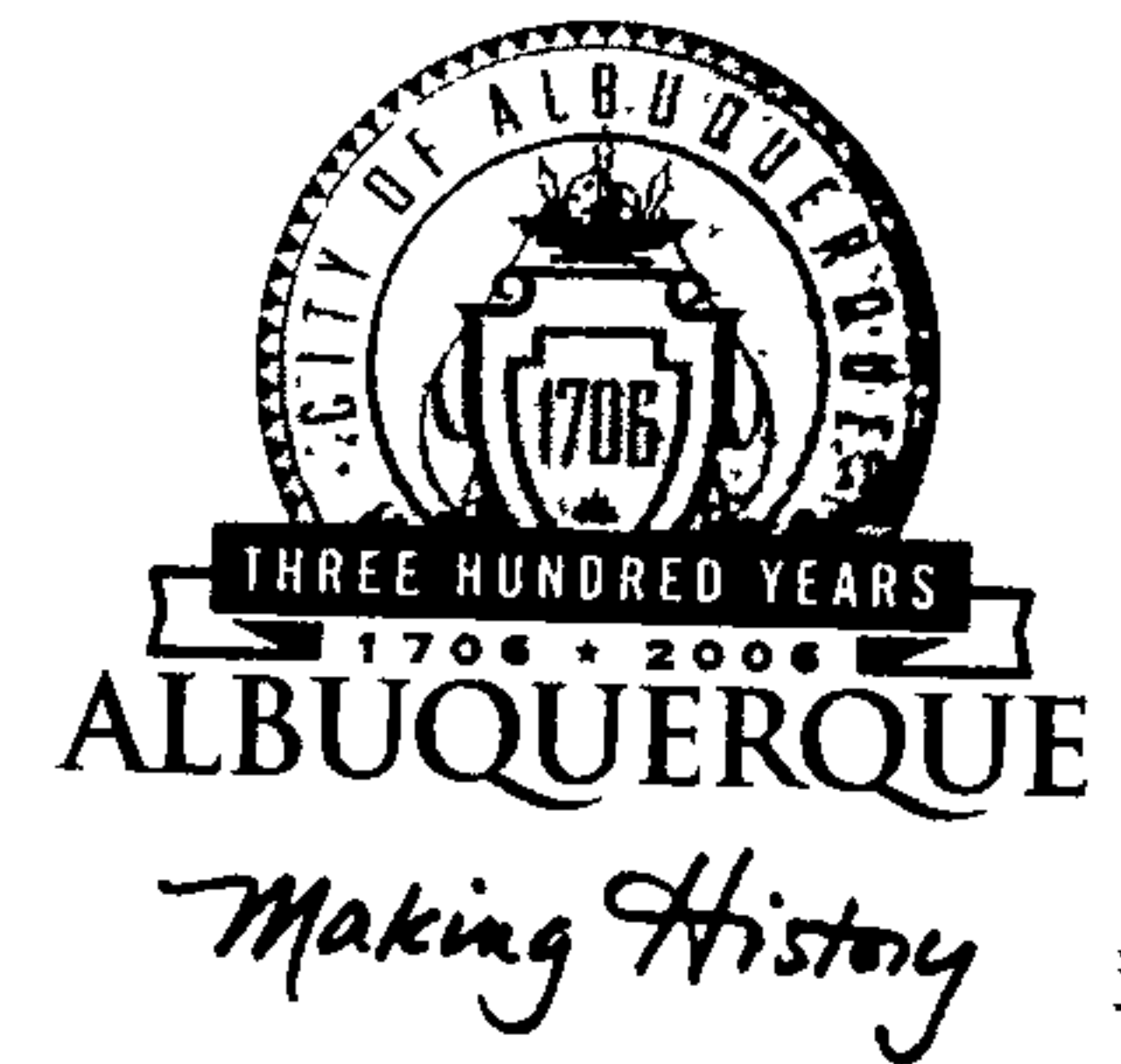


# CITY OF ALBUQUERQUE



September 29, 2004

Mr. Jeffrey G. Mortensen, PE  
**JEFF MORTENSEN & ASSOCIATES**  
6010-B Midway Park Blvd. NE  
Albuquerque, NM 87109

**Re: LBJ MID-SCHOOL GYM ADDITION**  
**6811 TAYLOR RANCH DRIVE NW**  
**Approval of Permanent Certificate of Occupancy (C.O.)**  
**Engineer's Stamp dated 06/26/2003 (D-11/D012)**  
**Certification dated 09/28/2004**

P.O. Box 1293

Dear Jeff,

Albuquerque

Based upon the information provided in your submittal received 09/29/2004, 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.

Sincerely,

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

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

C: Phyllis Villanueva  
File



# ***City of Albuquerque***

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

July 14, 2003

Jeff Mortensen, PE  
Jeff Mortensen & Associates  
6010B Midway Park Blvd. NE  
Albuquerque, NM 87109

**RE: LBJ Middle School Grading and Drainage Plan (D-11/D12)  
Engineer's Stamp Dated June 26, 2003**

Dear Mr. Mortensen:

Based upon the information provided in your submittal received June 27, 2003, the above referenced plan is approved for 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, an Engineer Certification per the DPM checklist will be required

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

Sincerely,

Carlos A. Montoya, PE  
City Floodplain Administrator

C: File

# CITY OF ALBUQUERQUE



August 19, 2009

Jeffrey G. Mortensen, P.E.  
**High Mesa Consulting Group**  
6010-B Midway Park Blvd. NE  
Albuquerque, NM 87109

**Re: Lyndon B. Johnson Middle School—Lobby & Toilet Room Addition, 6811  
Taylor Ranch Drive NW,**

**(D-11/D012)**

**Approval of Permanent Certificate of Occupancy,**

**Engineer's Stamp Dated: 01-19-09**

**Engineer's Certification Date: 08-19-09**

PO Box 1293

Dear Mr. Mortensen,

Albuquerque

Based upon the information provided by our visual inspection on 8/19/09, the above referenced certification is approved for release of Permanent Certificate of Occupancy by Hydrology.

