749881
Brad
Copper Park Sadd
K-22/D30

REAL PROPERTY ENCROACHMENT AGREEMENT
AND COVENANTS UPON REAL ESTATE
(Temporary structures, walls, fences)

This Agreement, between the City of Albuquerque, New Mexico ("City") and Corinthian Construction Inc ("User") is made in Albuquerque, New Mexico and is entered into as of the date of filing this Agreement with the City Clerk.

1. **Recital.** The User is the owner of certain real property ("User's Property") located at 500-528 Kelly Ct NE ABQ, NM 87123 in Albuquerque, New Mexico, and more particularly described as:

Block 19-A, Foothill Estates, recorded in Bernalillo County Clerk's office 11-10-1977, BK C12, pg 151.

The City is the owner of certain real property, easement or public right-of-way ("City's Property") adjoining, abutting or within User's Property. The User wishes to encroach upon, or already has encroached upon, the City's Property by constructing the following "Improvement":

6' CMU Wall

A sketch of the proposed or existing Improvement is attached and made a part of this Agreement.

The City agrees to permit the encroachment of the Improvements on the City's Property, provided the User complies with the terms of this Agreement.

2. **City Use of City's Property and City Liability.** The City has the right to enter upon the City's Property at any time and perform whatever inspection, installation, maintenance, repair, modification or removal ("Work") it deems appropriate without liability to the User. If the Work affects the Improvement, the City will not be financially or otherwise responsible for rebuilding or repairing the Improvement. The User promptly will repair the Improvement to the City's satisfaction. The cost of repairing the Improvement will be paid by User.

3. **User's Responsibility for Improvement.** The User will be solely responsible for constructing, maintaining, repairing and, if required, removing the Improvement, all in accordance with standards required by the City. The User will be solely responsible for paying all related costs. The User will not permit the Improvement to constitute a hazard to the health or safety of the general public or the interfere with the City's use of the City's Property. The User will conform with all applicable laws, ordinances and regulations.

(Approved by Legal Dept. as to form only-3/31/89)

8/02

2006072661
6460223
Page: 1 of 5
05/18/2006 11:46A
Maru Herrera Bern. Co. AGRE R 17.00 Bk-A117 Pg-2449

003/008
TSMCNANEY&ASSOC

4. **Demand for Repair, Modification or Removal.** The City may send written notice ("Notice") to the User requiring the User to repair, modify or remove the Improvement within ninety (90) days after mailing of the written notice to User ("Deadline") and the User will promptly comply with the requirements of the Notice. The City may demand removal of the Improvement without cause. If the removal is demanded, the City also may require the User to return the City's Property to its original condition by the Deadline. The User will perform all required work by the Deadline, at User's sole expense.

5. **Failure to Perform; Emergency.** If the User fails to comply with the terms of the Notice by the Deadline stated, or if the City determines that an emergency condition exists, the City may perform the work itself. The City then may assess the User for the cost of the work and for any other expenses or damages which result from User's failure to perform. The User shall pay the City the amount assessed within thirty (30) days after the City gives the User written notice of the amount due. If the City employs the City's Legal Department or an outside attorney to enforce this Agreement, the User shall pay the City all costs, charges and expenses, including reasonable attorney's fees for the City's Legal Department or outside attorney, expended or incurred by the City to successfully enforce this Agreement.

6. **Condemnation.** If any part of the User's property is ever condemned by the City, the User will forego all claims to compensation for any portion of User's structure which encroaches on City Property and for severance damage to the remaining portion of User's structure.

7. **Notice.** For purposes of giving formal written notice to the User, User's address and phone number is:

Notice may be given to the User either in person or by mailing the notice by regular U.S. mail, postage paid. Notice will be considered to have been received by the User within six (6) days after the notice is mailed if there is no actual evidence of receipt. The User may change User's address by giving written notice of the change by certified mail, return receipt requested, to the City Engineer at P. O. Box 1293, Albuquerque, New Mexico 87103.

Indemnification. The user agrees to indemnify, defend and hold harmless the City, its officials, agents and employees, from any claims, actions, suits or other proceedings arising from or out of the negligent acts or omissions of the failure of the User to perform any act or duty required of the User herein; provided, however, to the extent, if at all, Section 56-7-1 NMSA 1978 is applicable to this Agreement, this Agreement to indemnify will not extend to liability, claims, damages, losses or expenses, including attorney's fees, arising out of (1) the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs or specifications by the indemnitee, or the agents or employees of the indemnitee; or (2) the giving of or the failure to give direction or instructions by the indemnitee, where such giving or failure to give directions or instructions is the primary cause of bodily injury to persons or damage to property. The indemnification required hereunder shall not be limited as a result of the specifications of any applicable insurance coverage. Nothing herein is intended to impair any right or immunity under the laws of the State of New Mexico.

Maru Herrera Bern. Co. AGRE R 17.00
2006072661
6460223
Page: 2 of 5
05/18/2006 11:46A
Bk-A117 Pg-2449

004/008 TSMCNANEY&ASSOC 5059441232

9. **Term**. This Agreement may be terminated in writing at any time by the User or by the City, without cause. Termination by either party shall be effective ninety (90) days after mailing by a party of written notice of termination to the other party. A notice of termination shall be a Notice under Paragraph 4 requiring the User to remove the Improvement and return the City's property to its original condition by the Deadline.

10. **Binding on User's Property**. The obligations of the User set forth herein shall be binding upon the User, his heirs, assigns and successors and on User's Property, and constitute covenants running with User's Property until released by the City.

11. **Entire Agreement**. This Agreement contains the entire agreement of the parties and supersedes any and all other agreements or understandings, oral or written, whether previous to the execution hereof or contemporaneous herewith.

12. **Changes to Agreement**. Changes to this Agreement are not binding unless made in writing, signed by both parties.

13. **Construction and Severability**. If any part of this Agreement is held to be invalid or unenforceable, the remainder of the Agreement will remain valid and enforceable if the remainder is reasonably capable of completion.

14. **Captions**. The captions to the sections or paragraphs of this Agreement are not part of this Agreement and will not affect the meaning or construction of any of its provisions.

15. **Extent of Agreement.** User understands and agrees that the User is solely responsible for ascertaining whether User's Improvement encroaches upon the property or facilities of any other entity and that by entering into this Agreement, the City makes no representations or warranties that the City's property is the only property affected by the encroachment.

CITY OF ALBUQUERQUE

Approved By:

City Engineer
Date: 5-16-06

USER:

Date: 3/15/06

Lyle 5/15/06

4-6-06

8/02

Maru Herrera Bern. Co. AGRE R 17.00
2006072661
6460223
Page: 3 of 5
05/18/2006 11:46A
Bk-A117 Pg-2449

005/008 TSMCNANEY&ASSOC

USER'S NOTARY

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

This instrument was acknowledged before me on 15 day of MARCH, 2006 by (name(s) of person(s):) NICHOLAS CALLAS (title or capacity, for instance, "President" or "Owner") V.P. of (Subdivider) CORINTHIAN CONSTRUCTION, INC.

Charles T. Wong
Notary Public

My commission expires:
12/23/09

OFFICIAL SEAL
Charles T. Wong
Notary Public
State of New Mexico
My Commission Expires 12-23-09

CITY'S NOTARY

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

This instrument was acknowledged before me on 16th day of May, 2006 by Richard Dourte, City Engineer, City of Albuquerque, a municipal corporation, on behalf of said corporation.

