CITY OF ALBUQUERQUE

February 9, 2007

John M. Mackenzie, P.E.
D. Mark Goodwin & Associates, P.A.
PO Box 90606
Rio Rancho, NM 87199

Re: Chaparral Court, Engineer's Certification dated 7-24-06
Request for Release of Financial Guarantee, CPN 7710.81

Dear Mr. Mackenzie,

Based upon the information provided in your Drainage Certification received on February 8, 2007, the above referenced plan is approved for release of financial guarantee.

If you have any questions, you can contact me at 924-3990.

Sincerely,

Jeremy Hoover, P.E.
Senior Engineer
Hydrology Section
Development and Building Services

cc: file F10/D13
Marilyn Maldonado

P.O. Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

CITY OF ALBUQUERQUE

July 5, 2006

Mr. Mark Goodwin, P.E.
MARK GOODWIN & ASSOCIATES
4201 64th Street NW
Albuquerque, NM 87120

Re: CHAPARRAL COURT, 4201 64th Street NW, Grading/Drainage Plan, Engineer's Stamp, 06/03/2005 (F-10/D13)

Dear Mark,

Thank you for providing an Engineer Certification for the Grading/Drainage Plan for the above referenced plan. It will be placed in the project file

If you have any questions, I can be contacted at 924-3982.

Sincerely,

Arlene V. Portillo

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

C: file

P.O. Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

CITY OF ALBUQUERQUE

P.O. Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

September 11, 2006

FEMA Depot
3601 Eisenhower Ave
Alexandria VA, 22304

Re: Request for a Letter of Map Revision – Fill for Chaparral Court Subdivsion, City of Albuquerque, New Mexico, Community No. 350002, FIRM Panel 35001C0114E

Dear FEMA review engineer,

The purpose of this submittal is to convey the documents in order to request a Letter of Map Revision for the Chaparral Court Subdivision. This request is to show that this remnant of a floodplain is able be removed since there is no runoff draining into this "playa" and they have elevated the whole project to drain to existing City streets and storm drains.

Enclosed with this letter are the Application and analysis of the project and as-built construction drawings for requesting revisions to the National Flood Insurance Program map. Also enclosed is a fee of $800.00 payable to NFIP.

As the Community official, I have reviewed the application and endorse this revision request. Our Community would greatly appreciate your prompt response and approval.

If you have any questions, you can contact me at (505) 924-3986.

Sincerely,

Bradley L. Bingham, PE, CFM
City Floodplain Administrator

C: Mark Goodwin, MGA
Bill Blanton, FEMA Headquarters
Jack Quarles, FEMA Region VI
file

FEDERAL EMERGENCY MANAGEMENT AGENCY

PROPERTY INFORMATION FORM

O.M.B. NO. 3067-0147
Expires September 30, 2005

PAPERWORK BURDEN DISCLOSURE NOTICE

Public reporting burden for this form is estimated to average 1.63 hours per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing, reviewing, and submitting the form. You are not required to respond to this collection of information unless a valid OMB control number appears in the upper right corner of this form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden to: Information Collections Management, Federal Emergency Management Agency, 500 C Street, SW, Washington DC 20472, Paperwork Reduction Project (3067-0147). Submission of the form is required to obtain or retain benefits under the National Flood Insurance Program. **Please do not send your completed survey to the above address.**

This form may be completed by the property owner, property owner's agent, licensed land surveyor, or registered professional engineer to support a request for a Letter of Map Amendment (LOMA), Conditional Letter of Map Amendment (CLOMA), Letter of Map Revision Based on Fill (LOMR-F), or Conditional Letter of Map Revision Based on Fill (CLOMR-F) for existing or proposed, single or multiple lots/structures. Please check the item below that describes your request:

☐ LOMA	A letter from FEMA stating that an existing structure or parcel of land that has not been elevated by fill (natural grade) would not be inundated by the base flood.
☐ CLOMA	A letter from FEMA stating that a proposed structure that is not to be elevated by fill (natural grade) would not be inundated by the base flood if built as proposed.
☒ LOMR-F	A letter from FEMA stating that an **existing** structure or parcel of land that has been **elevated by fill** would not be inundated by the base flood.
☐ CLOMR-F	A letter from FEMA stating that a parcel of land or **proposed** structure that will be **elevated by fill** would not be inundated by the base flood if fill is placed on the parcel as proposed or the structure is built as proposed.

