

Ronald D. Brown, Chair
Daniel F. Lyon, Vice Chair
Tim Eichenberg, Secretary-Treasurer
Janet Sayers, Asst. Secretary-Treasurer
Danny Hernandez, Director

John P. Kelly, P.E.
Executive Engineer



Albuquerque

Metropolitan

Arroyo

Flood

Control

Authority

2600 Prospect N.E., Albuquerque, NM 87107
Phone: (505) 884-2215 Fax: (505) 884-0214

File

December 22, 2005

Rhett Waterman
Managing Member
Alpha Equities, LLC
8813 2nd Street NW, #E
Albuquerque, NM 87114

Mail & Fax 1-505-922-9418

Re: AMAFCA Does Not Accept the Drainage Improvements for Maintenance
Quivera Estates Subdivision

Mr. Waterman,

Per our agreement, dated March 17, 2004, "Agreement to Provide Maintenance for a Sediment Facility on the El Camino Arroyo at Barstow & Glendale", Alpha Equities, was to provide to AMAFCA an engineers certification that all improvements had been constructed in accordance with the approved plans and specifications for the project before AMAFCA would maintain the drainage improvements.

The pond shown on the approved plans was not constructed to the lines and grades shown. Consequently, AMAFCA did not accept the drainage improvements after construction and instructed Leo Valdez, Construction Observer, for Mark Goodwin & Associates, that AMAFCA would require that the pond be constructed to the lines and grades shown on the plans. I contacted Mr. Greg Krenik, P.E., the design engineer for the project concerning the construction deficiencies that were found.

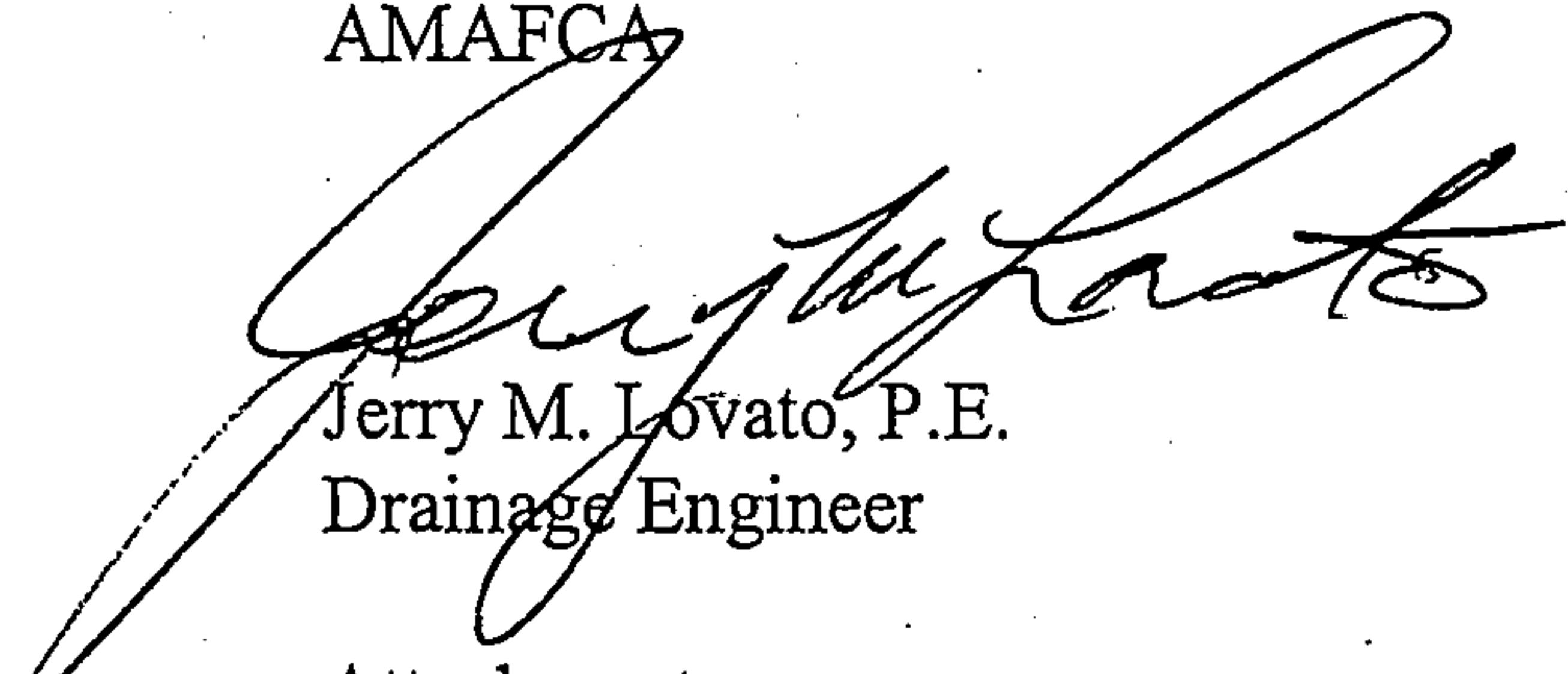
Remedial work was done on the pond in an attempt to address the construction deficiencies. Additional fill has been placed on the pond berm, but the fill was not benched or tied into the existing berm nor was the fill moisture conditioned and compacted. The modification to the pond is not acceptable.

Please submit to AMAFCA a remediation plan to address elevation deficiencies for all embankments associated with the diversion berm and pond located at Glendale and Barstow. All work shall meet the lines and grades shown on your plans for City of Albuquerque Project No. 729781 and shall be supported by appropriate geotechnical testing. All work will need to be completed by February 1, 2005. The remediation plan shall be submitted to AMAFCA no later than close of business January 5, 2006.

Rhett Waterman
December 22, 2005
Page 2 of 2

If you need additional information or have any questions please give me a call.

Sincerely,
AMAFCA



Jerry M. Lovato, P.E.
Drainage Engineer

Attachments:

Agreement to Provide Maintenance for a Sediment Facility on the El Camino Arroyo at Barstow & Glendale, dated March 17, 2004

CC:

Greg Krenik, P.E., D. Mark Goodwin & Associates, P.A.
Brad Bingham, P.E., City of Albuquerque
Lynn Mazur, P.E., Development Review Engineer, AMAFCA
AMAFCA Correspondence File

fax 1-505-797-9539
fax 1-505-924-3864

**Agreement to Provide Maintenance for
a Sedimentation Facility on the El Camino Arroyo
at Barstow & Glendale**

WHEREAS, the Albuquerque Metropolitan Arroyo Flood Control Authority (AMAFCA), a political subdivision of the State of New Mexico, and Alpha Equities, LLC, a New Mexico Limited Liability Company (OWNER), henceforth collectively referred to as the PARTIES, wish to enter into an Agreement to construct and maintain drainage improvements to serve its property; and,

WHEREAS, the OWNER is the fee simple owner of Lots 10-23, Block 12, Tract 1, Unit 3, and Lots 1 and 2, Block 17, Tract 1, Unit 3, plat of North Albuquerque Acres, filed in the Office of the County Clerk of Bernalillo County, New Mexico in Volume D, Folio 121, on September 10, 1931, the location of which is shown on Exhibit "A"; and,

WHEREAS, the North Albuquerque Acres Master Drainage Plan (DMP), Resource Technology, Inc., October 1998, prepared for the City of Albuquerque, identified capturing the El Camino Arroyo in a sediment basin at Ventura Street, routing the flows in a large diameter storm drain down Glendale Avenue, and diverting the flows down Wyoming Boulevard to the proposed La Cueva Channel; and,

WHEREAS, as the result of an Agreement for Construction among AMAFCA and area developers, the La Cueva Channel was constructed from Interstate 25 to Eagle Rock Avenue, and the El Camino Arroyo Diversion Storm Drain was constructed in Wyoming Boulevard with an interim sediment basin at Wyoming Boulevard and Glendale Avenue; and,

WHEREAS, in order to develop its property, to be known as Quivera Estates Subdivision, the OWNER will construct a replacement interim sediment basin at Barstow Street and Glendale Avenue (IMPROVEMENTS), as shown on Exhibit "B", to replace the existing basin at Wyoming Boulevard and Glendale Avenue and will also construct the master-planned large diameter storm drain in Glendale Avenue from Barstow Street to Wyoming Boulevard, which shall be constructed under a City of Albuquerque work order, Project No. 727981; and,

WHEREAS, the OWNER has provided a Grant of Permanent Easement for Storm Drainage Works to AMAFCA for the proposed sediment basin to be located on Lots 1 and 2, Block 17, Tract 1, Unit 3, North Albuquerque Acres; and,

WHEREAS, the OWNER has requested that AMAFCA maintain the IMPROVEMENTS that will be constructed by the OWNER; and,

WHEREAS, AMAFCA is agreeable to assumption of maintenance of the completed IMPROVEMENTS after acceptance by AMAFCA;

NOW THEREFORE for good and valuable consideration, the receipt of which is hereby acknowledged the PARTIES agree as follows:

SECTION 1. OWNER, at its sole expense, agrees to:

- a. Cause to be designed, with engineer's seal and signature, and to be constructed the IMPROVEMENTS, with a minimum Volume Capacity of 2 acre-feet, one (1) Vehicle Access Ramp, a shotcrete weir and inlet structure, and an 84-inch Outlet Pipe. The IMPROVEMENTS shall conform to the dimensions and location shown on Exhibit "B". Construction of the IMPROVEMENTS shall conform to AMAFCA specifications and requirements.
- b. Provide final plans and specifications for construction of the IMPROVEMENTS to AMAFCA for review and approval prior to construction.
- c. Provide for the inspection of construction, including administration, testing, and inspection, or other supervision of construction, by a registered engineer and testing firm hired by OWNER and approved by AMAFCA to assure construction is in conformance with the plans and specifications.
- d. Reimburse AMAFCA for documented time spent at the job site by its staff for construction inspection. This time will be reimbursed at the rate of \$50.00 per hour, not to exceed a total combined amount of \$2,000.00.
- e. Cause work to be halted and remedial measures taken should the work be out of compliance with the plans and specifications, and/or standard construction practice.
- f. Obtain all necessary agency approvals for the project.
- g. Notify AMAFCA's Field Engineer by phone call to 884-2215 and in writing by facsimile to 884-0214 at least 48 hours prior to beginning work on the IMPROVEMENTS.
- h. Provide copies of all daily construction reports and testing reports to AMAFCA.
- i. Provide an engineer's certification to AMAFCA that the IMPROVEMENTS have been constructed in accordance with the approved plans and specifications. Furnish as-built mylars within 30 days of final acceptance.
- j. Require its contractor to provide liability insurance during the period of construction naming AMAFCA as an additional insured. The amount of the liability insurance shall be at least \$1,000,000.00.
- k. Provide a Grant of Permanent Easement for Storm Drainage Works (Drainage Easement), granting easement rights to AMAFCA for the operation and maintenance of the IMPROVEMENTS, acceptable to AMAFCA.

1. Provide to AMAFCA proof of consent from Los Alamos National Bank consenting to the Drainage Easement, acceptable to AMAFCA, or as an alternative, obtain a Partial Release removing Lots 1 and 2 from the existing mortgage.

SECTION 2. AMAFCA agrees to:

a. Review and, if appropriate, approve plans and specifications for IMPROVEMENTS, as prepared by the OWNER's engineer. The vertical and horizontal limits of the IMPROVEMENTS will be substantially the same as shown in Exhibit "B".

b. Provide periodic inspection of the IMPROVEMENTS during the construction period by its staff to assure that construction is in conformance with the plans and specifications.

c. Accept the IMPROVEMENTS for continuous maintenance upon satisfactory completion of construction and confirm acceptance of same in writing by AMAFCA's Executive Engineer.

d. Accept dedication of the Drainage Easement for the IMPROVEMENTS as requested by AMAFCA, provided that the document is acceptable to AMAFCA and proper consent has been provided by Los Alamos National Bank.

e. After completion of the IMPROVEMENTS and acceptance by AMAFCA, and after receipt of a Letter Of Map Revision from FEMA, quitclaim / release the existing Grant of Permanent Easement for Storm Drainage Works for the existing sediment basin that encumbers Lots 31 and 32, Block 11, Tract 1, Unit 3, North Albuquerque Acres to the current property owners.