Gloria D. Saavedra
Notary Public

My commission expires:
11-25-2007

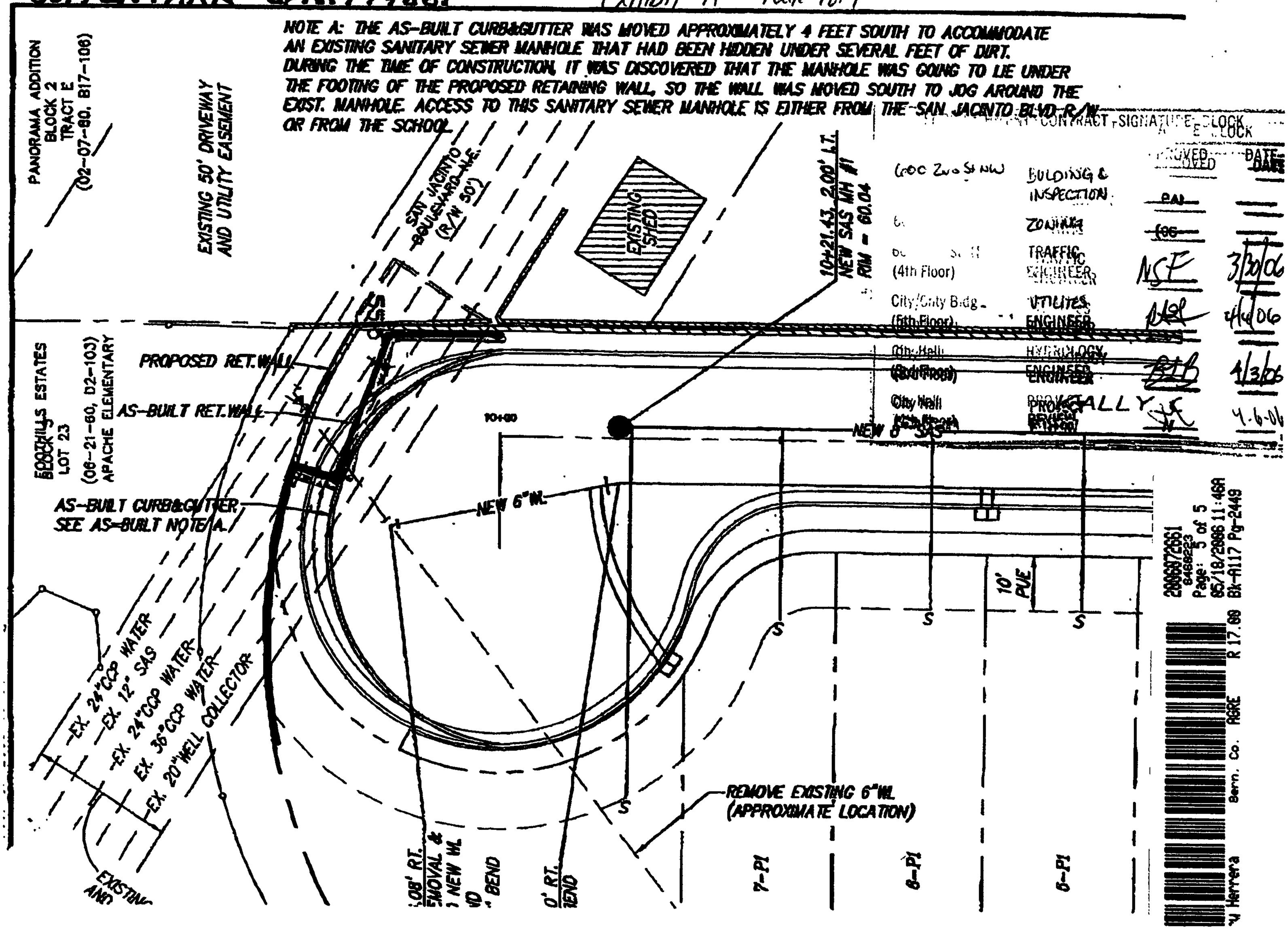
Maru Herrera Bern Co. AGRE R 17.00

2006072661
6460223
Page: 4 of 5
05/18/2006 11:46A
Bk-A117 Pg-2449

8/02

800/900 TSMCNANEY&ASSOC

COPPER PARK CPN: 749881 Exhibit A Page 1 of 1



CITY OF ALBUQUERQUE

May 26, 2006

Ms. Diane Hoelzer, PE
MARK GOODWIN & ASSOCIATES
P.O. Box 90606
Albuquerque, NM 87199

RE: COPPER PARK SUBDIVISION (K-22/D30)
Engineers Certification for Release of Financial Guaranty
Engineers Stamp dated 10/27/2004
Engineers Certification dated 05/23/2006

Dear Diane:

Based upon the information provided in your Engineer's Certification Submittal dated 05/24/2006, the above referenced plan is adequate to satisfy the Grading and Drainage Certification for Release of Financial Guaranty.

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

Sincerely,

Arlene V. Portillo

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

C: Marilyn Maldonado, COA #749881
File

P.O. Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV. 1/28/2003rd)

PROJECT TITLE: Copper Park Subdivision
DRB #: 1002334 EPC#:_____

ZONE MAP/DRG. FILE #:K-22 / D30
WORK ORDER#:749881

LEGAL DESCRIPTION: Block 19A, Foothills Estates
CITY ADDRESS:_____

ENGINEERING FIRM: Mark Goodwin & Associates, PA
ADDRESS: PO Box 90606
CITY, STATE: Albuquerque, NM

CONTACT: Diane Hoelzer
PHONE: 828-2200
ZIP CODE: 87199

OWNER: Harvest Homes
ADDRESS: PO Box 92246
CITY, STATE: Albuquerque, NM

CONTACT: Lowell Williams
PHONE: 792-5400
ZIP CODE: 87199

ARCHITECT: _____
ADDRESS: _____
CITY, STATE: _____

CONTACT: _____
PHONE:
ZIP CODE: _____

SURVEYOR: ALS, Inc.
ADDRESS: PO Box 30701
CITY, STATE: Albuquerque, NM

CONTACT: Tim Aldrich
PHONE: 884-1990
ZIP CODE: 87190

CONTRACTOR: Salls Brothers Construction Inc.
ADDRESS: 7301 Reading Drive SE
CITY, STATE: ABQ, NM

CONTACT: Fred Salls
PHONE: 873-8780
ZIP CODE: 87193

Approved in 2004

CHECK TYPE OF SUBMITTAL:

- ☐ DRAINAGE REPORT
- ☐ DRAINAGE PLAN 1st SUBMITTAL, ***REQUIRES TCL or equal***
- ☐ DRAINAGE PLAN RESUBMITTAL
- ☐ CONCEPTUAL GRADING & DRAINAGE PLAN
- ☐ GRADING PLAN
- ☐ EROSION CONTROL PLAN
- ☒ ENGINEER'S CERTIFICATION (HYDROLOGY)
- ☐ CLOMR/LOMR
- ☐ TRAFFIC CIRCULATION LAYOUT (TCL)
- ☐ ENGINEERS CERTIFICATION (TCL)
- ☐ ENGINEERS CERTIFICATION (DRB APPR. SITE PLAN)
- ☐ OTHER

CHECK TYPE OF APPROVAL SOUGHT:

- ☒ SIA / FINANCIAL GUARANTEE RELEASE
- ☐ PRELIMINARY PLAT APPROVAL
- ☐ S. DEV. PLAN FOR SUB'D. APPROVAL
- ☐ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
- ☐ SECTOR PLAN APPROVAL
- ☐ FINAL PLAT APPROVAL
- ☐ FOUNDATION PERMIT APPROVAL
- ☐ BUILDING PERMIT APPROVAL
- ☐ CERTIFICATE OF OCCUPANCY (PERM.)
- ☐ CERTIFICATE OF OCCUPANCY (TEMP.)
- ☐ GRADING PERMIT APPROVAL
- ☐ PAVING PERMIT APPROVAL
- ☐ WORK ORDER APPROVAL
- ☐ OTHER (SPECIFY)

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- ☐ YES
- ☒ NO
- ☐ COPY PROVIDED

RECEIVED
MAY 24 2006
HYDROLOGY SECTION

DATE SUBMITTED:May 23, 2006

BY:Diane Hoelzer, PE

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature , location and scope ot the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

1. **Conceptual Grading and Drainage Plan**: Required for approval of Site Development Plans greater than five (5) acres and Sector Plans.
2. **Drainage Plans**: Required for building permits, grading permits, paving permits and site plans less than five (5) acres.
3. **Drainage Report**: Required for subdivisions containing more than ten (10) lots or constituting five (5) acres or more.

