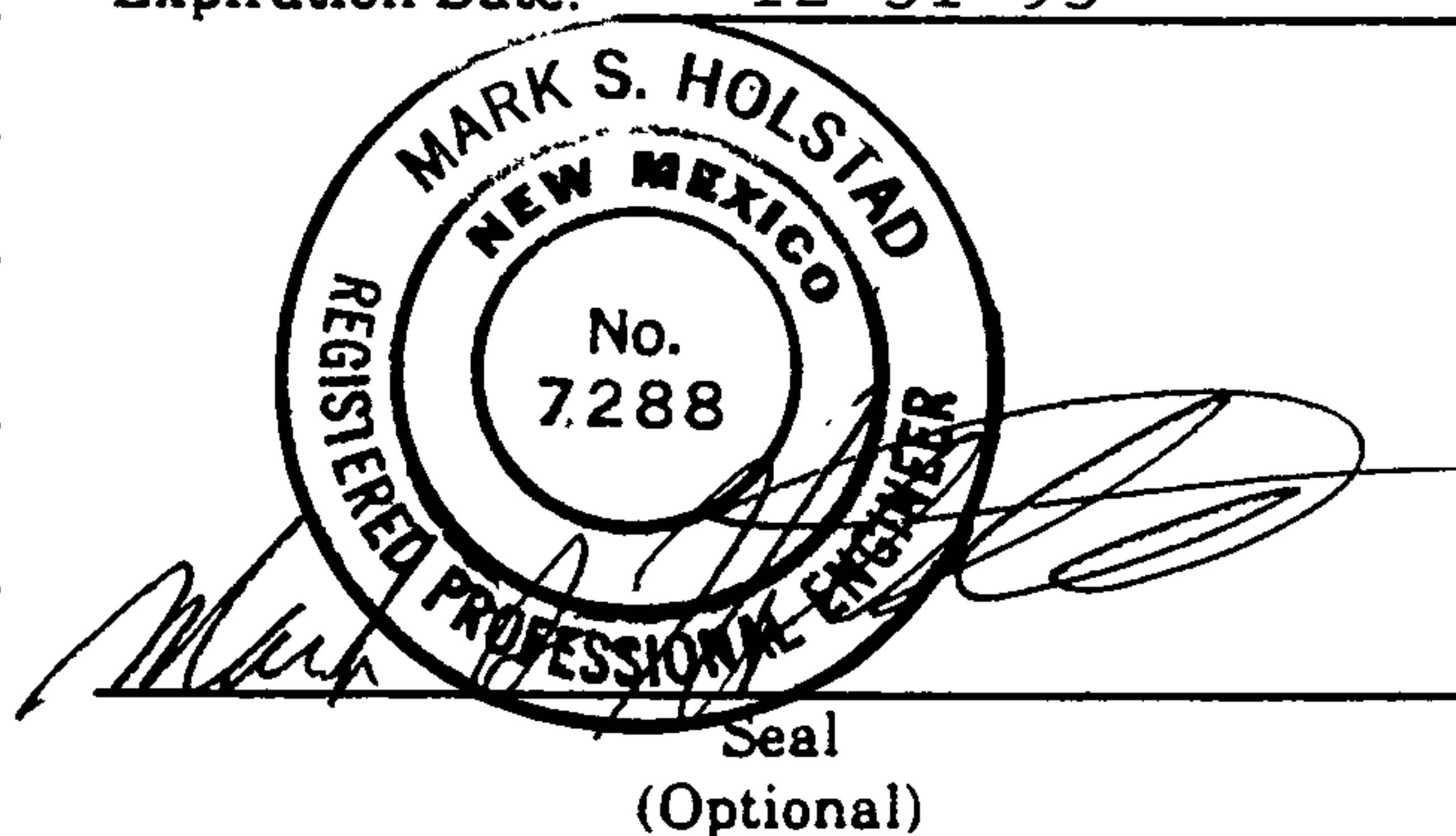
State New Mexico

Type of License Civil

[Signature]  
Signature

10/14/93  
Date

\*Specify Subdiscipline



Seal  
(Optional)

Note: Insert not applicable (N/A) when statement does not apply.

**FORM 2**

PAGE 1 OF 1

6. Sediment impact analysis was prepared by Richard J. Heggen, PE, PH, PhD.

Design surveys were performed under the supervision of Tom H. Wagner, PS.

Hydrology and hydraulic analysis were prepared under the supervision of myself (Mark S. Holstad, PE).

To the best of my knowledge, all the above work was performed in accordance with sound engineering practices.





FEMA USE ONLY

CERTIFICATION BY REGISTERED PROFESSIONAL ENGINEER  
AND/OR LAND SURVEYOR

FORM 2

1. This certification is in accordance with 44 CFR Ch. I, Section 65.2.
2. I am licensed with an expertise in Construction Engineering  
[example: water resources (hydrology, hydraulics, sediment transport, interior drainage)\*  
structural, geotechnical, land surveying.]
3. I have 5 years experience in the expertise listed above.
4. I have ☒ prepared ☒ reviewed the attached supporting data and analyses related to  
my expertise.
5. I ☒ have ☐ have not visited and physically viewed the project.
6. In my opinion, the following analyses and/or design, were performed in accordance with  
sound engineering practices:  
See text
7. Based upon the following review, the modifications in place have been constructed in  
general accordance with plans and specifications.

Basis for above statement: (check all that apply)

- a. ☒ Viewed all phases of actual construction.
  - b. ☒ Compared plans and specifications with as-built survey information.
  - c. ☒ Examined plans and specifications and compared with completed projects.
  - d. ☐ Other \_\_\_\_\_
8. All information submitted in support of this request is correct to the best of my knowledge.  
I understand that any false statement may be punishable by fine or imprisonment under  
Title 18 of the United States Code, Section 1001.