NM 87103

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

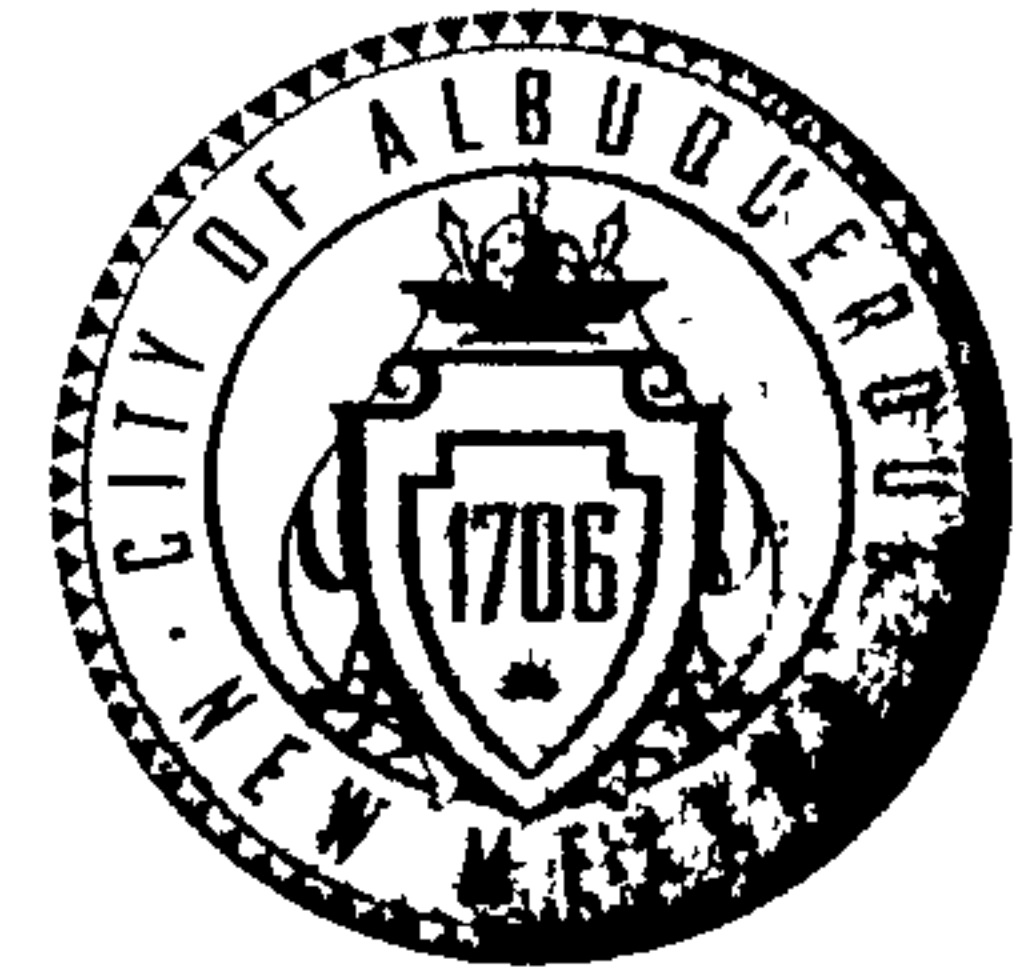
Sincerely,

Timothy E. Sims  
Plan Checker-Hydrology, Planning Dept  
Development and Building Services

www.cabq.gov

C: CO Clerk—Katrina Sigala  
file

# CITY OF ALBUQUERQUE



January 22, 2009

Jeffrey G. Mortensen, P.E.  
High Mesa Consulting Group  
6010-B Midway Park Blvd NE  
Albuquerque, NM 87109

**Re: Lyndon B. Johnson Middle School (Lobby & Toilet Addition)**  
**6811 Taylor Ranch Drive NW**  
**Grading and Drainage Plan**  
**Engineer's Stamp dated 01-19-08 (D-11/D12)**

Dear Mr. Mortensen,

Based upon the information provided in your submittal received 01-20-09, the above referenced plan is approved for 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.

PO Box 1293

If you have any questions, you can contact me at 924-3630.

Albuquerque

Sincerely,

NM 87103

Nilo E. Salgado-Fernandez, P.E.  
Senior Engineer, Planning Dept.  
Development and Building Services

www.cabq.gov C: File



# City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

April 7, 1993

Steve Crawford, P.E.  
BPLW Architect & Engineering, Inc.  
2400 Louisiana Boulevard NE, Suite 400  
Albuquerque, New Mexico 87110

RE: ENGINEER'S CERTIFICATION FOR WEST SIDE MIDDLE SCHOOL, (D-11/D12),  
ENGINEER'S STAMP DATED DECEMBER 29, 1992

Dear Mr. Crawford:

Based on the information provided on the referenced submittal received January 4, 1993 and supplemental information received March 18, 1993, the plan is acceptable for Certification of Occupancy release.

If you should have any questions, please do not hesitate to contact me at 768-2650.

Cordially,

Gilbert Aldaz, P.E. & P.S.  
Civil Engineer/Hydrology

xc: Alan Martinez  
wp+7522 ~~File~~

PUBLIC WORKS DEPARTMENT





STATE OF NEW MEXICO  
STATE ENGINEER OFFICE  
SANTA FE

ELUID L. MARTINEZ  
State Engineer

BATAAN MEMORIAL BUILDING, ROOM 101  
POST OFFICE BOX 25102  
SANTA FE, NEW MEXICO 87504-5102

April 2, 1991

Mr. Stephen L. Crawford, P.E.  
BPLW Architects & Engineers, Inc.  
American Financial Center #5, Suite 400  
2400 Louisiana Blvd., NE  
Albuquerque, NM 87110

RECEIVED

APR 03 1991

Re: File No. 3850


BPLW  
Architects & Engineers, Inc.

Dear Mr. Crawford:

Reference is made to your March 27, 1991, letter (telefaxed March 28, 1991) advising of your intentions to substitute Class 50 ductile iron water pressure pipe for the originally specified RCP for the Mariposa Basin penetration to provide drainage for the Westside Middle School. This substitution is acceptable provided that the pipe and related hardware are installed in accordance with the manufacturer's guidelines, including the urethane seal to be placed at the pipe/collar interface.

Sincerely,

Eluid L. Martinez  
State Engineer

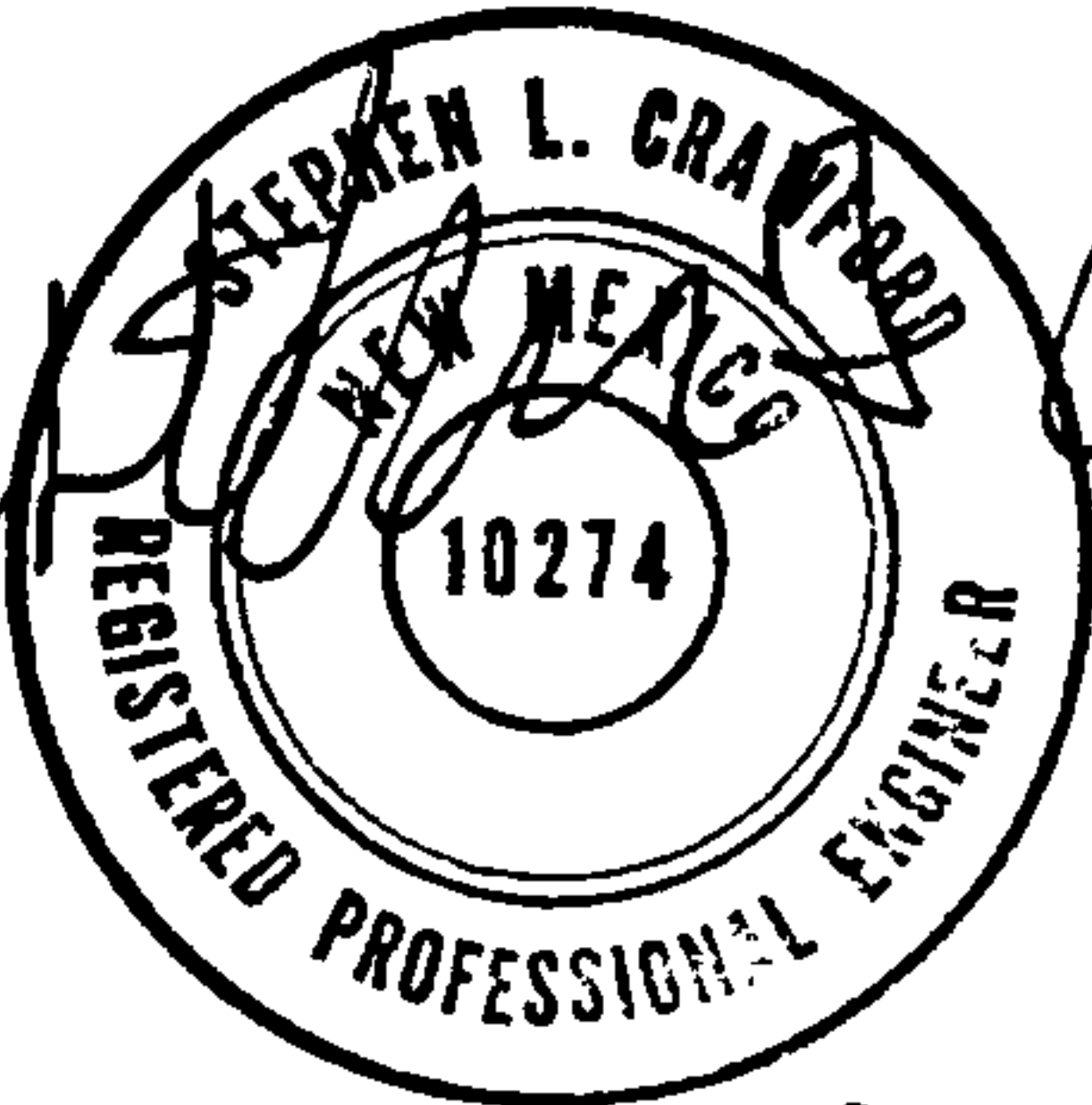
By   
Donald T. Lopez, P.E.  
Acting Chief  
Technical Division