CITY OF ALBUQUERQUE

November 8, 2004

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

Re: Copper Park Subdivision, Block 19A Foothills Estates, Preliminary Plat Engineer's Stamp dated 10-27-04 (K22-D30)

Dear Ms. Niese,

Based upon the information provided in your submittal received 10-27-04, the above referenced plan is approved for Preliminary Plat action by the DRB. Once the DRB has approved the plan, please submit a mylar copy to me in order to obtain rough grading approval.

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

Sincerely,

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

C: Bradley Bingham, DRB
file

P.O. Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV. 1/28/2003rd)

PROJECT TITLE: Copper Park Subdivision
DRB #: 1002334 EPC#:_____

ZONE MAP/DRG. FILE #:K-22 / D30
WORK ORDER#:_____

LEGAL DESCRIPTION: Block 19A, Foothills Estates
CITY ADDRESS:_____

ENGINEERING FIRM: Mark Goodwin & Associates, PA
ADDRESS: PO Box 90606
CITY, STATE: Albuquerque, NM

CONTACT: Amy L. D. Niese, PE
PHONE: 828-2200
ZIP CODE: 87199

OWNER: Harvest Homes
ADDRESS: PO Box 92246
CITY, STATE: Albuquerque, NM

CONTACT: Lowell Williams
PHONE: 792-5400
ZIP CODE: 87199

ARCHITECT: _____
ADDRESS: _____
CITY, STATE: _____

CONTACT: _____
PHONE:
ZIP CODE: _____

SURVEYOR: ALS, Inc.
ADDRESS: PO Box 30701
CITY, STATE: Albuquerque, NM

CONTACT: Tim Aldrich
PHONE: 884-1990
ZIP CODE: 87190

CONTRACTOR: _____
ADDRESS: _____
CITY, STATE: _____

CONTACT: _____
PHONE: _____
ZIP CODE: _____

CHECK TYPE OF SUBMITTAL:

- ☒ DRAINAGE REPORT
- ☐ DRAINAGE PLAN 1st SUBMITTAL, ***REQUIRES TCL or equal***
- ☐ DRAINAGE PLAN RESUBMITTAL
- ☐ CONCEPTUAL GRADING & DRAINAGE PLAN
- ☐ GRADING PLAN
- ☐ EROSION CONTROL PLAN
- ☐ ENGINEER'S CERTIFICATION (HYDROLOGY)
- ☐ CLOMR/LOMR
- ☐ TRAFFIC CIRCULATION LAYOUT (TCL)
- ☐ ENGINEERS CERTIFICATION (TCL)
- ☐ ENGINEERS CERTIFICATION (DRB APPR. SITE PLAN)
- ☐ OTHER

CHECK TYPE OF APPROVAL SOUGHT:

- ☐ SIA / FINANCIAL GUARANTEE RELEASE
- ☒ PRELIMINARY PLAT APPROVAL
- ☐ S. DEV. PLAN FOR SUB'D. APPROVAL
- ☐ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
- ☐ SECTOR PLAN APPROVAL
- ☐ FINAL PLAT APPROVAL
- ☐ FOUNDATION PERMIT APPROVAL
- ☐ BUILDING PERMIT APPROVAL
- ☐ CERTIFICATE OF OCCUPANCY (PERM.)
- ☐ CERTIFICATE OF OCCUPANCY (TEMP.)
- ☒ GRADING PERMIT APPROVAL
- ☐ PAVING PERMIT APPROVAL
- ☐ WORK ORDER APPROVAL
- ☐ OTHER (SPECIFY)

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- ☐ YES
- ☒ NO
- ☐ COPY PROVIDED

RECEIVED
OCT 2 7 2004
HYDROLOGY SECTION

DATE SUBMITTED: October 28, 2004

BY: Amy L. D. Niese, PE

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature , location and scope ot the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

1. **Conceptual Grading and Drainage Plan**: Required for approval of Site Development Plans greater than five (5) acres and Sector Plans.
2. **Drainage Plans**: Required for building permits, grading permits, paving permits and site plans less than five (5) acres.
3. **Drainage Report**: Required for subdivisions containing more than ten (10) lots or constituting five (5) acres or more.

CITY OF ALBUQUERQUE

THREE HUNDRED YEARS 1706 • 2006
ALBUQUERQUE
Making History

October 20, 2004

Amy Niese, PE
Mark Goodwin & Associates
P.O. Box 90606,
Albuquerque, NM 87199

Re: Copper Park Subdivision Drainage Report
Engineer's Stamp dated 9-24-04, (K22/D30)

Dear Mrs. Niese,

Based upon the information provided in your submittal dated 9-24-04, the above referenced plan is approved for Preliminary Plat action by the DRB. Once that board approves the plan, please submit a mylar copy for my signature in order to obtain a Rough Grading Permit. The channel in the backyards must be concrete.

This project requires a National Pollutant Discharge Elimination System (NPDES) permit. Refer to the attachment that is provided with this letter for details. If you have any questions please feel free to call the Municipal Development Department, Hydrology section at 768-3654 (Charles Caruso).

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

Sincerely,

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

C: Chuck Caruso, DMD
file

P.O. Box 1293
Albuquerque
New Mexico 87103
www.cabq.gov

DRAINAGE INFORMATION SHEET
(REV. 1/28/2003rd)

PROJECT TITLE: Copper Park Subdivision — ZONE MAP/DRG #: K-22/D030

DRB#: 1002334 — EPC #: — W.O.#:

LEGAL DESCRIPTION: Block 19A, Foothills Estates

CITY ADDRESS:

ENGINEERING FIRM:	Mark Goodwin & Associates, PA	CONTACT:	Amy L. D. Niese, PE
ADDRESS:	PO Box 90606	PHONE:	828-2200
CITY, STATE:	Albuquerque, NM	ZIP CODE:	87199
OWNER:	Harvest Homes	CONTACT:	Lowell Williams
ADDRESS:	PO Box 92246	PHONE:	792-5400
CITY, STATE:	Alb, NM	ZIP CODE:	87199
ARCHITECT:		CONTACT:	
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	
SURVEYOR:	Aldrich Land Surveying	CONTACT:	Tim Aldirch
ADDRESS:	P.O. Box 30701	PHONE:	884-1990
CITY, STATE:	Albuquerque, NM	ZIP CODE:	87190-0701
CONTRACTOR:		CONTACT:	
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	

CHECK TYPE OF SUBMITTAL:

- x DRAINAGE REPORT
- ___ DRAINAGE PLAN 1ST SUBMITTAL, req. TCL or equal
- ___ DRAINAGE PLAN RESUBMITTAL
- ___ CONCEPTUAL GRADING & DRAINAGE PLAN
- ___ GRADING PLAN
- ___ EROSION CONTROL PLAN
- ___ ENGINEER'S CERTIFICATION (HYDROLOGY)
- ___ CLOMR/LOMR
- ___ TRAFFIC CIRCULATION LAYOUT (TCL)
- ___ ENGINEER'S CERTIFICATION (TCL)
- ___ ENGINEER'S CERTIFICATION (DRB APPR. SITE PLAN)
- ___ OTHER

CHECK TYPE OF APPROVAL SOUGHT:

- ___ SIA / FINANCIAL GUARANTEE RELEASE
- x PRELIMINARY PLAT APPROVAL
- ___ S. DEV. PLAN FOR SUB'D. APPROVAL
- ___ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
- ___ SECTOR PLAN APPROVAL
- ___ FINAL PLAT APPROVAL
- ___ FOUNDATION PERMIT APPROVAL
- ___ BUILDING PERMIT APPROVAL
- ___ CERTIFICATE OF OCCUPANCY (PERM)
- ___ CERTIFICATE OF OCCUPANCY (TEMP)
- x GRADING PERMIT APPROVAL
- ___ PAVING PERMIT APPROVAL
- ___ WORK ORDER APPROVAL
- ___ OTHER (specify)

WAS A PRE-DESIGN CONFERENCE ATTENDED?