Name: Richard Peña  
(please print or type)

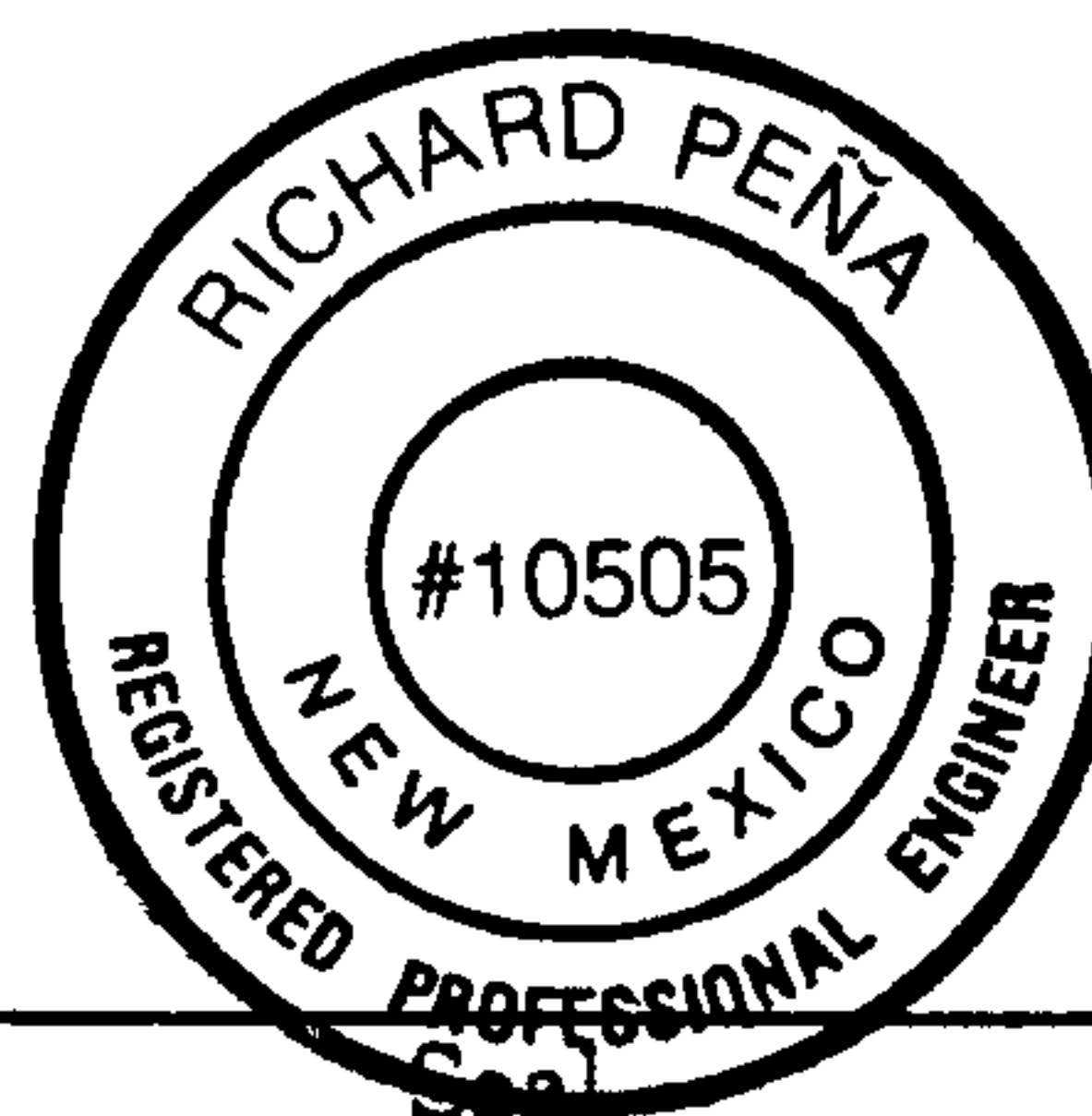
Title: Construction Engineer  
(please print or type)

Registration No. 10505 Expiration Date: 12-31-93

State New Mexico

Type of License Civil

Richard Peña  
Signature  
10-14-93  
Date



\*Specify Subdiscipline

(Optional)

Note: Insert not applicable (N/A) when statement does not apply.

Item 6.

Construction of entire project, including all drainage improvements, roadway pavement, landscaping. Drainage improvements include construction of reinforced concrete box culverts, storm inlets, and reinforced concrete pipe.

To the best of my knowledge all the above work was performed with sound construction practices, in accordance with the project's contract documents.





FEMA USE ONLY

CERTIFICATION BY REGISTERED PROFESSIONAL ENGINEER  
AND/OR LAND SURVEYOR

FORM 2

1. This certification is in accordance with 44 CFR Ch. I, Section 65.2.
2. I am licensed with an expertise in Land Surveying  
[example: water resources (hydrology, hydraulics, sediment transport, interior drainage)\*  
structural, geotechnical, land surveying.]
3. I have 36 years experience in the expertise listed above.
4. I have ☒ prepared ☐ reviewed the attached supporting data and analyses related to my expertise.
5. I ☒ have ☐ have not visited and physically viewed the project.
6. In my opinion, the following analyses and/or design, were performed in accordance with sound engineering practices:  
All Design, Right of Way Drawing Surveys & Record
7. Based upon the following review, the modifications in place have been constructed in general accordance with plans and specifications.

Basis for above statement: (check all that apply)

- a. ☐ Viewed all phases of actual construction.
  - b. ☒ Compared plans and specifications with as-built survey information.
  - c. ☐ Examined plans and specifications and compared with completed projects.
  - d. ☐ Other \_\_\_\_\_
8. All information submitted in support of this request is correct to the best of my knowledge. I understand that any false statement may be punishable by fine or imprisonment under Title 18 of the United States Code, Section 1001.