Fill is defined as material from any source placed to raise the ground to or above the Base Flood Elevation (BFE). The common construction practice of removing unsuitable existing material (topsoil) and backfilling with select structural material is not considered the placement of fill if the practice does not alter the existing (natural grade) elevation, which is at or above the BFE. **Fill that is placed before the date of the first National Flood Insurance Program (NFIP) map showing the area in a Special Flood Hazard Area (SFHA) is considered natural grade.**

Has fill been placed on your property? ☒ Yes ☐ No If yes, when was fill placed? Jan / 06 (month/year)

Will fill be placed on your property? ☐ Yes ☐ No If yes, when will fill be placed? / (month/year)

1. Street Address of the Property (if request is for multiple structures, please attach additional sheet):
   4201 64th Street NW, Albuquerque, NM 87120
2. Legal description of Property (Lot, Block, Subdivision) (if a street address cannot be provided):
   Street Address is provided
3. Are you requesting that the SFHA designation be removed from (check one):
   - ☐ the entire legally recorded property?
   - ☒ a portion of land within the bounds of the property (a certified metes and bounds description and map of the area to be removed, certified by a licensed land surveyor or registered professional engineer, are required)?
   - ☐ structures on the property? What are the dates of construction?
4. Is this request for a (check one):
   - ☐ single structure
   - ☐ single lot
   - ☐ multiple structures (How many structures are involved in your request? List the number:)
   - ☒ multiple lots (How many lots are involved in your request? List the number: 22)

In addition to this form (MT-1 Form 1), ALL requests must include the following:

- Copy of the Plat Map for the property (with recordation data and stamp of the Recorder's Office)
  OR
- Copy of the property Deed (with recordation data and stamp of the Recorder's Office), accompanied by a tax assessor's map or other certified map showing the surveyed location of the property relative to local streets and watercourses
- Copy of the effective FIRM panel and/or Flood Boundary and Floodway Map (FBFM) (if applicable) on which the property location has been accurately plotted (property inadvertently located in the NFIP regulatory floodway will require Section B of MT-1 Form 3)
- Form 2 – Elevation Form. If an Elevation Certificate has already been completed for this property, it may be submitted in addition to Form 2.

Please include a map scale and North arrow on all maps submitted.

For LOMR-Fs and CLOMR-Fs, the following must be submitted in addition to the items listed above:

- Form 3 – Community Acknowledgment Form

Processing Fee (see instructions for appropriate mailing address; or, visit **http://www.fema.gov/plan/prevent/fhm/frm_fees.shtm** for the most current fee schedule)

Revised fee schedules are published periodically, but no more than once annually, as noted in the Federal Register. Please note: single/multiple lot(s)/structure(s) LOMAs are fee exempt. The current review and processing fees are listed below:

Check the fee that applies to your request:

- ☐ $325 (single lot/structure LOMR-F following a CLOMR-F)
- ☐ $425 (single lot/structure LOMR-F)
- ☐ $500 (single lot/structure CLOMA or CLOMR-F)
- ☐ $700 (multiple lot/structure LOMR-F following a CLOMR-F, or multiple lot/structure CLOMA)
- ☒ XX $800 (multiple lot/structure LOMR-F or CLOMR-F)

Please submit the Payment Information Form for remittance of applicable fees. Please make your check or money order payable to: National Flood Insurance Program.

All documents submitted in support of this request are correct to the best of my knowledge. I understand that any false statement may be punishable by fine or imprisonment under Title 18 of the United States Code, Section 1001.

Applicant's Name: Pavan K. Toleti (Please Print or Type)

Company: Mark Goodwin & Associates

Mailing Address: P.O. Box 90606
Albuquerque, NM 87199

Daytime Telephone No.: (505) 828-2200

E-Mail Address: pavan@goodwinengineers.com (optional)

Fax No.: (505) 797-9539

Date 30th June '06

T. Pavankumar
Signature of Applicant (required)

If you have any questions concerning FEMA policy, or the NFIP in general, please contact the FEMA Map Assistance Center toll free at 1-877-FEMA MAP (1-877-336-2627), or visit the Flood Hazard Mapping website at **http://www.fema.gov/plan/prevent/fhm.**

FEDERAL EMERGENCY MANAGEMENT AGENCY

ELEVATION FORM

O.M.B. NO. 3067-0147
Expires September 30, 2005

PAPERWORK BURDEN DISCLOSURE NOTICE

Public reporting burden for this form is estimated to average 1 hour per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing, reviewing, and submitting the form. You are not required to respond to this collection of information unless a valid OMB control number appears in the upper right corner of this form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden to: Information Collections Management, Federal Emergency Management Agency, 500 C Street, SW, Washington DC 20472, Paperwork Reduction Project (3067-0147). Submission of the form is required to obtain or retain benefits under the National Flood Insurance Program. **Please do not send your completed survey to the above address.**