SECTION 3. Both PARTIES agree:

a. Both PARTIES will strive for prompt action and timely response.

b. If any situation arises which adversely affects either PARTY's participation in this Agreement, said PARTY will immediately notify the other PARTY in writing.

c. Any circumstance, including the above, which materially affects this Agreement will be promptly and equitably resolved by both PARTIES, and, if necessary, an amendment to this Agreement shall be executed.

d. Unresolvable differences shall be referred to binding arbitration under the provisions of the New Mexico Uniform Arbitration Act.

e. The OWNER, after consultation with AMAFCA, shall execute change orders and resolve contract claims relating to design and construction of the IMPROVEMENTS. The OWNER shall assume financial commitments resulting from any change order or resolution of a

contract claim from construction of said projects, unless such change order or claim is the result and effected by actions of AMAFCA or a third party in expanding the size or capacity of the project beyond the originally approved design. Notwithstanding anything to the contrary, this Agreement requires the OWNER only to construct the drainage improvements shown on Exhibit "B" in accordance with this Agreement and AMAFCA's generally applicable standards.

f. All storm drainage facilities will be designed and constructed to City of Albuquerque and AMAFCA standards and, as constructed, shall meet all applicable codes.

g. This Agreement shall not be assignable by either PARTY of the PARTIES to this Agreement without the written consent of the other PARTY of the Agreement.

h. This Agreement may be modified only by mutual written agreement of the PARTIES hereto.

i. The PARTIES understand and agree that the obligation of each PARTY under this Agreement shall be performed in compliance with the applicable laws, statutes and ordinances. Nothing herein is intended to constitute any agreement for the PARTIES to perform any activity in violation of the Constitution or Laws of the State of New Mexico.

j. All notices with respect to this Agreement shall be in writing and shall be delivered personally, sent via confirmed fax, or sent postage prepaid by United States Mail, certified mail, return receipt requested, to the addresses set forth below or such other addresses as hereafter specified in writing by one Party to the other:

Albuquerque Metropolitan Arroyo
Flood Control Authority
2600 Prospect, NE
Albuquerque, NM 87107
FAX: (505) 884-0214

Alpha Equities, LLC
8813 2nd Street NW, #E
Albuquerque, NM 87114
FAX: (505) 922-9418

k. If any clause or provision in this Agreement is illegal, invalid, or unenforceable, under present or future laws effective during the term of this Agreement, then and in that event, it is the intention of the PARTIES hereto that the remainder of this Agreement shall not be affected thereby.

l. It is specifically agreed between the PARTIES executing this Agreement that this Agreement does not and is not intended to create in the public, or any member thereof, any rights whatsoever, such as, but not limited to, the rights of a third party beneficiary, or to authorize anyone not a party to this Agreement to maintain a suit(s) for wrongful death(s), bodily and/or personal injury(ies) to person(s), damage(s), and/or any other claim(s) whatsoever pursuant to the provisions of this Agreement.

m. In the event of any dispute regarding this Agreement, the prevailing PARTY shall be entitled to reimbursement of its costs and reasonable attorney's fees.

SECTION 4. SUCCESSORS AND ASSIGNS:

The Agreement and the rights, interests, and obligation hereunder shall be binding upon and shall insure to the benefit of the parties hereto and their respective successors and assigns.

IN WITNESS WHEREOF, the undersigned have caused this Agreement to be executed as of the day and year set forth above.

AMAFCA

By: John P. Kelly
John P. Kelly, Executive Engineer
(as authorized by the AMAFCA Board of Directors
at its meeting of March 17, 2004)

Alpha Equities, LLC

By: Rhett Waterman, Managing Member

ACKNOWLEDGEMENT FOR NATURAL PERSON

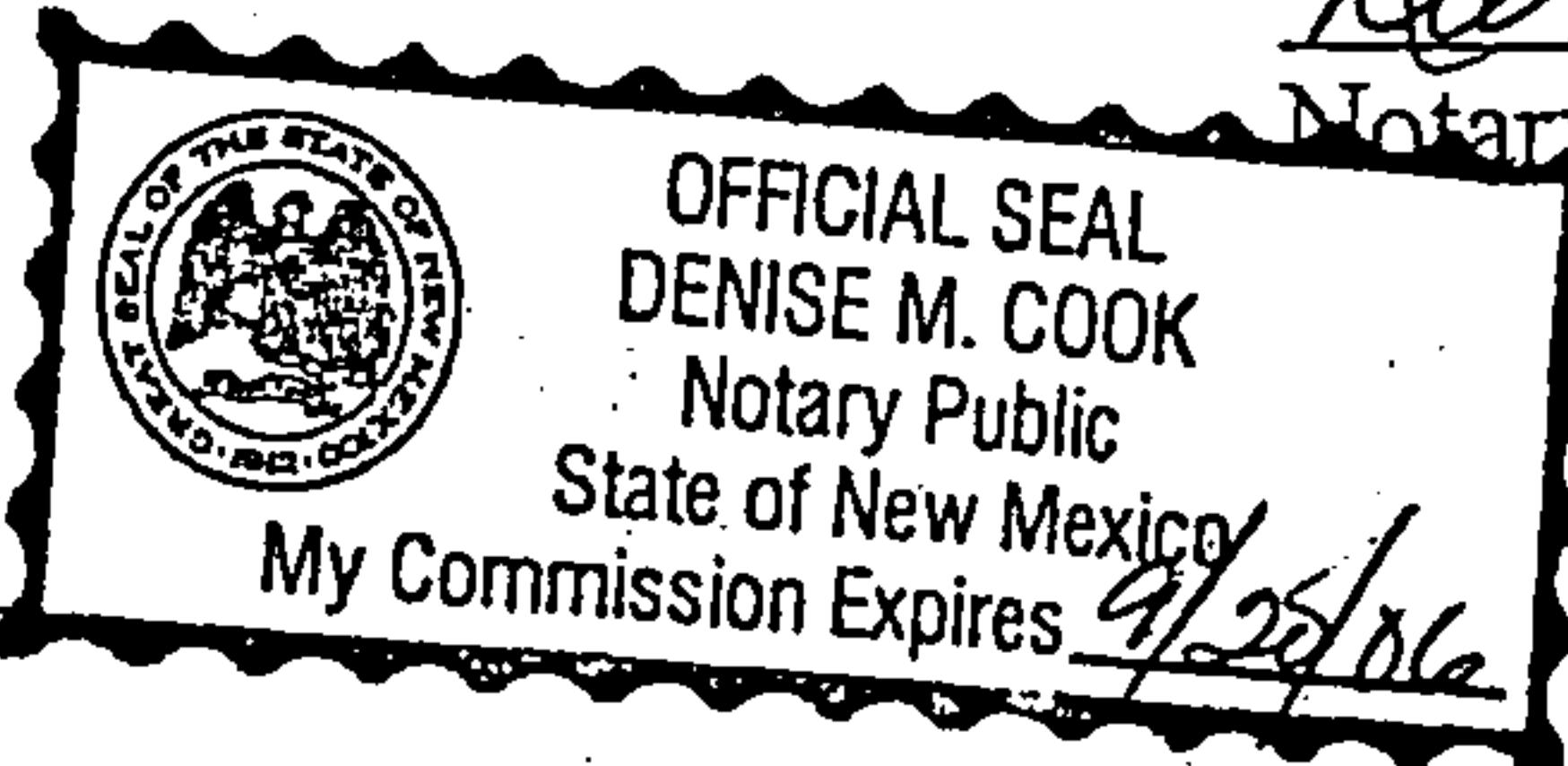
STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

This instrument was acknowledged before me on April 5th, 2004 by
John P. Kelly, Executive Engineer for the Albuquerque Metropolitan Arroyo Flood Control
Authority, a Political Subdivision of the State of New Mexico.

Denise M. Cook

My Commission Expires:

Sept. 20, 2006



ACKNOWLEDGEMENT FOR CORPORATION

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

This instrument was acknowledged before me on March 30th, 2004 by
Rhett Waterman, Managing Member, Alpha Equities, LLC, on behalf of said Limited Liability
Company.

Rhett Waterman
Notary Public

My Commission Expires:

4-10-05

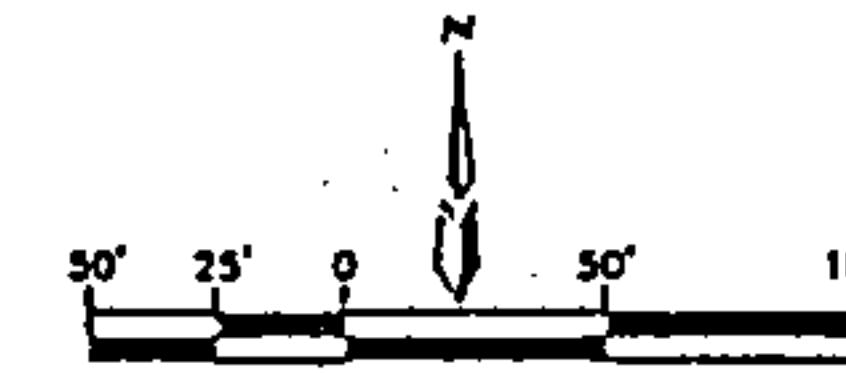
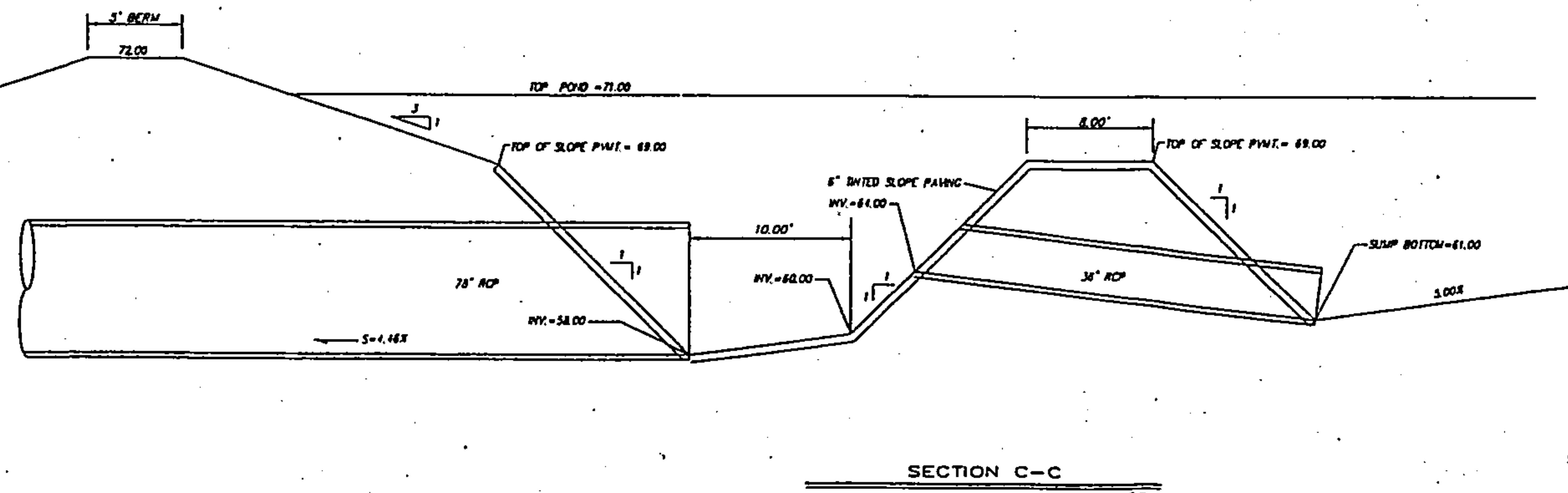
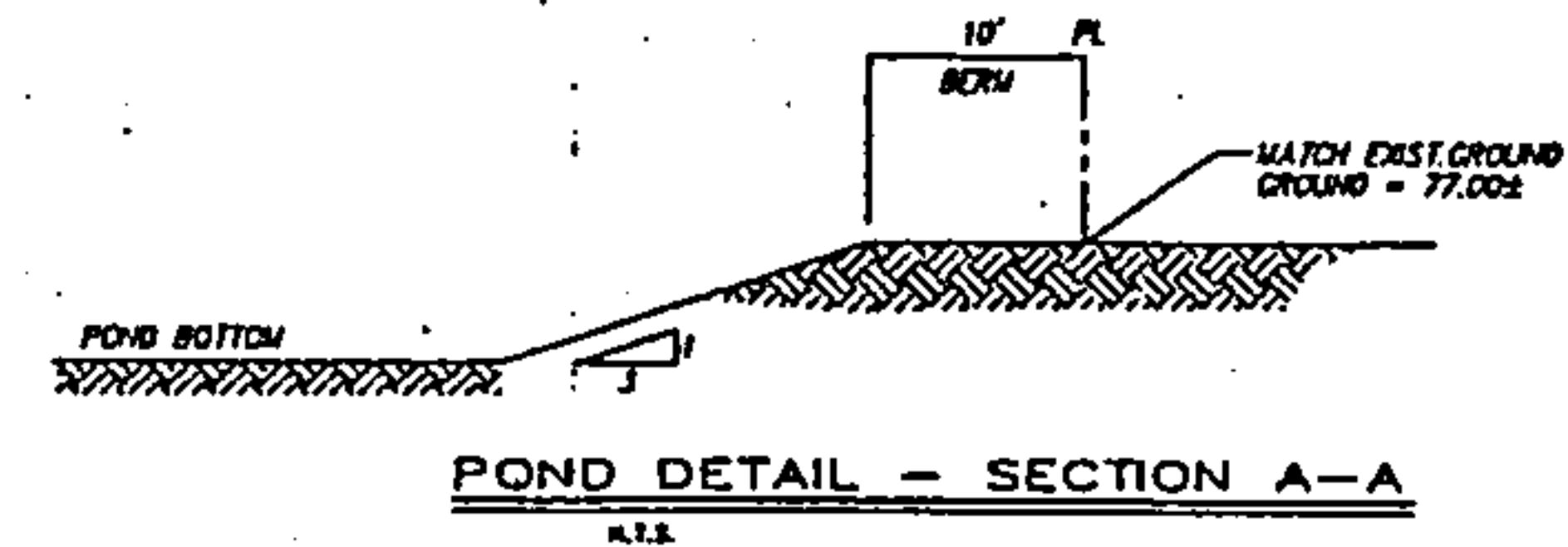
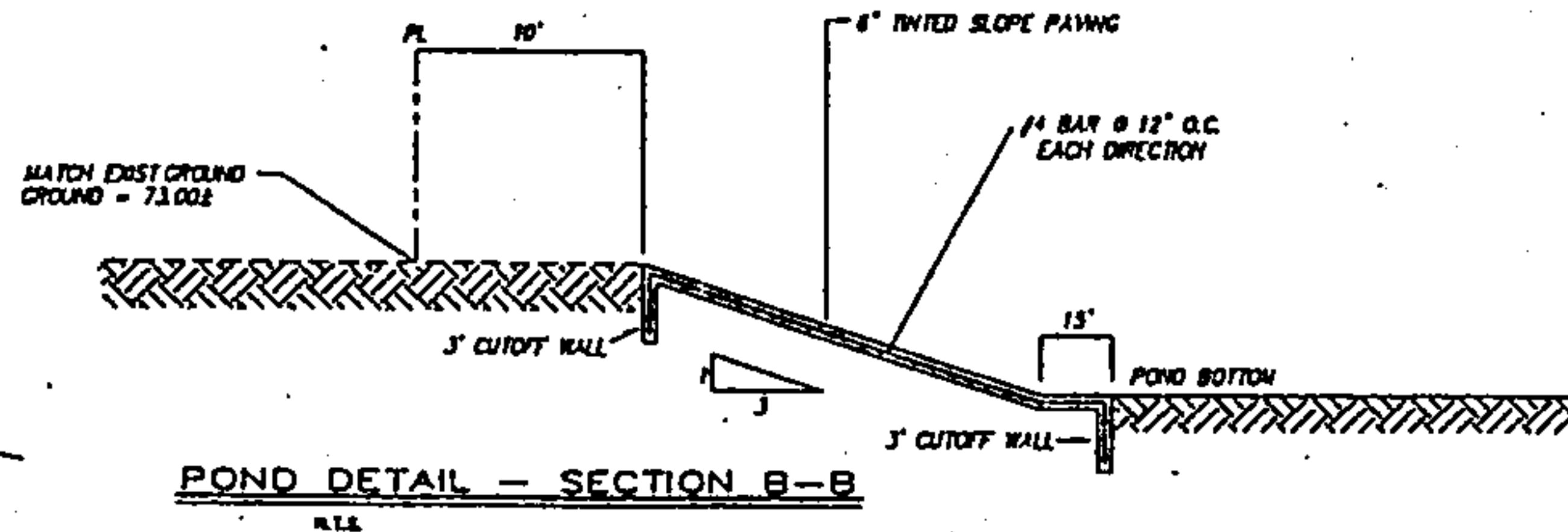
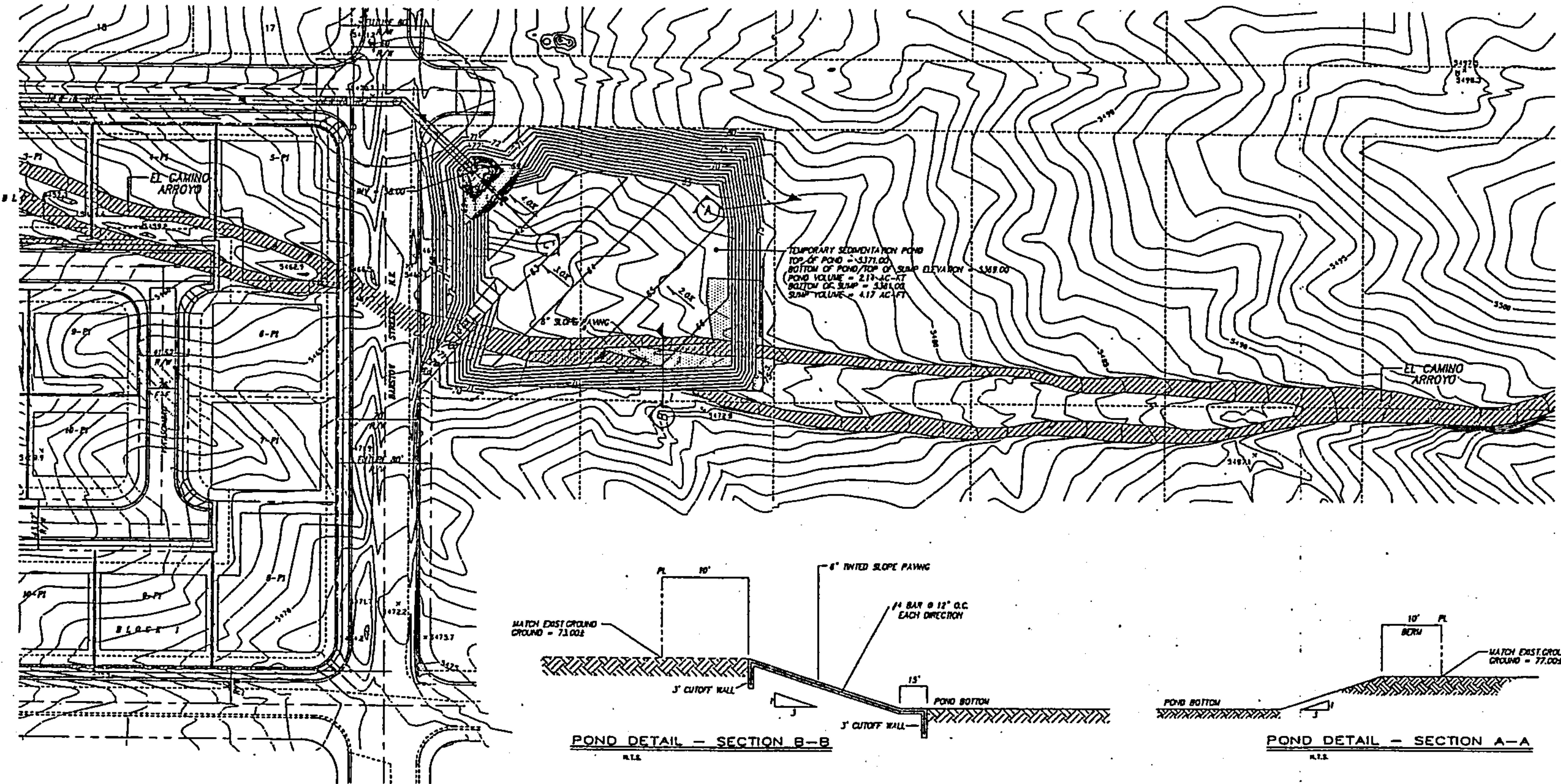


EXHIBIT B		40.045/14	40.045/14
DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL		
CITY PROJECT NO. 729781		ZONE MAP NO. B-19	SHEET OF 20 20
LAST DESIGN UPDATE			
A30820UV/PLAHS/A3082-PONDA-DETAILS/03-05-01/ADH GJM			

**QUIVERA ESTATES
EL CAMINO DIVERSION STORMDRAIN
SEDIMENTATION POND PLAN & DETAILS**

dmg MARK GOODMAN & ASSOCIATES, P.A.
CONSULTING ENGINEERS
P.O. BOX 80505
ALBUQUERQUE, NEW MEXICO 87199
(505) 828-2200, FAX (505) 797-9339

**ALBUQUERQUE METROPOLITAN
ARROYO FLOOD CONTROL AUTHORITY**

AS BUILT INFORMATION

CONTRACTOR	CONTRACT NO.
FIELD NOTES	DATE
NO. BY	LOCATED IN THE NORTHEAST quadrant of the intersection of Modesto Ave. NE and Berrien St. NE, approximately 30' north from the confluence of Modesto Ave. NE and approximately 30' east from the confluence of Berrien St. NE.
FIELD NOTES	DATE
NO. BY	Geographic Position (NGA 1987) in feet
FIELD NOTES	DATE
NO. BY	NM State Plane Coordinates (Central Zone)
FIELD NOTES	DATE
NO. BY	X=104237.58 Y=324092.46
FIELD NOTES	DATE
NO. BY	Elevation=517.433 NM0292 in feet

Ronald D. Brown, Chair
Daniel F. Lyon, Vice Chair
Tim Eichenberg, Secretary-Treasurer
Janet Sayers, Asst. Secretary-Treasurer
Danny Hernandez, Director

John P. Kelly, P.E.
Executive Engineer



Greg Krenik, P.E.
D. Mark Goodwin & Associates
P.O. Box 90606
Albuquerque, NM 87199

**Albuquerque
Metropolitan
Arroyo
Flood
Control
Authority**

2600 Prospect N.E., Albuquerque, NM 87107
Phone: (505) 884-2215 Fax: (505) 884-0214

3-19/2023
File

December 22, 2005

Mail & Fax 1-505-797-9539

Re: AMAFCA Does Not Accept the Drainage Improvements for Maintenance
Quivera Estates Subdivision

Dear Greg,

The pond shown on the approved plans, City of Albuquerque Project No. 729781, was not constructed to the lines and grades shown. Consequently, AMAFCA did not accept the drainage improvements after construction and instructed Leo Valdez, Construction Observer, for Mark Goodwin & Associates, that AMAFCA would require that the pond be constructed to the lines and grades shown on the plans. I contacted you concerning the construction deficiencies that were found.

Remedial work was done on the pond in an attempt to address the construction deficiencies. AMAFCA did not receive any daily or testing reports concerning the extent of the remedial work. It appears that additional fill has been placed on the pond berm, but the fill was not tied into the existing berm nor was the fill moisture conditioned and compacted. The remedial work did not address the construction deficiencies.

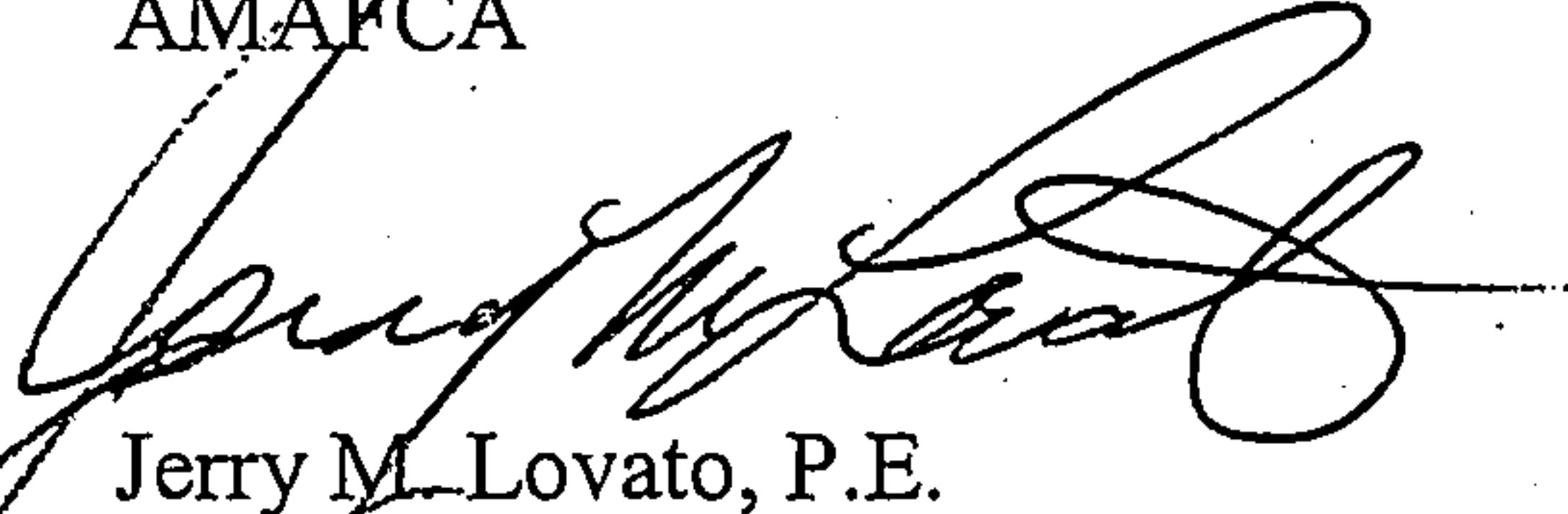
I cannot verify your certification of the as-built conditions of the project at this time. As such I can not recommend to the Executive Engineer that AMAFCA maintain the drainage improvements described in the agreement between AMAFCA and Alpha Equities, LLC dated March 17, 2004 and the associated Letter of Map Revision submitted to FEMA.

I have asked Alpha Equities to submit to AMAFCA a remediation plan to address elevation deficiencies for all embankments associated with the diversion berm and pond located at Glendale and Barstow. All work shall meet the lines and grades shown on your plans for City of Albuquerque Project No. 729781 and shall be supported by appropriate geotechnical testing. All work will need to be completed by February 1, 2005. The remediation plan shall be submitted to AMAFCA no later than close of business January 5, 2006.