Name: Thomas H. Wagner  
(please print or type)

Title: Survey Manager  
(please print or type)

Registration No. N.M. 3517 Expiration Date: 12-31-93

State New Mexico

Type of License Professional Surveyor

Thomas H. Wagner  
Signature

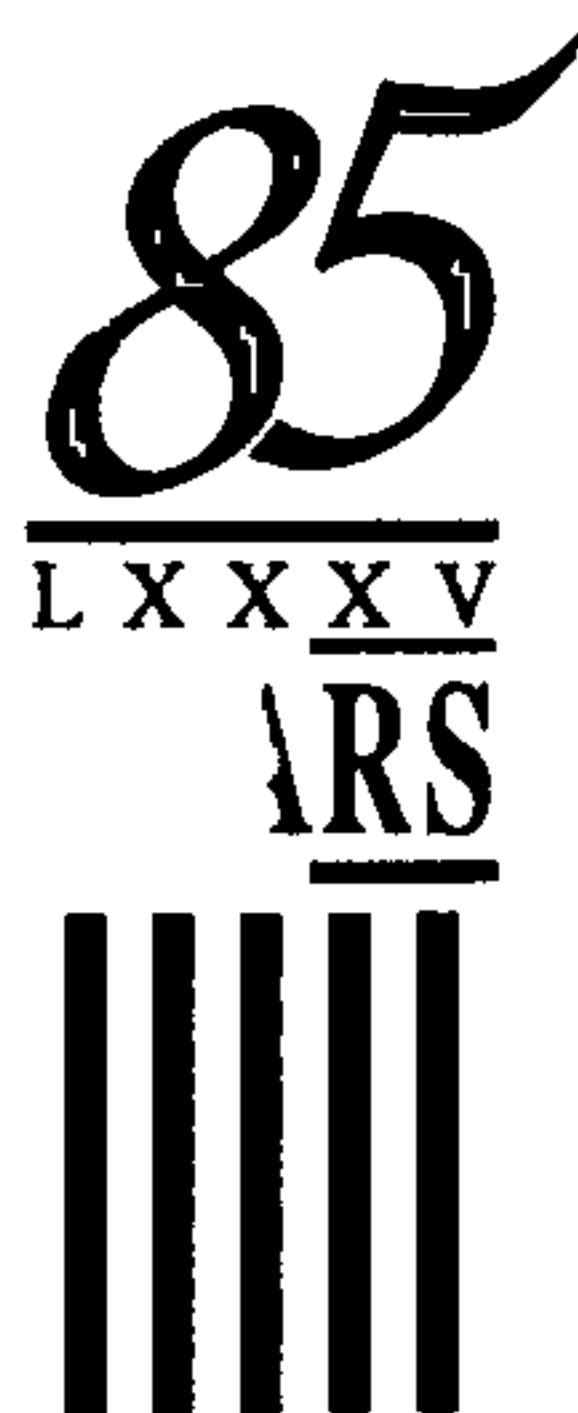
10/14/93  
Date



\*Specify Subdiscipline

(Optional)

Note: Insert not applicable (N/A) when statement does not apply.



**Greiner**


**Greiner, Inc.**  
5971 Jefferson Blvd., . . .  
Suite 101  
Albuquerque, New Mexico 87109  
(505) 345-3999  
FAX: (505) 345-8393

## **CERTIFICATION FOR SOIL COMPACTION**

**Project:** Vineyard Channel, West of I-25  
**Project No.:** City of Albuquerque No. 4100.90  
**FEMA Case No.:** 93-06-199R  
**Community No.:** 350002

Greiner, Inc. certifies that all fill placed throughout the project limits, located within the previously identified 100 year floodplain, is compacted to 95% (ninety-five percent) of the maximum density obtainable with the Modified Proctor Test method issued by the American Society for Testing and Materials (ASTM Standard D-1557) for all areas removed from the previous 100-year floodplain. Please see **Attachment A** as justification for the use of a modified proctor rather than ASTM D-698.

Certified by:

  
Richard Peña, P.E.  
Construction Engineer



10-8-93  
Date:



# Federal Emergency Management Agency

Washington, D.C. 20472

DEC 16 1993

Mr. Larry A. Blair, P.E.  
Executive Engineer  
AMAFCA  
2600 Prospect NE.  
Albuquerque, New Mexico 87107

IN REPLY REFER TO:  
Case No.: 94-06-036P  
Community: City of Albuquerque,  
New Mexico  
Community No.: 350002

316-I

Dear Mr. Blair:

The Federal Emergency Management Agency has completed its review of your request for a Letter of Map Revision (LOMR) to the Flood Insurance Rate Map (FIRM) for the Vineyard Arroyo in the above-referenced community. Prior to commencement of our review, we received the required initial fee of \$225.

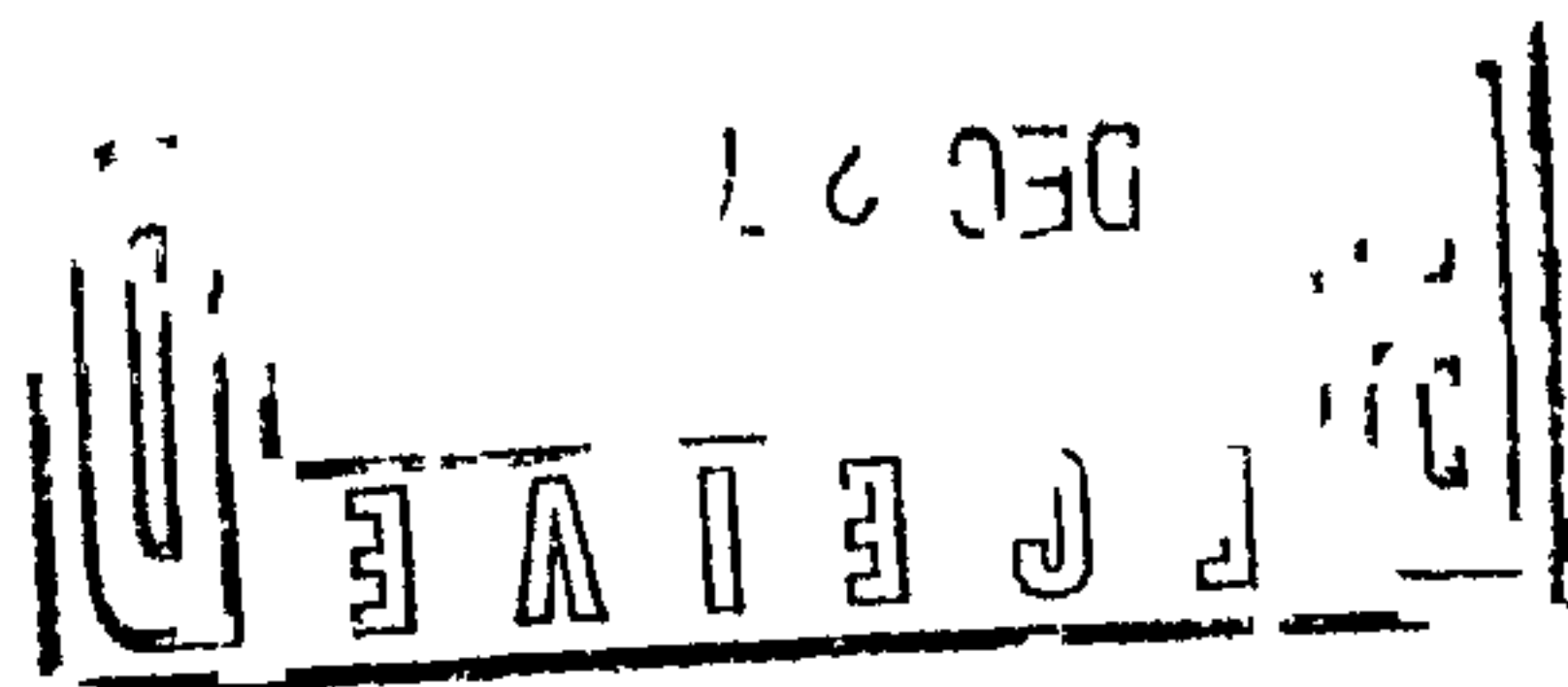
Review and processing costs associated with this request total \$560. In addition, because your request will result in a revision to one FIRM panel, an additional \$410 is added to the review and processing costs, resulting in a total fee of \$970.