This form must be completed for requests and must be completed and signed by a registered professional engineer or licensed land surveyor. A FEMA **National Flood Insurance Program (NFIP) Elevation Certificate may be submitted in addition to this form for single structure requests.**

For requests to remove a structure on natural grade OR on engineered fill from the Special Flood Hazard Area (SFHA), submit the lowest adjacent grade (the lowest ground touching the structure), including an attached deck or garage. For requests to remove an entire parcel of land from the SFHA, provide the lowest lot elevation; or, if the request involves an area described by metes and bounds, provide the lowest elevation within the metes and bounds description.

1. NFIP Community Number: 35002 Property Name or Address: CHAPARRAL COURT; 4201 64TH STREET NW ABQ, NM 87120
2. Are the elevations listed below based on [X] existing or [ ] proposed conditions? (Check one)
3. What is the elevation datum? NGVD 29 If any of the elevations listed below were computed using a datum different than the datum used for the effective Flood Insurance Rate Map (FIRM) (e.g., NGVD 29 or NAVD 88), what was the conversion factor?

   Local Elevation +/- ft. = FIRM Datum

4. For the existing or proposed structures listed below, what are the types of construction? (check all that apply)
   [ ] crawl space [X] slab on grade [ ] basement/enclosure [ ] other (explain)
5. Has FEMA identified this area as subject to land subsidence or uplift? (see instructions) [ ] Yes [X] No
   If yes, what is the date of the current releveling? / (month/year)

Lot Number	Block Number	Lowest Lot Elevation	Lowest Adjacent Grade To Structure	Base Flood Elevation	For FEMA Use Only
1		5112.11	5113.55	5113	
2		5113.17	5113.86	5113	
3		5112.82	5114.52	5113	

This certification is to be signed and sealed by a licensed land surveyor, registered professional engineer, or architect authorized by law to certify elevation information. All documents submitted in support of this request are correct to the best of my knowledge. I understand that any false statement may be punishable by fine or imprisonment under Title 18 of the United States Code, Section 1001.

Certifier's Name:	License No.:	**Expiration Date:**
Company Name:	Telephone No.:	**Fax No.:**
Signature:	Date:	

Seal (optional)

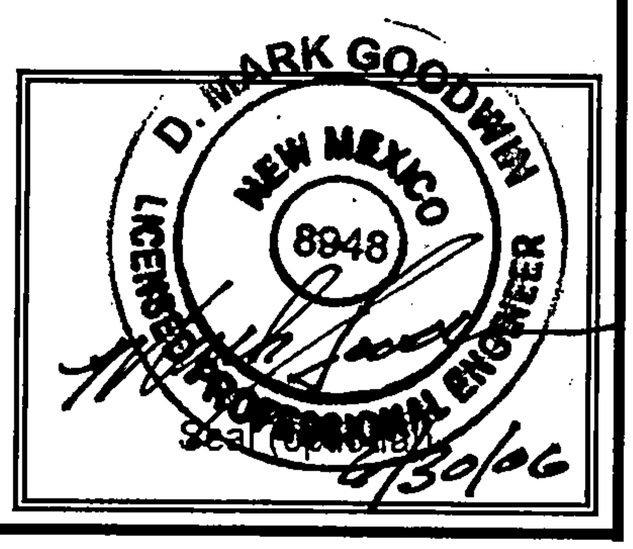
Continued from Page 1.

Lot Number	Block Number	Lowest Lot Elevation	Lowest Adjacent Grade To Structure	Base Flood Elevation	For FEMA Use Only
4		5112.82	5113.44	5113	
5		5113.35	5114.19	5113	
6		5113.70	5114.46	5113	
7		5113.82	5114.61	5113	
8		5113.48	5114.31	5113	
9		5113.25	5114.31	5113	
10		5113.25	5114.27	5113	
11		5113.62	5114.46	5113	
12		5113.95	5114.83	5113	
13		5114.25	5114.90	5113	
14		5114.52	5115.21	5113	
15		5114.06	5115.50	5113	
16		5114.06	5115.41	5113	
17		5113.43	5115.43	5113	
18		5113.68	5114.43	5113	
19		5112.82	5113.37	5113	
20		5113.01	5114.25	5113	
21		5113.04	5114.19	5113	
22		5112.46	5113.76	5113	

This certification is to be signed and sealed by a licensed land surveyor, registered professional engineer, or architect authorized by law to certify elevation information. All documents submitted in support of this request are correct to the best of my knowledge. I understand that any false statement may be punishable by fine or imprisonment under Title 18 of the United States Code, Section 1001.