- ___ YES
- x NO
- ___ COPY PROVIDED

RECEIVED SEP 24 2004 HYDROLOGY SECTION

DATE SUBMITTED: 9/24/04 — BY: Amy L. D. Niese, PE

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location and scope of the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

1. **Conceptual Grading and Drainage Plan**: Required for approval of Site Development Plans greater than five (5) acres and Sector Plans.
2. **Drainage Plans**: Required for building permits, grading permits, paving permits and site plans less than five (5) acres.
3. **Drainage Report**: Required for subdivisions containing more than ten (10) lots or constituting five (5) acres or more.

[redacted]

RECEIVED
SEP 24 20(
HYDROLOGY SECTION

MARK GOODWIN & ASSOCIATES
CONSULTING ENGINEERS

DRAINAGE REPORT

for

Copper Park Subdivision

Prepared By

Amy L. D. Niese, PE
Mark Goodwin & Associates, PA
P.O. Box 90606
Albuquerque, NM 87199

AMY L. D. NIESE
NEW MEXICO
15334
9/24/04
LICENSED PROFESSIONAL ENGINEER

September 2004

TABLE OF CONTENTS

I. Introduction

II. Existing Conditions

III. Proposed Drainage Plan

IV. Summary

LIST OF EXHIBITS

- *Zone Atlas Map, K-22*
- *FIRM Map 359F*
- *Copper Park Grading and Drainage Plan*
- *AHYMO Run*
  - *Summary Output - 100 year*
  - *Input Data - 100 year*
  - *Output Data - 100 year*
- *Copper Park Calculations*

INTRODUCTION

This report is being submitted for Grading and Drainage approval.

Please see the enclosed Zone Atlas Map, K-22. The proposed Copper Park Subdivision is located on Copper Avenue between Chelwood Park Boulevard and Chico Road. The project covers 0.95 acres and will be developed into 8 townhomes.

EXISTING CONDITIONS

Currently, the site is vacant and covered in native vegetation. Copper Avenue and the northeast corner of the site are in the 100 year floodplain per FIRM Map Panel 359F dated November 19, 2003 which is enclosed. The zoning is R-T.

A narrow strip from the adjoining Apache Elementary school drains 0.45 cfs onto this site (Basin B). There are no other off-site flows entering this property.

Most of the water drains to the SW corner to a narrow gap in the wall. Then the water drains to the parking lot of an apartment complex. A small part of the northeast corner of the site drains towards Copper Avenue.

PROPOSED DRAINAGE PLAN

Please see the enclosed Grading and Drainage Plan. Eight attached townhomes are being proposed for this subdivision.

Off-site Basin B (0.13 acre) discharges 0.45 cfs (100% C) to this site, Basin A. Basin A is 0.95 acre and currently produces 3.24 cfs for the 100 year storm (100%C). The total existing flow is 3.69 cfs. Please see the enclosed AHYMO run.

The proposed Basin A will produce 4.88 cfs for the 100 year storm (30%B, 30%C, and 40%D). The total proposed flow will be 5.33 cfs.

The site will surface discharge 5.33 cfs into Copper Avenue. This increase in flow is insignificant.

The 100 year flood plain in the northeast corner will remain. A floodwall will be installed in the northeast corner as shown on the Grading and Drainage Plan.

The road in the subdivision will have mountable curb and gutter. The maximum water surface elevation will be 0.27 feet which is lower than the top of curb.

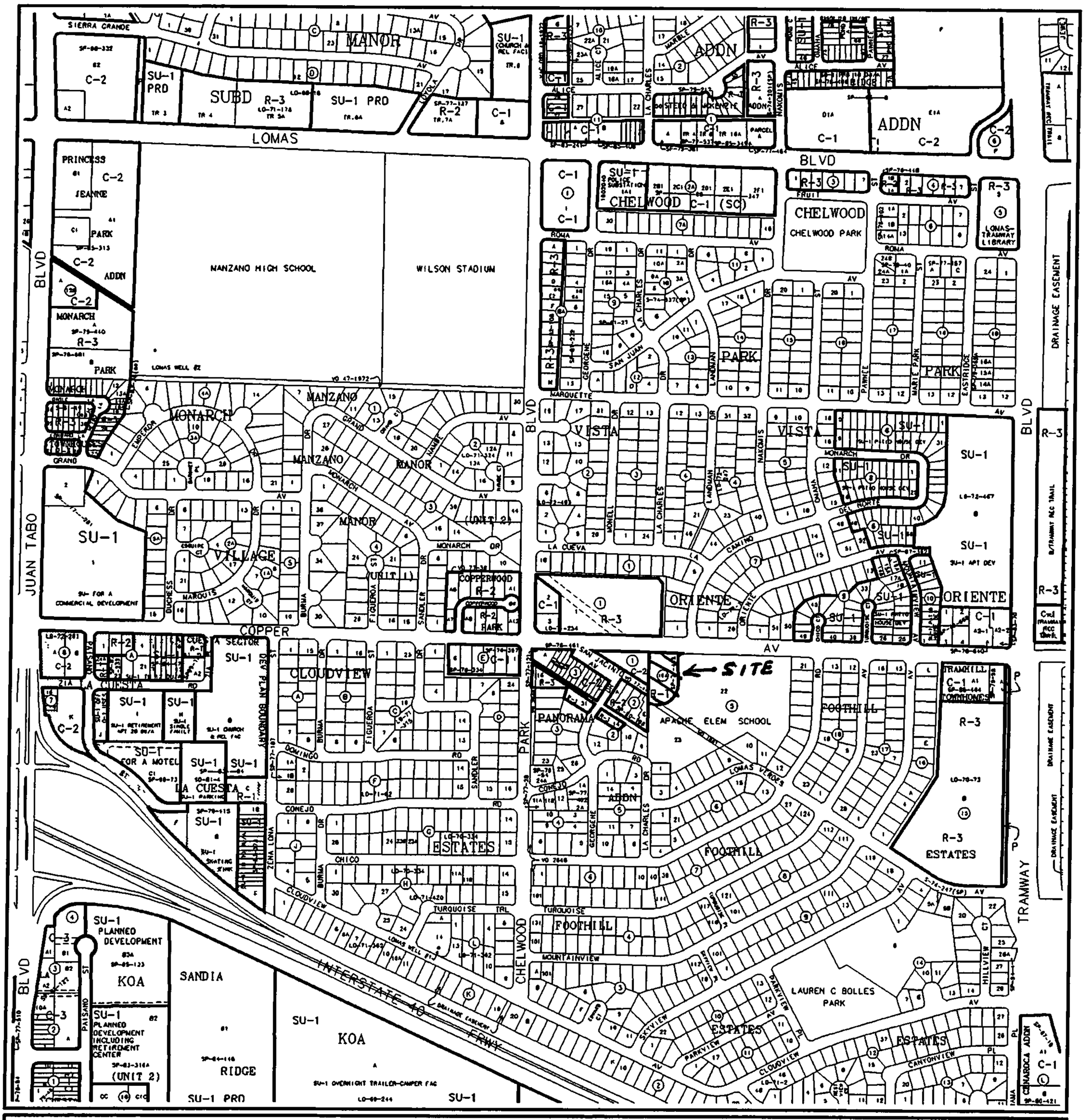
Because the site has attached townhomes, the water can not drain down the sides of the lots. As a result, a private drainage easement is being placed at the back of all the lots. Water will drain down as asphalt swale to a sidewalk culvert into Kally Court. Please see the enclosed calculations for the sizing of the ditch.