Please forward payment of \$745, representing the balance, to:

Federal Emergency Management Agency  
Revisions Fee-Collection System Administrator  
P.O. Box 3173  
Merrifield, Virginia 22116

Please note that the initial fee of \$225 will only be applied to this request if we receive the required fees within 90 days of the date of this letter. After 90 days, the request will be treated as an original submittal and the total fee of \$970 will be required before the requested LOMR will be issued.

Payment must be in the form of a check or money order made payable in U.S. funds to the National Flood Insurance Program, or by credit card payment. For identification purposes, the case number referenced above must be included on your check or money order. Please note that we will not issue our determination until this payment is received.





If you have any questions regarding this matter, please contact Mr. John Magnotti of our staff in Washington, DC, at (202) 646-3932, or by facsimile at (202) 646-3445.

Sincerely,



Michael K. Buckley, P.E., Chief  
Hazard Identification Branch  
Mitigation Directorate

cc: Mr. Gilbert Aldaz, P.E., L.S.  
City/County Floodplain Administrator  
City of Albuquerque

Mr. Mark S. Holstad, P.E.  
Project Manager  
Greiner Engineering



# Federal Emergency Management Agency

Washington, D.C. 20472

November 16, 1993

Mr. Gilbert Aldaz, P.E., L.S.  
City/County Floodplain Administrator  
City of Albuquerque  
P.O. Box 1293  
Albuquerque, New Mexico 87103

IN REPLY REFER TO:  
Case No.: 94-06-036P  
Community: City of Albuquerque,  
New Mexico  
Community No.: 350002

316-ACK

Dear Mr. Aldaz:

This is in response to your request, dated October 29, 1993, for a Conditional Letter of Map Revision (CLOMR) to the Flood Insurance Rate Map (FIRM) and Flood Boundary and Floodway Map (FBFM) for the above-referenced community. Pertinent information about the request is listed below.

Identifier:	Vineyard Channel West of I-25
Flooding Source:	Vineyard Arroyo
FIRM Panel Affected:	0016 C
FBFM Panel Affected:	0016

On October 1, 1992, the Federal Emergency Management Agency (FEMA) implemented the use of forms for requesting revisions or amendments to National Flood Insurance Program (NFIP) maps for two reasons. First, because the forms provide a step-by-step process for requesters to follow and are comprehensive, requesters are assured of providing all of the necessary information to support their requests without having to go through an iterative process of providing additional information in a piecemeal fashion. Experience has shown this to be a time-consuming and cost-intensive process. Second, because use of the forms assures that the requesters' submissions are complete and more logically structured, FEMA can complete its review in a shorter timeframe and at a lesser cost to the requester. While completion of the forms may appear to be burdensome, we believe it is prudent to do so because of the advantages that result for the requester.

Please note that the NFIP is non-taxpayer funded and its expenses are paid for by policyholders. Therefore, to minimize the financial burden on the policyholders while maintaining the NFIP as self-sustaining, FEMA has implemented a procedure to recover costs associated with reviewing and processing requests for final modifications to published flood information and maps. The initial fee of \$225 is the minimum charge associated with our review of a request of this type. You will be notified of the estimated costs if we anticipate that, due to the extent of the review required, the total costs will exceed \$3,500. In that situation, our review would be

NOV 18 1993

suspended pending our receipt of written authorization from you to proceed. If your request will result in a revision to the effective NFIP map, the total costs will include a fee of \$410 per revised panel to cover the costs of cartographic preparation.

Using the previously referenced certification forms, we have completed an inventory of the items that you submitted. The items identified below are required before we can begin a detailed review of the request.

ITEM

X 1. We have received all of the data and the initial fee we require to begin a detailed technical review of your request. If additional data are required, we will inform you within 30 days of the date of this letter. However, if application/certification form information is requested in Items 4 or 5 below, that information must be provided before we can issue our final determination.

X 2. We must receive the initial fee balance, \$25. Payment shall be made in the form of a check or money order made payable in U.S. funds to the National Flood Insurance Program, or by credit card payment. For identification purposes, the case number referenced above must be included on the check or money order. Please forward this payment to:

Federal Emergency Management Agency  
Revisions Fee-Collection System Administrator  
P.O. Box 3173  
Merrifield, Virginia 22116

       3. Based on our initial review of your request, we have determined that the total processing costs will exceed [\$3,500/6,500]. Please provide written authorization for us to proceed with our review to a limit of \$\_\_\_\_\_.

       4. All applicable forms from the enclosed "Application/Certification Forms" package and the necessary supporting data, as described in the package instructions, must be submitted.