Certifier's Name: MARK GOODWIN, PE	License No.: NMPE #8948	Expiration Date: 12/31/06
Company Name: MARK GOODWIN & ASSOC	Telephone No.: (505)828-2200	Fax No.: (505)797-9539
Signature: Mark Goodwin	Date:	

Seal (Optional)



FEDERAL EMERGENCY MANAGEMENT AGENCY

COMMUNITY ACKNOWLEDGMENT FORM

O.M.B. NO. 3067-0147
Expires September 30, 2005

PAPERWORK BURDEN DISCLOSURE NOTICE

Public reporting burden for this form is estimated to average 0.88 hour per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing, reviewing, and submitting the form. You are not required to respond to this collection of information unless a valid OMB control number appears in the upper right corner of this form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden to: Information Collections Management, Federal Emergency Management Agency, 500 C Street, SW, Washington DC 20472, Paperwork Reduction Project (3067-0147). Submission of the form is required to obtain or retain benefits under the National Flood Insurance Program. **Please do not send your completed survey to the above address.**

This form must be completed for requests involving the existing or proposed placement of fill (complete Section A) OR to provide acknowledgment of this request to remove a property from the SFHA which was previously located within the regulatory floodway (complete Section B).

This form must be completed and signed by the official responsible for floodplain management in the community. The community number and the subject property address must appear in the spaces provided below.

Community Number: 35002 Property Name or Address: Chaparral Court;4201 64th St. NW Abq. NM 87120

A. REQUESTS INVOLVING THE PLACEMENT OF FILL

As the community official responsible for floodplain management, I hereby acknowledge that we have received and reviewed this Letter of Map Revision Based on Fill (LOMR-F) or Conditional LOMR-F request. Based upon the community's review, we find the completed or proposed project meets or is designed to meet all of the community floodplain management requirements, including the requirement that no fill be placed in the regulatory floodway, and that all necessary Federal, State, and local permits have been, or in the case of a Conditional LOMR-F, will be obtained. In addition, we have determined that the land and any existing or proposed structures to be removed from the SFHA are or will be reasonably safe from flooding as defined in 44CFR 65.2(c), and that we have available upon request by FEMA, all analyses and documentation used to make this determination. For LOMR-F requests, we understand that this request is being forwarded to FEMA for a possible map revision.

Community Comments:

Community Official's Name and Title: (*Please Print or Type*)		Telephone No.:
Community Name:	Community Official's Signature: (required)	Date:

B. PROPERTY LOCATED WITHIN THE REGULATORY FLOODWAY

As the community official responsible for floodplain management, I hereby acknowledge that we have received and reviewed this request for a LOMA. We understand that this request is being forwarded to FEMA to determine if this property has been inadvertently included in the regulatory floodway. We acknowledge that no fill on this property has been or will be placed within the designated regulatory floodway. We find that the completed or proposed project meets or is designed to meet all of the community floodplain management requirements.

Community Comments:

Community Official's Name and Title: (*Please Print or Type*)		Telephone No.:
Community Name:	Community Official's Signature (required):	Date:

MAP SCALE 1" = 500'

250 0 500 1000 FEET

150 0 150 300 METERS

NFIP

PANEL 0114E

FIRM

FLOOD INSURANCE RATE MAP

BERNALILLO COUNTY, NEW MEXICO

AND INCORPORATED AREAS

PANEL 114 OF 825

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
ALBUQUERQUE, CITY OF	350002	0114	E
BERNALILLO COUNTY	350001	0114	E