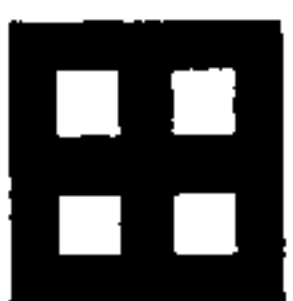
DTL:CEM:dg

cc: John Kelly, AMAFCA

**ENGINEER'S CERTIFICATION**  
**FOR**  
**MARIPOSA DETENTION DAM MODIFICATION**  
**STATE ENGINEER FILE NO. 3850**

I, Stephen L. Crawford, registered New Mexico Engineer Number 10274, do hereby certify that, to the best of my knowledge and belief, the modifications to the dam were performed in accordance with the approved construction plans and will be safe and perform as intended during a 100-year flood.

  
9-12-91

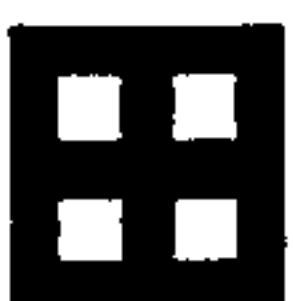
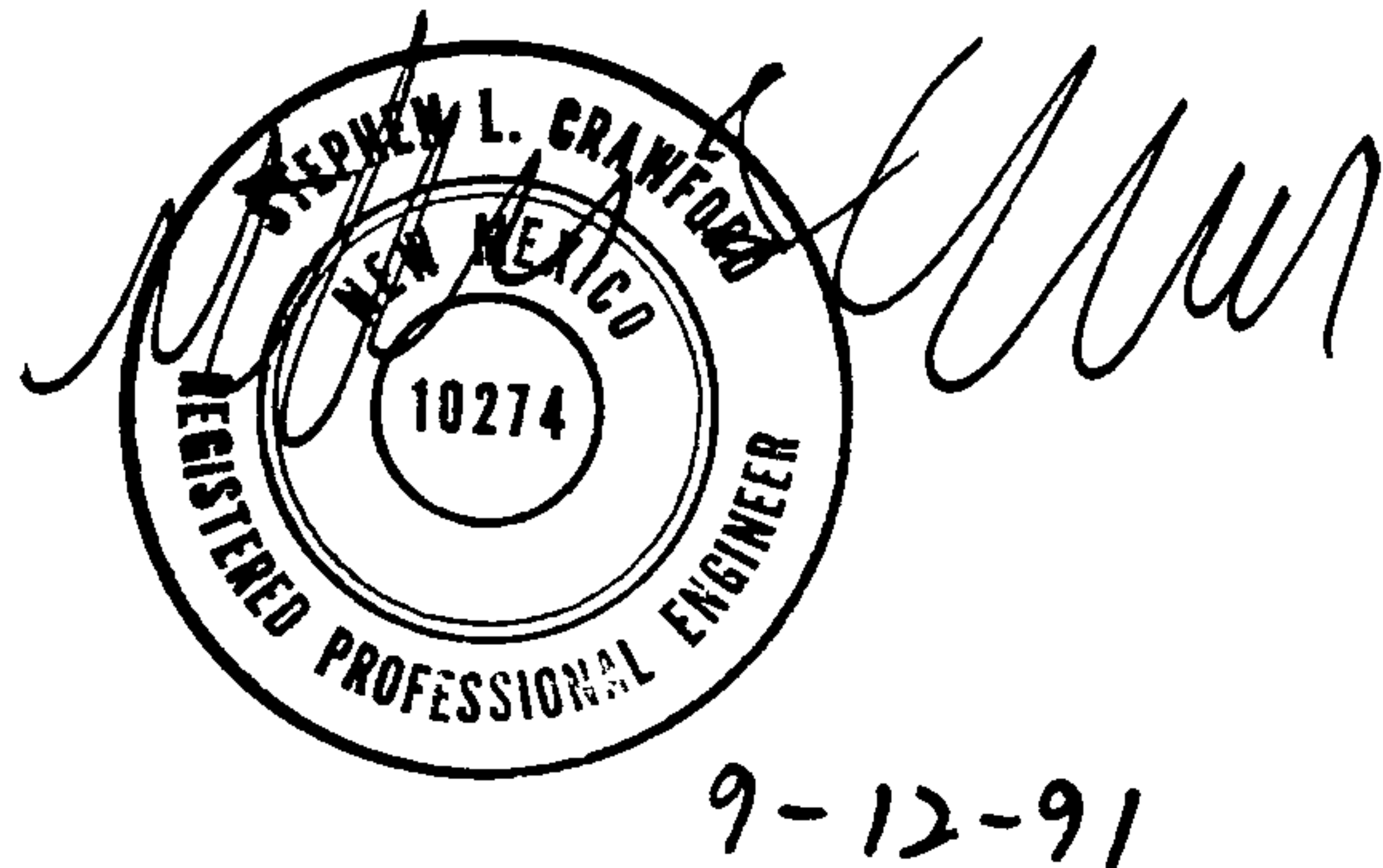


**COMPLETION REPORT**  
**FOR**  
**MARIPOSA DETENTION DAM MODIFICATIONS**  
**STATE ENGINEER FILE NO. 3850**

**SEPTEMBER, 1991**

Prepared by: BPLW Architects and Engineering, Inc.  
AFC #5, Suite 400  
2400 Louisiana Blvd., NE  
Albuquerque, NM 87110

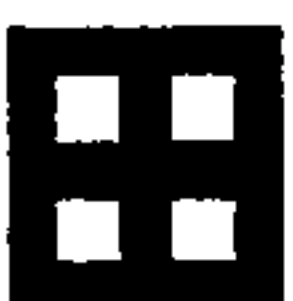
Mr. Stephen L. Crawford, P.E. No. 10274





The modifications to the dam were completed on June 24th, 1991. The original construction plans were modified once with the State Engineer's approval to change the pipe material from RCP to Ductile Iron due to material ordering lead times. The breached section of the dam was opened on April 19, 1991 and it was closed on May 16, 1991, one day behind the State Engineer's required date of May 15th. The weather was favorable and no risk to downstream property was incurred.