       5. The following forms, which were omitted from your previous submittal, must be provided:

- a. Form 1, entitled "Revision Requester and Community Official Form"
- b. Form 2, entitled "Certification by Registered Professional Engineer and/or Land Surveyor"
- c. Form 3, entitled "Hydrologic Analysis Form"
- d. Form 4, entitled "Riverine Hydraulic Analysis Form"
- e. Form 5, entitled "Riverine Mapping Form"
- f. Form 6, entitled "Channelization Form"
- g. Form 7, entitled "Bridge/Culvert Form" (one form per new/revised bridge/culvert)
- h. Form 8, entitled "Levee/Floodwall System Analysis Form"



- \_\_\_\_\_ i. Form 9, entitled "Coastal Analysis Form"
  - \_\_\_\_\_ j. Form 10, entitled "Coastal Structures Form"
  - \_\_\_\_\_ k. Form 11, entitled "Dam Form"
  - \_\_\_\_\_ l. Form 12, entitled "Alluvial Fan Flooding Form"
- \_\_\_\_\_ 6. With this letter, we are returning the original package indicating those forms that have not been completed in their entirety or on which data were requested. The item(s) that must be completed and/or statement(s) requesting data have/has been marked with an asterisk (\*). Please revise and resubmit the form package.
- \_\_\_\_\_ 7. Other: \_\_\_\_\_

Please note that if all of the required items are not submitted within 90 days of the date of this letter, any subsequent request will be treated as an original submittal and will be subject to all submittal/payment procedures, including the initial fees.

For a flood-control project to be exempt from fees and processing costs, it must be sponsored by a Federal, State, or local government, intended for public benefit, and primarily intended for flood-loss reduction to insurable structures in identified flood hazard areas that were in existence prior to commencement of construction of the flood-control project.

All required data (except the initial fee) and questions concerning your request are to be directed to our Technical Evaluation Contractor at the following address:

Michael Baker Jr., Inc.  
3601 Eisenhower Avenue  
Suite 600  
Alexandria, Virginia 22304  
(703) 960-8800

Attention: Mr. David P. Preusch, P.E.

When you write us about your request, please include the case number referenced above in your letter.

If you have any questions concerning FEMA policy, or the NFIP in general, please contact Mr. John Magnotti of our staff in Washington, DC, at (202) 646-3932, or by facsimile at (202) 646-3445.

Sincerely,

A handwritten signature in cursive script that reads "William R. Locke".

William R. Locke  
Chief, Risk Studies Division  
Federal Insurance Administration

Enclosures

cc: Mr. Mark Holstad, P.E.  
Project Manager  
Greiner Engineering

Mr. Larry A. Blair  
Executive Engineer  
AMAFCA



# City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

#74

October 29, 1993

Federal Emergency Management Agency Case No.: 93-06-199R (Vineyard Channel)  
Office of Risk Assessment  
500 C Street, S.W., Room 422  
Washington, DC 20472  
Community: City of Albuquerque,  
Bernalillo County,  
New Mexico  
Community No.: 350002

Attention: Mr. William R. Locke  
Chief, Risk Studies Division

Dear Mr. Locke:

This submittal is in response to the letter from the Federal Emergency Management Agency (FEMA) to the City of Albuquerque dated July 1, 1993, requesting additional data in order for FEMA to prepare a Letter of Map Revision (LOMR) for the above referenced project. FEMA's letter requested the following information:

Certification that all fill placed in the currently effective 100-year floodplain and below the proposed base flood elevation is compacted to 95 percent of the maximum density obtainable with the Standard Proctor Test method issued by the American Society for Testing and Materials (ASTM Standard D-698) for all areas to be removed from the 100-year floodplain.

As-built plans, certified by a registered professional engineer, of all proposed project elements

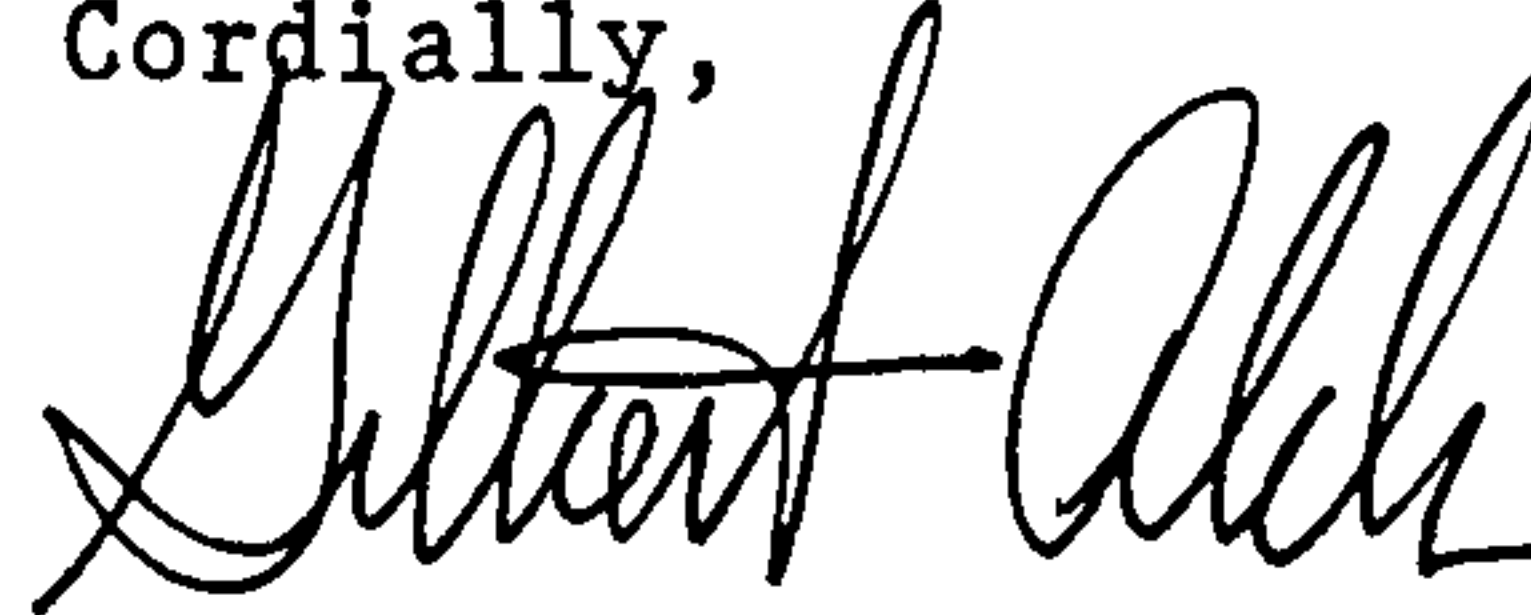
The appropriate initial fee (currently \$200) as required by section 72.3 of the National Flood Insurance Program (NFIP) regulations.