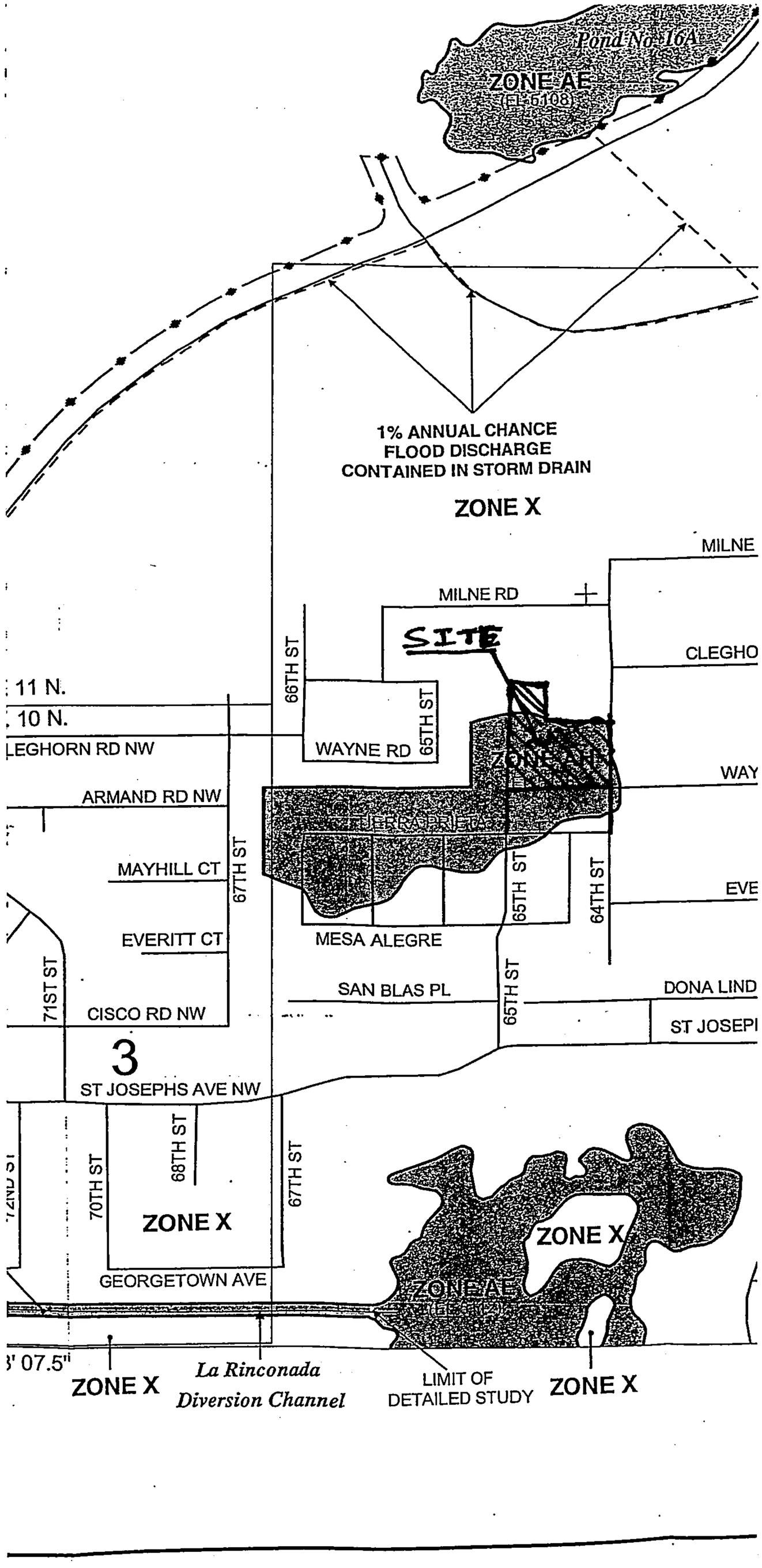
Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
35001C0114E