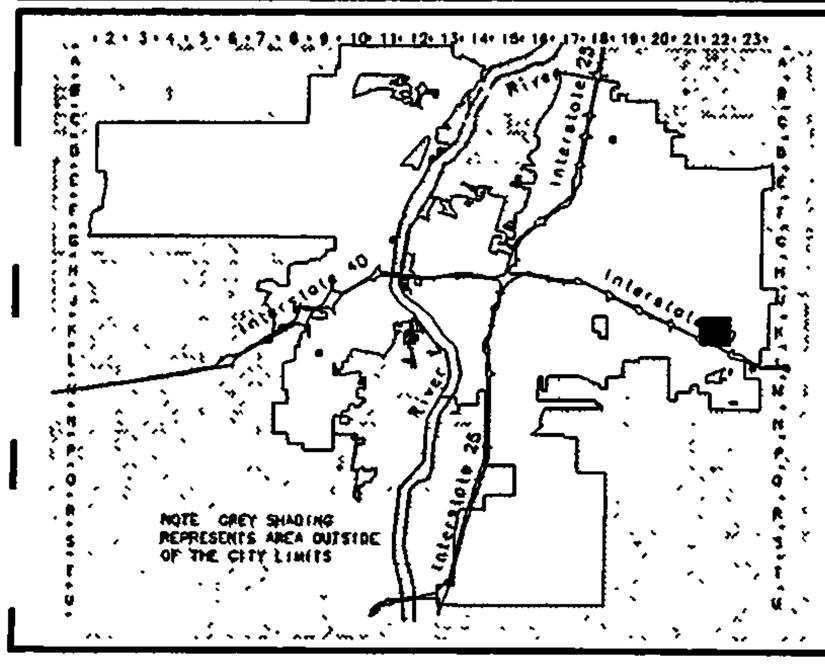
SUMMARY

The existing vacant lot will become an 8 lot subdivision with townhomes. The northeast corner of the site is in the 100 year flood plain. The flood plain will remain, but a flood wall will be installed in the northeast corner.

Basin B (0.45 cfs) will drain to Basin A (4.88 cfs). The subdivision will then surface discharge 5.33 cfs to Copper Avenue. The increase in flow is insignificant. A private asphalt ditch will be placed at the back of the lots to drain them to Kally Court.

ZONE ATLAS MAP





City of Albuquerque · New Mexico · 1706

Albuquerque Geographic Information System
PLANNING DEPARTMENT

© Copyright 2003

GRAPHIC SCALE IN FEET

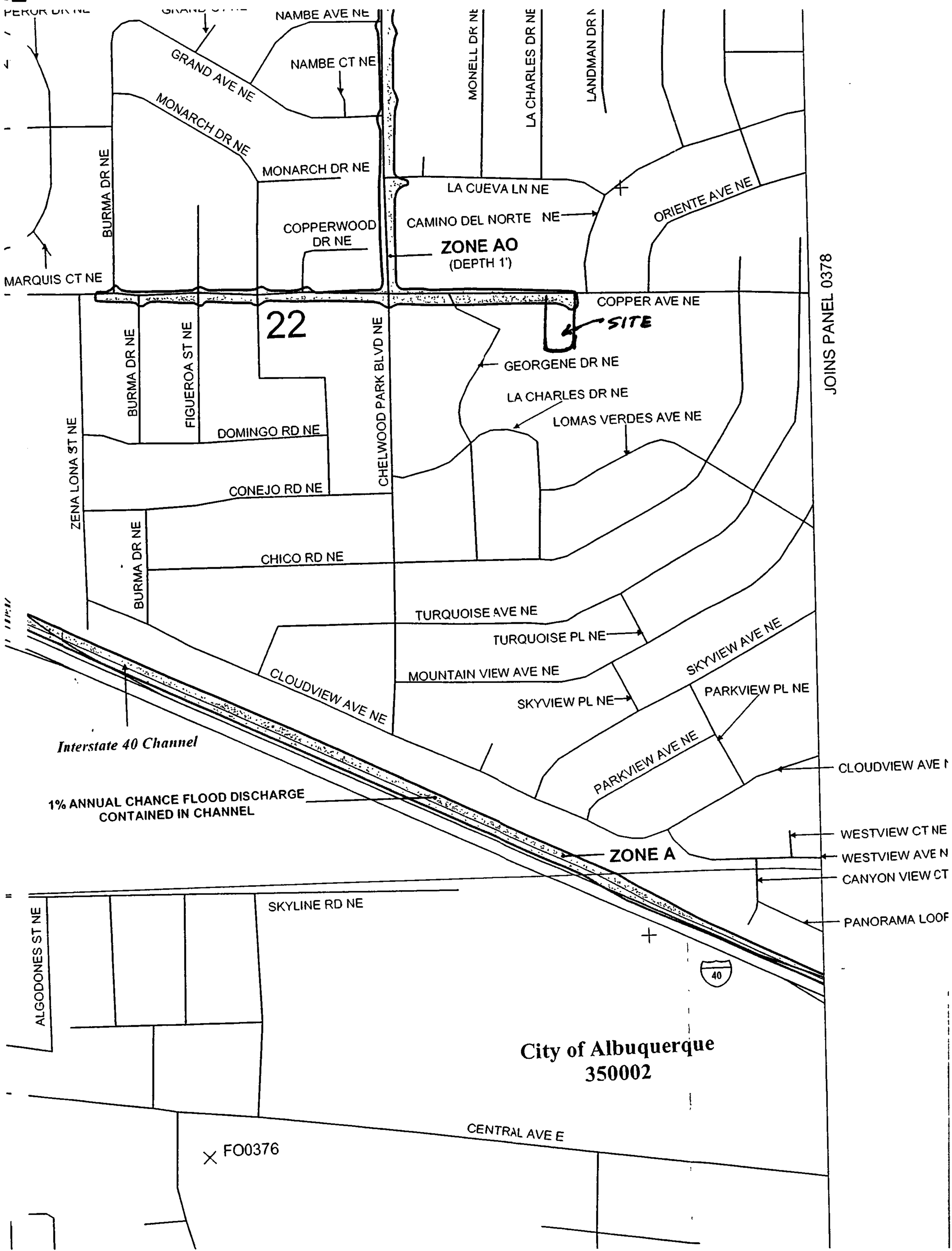
250 0 750 1000

Zone Atlas Page

K-22-Z

Map Amended through November 01, 2003

FIRM MAP


NAMBE AVE NE
GRAND AVE NE
NAMBE CT NE
MONARCH DR NE
MONARCH DR NE
BURMA DR NE
MONELL DR NE
LA CHARLES DR NE
LANDMAN DR
LA CUEVA LN NE
CAMINO DEL NORTE NE
ORIENTE AVE NE
COPPERWOOD DR NE
ZONE AO
(DEPTH 1')
MARQUIS CT NE
COPPER AVE NE
SITE
22
BURMA DR NE
FIGUEROA ST NE
CHELWOOD PARK BLVD NE
GEORGENE DR NE
LA CHARLES DR NE
LOMAS VERDES AVE NE
JOINS PANEL 0378
ZENA LONA ST NE
DOMINGO RD NE
CONEJO RD NE
BURMA DR NE
CHICO RD NE
TURQUOISE AVE NE
TURQUOISE PL NE
SKYVIEW AVE NE
MOUNTAIN VIEW AVE NE
CLOUDVIEW AVE NE
SKYVIEW PL NE
PARKVIEW PL NE
PARKVIEW AVE NE
CLOUDVIEW AVE N
Interstate 40 Channel
1% ANNUAL CHANCE FLOOD DISCHARGE
CONTAINED IN CHANNEL
WESTVIEW CT NE
ZONE A
WESTVIEW AVE N
CANYON VIEW CT
SKYLINE RD NE
PANORAMA LOOP
ALGODONES ST NE
40
City of Albuquerque
350002
CENTRAL AVE E
FO0376

' 00' 00"
35° 05' 37.5"