PUBLIC WORKS DEPARTMENT



As requested, enclosed is the Certification, as-builts, and a check for \$200. Your prompt response and approval for this LOMR would greatly be appreciated. If you should have any questions concerning this submittal, please do not hesitate to call me at (505) 768-2650.

Cordially,



~~(Gilbert Aldaz, P.E. & L.S.)~~  
City/County Floodplain Administrator

xc: Mr. Bob Hendrix, Branch Chief, Region VI  
Mr. Larry Blair, AMAFCA  
Mr. Mark S. Holstad, Greiner Engineering  
File

wp+1596

DANIEL W COOK, CHAIR

PAT D HIGDON, VICE-CHAIRMAN

RONALD BROWN, SECRETARY-TREASURER

GENEIVA MEEKER, ASST SECRETARY-TREASURER

MICHAEL MURPHY, DIRECTOR

LARRY A BLAIR

EXECUTIVE ENGINEER



**Albuquerque  
Metropolitan  
Arroyo  
Flood  
Control  
Authority**

2600 PROSPECT N E - ALBUQUERQUE, N M 87107

TELEPHONE (505) 884-2215

October 14, 1993

Mr. Gilbert Aldaz, P.E. & L.S.  
City/County Floodplain Administrator  
City of Albuquerque, P.O. Box 1293  
Albuquerque, New Mexico 87103

Re: Request for Letter of Map Revision, Vineyard Channel

Dear Gilbert:

Transmitted herewith for your review and submission to FEMA is the material requested by FEMA with the CLOMR approval. The CLOMR approval is attached, as are FEMA forms 1 & 2, Certificate of Soil Compaction, two sets of record drawings, and a check to FEMA for \$200.00.

If you have any questions concerning this please call Mark Holstad at Greiner Engineering, or John Kelly at AMAFCA.

Sincerely  
AMAFCA

Larry A. Blair  
Executive Engineer

OCT 18



**Greiner**

**Greiner, Inc.**  
5971 Jefferson Blvd.,  
Suite 101  
Albuquerque, New Mexico 87109  
(505) 345-3999  
FAX: (505) 345-8393

October 12, 1993

Mr. Gilbert Aldaz, PE/LS  
City/County Flood Plain Administrator  
City of Albuquerque  
PO Box 1293  
Albuquerque, NM 87103

**RE: LETTER OF MAP REVISION (LOMR) REQUEST  
VINEYARD CHANNEL, WEST OF I-25**

In reply to:


Case No.: 93-06-199R  
Community: City of Albuquerque, New Mexico  
Community No.: 350002

Greiner, Inc., is pleased to submit the following items for FEMA's consideration in revising the Flood Insurance Study (FIS) and Flood Insurance Rate Map (FIRM) for the completed project mentioned above.

- Certification for Soil Compaction with Attachment A regarding the use of a modified proctor (ASTM D-1557) vs. a standard proctor (ASTM D-698) for developing moisture - density soil relationships during construction.
- Record Drawings, certified by the Construction Engineer, Richard Peña, a registered professional engineer in the State of New Mexico.
- A \$200 (Two Hundred Dollar) fee as required by Section 72.3 of the National Flood Insurance Program (NFIP) regulations.

Sincerely,

**GREINER, INC.**

  
Mark S. Holstad, PE  
Project Manager

MSH:cs

VINEYARD3/LOMRREQ/E0161.00



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# V Vinyard & Associates, Inc.

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4415-D Hawkins, NE  
Albuquerque, New Mexico 87109  
(505) 345-1937

Geotechnical Engineering • Materials Testing • Environmental Engineering

October 5, 1993

Greiner Engineering, Inc.  
5971 Jefferson Street, NE  
Suite 101  
Albuquerque, New Mexico 87109

Attention: Mr. Richard Pena

Subject: Vineyard Channel  
V & A Project No.: 92-1-50

Gentlemen:

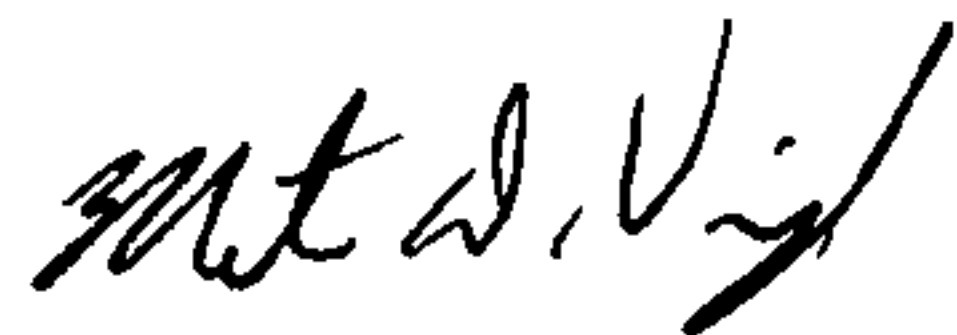
As requested, this letter clarifies the relative soil compaction criteria utilized on the Vineyard Channel project.

Two test procedures are utilized to determine maximum compacted density of a soil, ASTM D-698 and ASTM D-1557. The ASTM D-698 procedure is an older test which utilizes less compactive effort than the newer D-1557 procedure.

In our opinion the D-1557 procedure was the correct test to utilize on the Vineyard Channel project. Using the D-1557 procedure results in compacted fills which settle less, have a greater compacted density, higher shear strength and lower permeability than if the D-698 procedure was utilized.

Should you have any questions regarding this letter, please call.

Sincerely,  
Vinyard & Associates, Inc.