MAP REVISED
NOVEMBER 19, 2003

Federal Emergency Management Agency

NATIONAL FLOOD INSURANCE PROGRAM



DRAINAGE REPORT

For

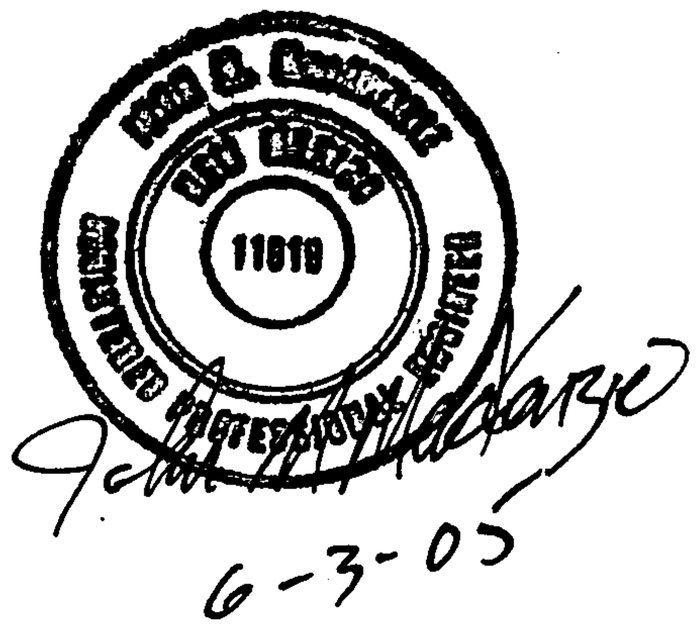
Chaparral Court Subdivision

Prepared for

Mel Famie, LLC
P.O. Box 2758
Corrales, NM 87048

Prepared by

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



June 2005

I. PROJECT DESCRIPTION

The proposed Chaparral Court Subdivison comprises approximately 3.6 acres, and is located along the west side of 64th Street NW, between Cleghorn Rd. and Wayne Rd. The proposal is to develop the site into 22 single family homes at a density of 6.11 DU per acre.

II. DRAINAGE DESIGN CRITERIA

The design criteria used in this report was in accordance with Section 22.2 Hydrology of the Development Process Manual, Volume 2, Design Criteria, January 1993 edition. The 100-year, 6-hour storm event was analyzed to determine street capacities using P(1hr) = 1.94", P(6hr) = 2.20". The onsite Land Treatment values used were Treatment D = 80, and Treatment B = 20 for the developed conditions. AHYMO printouts are provided at the back of this report.

III. EXISTING DRAINAGE CONDITIONS

The site is an infill site, with existing housing along the north, west, and south boundaries. To the east, 64th St. is developed with curb & gutter. Although no offsite waters impact this site from either the existing housing, or from 64th St., the site is listed by FEMA as being with an AH Zone floodplain (old playa) with a floodwater elevation of 5116 (FIRM map included). Per the AHYMO calculations, the site in the undeveloped state generates 5.79 cfs in a 100-year, 6-hour event. Except for a small area along 64th St., existing flows remain on-site.

IV. DEVELOPED DRAINAGE CONDITIONS

As indicated in the included drainage calculations, a total of 12.16 cfs will be generated within the 100-year, 6-hour event once the site is developed. All site generated flows will be surface routed via interior streets to 64th Street. Once in 64th, flows are diverted north, with flows along the east side of 64th turning east on Cleghorn Road where they are intercepted by drop inlets located west of Estancia Drive. Flows within the storm drain (30" to 48") are conveyed to interconnected detention basins located north of Milne Road. Flows along the west curb line of 64th continue north to Milne Road. Milne Road flows travel east to additional inlets located at Atrisco Drive.

V. SUMMARY

With full section developed streets and storm drains existing downstream of this site, and since this site is located at the lower reaches of the system drainage basin, the increase in flow resulting from the development of this site should have no adverse impacts downstream of the site.

As can be seen on the included drainage & grading plan, pad elevations have been set with some falling below the FEMA designated 100-year flood level. The required submittals to FEMA will be made to remove the area from the floodplain maps.

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

PROJECT CHAPARRAL COURT
SUBJECT DRAINAGE CALCS
BY TSD DATE 5/23/05
CHECKED _____ DATE _____
SHEET 1 OF 2

- THE SITE IS LOCATED ALONG THE WEST SIDE OF 64TH STREET BETWEEN TIERRA PRIETA AVE. & MILNE RD. THE INFILL SITE CONTAINS APPROX. 3.53 AC
- INTERIOR STREETS (.99 AC) WILL BE PUBLIC
- STORM WATERS GENERATED FROM SITE WILL SURFACE DISCHARGE TO 64TH ST.
- PER FEMA PANEL #0114E, THIS SITE IS IN A ZONE AH FLOODPLAIN (EL 5116)
- NO OFF-SITE FLOWS IMPACT THIS SITE. - EXISTING WALLS ON 3 SIDES & 64th ST ON ONE SIDE

1. FIND RUNOFF FROM LOTS:

AREA OF LOTS = 3.53 AC - .99AC = 2.54 AC.

AREA OF PADS = 22 x 45' x 45' = 1.02 AC.

DRIVE PADS = 22 x 18' x 20' = 0.18 AC.

