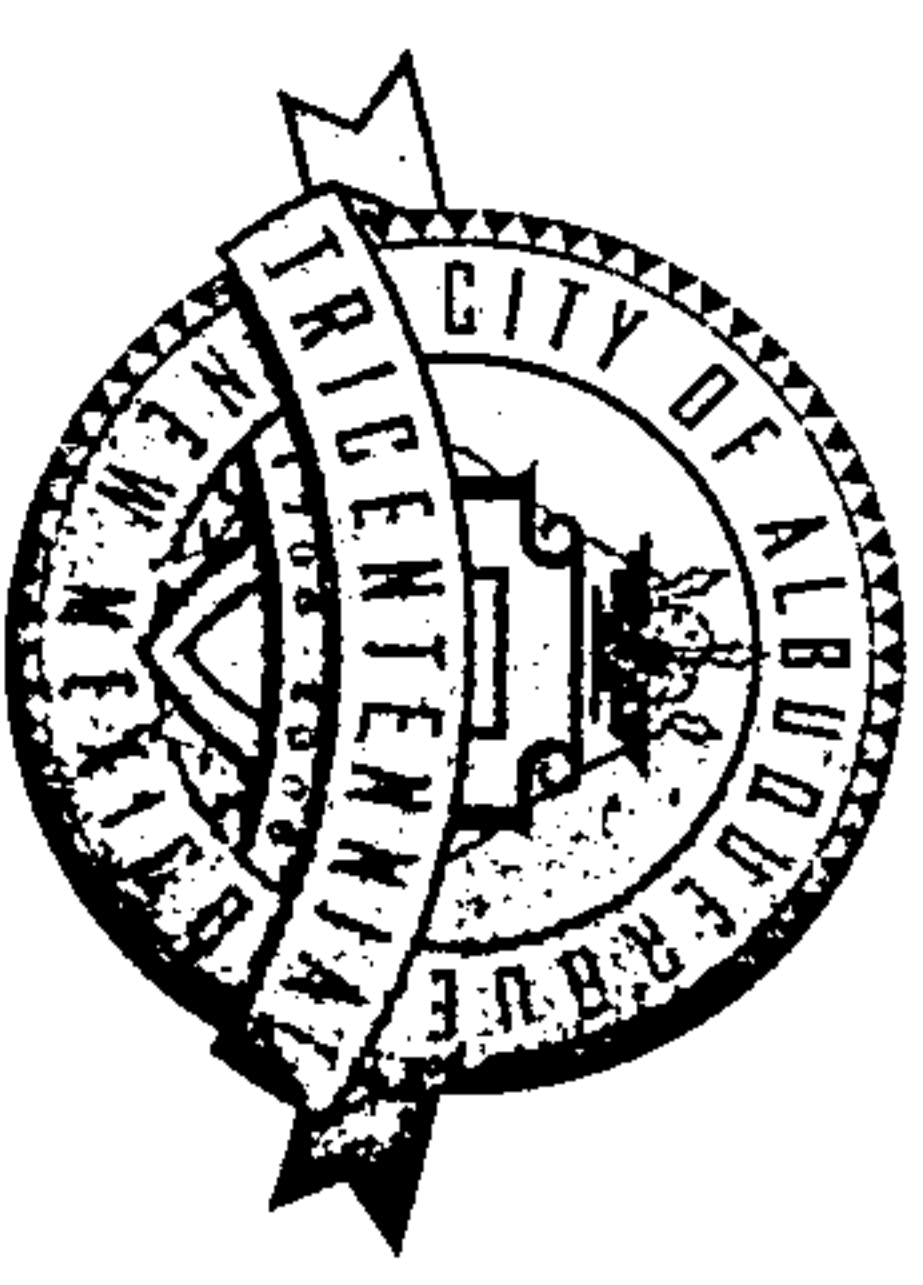


CITY OF ALBUQUERQUE



August 21, 2007

Dennis Lorenz, P.E.
Brasher & Lorenz
2201 San Pedro NE, Building 1 Suite 1200
Albuquerque, NM 87110

**Re: Four Hills Country Club Practice Tees and Teaching Center Addition,
911 Four Hills Road SE, Grading and Drainage Plan
Engineer's Stamp dated 8-10-07 (M22-D13A)**

Dear Mr. Lorenz,

Based upon the information provided in your submittal received 8-14-07, 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.

