CITY OF ALBUQUERQUE

June 23, 2010

Shahab Biazar, P.E.
Advanced Engineering and Consulting, LLC
4416 Anaheim Ave NE
Albuquerque, NM 87113

Re: Lots 11 and 12, 8705 Central Ave NW, Grading and Drainage Plan Engineer's Stamp date 6-17-10 (K09/D036)

Dear Mr. Biazar,

Based upon the information provided in your submittal received 6-21-10, the above referenced plan is approved for Building Permit. Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

Prior to Certificate of Occupancy release, Engineer Certification per the DPM checklist will be required.

If you have any questions, you can contact me at 924-3695.

Sincerely,

Curtis A. Cherne

Curtis A. Cherne, P.E.
Senior Engineer, Planning Dept.
Development and Building Services

C: file

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(Rev. 12/05)

PROJECT TITLE: LOT 11 AND 12, BLOCK 7, ORIGINAL TOWNSITE AT WESTLAND
ZONE ATLAS/DRG. FILE #: K-9 / D036
DRB #:
EPC #:
WORK ORDER #:

LEGAL DESCRIPTION: LOT 11 AND 12, BLOCK 7, ORIGINAL TOWNSITE AT WESTLAND
CITY ADDRESS: 8705 Central Ave NW

ENGINEERING FIRM: Advanced Engineering and Consulting, LLC
ADDRESS: 4416 Anaheim Ave., NE
CITY, STATE: Albuquerque, New Mexico
CONTACT: Shahab Biazar
PHONE: (505) 899-5570
ZIP CODE: 87113

OWNER:
ADDRESS:
CITY, STATE:
CONTACT:
PHONE:
ZIP CODE:

ARCHITECT:
ADDRESS:
CITY, STATE:
CONTACT:
PHONE:
ZIP CODE:

SURVEYOR:
ADDRESS:
CITY, STATE:
CONTACT:
PHONE:
ZIP CODE:

CONTRACTOR:
ADDRESS:
CITY, STATE:
CONTACT:
PHONE:
ZIP CODE:

CHECK TYPE OF SUBMITTAL:

- ____ DRAINAGE REPORT
- ____ DRAINAGE PLAN 1ST SUBMITTAL
- ____ DRAINAGE PLAN RESUBMITTAL
- ____ CONCEPTUAL GRADING & DRAINAGE PLAN
- X GRADING PLAN
- ____ EROSION CONTROL PLAN
- ____ ENGINEER'S CERTIFICATION (HYDROLOGY)
- ____ CLOMR / LOMR
- ____ TRAFFIC CIRCULATION LAYOUT (TCL)
- ____ ENGINEER/ARCHITECT CERT (TCL)
- ____ ENGINEER/ARCHITECT CERT (DRB S.P.)
- ____ ENGINEER/ARCHITECT CERT (AA)
- ____ OTHER (SPECIFY)

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
- X FINAL PLAT APPROVAL
- ____ FOUNDATION PERMIT APPROVAL
- X 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
JUN 21 2010
HYDROLOGY SECTION

DATE SUBMITTED: 06 / 21 / 2010
BY: Shahab Biazar, P.E.

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 submittals may be required based on the following:

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

DRAINAGE REPORT
FOR

LOTS 11 & 12, BLOCK 7,

ORIGINAL TOWNSITE AT WESTLAND

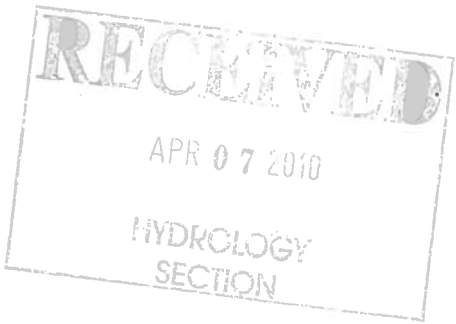
Prepared by:

ADVANCED
ENGINEERING
and CONSULTING, LLC

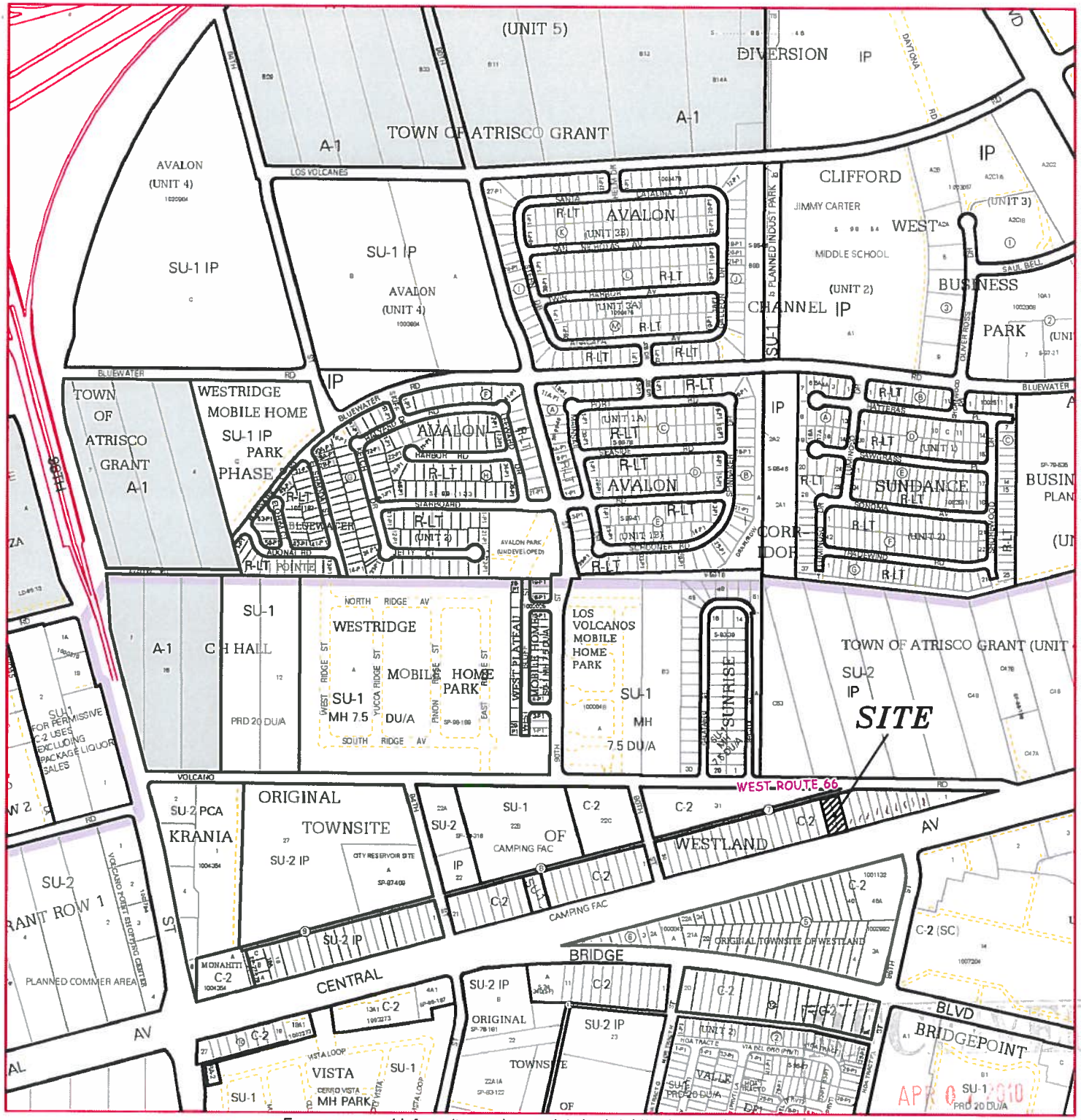
4416 Anaheim Ave., NE
Albuquerque, New Mexico 87113

April, 2010

Shahab Biazar
PE NO. 13479



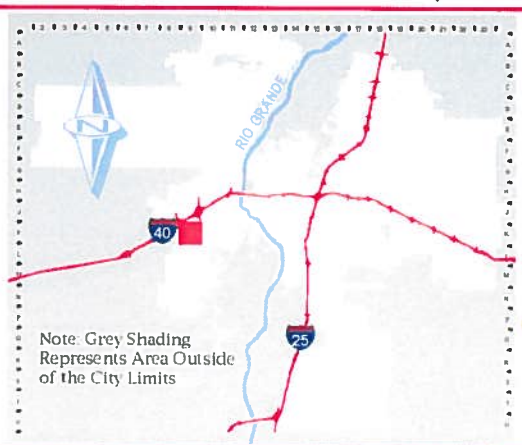
2010-DRN



For more current information and more details visit: http://www.cabq.gov/gis

Albuquerque Geographic Information System

Map amended through: 3/10/2009



Zone Atlas Page:

K-09-Z

Selected Symbols

- SECTOR PLANS
- Design Overlay Zones
- City Historic Zones
- H-1 Buffer Zone
- Petroglyph Mon.
- Escarpment
- 2 Mile Airport Zone
- Airport Noise Contours
- Wall Overlay Zone

0 750 1,500 Feet

Location

Lot 11 and 12, Block 7, Original Townsite at Westland, are located between 86th and 90th Street on the north side of Central Avenue. See an attached portion of Zone Atlas page number K-9 for exact location.

Purpose

The purpose of this drainage report is to present a grading and drainage solution for the proposed building on this site. We are requesting rough grading and building permit approval.

Existing Drainage Conditions

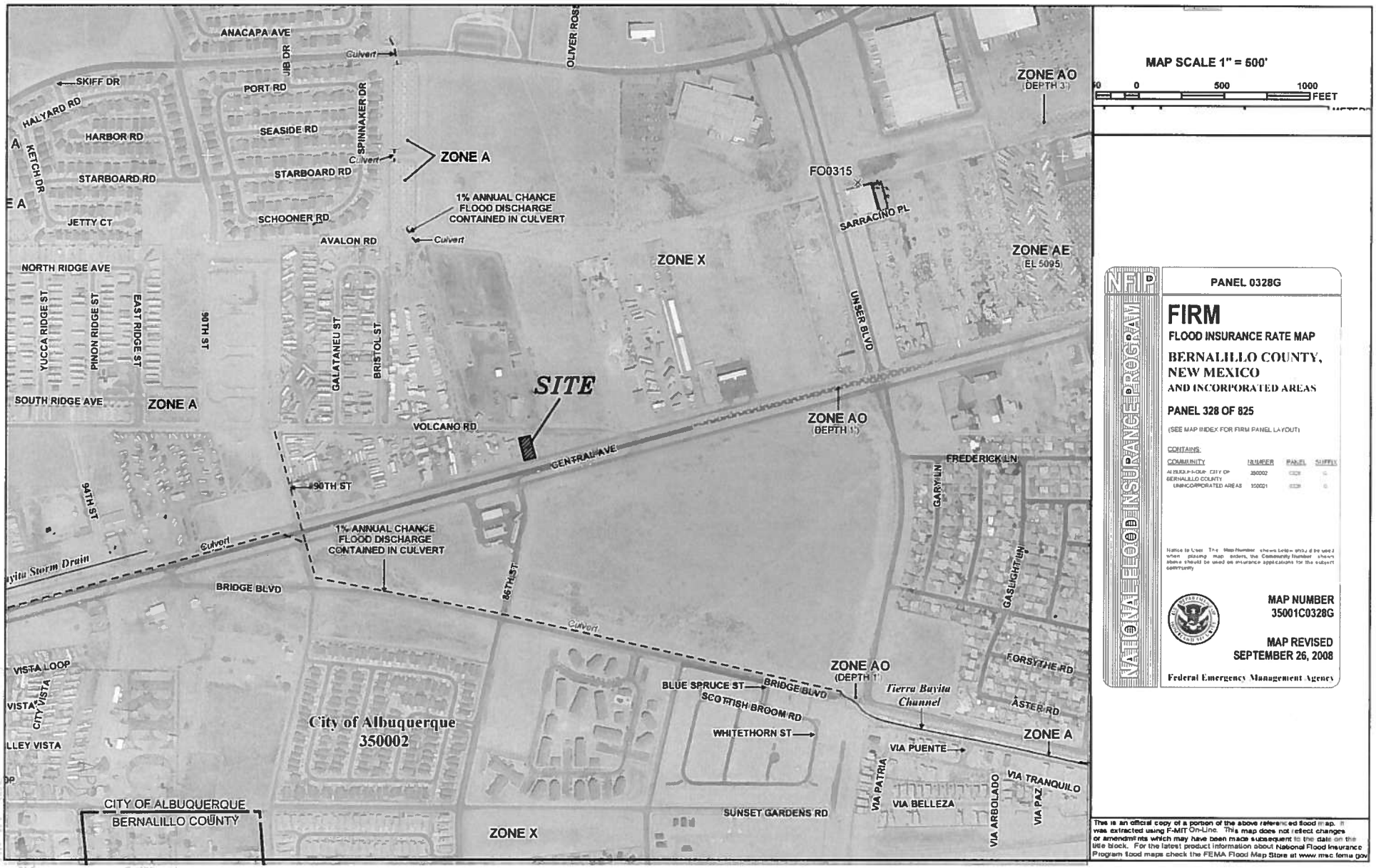
The site drains from west to east and then south to Central Avenue. Minor runoff may enter from the north and some from the west. No other offsite runoff does appear to enter the site. Based on the FIRM map number 35001C0328G the site does not fall within a 100-year floodplain. See an attached portion of the floodplain map for the location of the site.