MA AVE NE

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

	Floodplain boundary
	Floodway boundary
	Zone D boundary
	CBRS and OPA boundary
	Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
513	Base Flood Elevation line and value; elevation in feet*
(EL 987)	Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

A — A	Cross section line
23 - - - - - - 23	Transect line
45° 02' 08", -93° 02' 12"	Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
4989000M	1000-meter Universal Transverse Mercator grid values, zone 13

PANEL 0359F

FIRM

FLOOD INSURANCE RATE MAP

BERNALILLO COUNTY, NEW MEXICO

AND INCORPORATED AREAS

PANEL 359 OF 825

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
ALBUQUERQUE, CITY OF	350002	0359	F

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
35001C0359F

MAP REVISED
NOVEMBER 19, 2003

Federal Emergency Management Agency

COPPER PARK

GRADING AND DRAINAGE PLAN

AHYMO SUMMARY TABLE (AHYMO194) - AMAFCA Hydrologic Model - January, 1994 RUN DATE (MON/DAY/YR) =07/01/2004
INPUT FILE = COPPER.DAT USER NO.= M_GOODWN.I01

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE = 1 NOTATION
START										TIME= .00
RAINFALL TYPE= 1										RAIN6= 2.600
COMPUTE NM HYD	100.00	-	1	.00148	3.24	.100	1.26834	1.500	3.417	PER IMP= .00
COMPUTE NM HYD	200.00	-	2	.00202	4.88	.171	1.58309	1.500	3.772	PER IMP= 40.00
COMPUTE NM HYD	300.00	-	3	.00020	.45	.014	1.26834	1.500	3.482	PER IMP= .00
FINISH										

AHYMO RUN

```
    AHYMO PROGRAM (AHYMO194) - AMAFCA Hydrologic Model - January, 1994
         RUN DATE (MON/DAY/YR) = 07/01/2004
         START TIME (HR:MIN:SEC) = 11:35:37     USER NO.= M_GOODWN.I01
         INPUT FILE = COPPER.DAT

START                TIME=0.0
*****    COPPER PARK G&D PLAN
*****    FILE: C:\AHYMO\FORK.DAT JULY 1, 2004   BY:AMY
*****
*****    100-YEAR 6-HOUR STORM EVENT
*****
RAINFALL             TYPE=1 RAIN QUARTER=0.0 IN
                     RAIN ONE=2.10 IN RAIN SIX=2.60 IN
                     RAIN DAY=3.25 IN DT=0.033333 HR

               COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 HR.
               DT =     .033333 HOURS       END TIME =     5.999940 HOURS
                  .0000   .0033   .0066   .0100   .0135   .0171   .0207
                  .0244   .0282   .0321   .0361   .0402   .0445   .0488
                  .0532   .0578   .0625   .0673   .0724   .0775   .0829
                  .0884   .0942   .1001   .1064   .1128   .1196   .1267
                  .1342   .1420   .1503   .1561   .1623   .1690   .1833
                  .2152   .2643   .3348   .4310   .5575   .7188   .9195
                 1.1646  1.3912  1.4861  1.5662  1.6374  1.7022  1.7619
                 1.8173  1.8691  1.9176  1.9633  2.0064  2.0471  2.0856
                 2.1221  2.1567  2.1895  2.2207  2.2503  2.2578  2.2649
                 2.2717  2.2782  2.2845  2.2905  2.2963  2.3020  2.3074
                 2.3127  2.3178  2.3228  2.3277  2.3324  2.3370  2.3415
                 2.3459  2.3502  2.3544  2.3586  2.3626  2.3666  2.3705
                 2.3743  2.3781  2.3818  2.3854  2.3890  2.3925  2.3959
                 2.3993  2.4027  2.4060  2.4093  2.4125  2.4157  2.4188
                 2.4219  2.4249  2.4279  2.4309  2.4339  2.4368  2.4396
                 2.4425  2.4453  2.4480  2.4508  2.4535  2.4562  2.4589
                 2.4615  2.4641  2.4667  2.4692  2.4718  2.4743  2.4767
                 2.4792  2.4817  2.4841  2.4865  2.4888  2.4912  2.4935
                 2.4958  2.4981  2.5004  2.5027  2.5049  2.5072  2.5094
                 2.5116  2.5137  2.5159  2.5180  2.5202  2.5223  2.5244
                 2.5264  2.5285  2.5306  2.5326  2.5346  2.5366  2.5386
                 2.5406  2.5426  2.5446  2.5465  2.5484  2.5504  2.5523
                 2.5542  2.5561  2.5579  2.5598  2.5617  2.5635  2.5653
                 2.5672  2.5690  2.5708  2.5726  2.5744  2.5761  2.5779
                 2.5796  2.5814  2.5831  2.5849  2.5866  2.5883  2.5900
                 2.5917  2.5934  2.5950  2.5967  2.5983  2.6000

*****
*****    EXISTING CONDITIONS
*****
COMPUTE NM HYD       ID=1 HYD NO=100.00 AREA=0.00148 SQ MI
                     PER A=00.00 PER B=00.00 PER C=100.00 PER D=00.00
                     TP=0.1333 HR MASS RAINFALL=-1

    K =    .108461HR    TP =    .133300HR    K/TP RATIO =    .813662     SHAPE CONSTANT, N =  4.394154
    UNIT PEAK =    4.2262    CFS   UNIT VOLUME =     .9973       B =   380.65      P60 = 2.1000
    AREA =       .001480 SQ MI    IA =     .35000 INCHES    INF =     .83000 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =    .033333

PRINT HYD            ID=1 CODE=1

                                   PARTIAL HYDROGRAPH   100.00

    RUNOFF VOLUME =      1.26834 INCHES      =         .1001 ACRE-FEET
    PEAK DISCHARGE RATE =        3.24 CFS  AT   1.500 HOURS   BASIN AREA =    .0015 SQ. MI.


*****
*****    PROPOSED CONDITIONS
*****
*****    PROPOSED SUBDIVISION
*****
COMPUTE NM HYD       ID=2 HYD NO=200.00 AREA=0.00202 SQ MI
                     PER A=00.00 PER B=30.00 PER C=30.00 PER D=40.00
                     TP=0.1333 HR MASS RAINFALL=-1

    K =    .072649HR    TP =    .133300HR    K/TP RATIO =    .545000     SHAPE CONSTANT, N =  7.106420
    UNIT PEAK =    3.1900    CFS   UNIT VOLUME =     .9961       B =   526.28      P60 = 2.1000
    AREA =       .000808 SQ MI    IA =     .10000 INCHES    INF =     .04000 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =    .033333


    K =    .120817HR    TP =    .133300HR    K/TP RATIO =    .906356     SHAPE CONSTANT, N =  3.908546
    UNIT PEAK =    3.1734    CFS   UNIT VOLUME =     .9962       B =   349.03      P60 = 2.1000
    AREA =       .001212 SQ MI    IA =     .42500 INCHES    INF =    1.04000 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =    .033333
```

```
PRINT HYD          ID=2 CODE=1

                                   PARTIAL HYDROGRAPH   200.00

    RUNOFF VOLUME =     1.58309 INCHES     =        .1706 ACRE-FEET
    PEAK DISCHARGE RATE =       4.88 CFS  AT   1.500 HOURS   BASIN AREA =   .0020 SQ. MI.


*****
*****
*****   OFF-SITE FLOW FROM SCHOOL
*****
COMPUTE NM HYD      ID=3 HYD NO=300.00 AREA=0.00020 SQ MI
                    PER A=00.00 PER B=0.00 PER C=100.00 PER D=0.00
                    TP=0.1333 HR MASS RAINFALL=-1

    K =   .108461HR    TP =   .133300HR    K/TP RATIO =   .813662     SHAPE CONSTANT, N =  4.394154
    UNIT PEAK =   .57111    CFS   UNIT VOLUME =    .9788       B =   380.65      P60 = 2.1000
    AREA =      .000200 SQ MI    IA =    .35000 INCHES    INF =    .83000 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033333

PRINT HYD          ID=3 CODE=1

                                   HYDROGRAPH FROM AREA   300.00

    RUNOFF VOLUME =     1.26834 INCHES     =        .0135 ACRE-FEET
    PEAK DISCHARGE RATE =        .45 CFS  AT   1.500 HOURS   BASIN AREA =   .0002 SQ. MI.


*****
FINISH

    NORMAL PROGRAM FINISH          END TIME (HR:MIN:SEC) = 11:35:37
```

```
START                    TIME=0.0
*****    COPPER PARK G&D PLAN
*****    FILE: C:\AHYMO\FORK.DAT JULY 1, 2004   BY:AMY
*****
*****    100-YEAR 6-HOUR STORM EVENT
*****
RAINFALL                 TYPE=1 RAIN QUARTER=0.0 IN
                         RAIN ONE=2.10 IN RAIN SIX=2.60 IN
                         RAIN DAY=3.25 IN DT=0.033333 HR
*****
*****   EXISTING CONDITIONS
*****
COMPUTE NM HYD           ID=1 HYD NO=100.00 AREA=0.00148 SQ MI
                         PER A=00.00 PER B=00.00 PER C=100.00 PER D=00.00
                         TP=0.1333 HR MASS RAINFALL=-1
PRINT HYD                ID=1 CODE=1
*****
*****   PROPOSED CONDITIONS
*****
*****   PROPOSED SUBDIVISION
*****
COMPUTE NM HYD           ID=2 HYD NO=200.00 AREA=0.00202 SQ MI
                         PER A=00.00 PER B=30.00 PER C=30.00 PER D=40.00
                         TP=0.1333 HR MASS RAINFALL=-1
PRINT HYD                ID=2 CODE=1
*****
*****
*****   OFF-SITE FLOW FROM SCHOOL
*****
COMPUTE NM HYD           ID=3 HYD NO=300.00 AREA=0.00020 SQ MI
                         PER A=00.00 PER B=0.00 PER C=100.00 PER D=0.00
                         TP=0.1333 HR MASS RAINFALL=-1
PRINT HYD                ID=3 CODE=1
*****
FINISH
```