Albuquerque

P.O. Box 1293

New Mexico 87103

This project requires a National Pollutant Discharge Elimination System (NPDES) permit. In addition to submitting an NOI to the EPA and preparing a SWPPP, please send a copy of the SWPPP on a CD in .pdf format to the following address:

Department of Municipal Development
Storm Drainage Division
P.O. Box 1293, One Civic Plaza, Rm. 301
Attn: Kathy Verhage
Albuquerque, NM 87103

www.cabq.gov

If you have any questions regarding this permit please feel free to call the DMD Storm Drainage Design section at 768-3654 (Kathy Verhage).

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

Sincerely,

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

C: Kathy Verhage, DMD Storm Drainage Design
File

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(Rev. 06/22/2005)

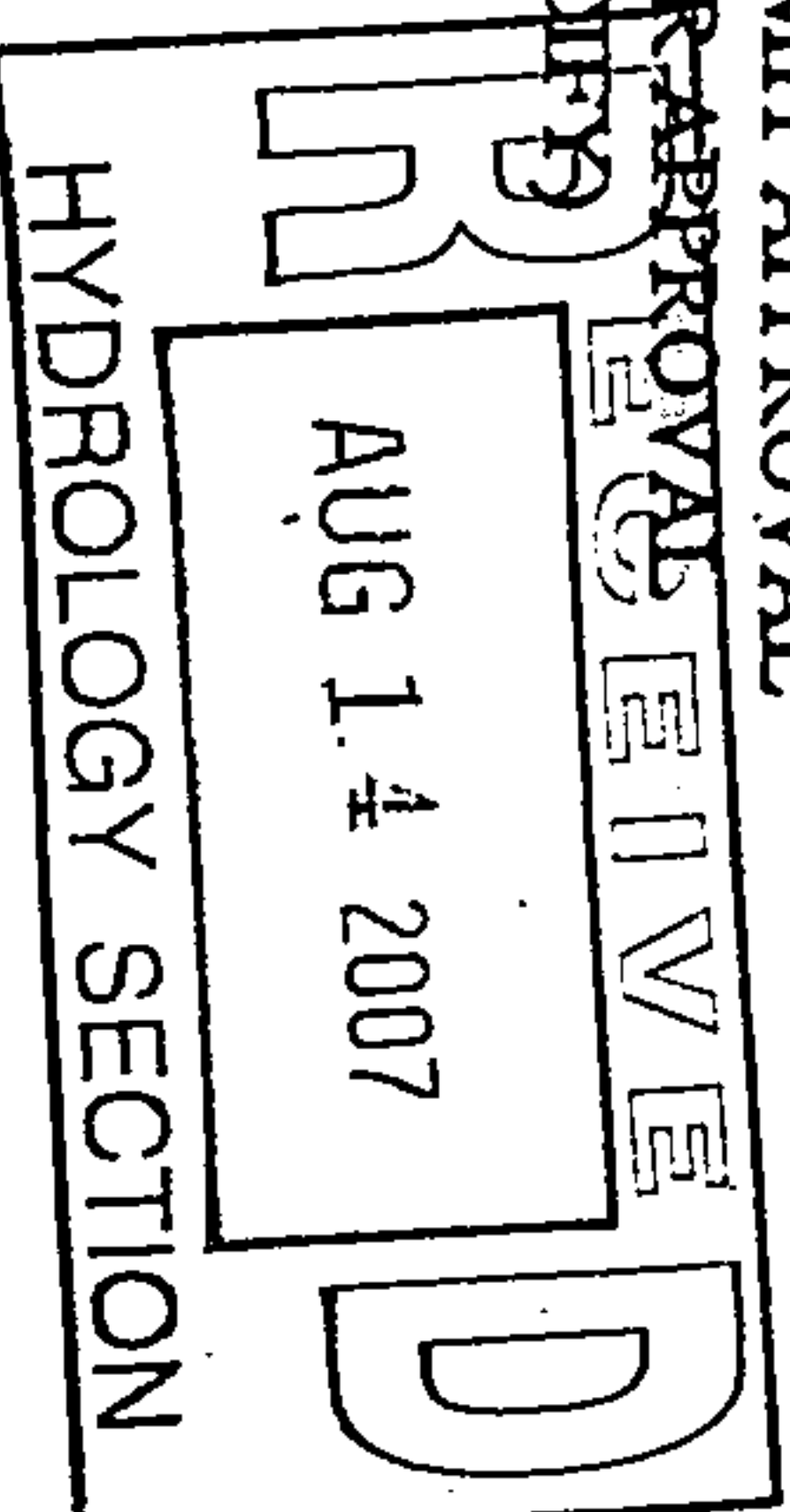
PROJECT TITLE: FOUR HILLS COUNTRY CLUB ZONE MAP/DRG. FILE # M22-D13A
DRB#: — EPC#: — WORK ORDER#: —LEGAL DESCRIPTION: FOUR HILLS COUNTRY CLUB
CITY ADDRESS: 911 FOUR HILLS ROAD SEENGINEERING FIRM: BRASHER + LORENZ
ADDRESS: 2201 SAN PEDRO NE
CITY, STATE: ALBUQUERQUE NM
CONTACT: D. LORENZ
PHONE: 888-6088
ZIP CODE: 87110OWNER: FOUR HILLS COUNTRY CLUB
ADDRESS: 911 FOUR HILLS RD SE
CITY, STATE: ALBUQUERQUE NM
CONTACT: SCOTT GATES
PHONE: 299-9555
ZIP CODE: 87123ARCHITECT: NONE
ADDRESS: —
CITY, STATE: —
CONTACT: —
PHONE: —
ZIP CODE: —SURVEYOR: PRECISION SURVEYS
ADDRESS: 8414.5 JEFFERSON NE
CITY, STATE: ALBUQUERQUE NM
CONTACT: L. MEDRANO
PHONE: 856-5700
ZIP CODE: 87113CONTRACTOR: KELAN KELINS EARTHMOVING
ADDRESS: 2425 JEFFERSON NE
CITY, STATE: ALBUQUERQUE NM
CONTACT: JOHN KELINS
PHONE: 884-6947
ZIP CODE: 87110