∴ LOT TREATMENT TYPES:

'D' = 1.02 AC + 0.18AC = 1.20 AC

'B' = 2.54 AC - 1.20AC = 1.34 AC

2. FIND RUNOFF FROM ROW:

USE 20% 'B' & 80% 'D'

'B' = .20(.99AC) = .20 AC

'D' = .80(.99AC) = .80 AC

3. RAINFALL FOR AHYMO RUN

P_1 = 1.94 in, P_6 = 2.20 in, P_{24} = 2.56 IN

4. FROM AHYMO OUTPUT

Q_{EXIST} = 5.79 CFS (SHEET FLOW TO 64TH ST.)

Q_{DEV} = 12.16 CFS = 0.553 CFS/LOT

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

PROJECT CHAPARRAL COURT
SUBJECT DRAINAGE CALCS
BY TSO DATE 5/23/05
CHECKED _____ DATE _____
SHEET 2 OF 2

Will look at worst case - the entrance street from 64th St.

8" VC, slope = 0.50%
Q = 12.16 CFS
Use a flow depth of 0.50'
$A = (.22' \cdot .28') + 2(1/2(.28) \cdot .14) = 10.085F$
$Rh = A/Wp = 10.08/(28+1) = .347$
$V = 1.49 R^{2/3} S^{1/2}/n = 1.49(.347)^{.67}(.005)^{.5}/.017 = 3.05 fps$
$Q = VA = 3.05(10.08) = 30.74 CFS \rightarrow OK$
$d + V^2/2g = .5 + (3.05)^2/64.4 = .64' < 1.85 \rightarrow OK$

```
START              TIME=0.0
*****              CHAPPARAL COURT
*****              CALCULATE & ROUTE STORM FLOWS
*****              USE 100 YEAR 6 HOUR STORM EVENT
*****              FILE:  CHAPPARALCOURT.DAT    05/23/05  JSD
**********************************************************
RAINFALL           TYPE=1 RAIN QUARTER=0.0 IN
                   RAIN ONE=1.94 IN RAIN SIX=2.20 IN
                   RAIN DAY=2.56 IN DT=0.03333 HR
**********************************************************
*****
*****FIRST LOOK AT EXISTING FLOWS FROM THIS SITE
*****
COMPUTE NM HYD          ID=1 HYD NO=101.0 AREA=0.0055 SQ MI
                   PER A=80 PER B=0 PER C=20 PER D=0
                   TP=0.1333 HR MASS RAINFALL=-1
PRINT HYD          ID=1 CODE=1
*****
*****NEXT LOOK AT DEVELOPED CONDITIONS
*****
COMPUTE NM HYD          ID=3 HYD NO=103.0 AREA=0.0055 SQ MI
                   PER A=0 PER B=44 PER C=0 PER D=56
                   TP=0.1333 HR MASS RAINFALL=-1
PRINT HYD          ID=3 CODE=1
FINISH
```

```
          AHYMO PROGRAM (AHYMO_97) -                          - Version:
1997.02d
               RUN DATE (MON/DAY/YR) = 06/03/2005
               START TIME (HR:MIN:SEC) = 09:52:50     USER NO.= AHYMO-I-
9702dGoodwinM-AH
               INPUT FILE = C:\PROGRA~1\AHYMO_97\CHAPPA~1.DAT\CHAPPA~1.DAT


     START                              TIME=0.0
     *****                              CHAPPARAL COURT
     *****                              CALCULATE & ROUTE STORM FLOWS
     *****                              USE 100 YEAR 6 HOUR STORM EVENT
     *****                              FILE:  CHAPPARALCOURT.DAT    05/23/05  JSD
     ********************************************************************
     RAINFALL                      TYPE=1 RAIN QUARTER=0.0 IN
                                        RAIN ONE=1.94 IN RAIN SIX=2.20 IN
                                        RAIN DAY=2.56 IN DT=0.03333 HR

                                   COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS
2 - PEAK AT 1.40 HR.
                                   DT =     .033330 HOURS        END TIME =     5.999400 HOURS
                                      .0000   .0010   .0020   .0030   .0041   .0051   .0062
                                      .0074   .0085   .0097   .0109   .0122   .0134   .0148
                                      .0161   .0175   .0190   .0204   .0220   .0236   .0252
                                      .0269   .0287   .0306   .0325   .0345   .0367   .0389
                                      .0412   .0437   .0463   .0517   .0574   .0635   .0767
                                      .1061   .1514   .2165   .3053   .4220   .5709   .7562
                                      .9824  1.1923  1.2800  1.3540  1.4198  1.4797  1.5349
                                     1.5861  1.6339  1.6788  1.7210  1.7608  1.7984  1.8340
                                     1.8677  1.8997  1.9300  1.9588  1.9862  1.9918  1.9970