CALCULATIONS FOR

COPPER PARK

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 COPPER PARK
SUBJECT
BY AMY DATE 7/1/04
CHECKED DATE
SHEET 1 OF

FLOWS

SITE A = 0.95AC = 41,382 SF = 0.00148 SQ MI

P_{60} = 2.1
P_{360} 2.6
P_{1440} = 3.25

TYPE D
ROW 0.0384 AC = 1673 SF
TOWNHOMES
6(53x27) + 2(65x27) = 12,096
DRIVES 20 x 16 x 8 = 2560

16,329 → 39.5%

FROM ATMO Q_{EXIST} = 3.24
Q_{PROP} = 4.88
1.64 cfs DIFFERENCE

OFF-SITE FLOWS FROM SCHOOL
$155 \times 15 + \frac{\pi 45^2}{2}$ = 5506 SF = 0.00020 SQ MI = 0.13 AC
FROM ATMO Q = 0.45 cfs

TOTAL Q_{PROP} = 5.33 cfs
TOTAL Q_{EXIST} = 3.69

1.64 cfs DIFF

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

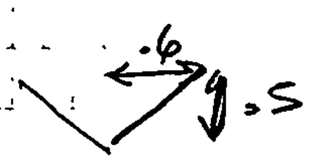
PROJECT COPPER PARK
SUBJECT
BY AMW DATE 7/7/04
CHECKED DATE
SHEET ___ OF ___

SIZE DITCH

OFFSITE AREA $Q = 0.45$ cfs

ON-SITE $Q = (47 \times 95 + 10 \times 110)\ \frac{3.77 \text{ cfs}}{\text{Ac}} = .48$ cfs

.93 cfs TOTAL



$$Q = \frac{1.49\, A R^{2/3} S^{1/2}}{n}$$

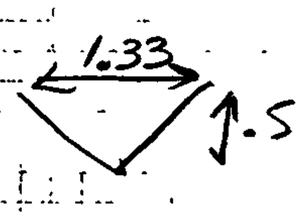
$A = 2(\tfrac{1}{2})\,.6(.5) = 0.30$

$R = \frac{A}{WP} = \frac{0.30}{2\sqrt{.6^2 + .5^2}} = 0.19$

$S = .006$

$n = .013$

$Q = \frac{1.49(.30)(.19)^{2/3}\sqrt{.006}}{.013} = 0.89$ X



$A = 2(\tfrac{1}{2})(.67)(.5) = .34$

$R = \frac{A}{WP} = \frac{.34}{2\sqrt{.67^2 + .5^2}} = 0.20$

$S = .006$

$n = .013$

$Q = \frac{1.49(.34)(.20)^{2/3}\sqrt{.006}}{.013} = 1.04 \text{ cfs} > 0.93 \text{ cfs}$ ✓

SIZE OPENING IN CURB

$$L = \frac{Q}{2.95 H^{3/2}} = \frac{0.93}{2.95(.33)^{3/2}} = 1.66'$$

HEC-RAS Plan: Plan 01 River: street Reach: a

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chnl
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
a	1000	5.33	0.00	0.52		0.52	0.000178	0.47	11.39	44.00	0.16
a	500	5.33	0.00	0.27	0.25	0.32	0.006001	1.68	3.17	24.98	0.83

26' FF

MTB C+G

File
K22/D30

facsimile TRANSMITTAL

to: Brad Bingham
fax #: 924-3864
re: Copper Park Subdivision (Townhome Project)
date: January 7, 2005
pages: 3, including this cover sheet.

Brad,

This project naturally drains towards the southwest however the grading was approved to drain the site to the north to Copper Avenue. Consequently the site is requiring a sizable importation of dirt which may likely kill the project unless there is an alternative grading scheme.

Is it possible to drain the site to the southwest to the existing San Jacinto Avenue right of way ? The totally developed flow from this project site would be 5.88 cfs. It seems like this small amount of discharge could be free discharged to San Jacinto Ave.

Please call me and discuss.