Martin D. Vinyard, PE



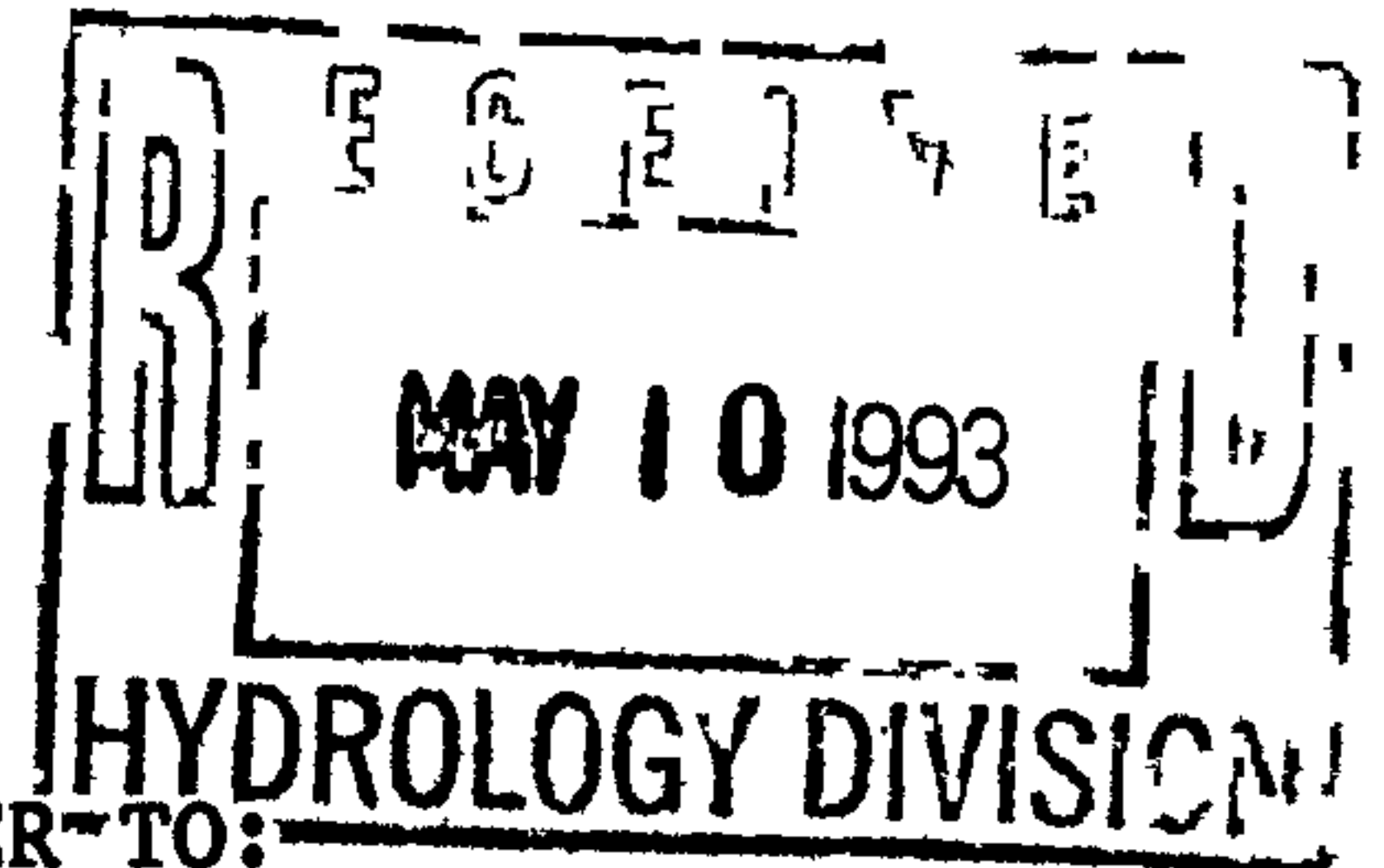
ATTACHMENT A



# Federal Emergency Management Agency

Washington, D.C. 20472

May 6, 1993



Mr. Gilbert Aldaz, P.E., L.S.  
City/County Floodplain Administrator  
City of Albuquerque  
P.O. Box 1293  
Albuquerque, New Mexico 87103

IN REPLY REFER TO:  
Case No.: 93-06-199R  
Community: City of Albuquerque,  
New Mexico  
Community No.: 350002

316-ACK

Dear Mr. Aldaz:

This is in response to your request, dated February 26, 1993, for a Conditional Letter of Map Revision (CLOMR) for the above-referenced community. Pertinent information about the request is listed below.

Identifier:	Vineyard Channel
Flooding Source:	Vineyard Arroyo
FIRM Panel Affected:	350002 0016
FBFM Panel Affected:	350002 0016

On October 1, 1992, the Federal Emergency Management Agency (FEMA) implemented the use of detailed application and certification forms for requesting revisions or amendments to National Flood Insurance Program (NFIP) maps. These forms outline technical and NFIP-related considerations in a fashion that facilitates an efficient review.

In addition, FEMA has implemented a reimbursement procedure to recover costs associated with reviewing and processing CLOMR requests, thus reducing the expense to the NFIP. The initial fees of \$735 that you have submitted are the minimum charges associated with our review of a project of this type. You will be notified of the estimated costs if we anticipate that, due to the extent of the review required, the total costs will exceed \$1,500. In that situation, our review would be suspended pending our receipt of written authorization from you to proceed. If your request will result in a revision to the effective NFIP map, the total costs will include a fee of \$560 per revised panel to cover the costs of cartographic preparation.

Using the previously referenced certification forms, we have completed an inventory of the items that you submitted. The items identified below are required before we can begin a detailed review of the request.

## ITEM

- X 1. We have received all of the data and initial fees we require to begin a detailed technical review of your request. If additional

data are required, we will inform you within 30 days of the date of this letter. However, if application/certification form information is requested in Items 4 or 5 below, that information must be provided before we can issue our final determination.

- \_\_\_\_ 2. We must receive the [remainder of the] initial fees, \$\_\_\_\_\_, before we will begin our review. Payment must be in the form of a check or money order made payable to the National Flood Insurance Program. For identification purposes, the case number referenced above must be included on the check or money order. Please forward this payment to:

Federal Emergency Management Agency  
Revisions Fee-Collection System Administrator  
P.O. Box 3173  
Merrifield, Virginia 22116

- \_\_\_\_ 3. Based on our initial review of your request, we have determined that the total processing costs will exceed [\$1,500/\$2,500/\$5,000]. Please provide written authorization for us to proceed with our review to a limit of \$\_\_\_\_\_.