The enclosed file folder contains the field inspection reports, photographs, submittals and geotechnical tests results.



## HYDRAULIC GRADE LINE ASSESSMENT

1. For purposes of assessing the interaction of the on-site hydrograph and its discharge through the 30" RCP outlet pipe, several baseline data runs on HYMO were made. Appendices 1, 2 and 3 contain the results of the 10-year/Mariposa Dam, 100-year/On-site, and 100-year/Mariposa Dam hydrograph computations.
2. Per the DPM 22.3-B-2-a, the HGL shall be computed from the 10-year flood depth in a detention pond if that is the outfall or other more detailed analyses must be performed. Appendix 1 indicates that the 10-year maximum water surface elevation in the Mariposa Detention Facility is 5110.98. This flood level is too high for reasonable design purposes; therefore more detailed evaluations of time and flood stage must be made during the 100-year flood to determine the adequacy of the proposed HGL calculations for the on-site storm drain.
3. The data in Appendices 2 & 3 show that the site discharge peaks at time  $T=0.50$  hours. At this time, the water surface elevation in the dam is at 5103.44 leaving the site's discharge pipe (INV=05.23) well above the flood depth.
4. The HGL at MH-4 (upper end of the 30" RCP outlet pipe) is at elevation 09.53 when the site flow peaks at 36.37cfs. See revised HGL calculations for the outlet pipe in Appendix 4 and the revised drainage plate in the map pocket. As the Mariposa Dam WS elevation rises, it will slowly back up the site's HGL. The time at which this begins to happen is about time  $T=1.10$  hours. The dam WS elevation will be at 5109.23 at this time and the site's runoff rate will have fallen off to 6.1cfs. At this point, 88% of the site's runoff will have already entered the Mariposa Dam (see calc on hydrograph in Appendix 2).

5. From time  $T=1.10$  hours to  $T=1.40$  hours, the onsite flow will be reduced from 6.1cfs to 1.4cfs and the dam WS elevation will rise to elevation 5112.27. At this point 93% of the on-site runoff volume will have entered the dam. Appendices 4 & 5 contain calculations which show that the HGL at the SE corner overflow catch basin (CB-2) will be at elevation 12.39 at this time. This is still below the grate elevation of 12.90.
6. From time  $T=1.40$  hours to  $T=1.57$  hours, the on-site flow will be reduced from 1.4cfs to 0.9cfs and the dam WS elevation will rise to 5113.42. At this point in time, the flapgate on the outlet structure will close. The remaining 7% of the on-site runoff from the 100-year storm will then overflow to Taylor Ranch Drive. The total volume of this overflow will be about 3900 cubic feet and the flow rate will decline from 0.8cfs to zero over a 5 hour period of time. The computations in Appendix 7 show that if the site is not developed, about 3800 cubic feet of runoff will overflow Taylor Ranch Drive and bypass the Mariposa Detention Facility. The proposed development and its stormwater runoff design will not significantly change any downstream flow conditions on Taylor Ranch Drive.

# HYMO Properties (Input Data) for Basins Tributary to Storm Drain

Basin	Imp (D)	Acres	
		Native (A)	Landscape (B)
B-2	0.63	0	0.29
B-4	2.94	0	0.43
B-7	0.63	0	0.40
B-8	0.29	0	1.14
B-9	0	0	0.46
B-12	2.91	0	0
	<u>7.40</u>		<u>2.72</u>

## Percents for HYMO input

$$A = 0$$

$$B = 27$$

$$C = 0$$

$$D = 73$$

$$A = 0.015813 \text{ sq mi}^2$$

Project HGL @ T = 10.40 hrs

Subject \_\_\_\_\_

Project No. \_\_\_\_\_ Date \_\_\_\_\_ By \_\_\_\_\_

- ☐ Memorandum
- ☐ Telephone record
- ☐ Note to the file
- ☐ Minutes of meeting
- ☐ To be typed
- ☐ \_\_\_\_\_

Simplified HGL Calcs assuming orifice head loss added to all friction losses at each junction with all pipes fully submerged.

a) HGL at Mariposa Dam = 12.270

a) plus head loss thru outlet structure  
(see Appendix 5) + 0.100  
= 12.370

b) plus 30" orifice + 0.004  
 $1.4 = 0.60 A \sqrt{2gH}$   
= 12.374

c) plus 336.20' of 36" HDPE SD  
 $n = 0.010$   $Q = 1.4$

Mannings  $h = 4.66 n^2 \frac{Q^2 L}{d^{16/3}} + 0.001$  = 12.375

d) plus 36" orifice

$1.4 = 0.60 A \sqrt{2gH}$  + 0.002 = 12.377

e) plus 300.28' of 30" HDPE SD  
 $n = 0.010$   $Q = 1.15$

$h = 4.66 n^2 \frac{Q^2 L}{d^{16/3}} + 0.002$  = 12.379





Project \_\_\_\_\_

Subject \_\_\_\_\_

Project No. \_\_\_\_\_ Date \_\_\_\_\_ By \_\_\_\_\_

- ☐ Memorandum
- ☐ Telephone record
- ☐ Note to the file
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- ☐ \_\_\_\_\_