Greg Krenik
December 22, 2005
Page 2 of 2

If you need additional information or have any questions please give me a call.

Sincerely,
AMAFCA



Jerry M. Lovato, P.E.
Drainage Engineer

Attachments:

Photos, dated December 21, 2005, Barstow & Glendale

CC:

Rhett Waterman, Alpha Equities, LLC	fax 1-505-922-9418
Brad Bingham, P.E, City of Albuquerque	fax 1-505-924-3864
Lynn Mazur, AMAFCA, Development Review Engineer	
AMAFCA File (2)	

12/21/2005



12/21/2005



CITY OF ALBUQUERQUE



May 10, 2006

Gregory Krenik, P.E.
Mark Goodwin & Associates, PA
P.O. Box 90606
Albuquerque, NM 87199

Re: Quivera Estates, SIA/Financial Guarantee Release

Engineer's Stamp dated 12-29-03 (B19-D23)

Certification dated 8-04-04

Dear Mr. Krenik,

P.O. Box 1293

Based upon the information provided in your submittal received 5-10-06, the above referenced certification is approved for release of SIA and Financial Guarantee.

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

Albuquerque

New Mexico 87103

Sincerely,

A handwritten signature in black ink, appearing to read "K. D. METRO".

Kristal D. Metro, P.E.
Senior Engineer, Planning Dept.
Development and Building Services

www.cabq.gov

C: Marilyn Maldonado, COA# 729781
File



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

March 30, 2004

Gregory J. Krenik, PE
Mark Goodwin & Associates
P.O. 90606
Albuquerque, NM 87199

Re: Quivera Estates Storm Drain Drainage Report
Engineer's Stamp dated 2-11-04 (B19/D23)

Dear Mr. Krenik,

Based upon the information provided in your submittals dated 2-26-04, the above referenced report is approved for Work Order. AMAFCA concurrence will be required. Any comments can be addressed at DRC.

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

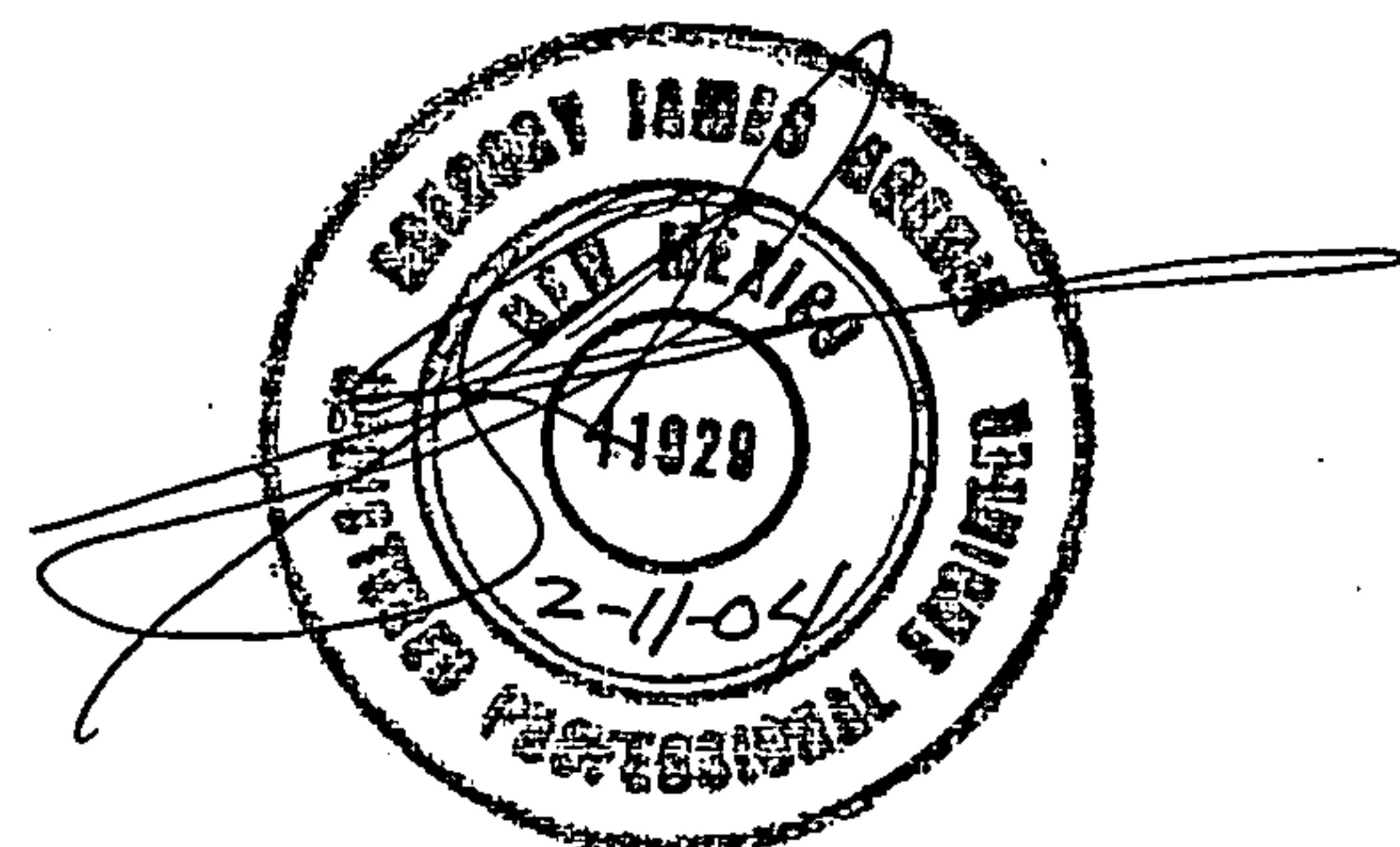
Sincerely,

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

C: Lynn Mazur, AMAFCA
file

DRAINAGE REPORT
for
Quivera Estates
El Camino Arroyo
Storm Drain Diversion

FEBRUARY 2004





D. Mark Goodwin & Associates, P.A.
Consulting Engineers

P.O. BOX 90606, ALBUQUERQUE, NM 87199
(505) 828-2200 FAX 797-9539
e-mail: dmg@swcp.com

PROJECT QUIVERA ESTATES
SUBJECT GLENDALE STORMAIN
BY GSK DATE 2-11-04
CHECKED _____ DATE _____
SHEET 1 OF 1

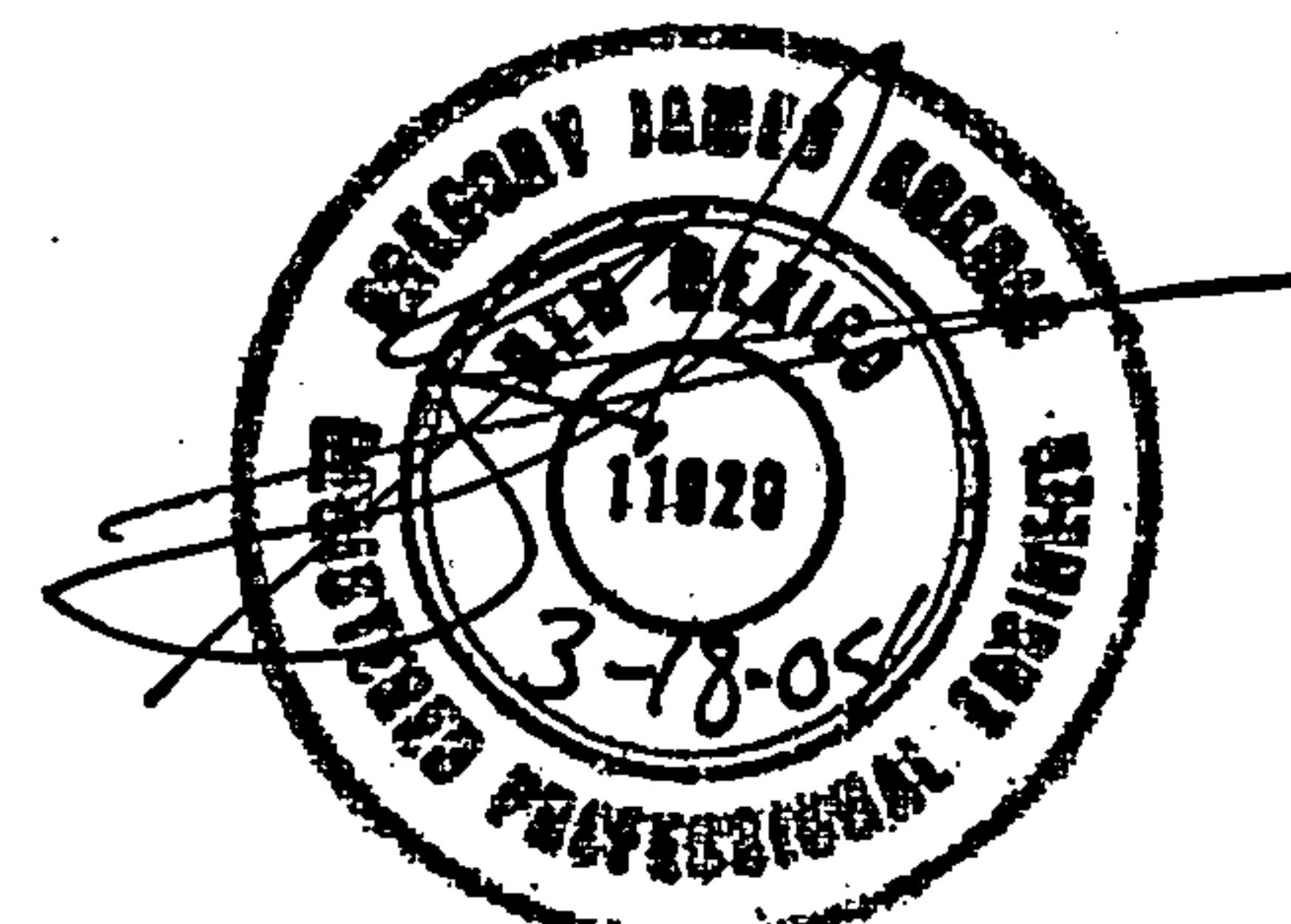
- THIS REPORT IS FOR THE DESIGN OF THE GLENDALE STORMAIN FROM THE EXISTING 96" RCP AT WYOMING TO THE NEW SEDIMENTATION POND AT BARSTOW.
- PER THE QUIVERA ESTATES DRAINAGE REPORT PREPARED BY MARK GOODWIN & ASSOCIATES 11-20-04, APPENDIX "A"
 - "THE EXISTING SEDIMENTATION/DETENTION POND AT THE NE CORNER OF GLENDALE AND WYOMING WILL BE RELOCATED TO THE SE CORNER OF GLENDALE AND BARSTOW. AN 84" STORMAIN WILL BE INSTALLED IN GLENDALE FROM THE EXISTING 96" STORMAIN IN WYOMING TO THE RELOCATED POND AS PART OF THE "FINAL NORTH ALBUQUERQUE ACRES MASTER DRAINAGE PLAN" PREPARED BY RESOURCE TECHNOLOGY, INC., 10-28-98. THE PORTIONS OF THAT REPORT THAT PERTAIN TO OUR PROJECT ARE INCLUDED IN THIS REPORT AS APPENDIX "A". "
- WE WILL MODIFY THE STORMAIN DESIGN THAT WAS DONE FOR THE EL CAMINO DIVERSION TO THE LA CUEVA CHANNEL.
 - FROM THE EL CAMINO SUMMARY SHEET OF THE RTI REPORT Q = 870 CFS AT BARSTOW
 - FROM DESIGN THE WYOMING STORMAIN HAS A Q = 911 CFS.
 - WE WILL ADD 10 CFS TO THE SD AT FOUR LOCATIONS ALONG THE RUN AT POINTS WHERE CONCENTRATED FLOW ENTERS THE SD.
- THE RTI REPORT CALLED FOR 84" RCP BUT WITH THE CONDITIONS THAT THE PROJECT IS IN HAS THE PROPOSED STORMAIN VARYING FROM 96" RCP TO 78" RCP. THE SLOPE OF THE PIPE WAS THE MAIN FACTOR.
- THE ATTACHED HYDRAULIC REPORT FOR THE STORMAIN (SHEETS 2-17) USES THE FIRST FIVE LINES OF THE PREVIOUS EL CAMINO DIVERSION CALCULATION DONE WITH THE LA CUEVA CHANNEL. THE ONLY CHANGES ARE I INSERTED THE ASBUILT INFORMATION FOR RIMS & INSETS. I MODIFIED LINE SIX (SHORTENED BECAUSE OF BEND) AND ADDED LINES 7 THRU 14

***Drainage Calculations
for Perimeter Roads***

at

Quivera Estates

March 2004



dmg

D. Mark Goodwin & Associates, P.A.
Consulting Engineers

P.O. BOX 90606, ALBUQUERQUE, NM 87199
(505) 828-2200 FAX 797-9539
e-mail: dmg@swcp.com

PROJECT QUIVERA ESTATES
SUBJECT PERIMETER ROAD DRAINAGE
BY GSK DATE 3-18-03
CHECKED _____ DATE _____
SHEET 1 OF 1

- QUIVERA ESTATES IS BOUNDED BY GLENDALE TO THE NORTH, BARSTOW TO THE EAST AND MODESTO TO THE SOUTH.
- WITH THIS PROJECT THE FULL MODESTO SECTION WILL BE COMPLETED ALONG OUR FRONTAGE. THE CITY OF ALBUQUERQUE RECENTLY COMPLETED THE SOUTH SIDE OF MODESTO.