Proposed Conditions and On-Site Drainage Management Plan

Under the proposed conditions the runoff will continue to drain from west to east and the south to Central Avenue. The increase in the runoff is fairly insignificant and should not have an impact on the street flow capacity nor the drainage system downstream of the site.

Calculations

City of Albuquerque, Development Process Manuel, Section 22.2, Hydrology Section, was used for runoff calculations. See this report for Summary Table for runoff results. See also this report for the AHYMO input and output files for runoff calculations.


ANACAPA AVE
JIB DR
Culvert
OLIVER ROSS
SKIFF DR
PORT RD
HALYARD RD
SPINNAKER DR
HARBOR RD
SEASIDE RD
KETCH DR
ZONE A
STARBOARD RD
STARBOARD RD
1% ANNUAL CHANCE FLOOD DISCHARGE CONTAINED IN CULVERT
JETTY CT
SCHOONER RD
AVALON RD
Culvert
ZONE X
NORTH RIDGE AVE
YUCCA RIDGE ST
PINON RIDGE ST
EAST RIDGE ST
90TH ST
GALATANEU ST
BRISTOL ST
SITE
SOUTH RIDGE AVE
ZONE A
VOLCANO RD
CENTRAL AVE
90TH ST
94TH ST
Culvert
1% ANNUAL CHANCE FLOOD DISCHARGE CONTAINED IN CULVERT
BRIDGE BLVD
86TH ST
Culvert
VISTA LOOP
VISTA
CITY VISTA
LLEY VISTA
City of Albuquerque
350002
CITY OF ALBUQUERQUE
BERNALILLO COUNTY
ZONE X
SUNSET GARDENS RD
BLUE SPRUCE ST
BRIDGE BLVD
SCOTTISH BROOM RD
WHITETHORN ST
ZONE AO
(DEPTH 1)
Tierra Bayita Channel
VIA PUENTE
ZONE A
VIA PATRIA
VIA BELLEZA
VIA ARBOLADO
VIA PAZ
VIA TRANQUILO
ASTER RD
FORSYTHE RD
GASLIGHT LN
GARY LN
FREDERICK LN
ZONE AO
(DEPTH 1)
ZONE AO
DEPTH 3
FO0315
SARRACINO PL
UNSER BLVD
ZONE AE
EL 5095
MAP SCALE 1" = 500'
500
1000
FEET
PANEL 0328G
FIRM
FLOOD INSURANCE RATE MAP
BERNALILLO COUNTY, NEW MEXICO
AND INCORPORATED AREAS
PANEL 328 OF 825
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)
CONTAINS:
COMMUNITY
NUMBER
PANEL
SUFFIX
ALBUQUERQUE, CITY OF
350002
0328
G
BERNALILLO COUNTY
UNINCORPORATED AREAS
350001
0328
G
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
35001C0328G
MAP REVISED
SEPTEMBER 26, 2008
Federal Emergency Management Agency
NATIONAL FLOOD INSURANCE PROGRAM
This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

RUNOFF CALCULATION RESULTS

BASIN	AREA (SF)	AREA (AC)	AREA (MI^2)
ON-SITE	20,000.00	0.4591	0.000717

HISTORICAL

BASIN	Q-100 CFS	Q-10 CFS	TREATMENT A, B, C, D
ON-SITE	0.60	0.11	100%, 0%, 0%, 0%

PROPOSED

BASIN	Q-100 CFS	Q-10 CFS	TREATMENT A, B, C, D
ON-SITE	1.78	1.11	0%, 10%, 20%, 70%

2010 BASIN.123

RUNOFF CALCULATIONS

(INPUT DATA FOR AHYMO CALCULATIONS)

The site is @ Zone 1

DEPTH (INCHES) @ 100-YEAR STORM

P_{60} = 1.87 inches

P_{360} = 2.20 inches

P_{1440} = 2.66 inches

DEPTH (INCHES) @ 10-YEAR STORM

P_{60} = 1.87 x 0.667
= 1.25 inches

P_{360} = 1.47

P_{1440} = 1.77

See the summary output from AHYMO calculations.