f) plus 30" orifice

$$1.15 = 0.60 A \sqrt{2gH} + 0.002 = 12.381$$

g) plus 404.74' of 24" HDPE SD

$$n = 0.010 \quad Q = 0.61$$

$$h = 4.66 n^2 \frac{Q^2 L}{d^{16/3}} + 0.002 = 12.383$$

h) plus 24" orifice

$$0.61 = 0.60 A \sqrt{2gH} + 0.002 = 12.385$$

0 0 Total HGL Head loss

From CB-2 at SE corner  
of site is less than 0.12 feet



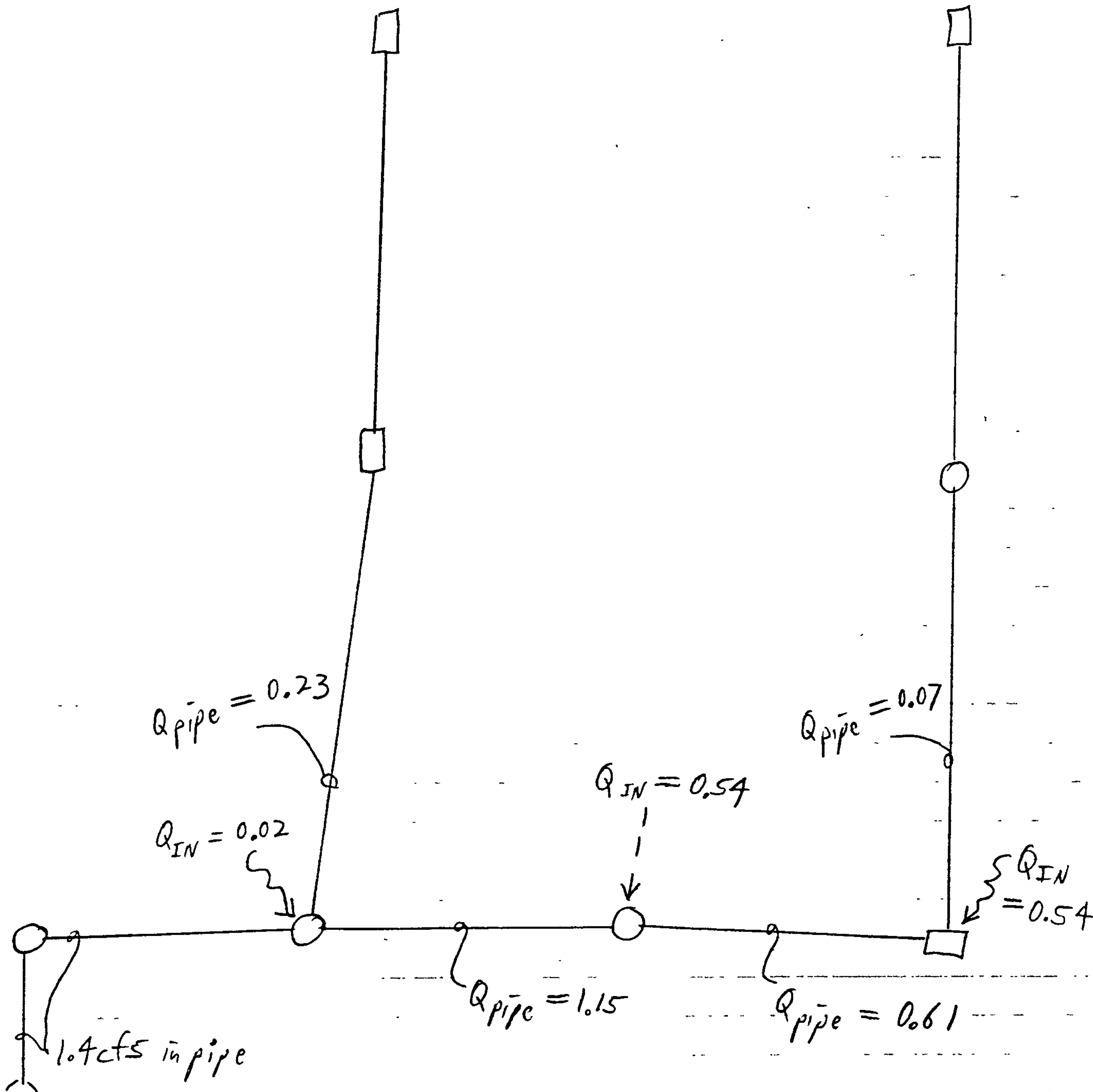


Project Storm Drain Flows

Subject at  $T = 1.40$  hours

Project No. \_\_\_\_\_ Date \_\_\_\_\_ By \_\_\_\_\_

- ☐ Memorandum
- ☐ Telephone record
- ☐ Note to the file
- ☐ Minutes of meeting
- ☐ To be typed
- ☐ \_\_\_\_\_



Copies to:

Page 5-4 of

June 1990

*Designing to Shape the future*



# BPLW

Architects & Engineers, Inc.

2400 Louisiana Blvd. NE  
AFC #5 Suite 400  
Albuquerque, NM 87110  
(505) 881-2759

63 East Main Street  
Suite 602  
Mesa, AZ 85201  
(602) 827-2759

Project \_\_\_\_\_

Subject \_\_\_\_\_

Project No. \_\_\_\_\_ Date \_\_\_\_\_ By \_\_\_\_\_

- ☐ Memorandum
- ☐ Telephone record
- ☐ Note to the file
- ☐ Minutes of meeting
- ☐ To be typed
- ☐ \_\_\_\_\_

85LF 30" RCP + 30" Flapgate

Mannings  
(n=0.013)

$S_f = 5.942 E-06 (Q^2)$  for 30" pipe

Q	$S_f$	$H_f$	$H_{gate}$ <sup>1.5 times</sup>	Total H.L.
36.37	0.007860	0.67	0.06	0.73
10	0.000594	0.05	0.18	0.23
7	0.000291	0.02	0.15	0.17
6	0.000213	0.02	0.12	0.14
5	0.000149	0.01	0.09	0.10
2				< 0.10
1				< 0.10

Copies to: \_\_\_\_\_

Page 6-2 of

June 1990

Designing to Shape the future



Project West Side Mid School  
Subject Existing Condition @ GCR  
Project No. \_\_\_\_\_ Date \_\_\_\_\_ By He

- ☐ Memorandum
- ☐ Telephone record
- ☐ Note to the file
- ☐ Minutes of meeting
- ☐ To be typed
- ☐ \_\_\_\_\_

1) At the intersection of Taylor Ranch & Golf Course Road, all the site's existing runoff enters the Mariposa Dam through a flapgate.