TOTAL ROW FROM BARSTOW TO WYOMING

$$= 3.533 \text{ AC} \quad 60' \text{ ROW} \quad 32' \text{ F-F w/ } 4' \text{ SOWK N. SIDE}$$

60% "D"
40% "B"

FROM AHYMO OUTPUT SHEETS 6-9

$$Q = 14.25 \text{ cfs}$$

THIS TRANSLATES TO A $Q = 3.21 \text{ cfs}$ ON THE NORTH SIDE OF MODESTO AT THE WEST END OF QUIVERA ESTATES.

- THE WEST HALF OF BARSTOW WILL BE COMPLETED WITH THIS PROJECT. FLOWS WILL GO TO MODESTO AND GLENDALE AND TRAVEL EAST. THE EAST HALF FLOWS WILL NOT BE ALLOWED TO CROSS BARSTOW AND WILL REQUIRE A SUMP INLET.

TOTAL ROW FROM MODESTO TO GLENDALE

$$= 0.9679 \text{ AC} \quad 90\% "D" \quad 10\% "B"$$

50% OF Q WILL BE IN SUMP CONDITION

FROM AHYMO OUTPUT SHEETS 6-9

$$Q = 4.64 \text{ cfs}$$

$$Q_{in \ sump} = 2.32 \text{ cfs}$$

$$Q/p = 3.04^{1.5} \text{ FOR SUMP INLET}$$

$$P = \text{PERIMETER} \quad SGL "A" \quad DBC THROAT \\ = 11$$

$$H = 0.17' < 0.67 \text{ OK Curb Height}$$

$$< 0.485 \text{ OK Crown Height}$$

CAPACITY BEFORE FLOW SPILLS OVER CROWN
 $= 11.15 \text{ cfs}$

THIS LEAVES 8.83 cfs THAT CAN PASS FUTURE INLETS
ON MODESTO AND GLENDALE TO FLOW TO THIS SUMP



D. Mark Goodwin & Associates, P.A.
Consulting Engineers
P.O. BOX 90606, ALBUQUERQUE, NM 87199
(505) 828-2200 FAX 797-9539
e-mail: dmg@swcp.com

PROJECT QUINTANA ESTATES
SUBJECT PERIMETER ROAD DRAINAGE
BY GSK DATE 3-18-04
CHECKED _____ DATE _____
SHEET 2 OF 1

- THE PROJECT CONSTRUCT THE SOUTH HALF OF GLENDALE ALONG THE PROJECTS FRONTAGE. AN INLET WILL BE REQUIRED AT THE WEST END TO TAKE FLOWS BEFORE LEAVING THE PAVEMENT.

TOTAL ROW OF GLENDALE FROM BARSTOW TO WYOMING
 $= 3.5331 \text{ AC} \quad 30\% \text{ "D"} \quad 20\% \text{ "B"}$

FROM AHYMO OUTPUT SHEETS 6-9
 $Q = 16.02 \text{ cfs}$

THIS TRANSLATES TO 3.15 cfs TO THE POINT OF THE INLET LOCATION - SGL "A"

$$d = 0.28 \quad s = 3.0\% \quad n = 0.017$$

$$w_p = 10.03$$

$$A = 1.6356$$

$$V_{1/2} = 3.33 \text{ f/s}$$

$$Q_{1/2} = 3.45 \text{ cfs} \approx 3.15 \text{ cfs } \underline{\text{OK}}$$

FROM Nomo Sheet 5

$$Q_{\text{INLET}} = 2.95 \text{ cfs} \quad 0.20 \text{ cfs GOES BY INLET}$$

- DETERMINE FLOWS IN GLENDALE AFTER THE EL CAMINO ARROYO IS DIVERTED INTO THE NEW STORM DRAIN.

DRAINAGE BASINS ARE SHOWN ON THE ATTACHED MAP.

BASIN A: DRAINS THE NORTH SIDE OF GLENDALE ROW AND A PORTION OF LOTS TO THE NORTH TO A DBL "D" INLET IN THE SWALE OF THE REGRADED DIRT GLENDALE AVE.

BASIN B: DRAINS THE SOUTH SIDE OF GLENDALE ROW AND A PORTION OF LOTS TO THE SOUTH TO A DBL "D" INLET IN THE SWALE OF THE REGRADED DIRT GLENDALE AVE.

BASIN C: SAME AS BASIN B BUT DRAINS TO THE NEXT INLET

BASIN D: DRAINS THE NORTH SIDE OF GLENDALE ROW TO THE NEXT DBL "D" INLET

BASIN E: SAME AS BASIN D

BASIN F: DRAINS THE SOUTH SIDE OF GLENDALE ROW AND THE EL CAMINO (REMAINING ARROYO) TO THE NEXT DBL D INLET.

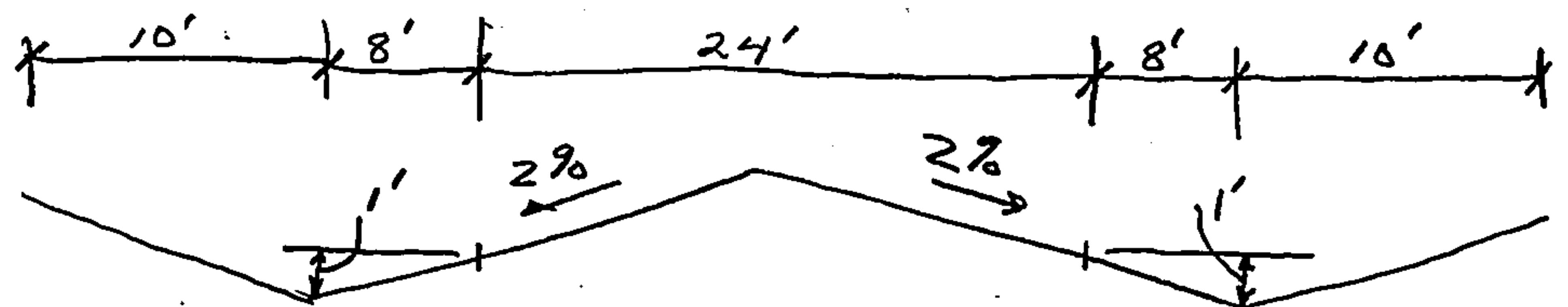
dmgD. Mark Goodwin & Associates, P.A.
Consulting EngineersP.O. BOX 90606, ALBUQUERQUE, NM 87199
(505) 828-2200 FAX 797-9539
e-mail: dmg@swcp.comPROJECT QUIVERA ESTATES
SUBJECT PERIMETER ROAD DRAINAGE
BY GJK DATE 3-18-04
CHECKED _____ DATE _____
SHEET 3 OF _____

BASIN	AREA (AC)	TYPE A (%)	TYPE B (%)	TYPE C (%)	TYPE D (%)
A	3.684	72.23	0	27.77	0
B	0.854	60.30	0	39.70	0
C	0.470	52.55	0	47.45	0
D	0.223	0	0	100	0
E	0.214	0	0	100	0
F	7.640	94.65	0	2.80	2.55

FROM AHYMO OUTPUT SHEETS 10-15

BASIN	Q (cfs)
A	8.06
B	2.03
C	1.18
D	0.77
E	0.74
F	14.70

• FIND SECTION OF GLENDALE



SLOPE = 3.5% $\eta = 0.027$

$d = 1.0$

$WP = 16$

$A = 8$

$V = 6.49 \text{ f/s}$

 $Q = 51.89 \text{ cfs}$ IS CAPACITY OF SWALE ON EACH SIDE OF GLENDALE

• SWALE HAS CAPACITY FOR ALL FLOWS LEADING TO INLETS

$d = 0.5$

$d = 0.29$

$d = 0.24$

$d = 0.21$

$d = 0.62$

$WP = 8$

$WP = 4.64$

$WP = 3.84$

$WP = 3.36$

$WP = 9.92$

$A = 2$

$A = 0.67$

$A = 0.46$

$A = 0.423$

$A = 3.08$

$V = 4.09 \text{ f/s}$

$V = 2.84 \text{ f/s}$

$V = 2.51 \text{ f/s}$

$V = 2.29 \text{ f/s}$

$V = 4.72 \text{ f/s}$

$Q = 8.17 \text{ cfs}$

$Q = 1.91 \text{ cfs}$

$Q = 1.16 \text{ cfs}$

$Q = 0.808 \text{ cfs}$

$Q = 14.33 \text{ cfs}$

dmg

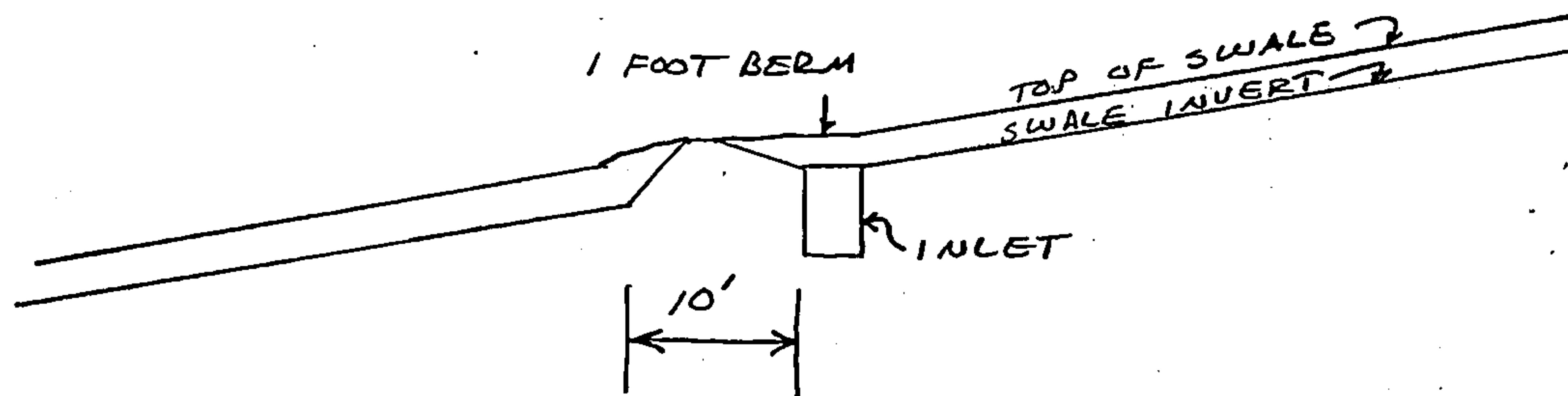
D. Mark Goodwin & Associates, P.A.
Consulting Engineers

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e-mail: dmg@swcp.com

PROJECT QUIVENA ESTATES
SUBJECT PERIMETER ROAD DRAINAGE
BY GJK DATE 3-18-04
CHECKED _____ DATE _____
SHEET 4 OF 1

- TO KEEP EACH BASIN'S RUNOFF IN EACH INLET
A SUMP MUST BE CONSTRUCTED.