- \_\_\_\_ 4. All applicable forms from the enclosed "Application/Certification Forms" package and the necessary supporting data, as described in the package instructions, must be submitted.

- \_\_\_\_ 5. The following forms, which were omitted from your previous submittal, must be provided:

- \_\_\_\_ a. Form 1, entitled "Revision Requester and Community Official Form"
- \_\_\_\_ b. Form 2, entitled "Certification by Registered Professional Engineer and/or Land Surveyor"
- \_\_\_\_ c. Form 3, entitled "Hydrologic Analysis Form"
- \_\_\_\_ d. Form 4, entitled "Riverine Hydraulic Analysis Form"
- \_\_\_\_ e. Form 5, entitled "Riverine Mapping Form"
- \_\_\_\_ f. Form 6, entitled "Channelization Form"
- \_\_\_\_ g. Form 7, entitled "Bridge/Culvert Form" (one form per new/revised bridge/culvert)
- \_\_\_\_ h. Form 8, entitled "Levee/Floodwall System Analysis Form"
- \_\_\_\_ i. Form 9, entitled "Coastal Analysis Form"
- \_\_\_\_ j. Form 10, entitled "Coastal Structures Form"
- \_\_\_\_ k. Form 11, entitled "Dam Form"
- \_\_\_\_ l. Form 12, entitled "Alluvial Fan Flooding Form"

- \_\_\_\_ 6. With this letter we are returning the original package indicating those forms that have not been completed in their entirety or on which data were requested. The item(s) that must be completed and/or statement(s) requesting data have/has been marked with an asterisk (\*). Please revise and resubmit the form package.

- \_\_\_\_ 7. Other: \_\_\_\_\_



Please note that if all of the required items are not submitted within 90 days of the date of this letter, any subsequent request will be treated as an original submittal and will be subject to all submittal/payment procedures, including the initial fees.

For a flood-control project to be exempt from fees and processing costs, it must be sponsored by a Federal, State, or local government, intended for public benefit, and primarily intended for flood-loss reduction to insurable structures in identified flood hazard areas that were in existence prior to commencement of construction of the flood-control project.

All required data (except the initial fees) and questions concerning your request are to be directed to our Technical Evaluation Contractor at the following address:

Michael Baker Jr., Inc.  
3601 Eisenhower Avenue  
Suite 600  
Alexandria, Virginia 22304  
(703) 960-8800

Attention: Mr. David P. Preusch, P.E.

When you write us about your request, please include the case number referenced above in your letter.

If you have any questions concerning FEMA policy, or the NFIP in general, please contact Mr. John Magnotti of my staff in Washington, DC, at (202) 646-3932, or by facsimile at (202) 646-3445.

Sincerely,



William R. Locke  
Chief, Risk Studies Division  
Federal Insurance Administration

Enclosures

cc: The Honorable Louis Saavedra  
Mayor, City of Albuquerque

Mr. Larry Blair, P.E.  
Executive Engineer  
AMAFCA

Mr. Mark S. Holstad  
Project Manager  
Greiner Engineering



# City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

February, 26, 1993

Bob Hendrix, Branch Chief  
Region VI, Federal Center  
800 North Loop 288  
Denton, Texas 76201-3698

RE: REQUEST FOR CONDITIONAL LETTER OF MAP REVISION FOR  
VINEYARD CHANNEL, WEST OF I-25, ALBUQUERQUE, NEW MEXICO  
COMMUNITY No. 350002

Dear Ms. Hendrix::

The purpose of this letter is to request a C.L.O.M.R. for the above referenced site. The request is to resolve potential litigation between a private party and a public agency. Enclosed with this letter is the following information:

1. The new implemented detailed application and certification forms for requesting revisions to the National Flood Insurance Program (NFIP) maps. Along with the forms is a detailed technical and NFIP-related considerations in a fashion that should facilitate an efficient review.
2. A check for \$735.00 to begin your review.

If you should have any questions concerning this submittal, please do not hesitate to call me at (505) 768-2650.

Cordially,

Gilbert Aldaz, P.E. & L.S.  
City/County Floodplain Administrator

xc: Larry Blair, AMAFCA  
Mark S. Holstad, Greiner Engineering  
*File*

(WP+1596)

PUBLIC WORKS DEPARTMENT

DANIEL W. COOK, CHAIR  
PAT D. HIGDON, VICE-CHAIR  
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GENEIVA MEEKER, ASST. SECRETARY-TREASURER  
MICHAEL MURPHY, DIRECTOR

LARRY A. BLAIR  
EXECUTIVE ENGINEER



**Albuquerque  
Metropolitan  
Arroyo  
Flood  
Control  
Authority**

2600 PROSPECT N E - ALBUQUERQUE, N M 87107  
TELEPHONE (505) 884-2215

February 24, 1993

Mr. Alan Johnson  
Federal Emergency Management Agency  
Washington, D.C. 20472

Re: Vineyard Channel West of I-25

Dear Mr. Johnson:

Your expeditious review and approval of this project is requested for the following reasons:

1. The project has, as one of its principal purposes, the removal of the floodplain from the property west of I-25, between Office Boulevard and Jefferson Boulevard. Removal of the floodplain will resolve potential litigation between a private party and a public agency; however, should FEMA approval be delayed beyond anticipated/expected time frames, the accord which has been reached could be seriously damaged, resulting in more legal action.
2. As indicated, the proposed project represents the culmination of agreement among three public and two private agencies, all of whom are contributing money and/or right-of-way.
3. The project is straightforward and uncomplicated.
4. The project is conservatively designed, with capacity in excess of present and future conditions.
5. The project is under construction, with completion expected before July, 1993.

Although we do not normally ask for special consideration, the special circumstances leading to this project beg for its rapid completion, and quick approval of a CLOMR and LOMR.

Sincerely,  
AMAFCA

Larry A. Blair, P.E.  
Executive Engineer

LAB:ij