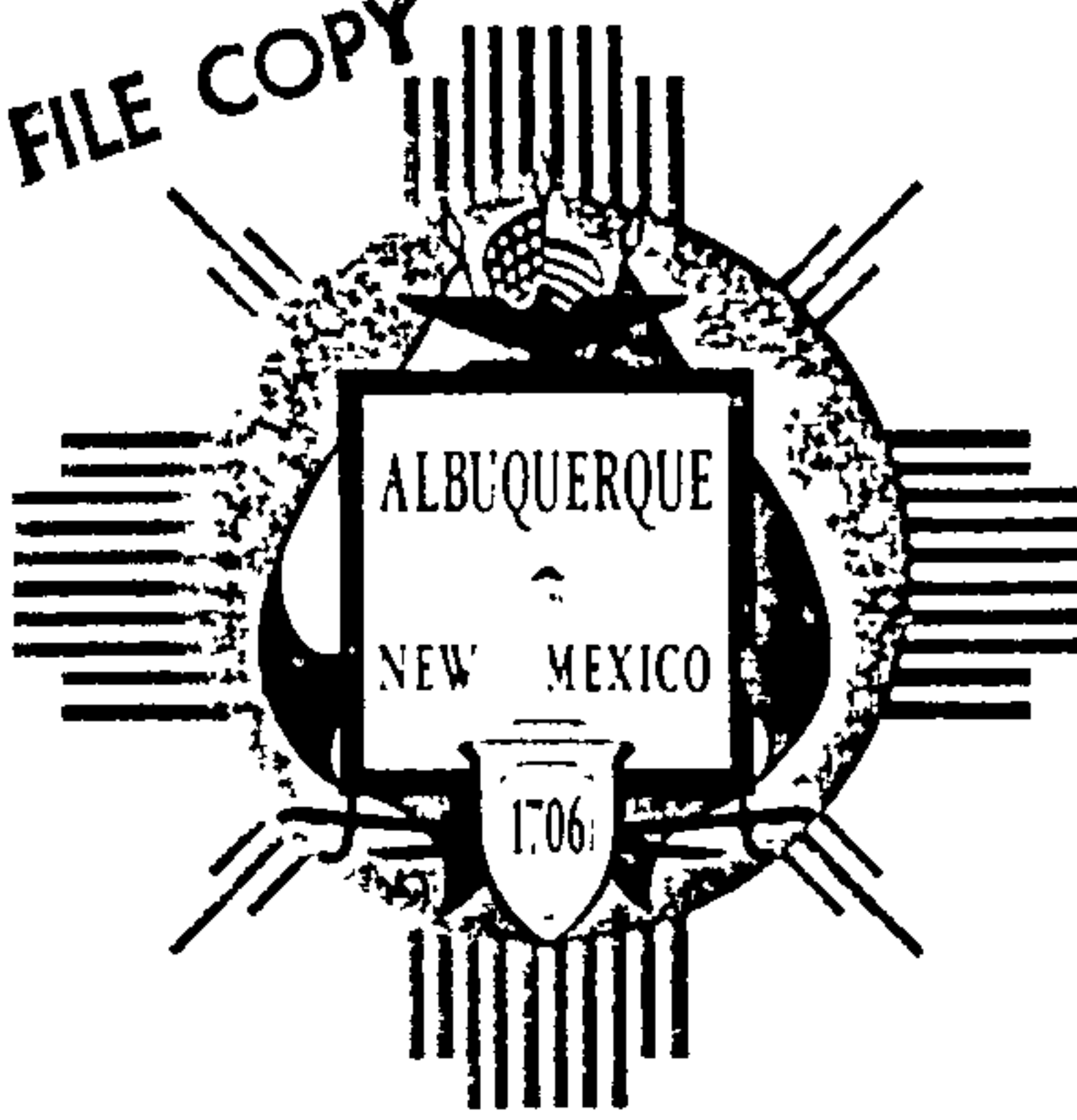
The as-builts for Taylor Ranch Drive indicate that the curb flow line elevation is 5109.1 on the west side of the street at the low point. Assuming a street flow depth of about one foot, the HGL for this inlet flapgate would be at about 5110.1.

2) From the 100 YR calcs in Appendix 3, the dam WS Elevation reaches this level (10.1) just after time  $T = 1.167$  hours at which point the Taylor Ranch / Golf Course Rd flapgate closes.

3) The HYMO run in this Appendix for the on-site existing conditions indicates that by time  $T = 1.167$  hours, about 82 % of the runoff has already entered the dam. The remaining 18 % of the runoff ( $\approx 3800$  CF) then passes through the intersection to points further downstream.



FILE COPY



# City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

March 15, 1991

Steve Crawford, P.E.  
BPLW Architects & Engineers  
2400 Louisiana Boulevard, NE  
Albuquerque, New Mexico 87110

RE: DRAINAGE REPORT AND ROUGH GRADING PLAN FOR WEST SIDE  
MIDDLE SCHOOL (D-11/D12) ENGINEER'S STAMP DATED  
FEBRUARY 21, 1991

Dear Mr. Crawford:


Based on the information provided on the referenced submittal received February 11, 1991, the report is approved for work order and building permit release.

The rough grading plan received March 5, 1991 is approved for rough grading. Please be advised that a top soil disturbance permit is required prior to beginning rough grading operations.

Please be advised that prior to Certificate of Occupancy release, an Engineer's Certification is required by this office.

If you should have any questions, please feel free to call me at 768-2650.

Cordially,

  
Gilbert Aldaz, P.E. & L.S.  
Civil Engineer/Hydrology

xc: Clifford E. Anderson, AMAFCA  
Roger Green, DRC Chairman

GA  
(wp+697)

PUBLIC WORKS DEPARTMENT

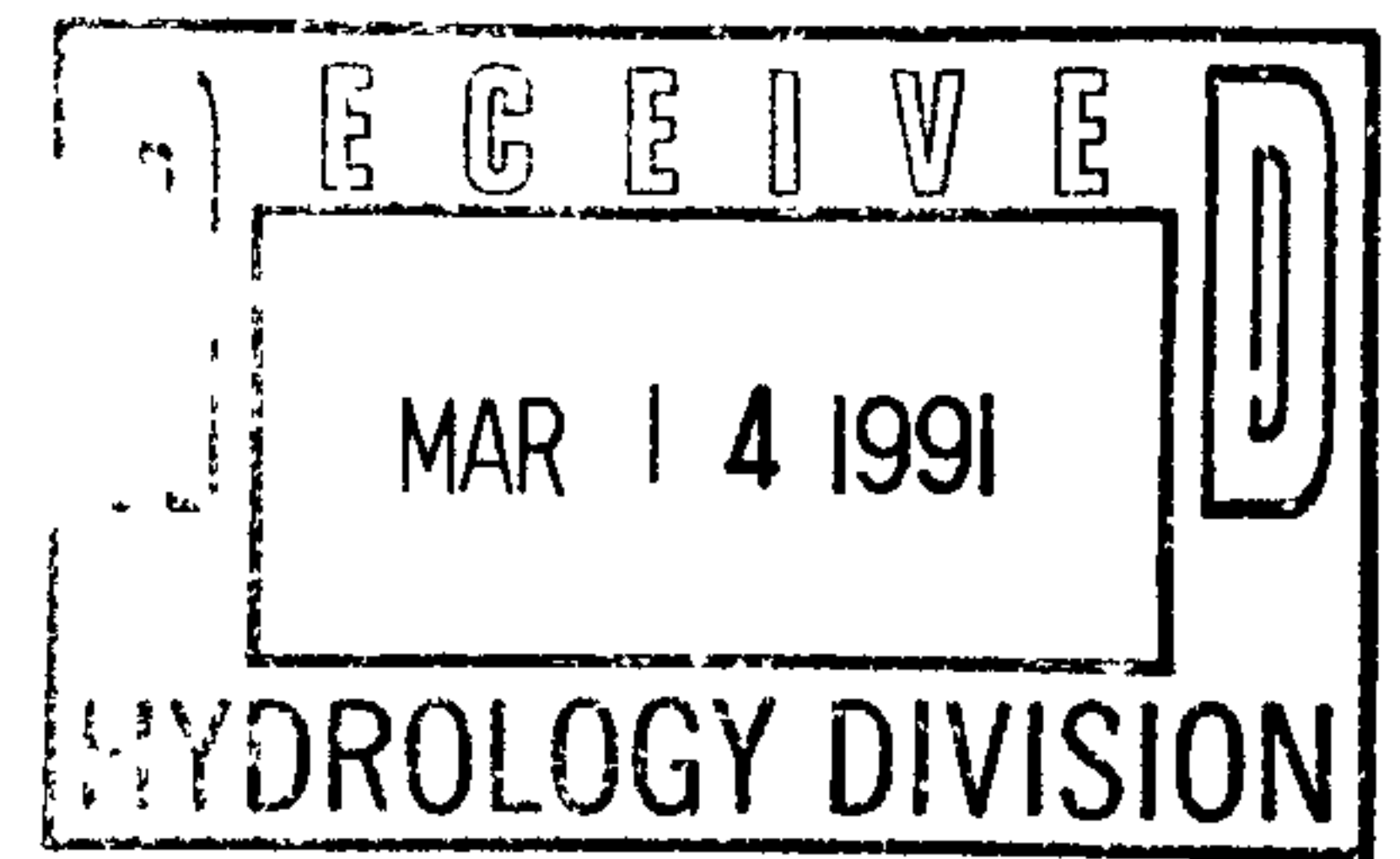
Walter H. Nickerson, Jr., P.E.  
Assistant Director Public Works