THIS CAN BE DONE BY BERMING DOWNSLOPE OF
EACH INLET TO A HEIGHT OF 1 FOOT WITH
IS THE DEPTH OF THE SWALE



- FIND CAPACITY OF DOUBLE "D" INLETS IN SUMP

$$P = \text{PERIMETER} = 17$$

$$\frac{Q}{P} = 3.0 H^{1.5}$$

ASSUME SOG CLOSED

- USE WORSE CASE

$$\frac{14.70}{8.5} = 3.0 H^{1.5}$$

$$H = 0.69' < 1.0 \text{ OK}$$

DRAINAGE REPORT
for
Quivera Estates

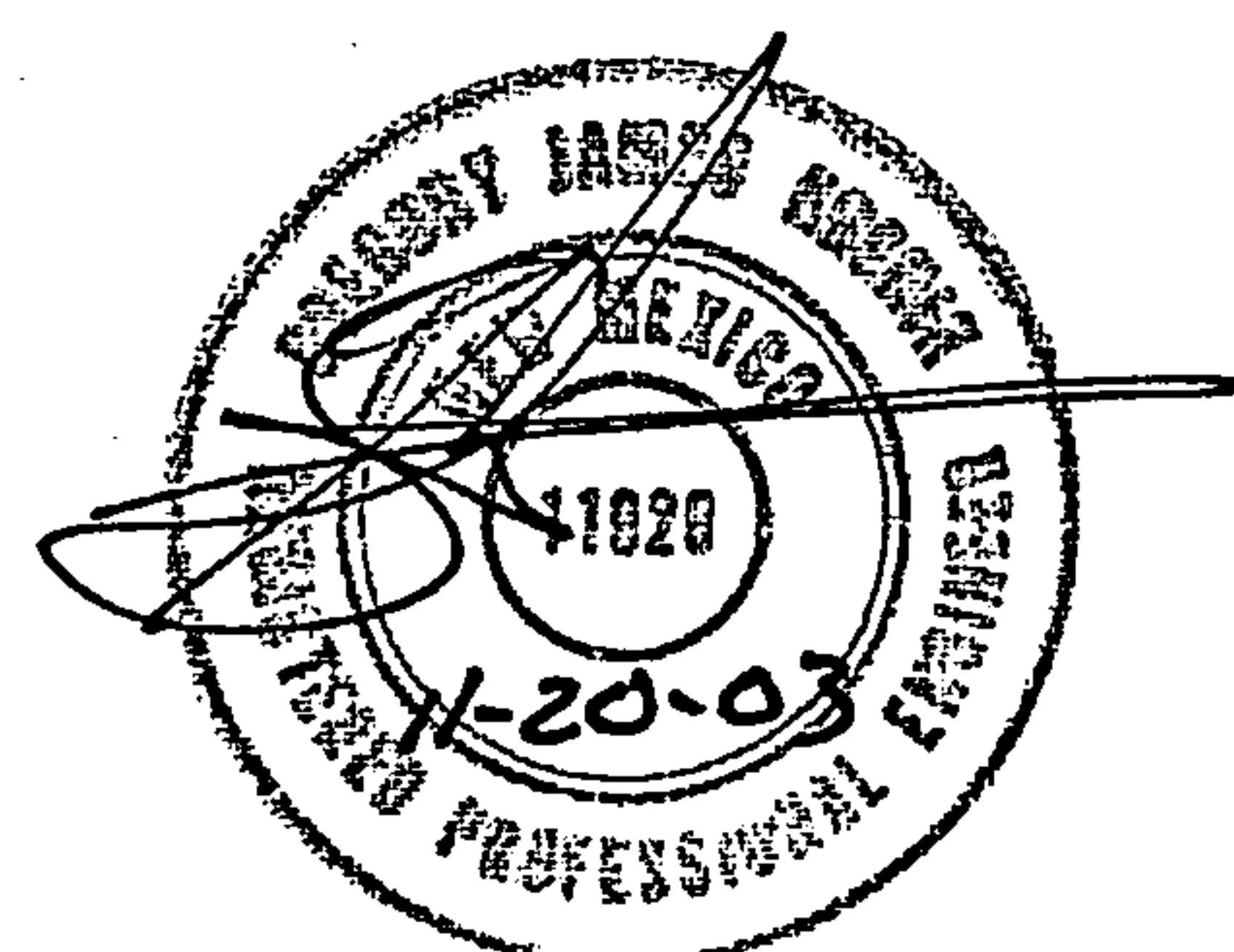
Prepared for

Alpha Equities, LLC
P.O. Box 10005
Albuquerque, NM 87184

Prepared by

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

November 2003



dmg

D. Mark Goodwin & Associates, P.A.
Consulting Engineers
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PROJECT QUINERA ESTATES
SUBJECT DRAINAGE CALCS
BY GJK DATE 11-18-03
CHECKED _____ DATE _____
SHEET 1 OF _____

- THE SITE CONTAINS 11.9513 AC SITUATED BETWEEN MODESTO AVE NE AND GLENDALE AVE NE WEST OF BARSTOW ST NE.
- THE SITE GENERALLY SLOPES FROM SE TO NW AT 4%.
- THE SITE IS IN ONE FLOOD ZONE BUT THIS FLOOD ZONE WILL BE REMOVED WITH A LOMR AS PART OF THIS PROJECT.
- THE EXISTING SEDIMENTATION/DETENTION POND AT THE NE CORNER OF GLENDALE AND WYOMING WILL BE RELOCATED TO THE SE CORNER OF GLENDALE AND BARSTOW. AN 84" STORMDRAIN WILL BE INSTALLED IN GLENDALE FROM THE EXISTING 96" STORMDRAIN IN WYOMING TO THE RELOCATED POND AS PART OF THE "FINAL NORTH ALBUQUERQUE ACRES MASTER DRAINAGE PLAN" PREPARED BY RESOURCE TECHNOLOGY, INC. 10-28-98. THE PORTIONS OF THAT REPORT THAT PERTAIN TO OUR PROJECT ARE INCLUDED IN THIS REPORT AS APPENDIX "A".
- FOR THE POND DESIGN WE WILL REFERENCE THE DESIGN FOR THE LA CUEVA CHANNEL AND DIVERSION PROJECT

- THERE WILL BE 42 LOTS

$$\text{AREA} = 11.9513 \text{ AC}$$

$$\text{AREA OF ROW} = 2.3360 \text{ AC}$$

$$1.8454 \text{ AC TYPE "A"}$$

$$0.4906 \text{ AC TYPE "B"}$$

AREA OF PADS

$$7 \times 90' \times 68' = 42,840 \text{ SF } 17.31\%$$

$$9 \times 95' \times 68' = 58,140 \text{ SF } 23.49\%$$

$$4 \times 95' \times 75' = 28,500 \text{ SF } 11.51\%$$

$$14 \times 80' \times 55' = 61,600 \text{ SF } 24.88\%$$

$$4 \times 57' \times 75' = 17,100 \text{ SF } 6.91\%$$

$$4 \times 80' \times 123' = 39,360 \text{ SF } 15.90\%$$

$$\underline{42} \quad 247,540 \text{ SF } = 5.6827 \text{ AC TYPE "D"}$$

AREA OF DRIVES

$$42 \times 20' \times 20' = 16,800 \text{ SF } = 0.3857 \text{ AC TYPE "D"}$$

$$\text{TOTAL TYPE "D"} = 1.8454 + 5.6827 + 0.3857 \\ = 7.9138 \text{ AC } = 66.22\%$$

$$\text{TYPE "B"} = 33.78\%$$

dmg

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(505) 828-2200 FAX 797-9539
e-mail: dmg@swcp.com

PROJECT DUVIERA ESTATES
SUBJECT DRAINAGE CALC'S
BY GSK DATE 11-18-03
CHECKED _____ DATE _____
SHEET 2 OF _____

$$P_1 = 2.15 \text{ in}$$

$$P_6 = 2.50 \text{ in}$$

$$P_{34} = 2.90 \text{ in}$$

FROM ANHYMO OUTPUT SHEETS 6-8

$$Q = 50.02 \text{ cfs}$$

• FIND RUNOFF PER PAD

(7)	90x68	8.46 cfs	1,236.9 cfs / lot
(9)	95x68	11.75 cfs	1,305.5 cfs / lot
(4)	95x75	5.76 cfs	1,439.3 cfs / lot
(14)	80x55	12.44 cfs	0.8889 cfs / lot
(4)	57x75	3.46 cfs	0.8641 cfs / lot
(4)	80x123	7.95 cfs	1,988.3 cfs / lot
		<u>50.02 cfs</u>	

• FIND STREET CAPACITY

$$28' F-F, 3.85\%, MTBL C+G$$

$$d = 0.26$$

$$wP = 12.135$$

$$A = 1.43$$

$$V_{1/2} = 4.13 \text{ f/s}$$

$$Q_{1/2} = 5.90 \text{ cfs}$$

$$d + \frac{V^2}{2g} = 0.52 \approx 0.51$$

$$28' F-F, 4.56\%, MTBL C+G$$

$$d = 0.24$$

$$wP = 11.12$$

$$A = 1.205$$

$$V_{1/2} = 4.24 \text{ f/s}$$

$$Q_{1/2} = 5.11 \text{ cfs}$$

$$d + \frac{V^2}{2g} = 0.52$$

• FIND FLOW IN VIA ENCUTADA JUST EAST OF CAMINO ESTREO

$$Q = 2(1.4393) + 1.9883 + 4(1.3055) + 3(1.2369) + 7(0.8889) + 2(0.8641) \\ \approx 21.75 \text{ cfs}$$

$$d = 0.39$$

$$wP = 28.78$$

$$A = 4.79$$

$$V = 4.58 \text{ f/s}$$

$$Q = 21.94 \text{ cfs} \approx 21.75 \text{ cfs OK}$$

$$d + \frac{V^2}{2g} = 0.72 < 0.85 \text{ OK}$$

$$28' F-F 47D C+G S = 3.0\%$$

INSTALL ONE DBL "A" INLET ON SOUTH SIDE
FROM NOMO SHEET 9

$$Q_{grate} = 6.5 \text{ cfs}$$

dmg

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Consulting Engineers

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e-mail: dmg@swcp.com

PROJECT QUINTA ESTUDES
SUBJECT DRAINAGE CALCS
BY GJK DATE 11-18-03
CHECKED _____ DATE _____
SHEET 3 OF _____

- Q INTO INTERSECTION

$$Q = 21.75 - 6.5 \\ = 15.25 \text{ cfs}$$

- FIND FLOW IN CAMINO ESTREO JUST SOUTH OF
VIA ENCANTADA

$$Q = 1.9883 + 4(1.2369) + 4(1.3055) + 1.9883 + 7(0.8889) + 2(0.8641) \\ + 2(1.4393) \\ = 24.9753 \text{ cfs}$$

$$d = 0.41 \quad 28' F-L STD C+G \quad S = 3.0\% \\ wP = 28.82 \\ A = 5.35 \\ V = 4.93 \text{ f/s} \\ Q = 26.36 \text{ cfs} \approx 24.98 \text{ cfs} \\ d + V^2/2g = 0.79 > 0.85 \text{ ok}$$

INSTALL 2 DBL A INLETS AT RETURNS
FROM NODS SHEET 9

$$Q_{NOD} = 7.1 \text{ cfs}$$

- Q INTO INTERSECTION
 $= 24.98 - 2(7.1)$
 $= 10.78 \text{ cfs}$

- FIND Q IN SUMP CONDITION

$$Q = 15.25 + 10.78 + 1.9883 + 1.3055 \\ = 29.32 \text{ cfs}$$

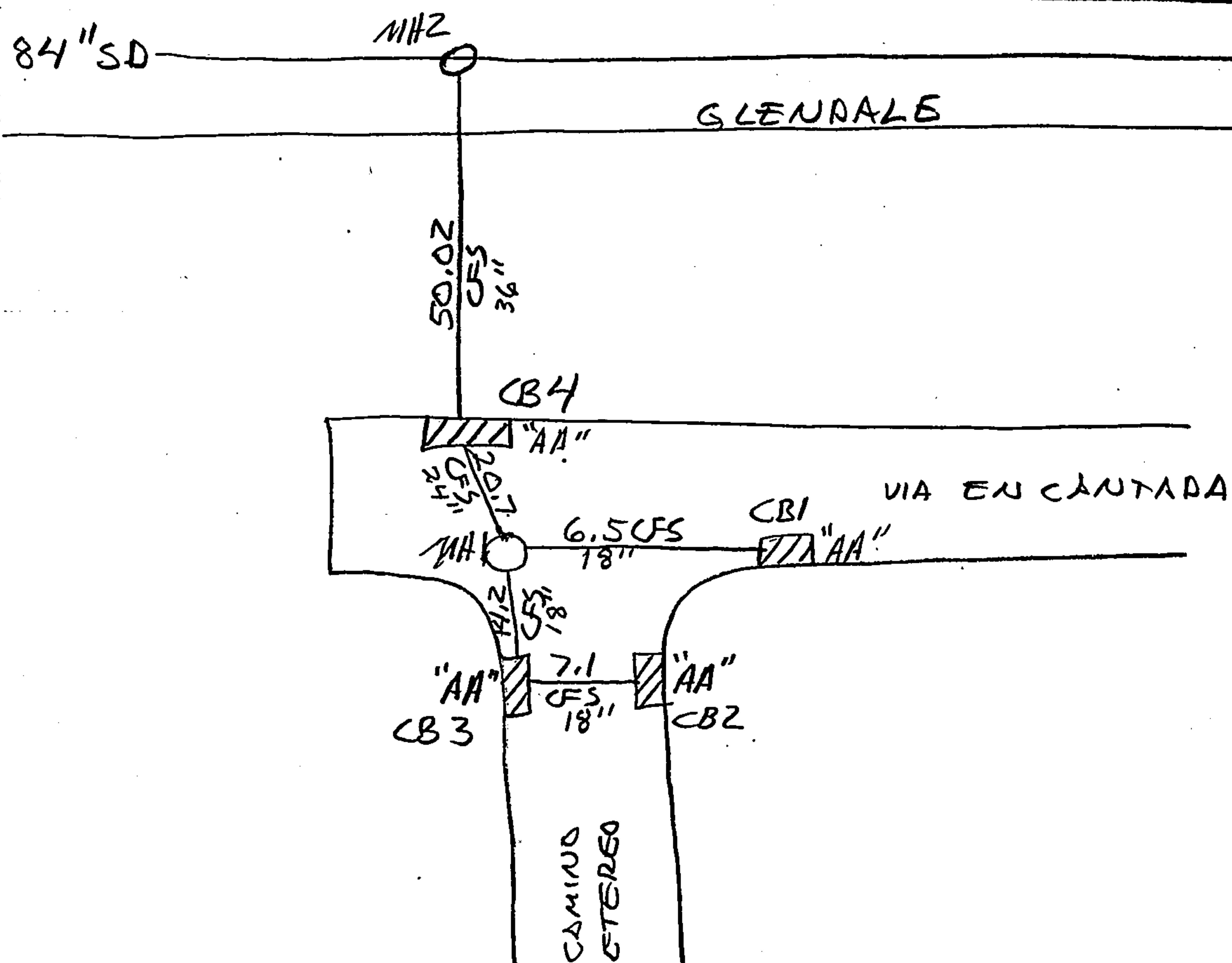
USE ONE DBL "A" INLET IN SUMP

$$Q_p = 3.0 H^{3/2} \quad P = 17$$

$$H = 0.69 < 0.85 \text{ ok}$$

dmgD. Mark Goodwin & Associates, P.A.
Consulting EngineersP.O. BOX 90606, ALBUQUERQUE, NM 87199
(505) 828-2200 FAX 797-9539
e-mail: dmg@swcp.comPROJECT OLIVER ESTATES
SUBJECT DRAINAGE CALCS
BY GJK DATE 11-18-03
CHECKED _____ DATE _____
SHEET 4 OF 1