                                     2.0020  2.0066  2.0111  2.0153  2.0194  2.0233  2.0270
                                     2.0306  2.0341  2.0374  2.0407  2.0438  2.0469  2.0498
                                     2.0527  2.0555  2.0583  2.0609  2.0635  2.0661  2.0686
                                     2.0710  2.0734  2.0757  2.0779  2.0802  2.0824  2.0845
                                     2.0866  2.0887  2.0907  2.0927  2.0947  2.0966  2.0985
                                     2.1003  2.1022  2.1040  2.1058  2.1075  2.1092  2.1110
                                     2.1126  2.1143  2.1159  2.1175  2.1191  2.1207  2.1223
                                     2.1238  2.1253  2.1268  2.1283  2.1297  2.1312  2.1326
                                     2.1340  2.1354  2.1368  2.1381  2.1395  2.1408  2.1422
                                     2.1435  2.1448  2.1460  2.1473  2.1486  2.1498  2.1511
                                     2.1523  2.1535  2.1547  2.1559  2.1571  2.1582  2.1594
                                     2.1605  2.1617  2.1628  2.1639  2.1650  2.1661  2.1672
                                     2.1683  2.1694  2.1704  2.1715  2.1726  2.1736  2.1746
                                     2.1757  2.1767  2.1777  2.1787  2.1797  2.1807  2.1817
                                     2.1826  2.1836  2.1846  2.1855  2.1865  2.1874  2.1883
                                     2.1893  2.1902  2.1911  2.1920  2.1929  2.1938  2.1947
                                     2.1956  2.1965  2.1974  2.1983  2.1991  2.2000

     ********************************************************************
     *****
     *****FIRST LOOK AT EXISTING FLOWS FROM THIS SITE
     *****
     COMPUTE NM HYD                ID=1 HYD NO=101.0 AREA=0.0055 SQ MI
                                        PER A=80 PER B=0 PER C=20 PER D=0
                                        TP=0.1333 HR MASS RAINFALL=-1
```

```
          K =    .150867HR    TP =    .133300HR    K/TP RATIO =  1.131782
SHAPE CONSTANT, N =  3.127284
          UNIT PEAK =   12.050    CFS   UNIT VOLUME =    .9988       B =
292.04      P60 = 1.9400
          AREA =       .005500 SQ MI    IA =    .59000 INCHES    INF =
1.50200 INCHES PER HOUR
          RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD -
DT =   .033330

     PRINT HYD                 ID=1 CODE=1

                                        PARTIAL HYDROGRAPH   101.00


          RUNOFF VOLUME =       .55070 INCHES     =         .1615 ACRE-FEET
          PEAK DISCHARGE RATE =       5.79 CFS  AT   1.533 HOURS   BASIN AREA =
.0055 SQ. MI.

     *****
     *****NEXT LOOK AT DEVELOPED CONDITIONS
     *****
     COMPUTE NM HYD            ID=3 HYD NO=103.0 AREA=0.0055 SQ MI
                                    PER A=0 PER B=44 PER C=0 PER D=56
                                    TP=0.1333 HR MASS RAINFALL=-1

          K =    .072649HR    TP =    .133300HR    K/TP RATIO =    .545000
SHAPE CONSTANT, N =  7.106420
          UNIT PEAK =   12.160    CFS   UNIT VOLUME =    .9984       B =
526.28      P60 = 1.9400
          AREA =       .003080 SQ MI    IA =    .10000 INCHES    INF =
.04000 INCHES PER HOUR
          RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD -
DT =   .033330


          K =    .131243HR    TP =    .133300HR    K/TP RATIO =    .984570
SHAPE CONSTANT, N =  3.586444
          UNIT PEAK =   5.9290    CFS   UNIT VOLUME =    .9979       B =
326.58      P60 = 1.9400
          AREA =       .002420 SQ MI    IA =    .50000 INCHES    INF =
1.25000 INCHES PER HOUR
          RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD -
DT =   .033330

     PRINT HYD                 ID=3 CODE=1

                                        PARTIAL HYDROGRAPH   103.00


          RUNOFF VOLUME =     1.41009 INCHES     =         .4136 ACRE-FEET
          PEAK DISCHARGE RATE =      12.16 CFS  AT   1.500 HOURS   BASIN AREA =
.0055 SQ. MI.
```