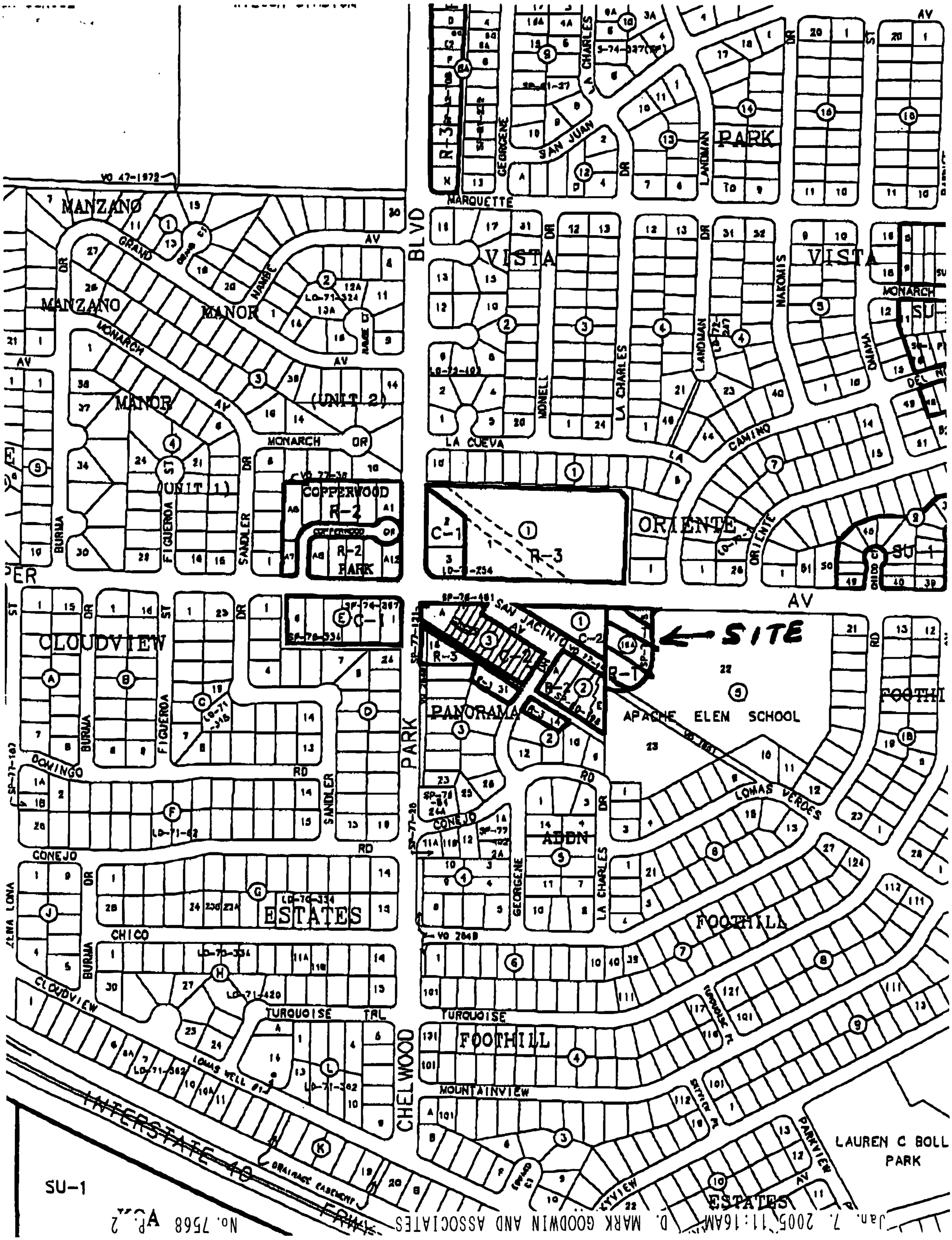
Thanks,

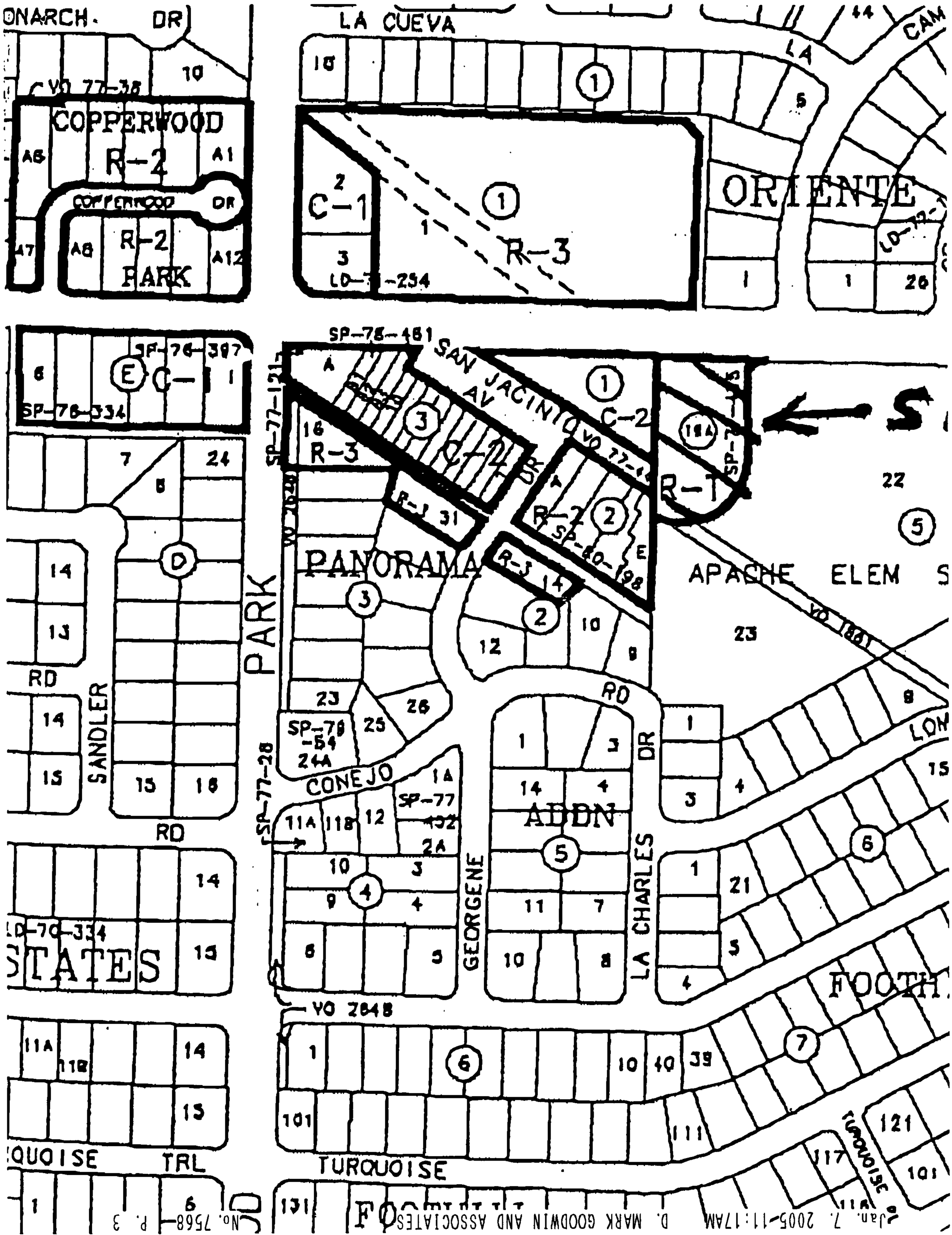
Diane Hoelzer

From the desk of...

Diane Hoelzer. P.E.
Civil Engineer
D.Mark Goodwin & Associates, PA
P.O.BOX 90606
Albuquerque, NM 87199

(505) 828-2200
Fax: 797-9539


MANZANO
MANZANO MANOR
MANOR (UNIT 2)
MANOR (UNIT 1)
COPPERWOOD
R-2
R-2 PARK
R-3
C-1
ORIENTE
PARK
VISTA
SU
CLOUDVIEW
PANORAMA
APACHE ELEM SCHOOL
SITE
ESTATES
FOOTHILL
CHELWOOD
LAUREN C BOLL PARK
INTERSTATE 40
SU-1
MARQUETTE
MONARCH
GRAND
LA CUEVA
SAN JUAN
LA CHARLES
GEORGENE
LANDMAN
NAKOMIS
OMAHA
CAMINO
ORIENTE
SAN JACINTO
LOMAS VERDES
CONEJO
CHICO
TURQUOISE
MOUNTAINVIEW
PARKVIEW
BURMA
FIGUEROA
SANDLER
ZENA LONA
DRAINAGE EASEMENT
D. MARK GOODWIN AND ASSOCIATES
Jan. 7. 2005 11:16AM
No. 7568 P. 2



TURQUOISE
TRL
TURQUOISE
FOOTH
STATES
LD-70-334
VO 2848
LA CHARLES
GEORGENE
ADDN
CONEJO
SP-77-132
SP-78-54
SP-77-28
RD
SANDLER
RD
DR
RD
PARK
PANORAMA
APACHE ELEM S
VO 1801
R-1
R-2
SP-80-198
R-1
R-3
C-2
VO 77-4
SAN JACINTO AV
SP-77-121
SP-78-481
SP-78-334
SP-76-397
C-1
5
LD-77-234
R-3
C-1
ORIENTE
PARK
R-2
COPPERWOOD DR
R-2
COPPERWOOD
VO 77-38
LA CUEVA
LA
CAM
DR
MONARCH