STORM DRAIN



STRUCTURE	RIM/GND	INV	Q LEAVING	SLOPE LEAVING	PIPE SIZE
CB1	32.14	28.14	6.5	1.2%	18"
CB2	32.29	28.29	7.1	1.0%	18"
CB3	32.25	28.07	14.2	2.0%	18"
CB4	31.30	27.47/26.97	50.02	1.5%	36"
MH1	31.70	26.72/25.72	20.7	1.0%	24"
MH2	32.28	23.70			84"

FROM NOMO SHEET 10

18" RCP AT 1% CARRIES 10.5 CFS

18" RCP AT 2% CARRIES 15.0 CFS

24" RCP AT 1% CARRIES 22.0 CFS

36" RCP AT 1.5% CARRIES 82.0 CFS



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e-mail: dmg@swcp.com

PROJECT Quivera Estates
SUBJECT DRAINAGE CALCS
BY GSK DATE 11-18-03
CHECKED _____ DATE _____
SHEET 5 OF _____

OFFSITE DRAINAGE DESIGN
FOR
QUIVERA ESTATES

- THE OFFSITE DRAINAGE IMPROVEMENTS CONSIST OF RELOCATING THE EXISTING SEDIMENTATION POND WHICH IS ON THE NE CORNER OF WYOMING BLVD AND GLENDALE AVE TO THE SE CORNER OF BARSTOW ST AND GLENDALE AVE. THE EXISTING POND WAS JUST COMPLETED AS PART OF THE LA CUEVA CHANNEL PROJECT FOR AMFCA. DESIGN WAS BY MARK GOODWIN AND ASSOCIATES. WE WILL USE THE SAME DESIGN FROM THAT SET OF PLANS FOR SIZE AND OUTFALL. THE ONLY DIFFERENCE WILL BE AN 84" OUTFALL INSTEAD OF 96". THE EXISTING 96" OUTFALL WILL BE REMOVED TO THE INTERSECTION OF GLENDALE. AT THIS POINT THE NEW 84" RCD WILL BEGIN AND RUN EAST TO BARSTOW AND INTO THE NEW POND. THIS IS ONLY A TEMPORARY LOCATION.

PER THE "FINAL NORTH ALBUQUERQUE ACRES MASTER DRAINAGE PLAN" PREPARED BY RESOURCE TECHNOLOGY, INC 10-28-98 (SEE APPENDIX "A") THE FINAL LOCATION OF THE SEDIMENT POND IS AT THE INTERSECTION OF GLENDALE AND VENTURA.

FLOW FOR THE 84" STORMDRAIN WAS TAKEN FROM THE NAA MASTER DRAINAGE PLAN $Q = 880 \text{ cfs}$

B-19/D23



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

March 30, 2004

Gregory J. Krenik, PE
Mark Goodwin & Associates
P.O. 90606
Albuquerque, NM 87199

Re: Quivera Estates Sedimentation Pond Drainage Report
Engineer's Stamp dated 2-27-04 (B19/D23)

Dear Mr. Krenik,

Based upon the additional information provided in your submittals dated 2-27-04, the above referenced report is approved for Grading Permit of the sedimentation pond. AMAFCA concurrence will be required if this pond replaces the one at Wyoming. An agreement and covenant for maintenance will be required if they do not agree to maintenance.

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

Sincerely,

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

C: Lynn Mazur, AMAFCA
file



D. Mark Goodwin & Associates, P.A.
Consulting Engineers

P.O. BOX 90606, ALBUQUERQUE, NM 87199
(505) 828-2200 FAX 797-9539
e-mail: dmg@swcp.com

PROJECT Quivira Estates
SUBJECT SEDIMENTATION POND
BY GJK DATE 2-27-04
CHECKED _____ DATE _____
SHEET 1 OF 1

- AS PART OF THE QUIVIRA ESTATES SUBDIVISION IT IS REQUIRED THAT THE EXISTING SEDIMENT POND BE RELOCATED FROM ITS PRESENT LOCATION AT THE NE CORNER OF WYOMING AND GLENDALE NE TO ITS NEW LOCATION AT THE SE CORNER OF BARSTOW AND GLENDALE NE.
- WE HAVE SIZED THE POND TO HAVE AS NEAR THE SAME VOLUMES AND OUTFLOW STRUCTURE AS THAT DESIGNED WITH THE LA CUEVA CHANNEL. THOSE CALCULATIONS ARE ATTACHED AS APPENDIX "A" ALONG WITH THE POND DESIGN SHEETS FROM THE LA CUEVA PROJECT.
- THE LAND CONDITIONS ARE NEAR IDENTICAL AS THOSE WITH THE PREVIOUS DESIGN AND THE EL CAMINO ARROYO DIMENSIONS AND SLOPE ARE CLOSE TO BEING IDENTICAL AS WELL. THEREFORE THE PREVIOUS CALCULATIONS SHOULD SUFFICE FOR THIS APPLICATION. IN FACT THEY SHOULD BE SOMEWHAT CONSERVATIVE BECAUSE THE RELOCATED POND IS LOCATED 2600 LF UPSTREAM FROM THE EXISTING POND.

ELEV	AREA (SF)	VOLUME: (AC-FT)
61	27	0 ← BOTTOM OF SUMP
62	1511	0.018
63	5,438	0.097
64	11,507	0.292
65	23,971	0.699
66	32,491	1.347
67	36,466	2.139
68	38,875	3.004
69	41,350	3.924 ← TOP OF SUMP / BOTTOM OF POND
70	45,744	4.924
71	48,833	6,010 ← TOP OF POND

WASH LOAD INPUT PARAMETER

THE MODIFIED UNIVERSAL SOIL LOSS EQUATION (MUSLE) IS:

$$Y_s = R_w K (LS) C P$$

Where R_w = $285 (58.84 \text{ ac-ft} \times 752 \text{ cfs})^{0.56}$

= 113,905.2 for 100-yr storm

and K = 0.125 from Soils Survey Interpretation Sheet SOILDS-5 where the upper half of the watershed is 0.10 and the lower half is 0.15.

and LS = 0.95 for 200' average length and 6% average slope from (table B-3)

and C = 0.20 for no appreciable canopy and 20% grass ground cover from (table B-2)

and P = 1.0 for range and wild-land

and the watershed is an average of 10% impervious.

Results from AHYMO "SED WASH LOAD" were input into the SEDIMENT TRANSP command as follows:

EVENT	Y _s (PPM)
100 YR	29547
50 YR	27932
25 YR	27125
5 YR	22586
2 YR	19054
	16211

V
Vinyard & Associates, Inc.

8916-A Adams Street NE
Albuquerque, New Mexico 87113
505/797-9743 505/797-9749 FAX

A

Geotechnical Engineering * Materials Testing * Environmental Engineering

June 18, 2001

D. Mark Goodwin & Associates
P.O. Box 90606
Albuquerque, NM 87199

Attn: Mr. Greg Krenik, P.E.

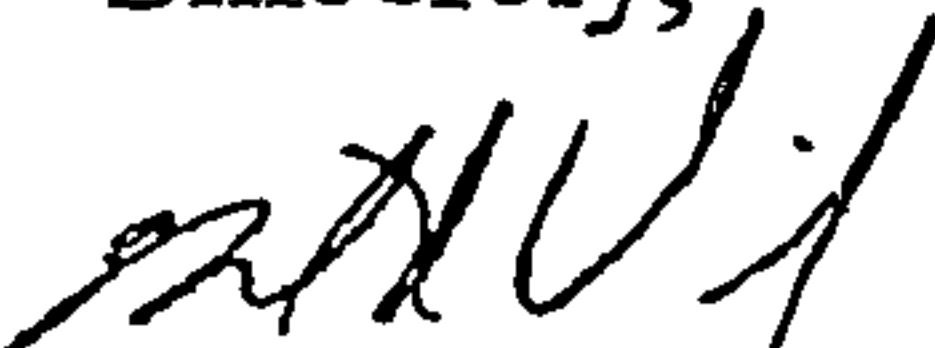
Project: Desert Ridge Trail - Sample
V & A Project No. 01-2-374

Gentlemen:

Attached are copies of the Sieve Analysis Test Results for the subject project.

Should you have any questions regarding this data, please do not hesitate to call.

Sincerely,


Martin D. Vinyard, P.E.
Vinyard & Associates, Inc.

Attachment: Data Sheets: (1)

cc: Addressee: (1)

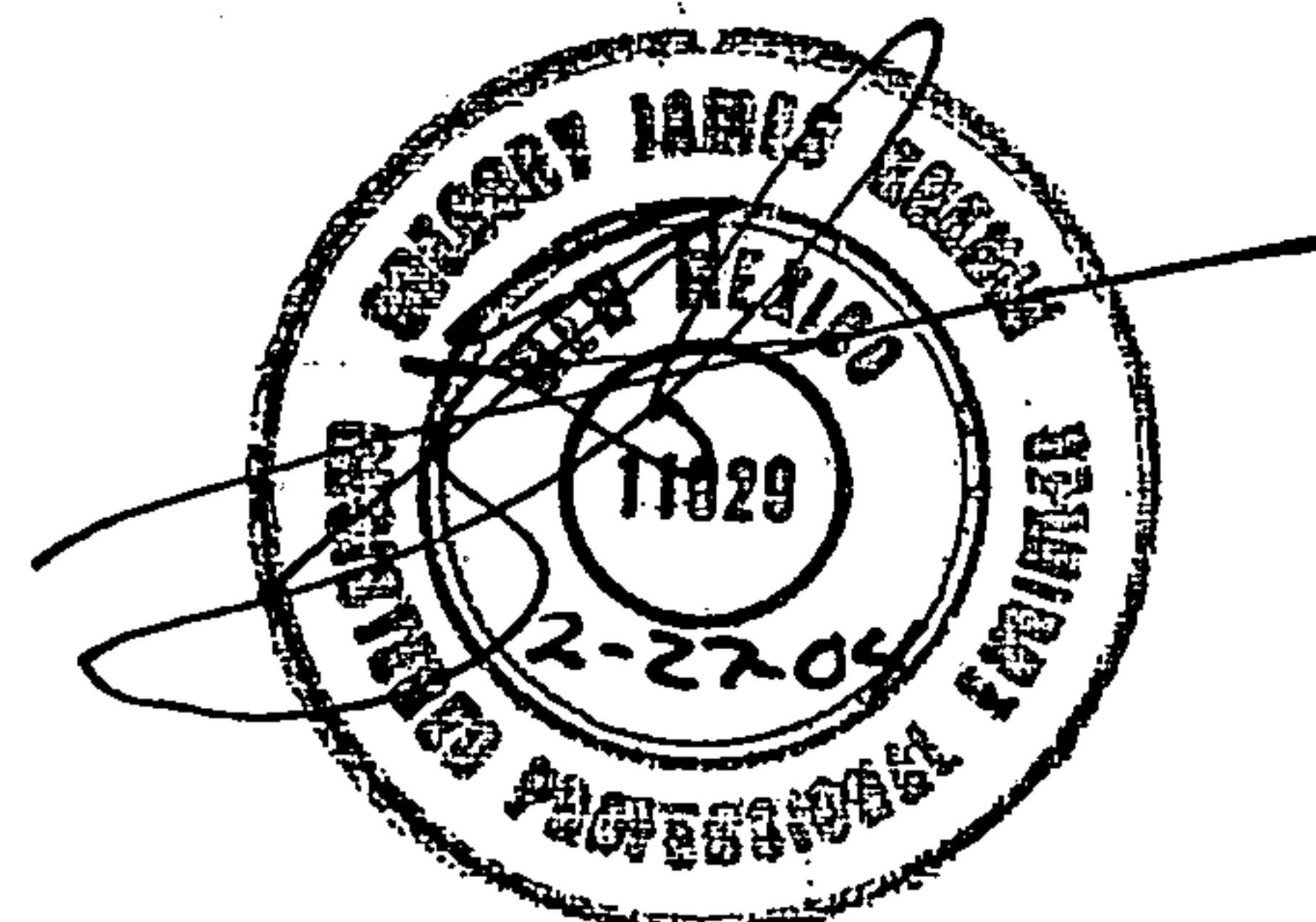
rka

A-142

911

**SEDIMENTATION POND
CALCULATIONS**
for
QUIVERA ESTATES

FEBRUARY 2004



Client: D. Mark Goodwin & Associates, Inc.