ENGINEERING GROUP

Telephone (505) 768-2500

AN EQUAL OPPORTUNITY EMPLOYER





STATE OF NEW MEXICO

STATE ENGINEER OFFICE

SANTA FE

ELUID L. MARTINEZ

State Engineer

BATAAN MEMORIAL BUILDING, ROOM 101

POST OFFICE BOX 25102

SANTA FE, NEW MEXICO 87504-5102

March 13, 1991

Mr. Gilbert Aldaz, P.E. & L.S.  
City of Albuquerque  
Public Works Department  
P.O. Box 1293  
Albuquerque, New Mexico 87103

Re: Mariposa Detention Dam Proposed Modifications-File No. 3850

Dear Mr. Aldaz:

The State Engineer Office has received proposed construction plans and specifications for the proposed construction of the Mariposa Detention Dam Modifications as a result of the proposed construction of the APS Westside Middle School. Formal construction plans and specifications were received on January 18, 1991 and on February 13, 1991.

The submittals are accepted subject to the following conditions:

- 1) That the qualifications of a professional engineer registered in New Mexico who will supervise construction must be submitted to and approved by the State Engineer prior to undertaking construction.
- 2) Construction shall be in accordance with the approved plans and specifications. Any modifications of the approved plans and specifications or design changes must be approved in writing by the State Engineer prior to undertaking such modifications.
- 3) Closure of the breached section of the embankment shall be completed by May 15, 1991.
- 4) During modification of the dam the State Engineer Office will be given a minimum of 72 hours notice to enable the State Engineer Office staff to observe the following items:

a) completed foundation preparation for the modification work;

b) embankment fill placement and outlet works construction at 50 percent completion; and

c) immediately after completion of the dam modification work.

5) Upon completion of construction, the professional engineer supervising construction shall submit to the State Engineer:

a) a completion report which shall include a description of the problems encountered and their solution; a summary of materials test data and construction photographs;


b) reproducible as-built drawings; and

c) A certificate that the dam modifications as constructed are safe for the intended use.

Please let me know if further discussion would be helpful.

Sincerely,

Eluid L. Martinez  
State Engineer

By   
Donald T. Lopez, P.E.  
Acting Chief  
Technical Division

DTL:dog

cc: Steve Crawford, P.E.  
BPLW Architects & Engineers  
2400 Louisiana Blvd., NE  
Albuquerque, New Mexico 87110



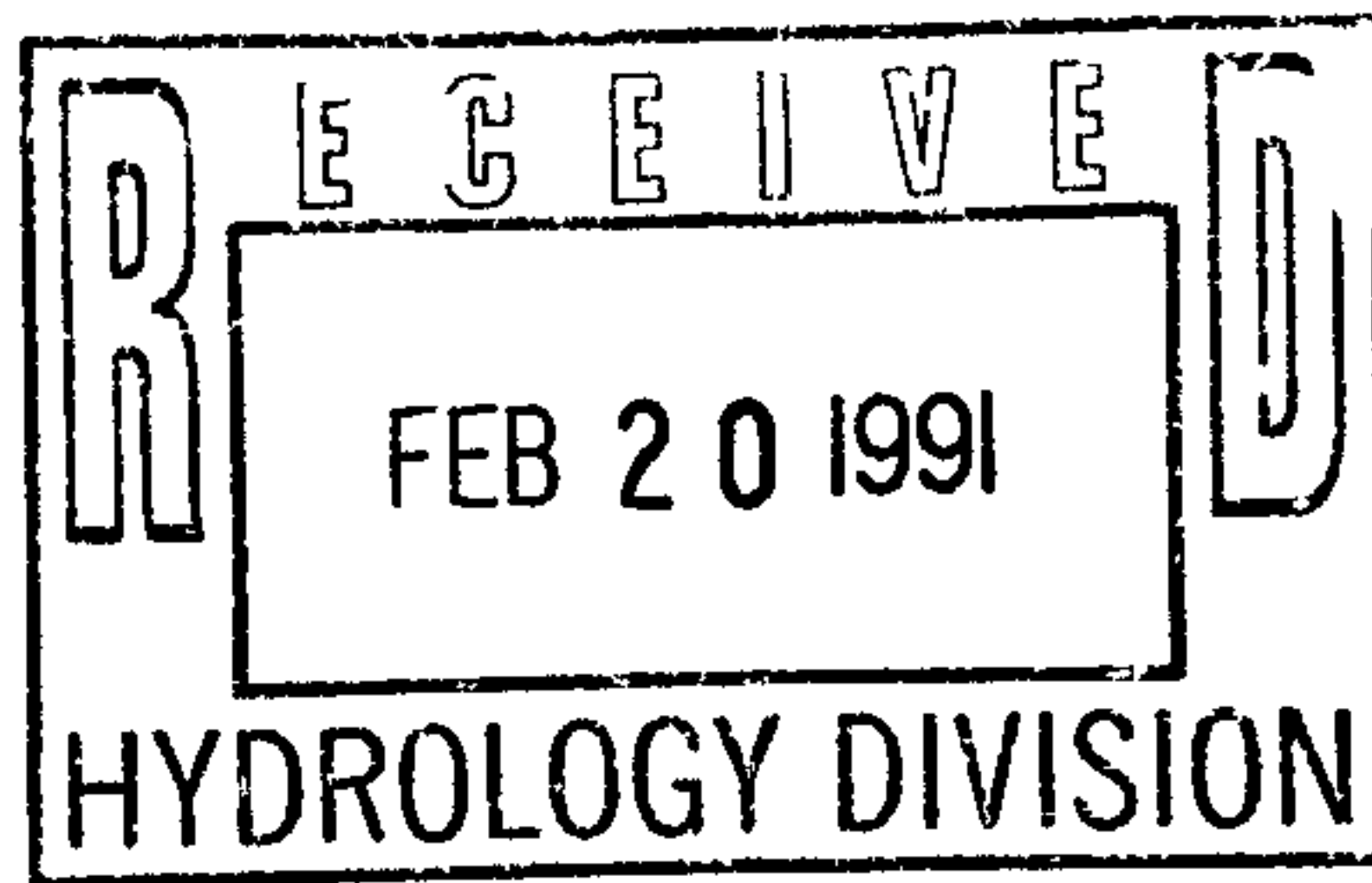
R. WARD HUNNICUTT, CHAIRMAN  
PAT D. HIGDON, VICE-CHAIRMAN  
DANIEL W. COOK, SECRETARY TREASURER  
GENEIVA MEEKER, DIRECTOR  
RONALD D. BROWN, DIRECTOR

LARRY A. BLAIR  
EXECUTIVE ENGINEER



**Albuquerque  
Metropolitan  
Arroyo  
Flood  
Control  
Authority**

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



*Elbert  
Alcaz  
Public Works  
Hydrology*

February 15, 1991

Steve Crawford, P.E.  
BPLW Architects & Engineers, Inc.  
2400 Louisiana Blvd., N.E.  
AFC #5, Suite 400  
Albuquerque, N.M. 87110

RE: Grading and Drainage Plan for Westside Middle School and  
Mariposa Dam Inlet Structure (D-11)

Dear Steve:

AMAFCA has reviewed the Grading and Drainage Plan for the above-referenced project (dated January 16, 1991) and the Hydraulic Grade Line Assessment (dated February 10, 1991). The Hydraulic Grade Line Assessment was prepared by BPLW in response to comments and concerns expressed by AMAFCA at our meeting on February 8, 1991.