Also see the following summary tables.

AHYMO INPUT FILE

```
*
* ZONE 1
*
**************************************************************
*      100-YEAR,  6-HR STORM (UNDER HISTORICAL CONDITIONS)       *
**************************************************************
START                 TIME=0.0
RAINFALL              TYPE=1 RAIN QUARTER=0.0 IN
                      RAIN ONE=1.87 IN RAIN SIX=2.20 IN
                      RAIN DAY=2.66 IN DT=0.03333 HR
* ON-SITE
COMPUTE NM HYD        ID=1 HYD NO=101.0 AREA=0.000717 SQ MI
                      PER A=100.00 PER B=0.00 PER C=0.00 PER D=0.00
                      TP=0.1333 HR MASS RAINFALL=-1
**************************************************************
*       10-YEAR,  6-HR STORM (UNDER HISTORICAL CONDITIONS)       *
**************************************************************
START                 TIME=0.0
RAINFALL              TYPE=1 RAIN QUARTER=0.0 IN
                      RAIN ONE=1.25 IN RAIN SIX=1.47 IN
                      RAIN DAY=1.77 IN DT=0.03333 HR
* ON-SITE
COMPUTE NM HYD        ID=1 HYD NO=111.0 AREA=0.000717 SQ MI
                      PER A=100.00 PER B=0.00 PER C=0.00 PER D=0.00
                      TP=0.1333 HR MASS RAINFALL=-1
**************************************************************
*        100-YEAR,  6-HR STORM (UNDER PROPOSED CONDITIONS)       *
**************************************************************
START                 TIME=0.0
RAINFALL              TYPE=1 RAIN QUARTER=0.0 IN
                      RAIN ONE=1.87 IN RAIN SIX=2.20 IN
                      RAIN DAY=2.66 IN DT=0.03333 HR
* ON-SITE
COMPUTE NM HYD        ID=1 HYD NO=101.1 AREA=0.000717 SQ MI
                      PER A=0.00 PER B=10.00 PER C=20.00 PER D=70.00
                      TP=0.1333 HR MASS RAINFALL=-1
**************************************************************
*         10-YEAR,  6-HR STORM (UNDER PROPOSED CONDITIONS)       *
**************************************************************
START                 TIME=0.0
RAINFALL              TYPE=1 RAIN QUARTER=0.0 IN
                      RAIN ONE=1.25 IN RAIN SIX=1.47 IN
                      RAIN DAY=1.77 IN DT=0.03333 HR
* ON-STIE
COMPUTE NM HYD        ID=1 HYD NO=111.1 AREA=0.000717 SQ MI
                      PER A=0.00 PER B=10.00 PER C=20.00 PER D=70.00
                      TP=0.1333 HR MASS RAINFALL=-1
**************************************************************
FINISH
```

SUMMARY OUTPUT FILE

AHYMO PROGRAM SUMMARY TABLE (AHYMO_97) - - VERSION: 1997.02d RUN DATE (MON/DAY/YR) =04/07/2010
INPUT FILE = 2010M USER NO.= AHYMO-I-9702c01000R31-AH

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= 2.200
COMPUTE NM HYD	101.00	-	1	.00072	.60	.017	.43925	1.533	1.310	PER IMP= .00
START										TIME= .00
RAINFALL TYPE= 1										RAIN6= 1.470
COMPUTE NM HYD	111.00	-	1	.00072	.11	.003	.08264	1.533	.249	PER IMP= .00
START										TIME= .00
RAINFALL TYPE= 1										RAIN6= 2.200
COMPUTE NM HYD	101.10	-	1	.00072	1.78	.063	1.63711	1.500	3.869	PER IMP= 70.00
START										TIME= .00
RAINFALL TYPE= 1										RAIN6= 1.470
COMPUTE NM HYD	111.10	-	1	.00072	1.11	.037	.97290	1.500	2.411	PER IMP= 70.00
FINISH										