Project Number: 01-2-374

Project: Desert Ridge Trail - Sample

Date Sampled: 6/18/01

Sample Number: 01-1629

Location: Bottom of arroyo sample.

Sieve Analysis Test Results

Sieve Size	% Passing By Weight
3/8"	100
#4	99
#8	92
#16	53
#30	21
#50	8
#100	3
#200	1.8

LL: NV PI: NP

Unified Classification: (SW)

AASHTO Classification: A-2-4

Estimated R-Value: 60 *estimated using AASHTO Charts

$$D_{50} = ?$$

A-143

91

APPENDIX D

SEDIMENT VOLUME SUMMARY

AHYMO RESULTS FOR 2-YR, 5-YR, 10-YR, 25-YR- 50-YR and 100-YR EVENTS ARE AS FOLLOWS:

Event	Total Sediment (Tons)	Ac-ft
100 yr	5389.59	2.4746
50 yr	3770.73	1.7312
25 yr	2715.87	1.2469
10 yr	1,422.20	0.6530
5 yr	691.95	0.3177
2 yr	196.78	0.0903

Average Annul is given by equation (1.1) as follows:

$$Y_m = 0.015 \times (5389.59) + 0.015 (3770.73) + 0.04 (2715.87) + 0.08 (1422.20) + 0.2 (691.95) + 0.4(196.78) \\ = 576.9 \text{ tons} = 0.2649 \text{ ac-ft}$$

The required sediment storage volume in the pond is five average annual events plus a single 100-yr event which is 3.799 ac-ft.

**Agreement to Provide Maintenance for
a Sedimentation Facility on the El Camino Arroyo
at Barstow & Glendale**

WHEREAS, the Albuquerque Metropolitan Arroyo Flood Control Authority (AMAFCA), a political subdivision of the State of New Mexico, and Alpha Equities, LLC, a New Mexico Limited Liability Company (OWNER), henceforth collectively referred to as the PARTIES, wish to enter into an Agreement to construct and maintain drainage improvements to serve its property; and,

WHEREAS, the OWNER is the fee simple owner of Lots 10-23, Block 12, Tract 1, Unit 3, and Lots 1 and 2, Block 17, Tract 1, Unit 3, plat of North Albuquerque Acres, filed in the Office of the County Clerk of Bernalillo County, New Mexico in Volume D, Folio 121, on September 10, 1931, the location of which is shown on Exhibit "A"; and,

WHEREAS, the North Albuquerque Acres Master Drainage Plan (DMP), Resource Technology, Inc., October 1998, prepared for the City of Albuquerque, identified capturing the El Camino Arroyo in a sediment basin at Ventura Street, routing the flows in a large diameter storm drain down Glendale Avenue, and diverting the flows down Wyoming Boulevard to the proposed La Cueva Channel; and,

WHEREAS, as the result of an Agreement for Construction among AMAFCA and area developers, the La Cueva Channel was constructed from Interstate 25 to Eagle Rock Avenue, and the El Camino Arroyo Diversion Storm Drain was constructed in Wyoming Boulevard with an interim sediment basin at Wyoming Boulevard and Glendale Avenue; and,

WHEREAS, in order to develop its property, to be known as Quivera Estates Subdivision, the OWNER will construct a replacement interim sediment basin at Barstow Street and Glendale Avenue (IMPROVEMENTS), as shown on Exhibit "B", to replace the existing basin at Wyoming Boulevard and Glendale Avenue and will also construct the master-planned large diameter storm drain in Glendale Avenue from Barstow Street to Wyoming Boulevard, which shall be constructed under a City of Albuquerque work order, Project No. 727981; and,

WHEREAS, the OWNER has provided a Grant of Permanent Easement for Storm Drainage Works to AMAFCA for the proposed sediment basin to be located on Lots 1 and 2, Block 17, Tract 1, Unit 3, North Albuquerque Acres; and,

WHEREAS, the OWNER has requested that AMAFCA maintain the IMPROVEMENTS that will be constructed by the OWNER; and,

WHEREAS, AMAFCA is agreeable to assumption of maintenance of the completed IMPROVEMENTS after acceptance by AMAFCA;

NOW THEREFORE for good and valuable consideration, the receipt of which is hereby acknowledged the PARTIES agree as follows:

SECTION 1. OWNER, at its sole expense, agrees to:

- a. Cause to be designed, with engineer's seal and signature, and to be constructed the IMPROVEMENTS, with a minimum Volume Capacity of 2 acre-feet, one (1) Vehicle Access Ramp, a shotcrete weir and inlet structure, and an 84-inch Outlet Pipe. The IMPROVEMENTS shall conform to the dimensions and location shown on Exhibit "B". Construction of the IMPROVEMENTS shall conform to AMAFCA specifications and requirements.
- b. Provide final plans and specifications for construction of the IMPROVEMENTS to AMAFCA for review and approval prior to construction.
- c. Provide for the inspection of construction, including administration, testing, and inspection, or other supervision of construction, by a registered engineer and testing firm hired by OWNER and approved by AMAFCA to assure construction is in conformance with the plans and specifications.
- d. Reimburse AMAFCA for documented time spent at the job site by its staff for construction inspection. This time will be reimbursed at the rate of \$50.00 per hour, not to exceed a total combined amount of \$2,000.00.
- e. Cause work to be halted and remedial measures taken should the work be out of compliance with the plans and specifications, and/or standard construction practice.
- f. Obtain all necessary agency approvals for the project.
- g. Notify AMAFCA's Field Engineer by phone call to 884-2215 and in writing by facsimile to 884-0214 at least 48 hours prior to beginning work on the IMPROVEMENTS.
- h. Provide copies of all daily construction reports and testing reports to AMAFCA.
- i. Provide an engineer's certification to AMAFCA that the IMPROVEMENTS have been constructed in accordance with the approved plans and specifications. Furnish as-built mylars within 30 days of final acceptance.
- j. Require its contractor to provide liability insurance during the period of construction naming AMAFCA as an additional insured. The amount of the liability insurance shall be at least \$1,000,000.00.
- k. Provide a Grant of Permanent Easement for Storm Drainage Works (Drainage Easement), granting easement rights to AMAFCA for the operation and maintenance of the IMPROVEMENTS, acceptable to AMAFCA.

1. Provide to AMAFCA proof of consent from Los Alamos National Bank consenting to the Drainage Easement, acceptable to AMAFCA, or as an alternative, obtain a Partial Release removing Lots 1 and 2 from the existing mortgage.

SECTION 2. AMAFCA agrees to:

a. Review and, if appropriate, approve plans and specifications for IMPROVEMENTS, as prepared by the OWNER's engineer. The vertical and horizontal limits of the IMPROVEMENTS will be substantially the same as shown in Exhibit "B".

b. Provide periodic inspection of the IMPROVEMENTS during the construction period by its staff to assure that construction is in conformance with the plans and specifications.

c. Accept the IMPROVEMENTS for continuous maintenance upon satisfactory completion of construction and confirm acceptance of same in writing by AMAFCA's Executive Engineer.

d. Accept dedication of the Drainage Easement for the IMPROVEMENTS as requested by AMAFCA, provided that the document is acceptable to AMAFCA and proper consent has been provided by Los Alamos National Bank.

e. After completion of the IMPROVEMENTS and acceptance by AMAFCA, and after receipt of a Letter Of Map Revision from FEMA, quitclaim / release the existing Grant of Permanent Easement for Storm Drainage Works for the existing sediment basin that encumbers Lots 31 and 32, Block 11, Tract 1, Unit 3, North Albuquerque Acres to the current property owners.

SECTION 3. Both PARTIES agree:

a. Both PARTIES will strive for prompt action and timely response.

b. If any situation arises which adversely affects either PARTY's participation in this Agreement, said PARTY will immediately notify the other PARTY in writing.

c. Any circumstance, including the above, which materially affects this Agreement will be promptly and equitably resolved by both PARTIES, and, if necessary, an amendment to this Agreement shall be executed.

d. Unresolvable differences shall be referred to binding arbitration under the provisions of the New Mexico Uniform Arbitration Act.

e. The OWNER, after consultation with AMAFCA, shall execute change orders and resolve contract claims relating to design and construction of the IMPROVEMENTS. The OWNER shall assume financial commitments resulting from any change order or resolution of a

contract claim from construction of said projects, unless such change order or claim is the result and effected by actions of AMAFCA or a third party in expanding the size or capacity of the project beyond the originally approved design. Notwithstanding anything to the contrary, this Agreement requires the OWNER only to construct the drainage improvements shown on Exhibit "B" in accordance with this Agreement and AMAFCA's generally applicable standards.

f. All storm drainage facilities will be designed and constructed to City of Albuquerque and AMAFCA standards and, as constructed, shall meet all applicable codes.

g. This Agreement shall not be assignable by either PARTY of the PARTIES to this Agreement without the written consent of the other PARTY of the Agreement.

h. This Agreement may be modified only by mutual written agreement of the PARTIES hereto.

i. The PARTIES understand and agree that the obligation of each PARTY under this Agreement shall be performed in compliance with the applicable laws, statutes and ordinances. Nothing herein is intended to constitute any agreement for the PARTIES to perform any activity in violation of the Constitution or Laws of the State of New Mexico.

j. All notices with respect to this Agreement shall be in writing and shall be delivered personally, sent via confirmed fax, or sent postage prepaid by United States Mail, certified mail, return receipt requested, to the addresses set forth below or such other addresses as hereafter specified in writing by one Party to the other:

Albuquerque Metropolitan Arroyo
Flood Control Authority
2600 Prospect, NE
Albuquerque, NM 87107
FAX: (505) 884-0214

Alpha Equities, LLC
8813 2nd Street NW, #E
Albuquerque, NM 87114
FAX: (505) 922-9418

k. If any clause or provision in this Agreement is illegal, invalid, or unenforceable, under present or future laws effective during the term of this Agreement, then and in that event, it is the intention of the PARTIES hereto that the remainder of this Agreement shall not be affected thereby.

l. It is specifically agreed between the PARTIES executing this Agreement that this Agreement does not and is not intended to create in the public, or any member thereof, any rights whatsoever, such as, but not limited to, the rights of a third party beneficiary, or to authorize anyone not a party to this Agreement to maintain a suit(s) for wrongful death(s), bodily and/or personal injury(ies) to person(s), damage(s), and/or any other claim(s) whatsoever pursuant to the provisions of this Agreement.

m. In the event of any dispute regarding this Agreement, the prevailing PARTY shall be entitled to reimbursement of its costs and reasonable attorney's fees.

SECTION 4. SUCCESSORS AND ASSIGNS:

The Agreement and the rights, interests, and obligation hereunder shall be binding upon and shall insure to the benefit of the parties hereto and their respective successors and assigns.

IN WITNESS WHEREOF, the undersigned have caused this Agreement to be executed as of the day and year set forth above.

AMAFCA

By: _____

John P. Kelly, Executive Engineer
(as authorized by the AMAFCA Board of Directors
at its meeting of March 17, 2004)

Alpha Equities, LLC

By: _____


Rhett Waterman, Managing Member

ACKNOWLEDGEMENT FOR NATURAL PERSON

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

This instrument was acknowledged before me on _____, 2004 by
John P. Kelly, Executive Engineer for the Albuquerque Metropolitan Arroyo Flood Control
Authority, a Political Subdivision of the State of New Mexico.

Notary Public

My Commission Expires:

ACKNOWLEDGEMENT FOR CORPORATION

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

This instrument was acknowledged before me on March 30th, 2004 by
Rhett Waterman, Managing Member, Alpha Equities, LLC, on behalf of said Limited Liability
Company.



Notary Public

My Commission Expires:

4-10-05

B9/DQ23

LETTER OF TRANSMITTAL

dmg

D. Mark Goodwin & Associates, P.A.
Consulting Engineers

P.O. BOX 90606, ALBUQUERQUE, NM 87199
(505) 828-2200 FAX 797-9539

TO Brian Bingham
Hydrology - ONE STOP

DATE	10 8-8-06	JOB NO.
ATTENTION	RE: Quivira Pave File	
RE:		

WE ARE SENDING YOU Attached Under separate cover via _____ the following items:

- Shop drawings Prints Plans Samples Specifications
 Copy of letter Change order

COPIES	DATE	NO.	DESCRIPTION
1			Pave Repair

THESE ARE TRANSMITTED as checked below:

- For approval Approved as submitted Resubmit _____ copies for approval
 For your use Approved as noted Submit _____ copies for distribution
 As requested Returned for corrections Return _____ corrected prints
 For review and comment _____
 FOR BIDS DUE _____ PRINTS RETURNED AFTER LOAN TO US

REMARKS _____

COPY TO _____

SIGNED: Gregory J. Krause