AMAFCA's concerns at this site are primarily focused on the Mariposa Dam and the new inlet structure which is proposed for construction. This includes the drainage structure from the inlet to manhole MH-4. We anticipate that the City of Albuquerque, Hydrology Division is currently reviewing the remaining site drainage and we will not duplicate that effort.

Our concern for protection of the integrity of the dam has caused us to carefully evaluate the function of the flap-gate at the outlet structure and the pipe specification through the embankment.

The use of a flap-gate to protect surrounding property from back-flow out of the dam certainly involves some risk of failure of this mechanical device. We realize that there are similar devices in place at this dam and that the school site cannot drain to the

Mr. Steve Crawford, P.E.  
February 15, 1991  
Page Two

dam without the use of a flap-gate; but we want your client and the City of Albuquerque to be aware of the additional risks and maintenance responsibilities that an additional mechanical device will impose on the site.

The risk of failure of the dam embankment is extremely remote but the hazards associated with such a failure can be catastrophic. The dam drains 22 square miles of upstream basin and therefore can receive a large volume of water. Should the earth embankment be breached, the flows leaving the dam would likely exceed several thousand cubic feet per second. The dam was designed with an emergency spillway so that the embankment would not be over-topped by the probable maximum storm (approximately 11 inches in one hour). Breaching of an earth embankment can occur by water passing through the dam embankment in addition to the over-topping. A storm sewer structure through the embankment provides a potential path for water in the dam to be carried along the outside of the pipe. Such a flow could cause failure of the earth embankment. For this reason, we require pipe with special joints, anti-seep collars, special compaction measures, and special inspection by the Engineer. These measures will reduce the potential for failure, provided that appropriate care is taken by the Contractor, the Engineer and the Owner.

When the inlet structure immediately west of the school site was constructed, AMAFCA received some assurances that the inlet was sized to accommodate all future flows. I am sure you can understand our lack of enthusiasm for another potentially hazardous pipe through the dam embankment at this location. We reluctantly accept BPLW's analysis that the existing capacity is not adequate for the proposed school site and must accept your conclusion that an additional pipe is required.

Based on AMAFCA's concerns, the plans now include the following items:

Reinforced concrete pipe with steel bell and spigot ring joints;

Special excavation and bedding of the pipe through the dam;

**A**lbuquerque  
**M**etropolitan  
**A**rroyo  
**F**lood  
**C**ontrol  
**A**uthority

Mr. Steve Crawford  
February 15, 1991  
Page Three

A removable access way at the outlet structure gate to allow for inspection and maintenance.

Your revised Hydraulic Grade Line Assessment provides detailed computations showing the flow rates and time of flow for water entering the dam from this site and from the 22 square mile upstream basin. Based on this analysis, it appears that the flap-gate would close and water would discharge to Taylor Ranch Drive at 1.57 hours after the start of rainfall (for a 100-year storm). The flap-gate structure from Taylor Ranch Drive would also be closed at this time, and any remaining flow will pond in the street or flow to other downstream areas. Since the flow rate to Taylor Ranch Drive is projected to be less than 1 cfs, AMAFCA has no objection to this proposed drainage concept. The City of Albuquerque should review this proposal carefully to make sure that their special concerns at Taylor Ranch Drive are addressed.

AMAFCA's current criteria for dam embankment pipes is a 36 inch minimum diameter to allow for visual inspection of the pipe and joints. Because of grade restrictions and an existing sanitary sewer near manhole MH-4, we understand that a 30 inch diameter is the largest size possible. The dam owner must recognize that the use of a 30 inch pipe will require somewhat more difficult inspection procedures.

The timing of construction is extremely important because the Mariposa Dam is currently functioning to protect life and property. A major storm during construction of an embankment cut could cause severe damage downstream. For this reason, the project specifications should include the following provisions:

1. Construction of the project must be completed by May 15, 1991. No compromise to the embankment capacity must be allowed between May 15, and October 15, in any year.
2. No construction should proceed if there is a National Weather Service forecast for measurable precipitation during the construction period.

Albuquerque  
Metropolitan  
Arroyo  
Flood  
Control  
Authority



Mr. Steve Crawford, P.E.  
February 15, 1991  
Page Four

3. Emergency construction equipment must be available at the construction site at all times to repair or replace any embankment excavation should a storm threaten dam safety. The power to enforce emergency embankment replacement must be granted to the dam owner (The City of Albuquerque) and the New Mexico State Engineer.
4. The City of Albuquerque, AMAFCA, and the New Mexico State Engineer must be notified of the date and time for maximum breach excavation. At least 72 hour advance notification must be provided.

Upon completion of the construction of the pipe and outlet structure at the dam embankment, the Engineer will be required to prepare a written inspection report. This report must include the new structure, and the existing dam and pipes that could be affected by the new construction. The Engineer must certify that the installation was completed per the approved plans and specifications. The inspection report should be transmitted to the City, AMAFCA, and the New Mexico State Engineer.

We understand that there has been some discussion of who should maintain the new inlet pipe, including the inlet structure and the first manhole. It is our position that the dam owner (The City of Albuquerque) must provide this maintenance. Appropriate maintenance is essential not only for proper function of the storm drain but also for the safety of the dam. We have no objection to APS sharing in maintenance costs but the primary responsibility must stay with the City. We are confident that the New Mexico State Engineer will share this opinion.

We note that you have included a signature block for AMAFCA's approval on the inlet structure plans. Based on compliance with our comments herein, we are prepared to sign off on the plans.

Albuquerque  
Metropolitan  
Arroyo  
Flood  
Control  
Authority

Mr. Steve Crawford, P.E.  
February 15, 1991  
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Two sets of the approved storm drainage and inlet construction drawings (prints) must be provided to AMAFCA for our use during construction. A set of reproducible mylar record drawings must be provided to AMAFCA upon completion of construction. Please note that the City of Albuquerque and the New Mexico State Engineer may have additional drawing requirements.

Sincerely,

AMAFCA



Clifford E. Anderson, PE & LS  
Drainage Engineer

CEA/ekr

cc: Gilbert Aldaz, City-County Floodplain Administrator  
Fred Aguirre, Hydrologist, City of Albuquerque, Public Works  
Dan Hogan, Division Manager, Hydrology Division, City of Alb.  
Bob Robie, Albuquerque Public Schools  
Don Lopez, New Mexico State Engineers Office

**A**lbuquerque  
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**A**rroyo  
**F**lood  
**C**ontrol  
**A**uthority