TYPE OF SUBMITTAL:

— DRAINAGE REPORT
— DRAINAGE PLAN 1" SUBMITTAL
☒ X DRAINAGE PLAN RESUBMITTAL
— CONCEPTUAL G & D PLAN
— GRADING PLAN
— EROSION CONTROL PLAN
— ENGINEER'S CERT (HYDROLOGY)
— CLOM/RLOMR
— TRAFFIC CIRCULATION LAYOUT
— ENGINEER'S CERT (TCL)
— ENGINEER'S CERT (DRB SITE PLAN)
— OTHER

CHECK TYPE OF APPROVAL SOUGHT:

— SIA/FINANCIAL GUARANTEE RELEASE
— PRELIMINARY PLAT APPROVAL
— S. DEV. PLAN FOR SUB'D APPROVAL
— S. DEV. FOR BLDG. PERMIT APPROVAL
— SECTOR PLAN APPROVAL
— FINAL PLAT APPROVAL
— FOUNDATION PERMIT APPROVAL
☒ X 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:

☒ X YES
— NO
— COPY PROVIDED

SUBMITTED BY: DENNIS A. LORENZ DATE: 8.13.07

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location and scope to 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 subdivision containing more than ten (10) lots or constituting five (5) acres or more.



BRASHER & LORENZ, INC.
CONSULTING ENGINEERS

2201 San Pedro NE Bldg 1 Suite 1300 • Albuquerque, NM 87110 • Phone (505) 888-6088 • Fax (505) 888-6188 • www.brasherlorenz.com

August 10, 2007

Kristal D. Metro, PE
Development and Building Services
Plaza Del Sol
Albuquerque, New Mexico 87102

SUBJECT: FOUR HILLS COUNTRY CLUB PRACTICE TEES AND TEACHING CENTER
911 Four Hills Road SE
M22-D13A

Dear Kristal:

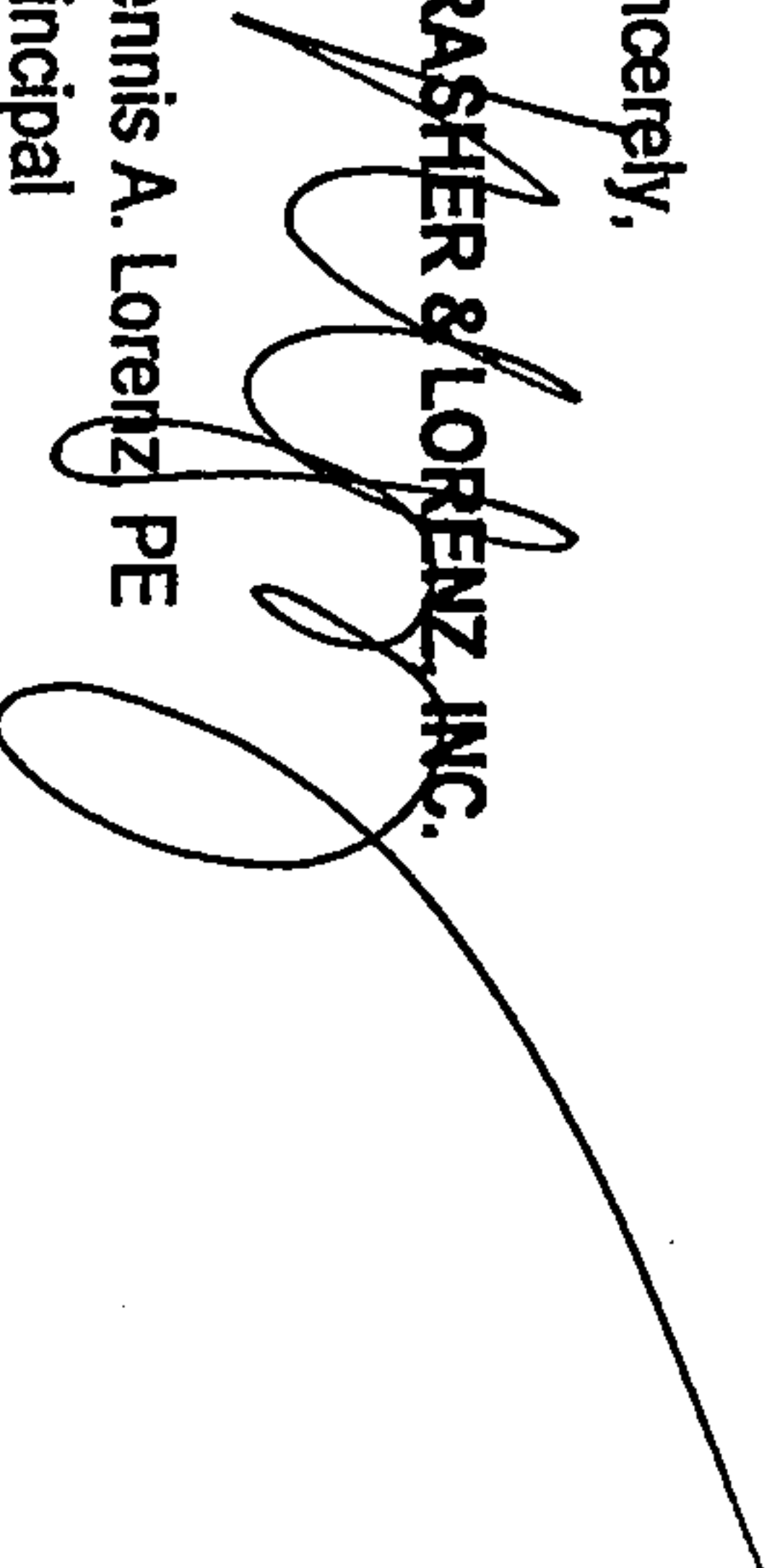
Submitted herewith for review and approval is copy of the revised Grading and Drainage Plan and Supplemental Calculations for the subject project. The Plan has been addressed to respond to your comment letter dated July 31, 2007 as follows:

1. Divided flow conditions exist at Analysis Points A and B, reducing the peak flow at Analysis Point C. The Supplemental Calculations contain an Executive Summary describing these divided flow conditions and the detailed AHYMO Output Files. Divided flow conditions were field verified during a heavy rainfall event in May 2007.
2. The limits of construction are illustrated on the Plan.
3. The easement arroyo is located north of FHCC and south of Stagecoach Road, and is visible on the Drainage Basin Map, Sheet 3.
4. The underground drainage system to be installed at the practice green is intended to promote subsurface drainage of the practice green and adjacent sand trap. It is not designed as a storm water conveyance system. The dashed pipes are perforated, 2-3-inches in diameter, and the solid pipes are 3-4-inch pvc drainlines. Flow from this piping system is very low, and occurs primarily during irrigation operations. This work is shown on the drainage plan as a convenience to illustrate the scope of work. Detailed construction documents have been prepared by the Golf Course Architect. If necessary these documents can be submitted, however I do not feel this piping design is pertinent to the Grading and Drainage Plan.
5. The flow arrows are enlarged for better resolution.
6. Four Hills Road is now shown on the Location Map (sheet 1) and Drainage Basin Map (sheet 3).

If you have any questions, or if I can be of any assistance, please feel free to call.

Sincerely,

BRASHER & LORENZ, INC.


Dennis A. Lorenz, PE
Principal

/dl/07513

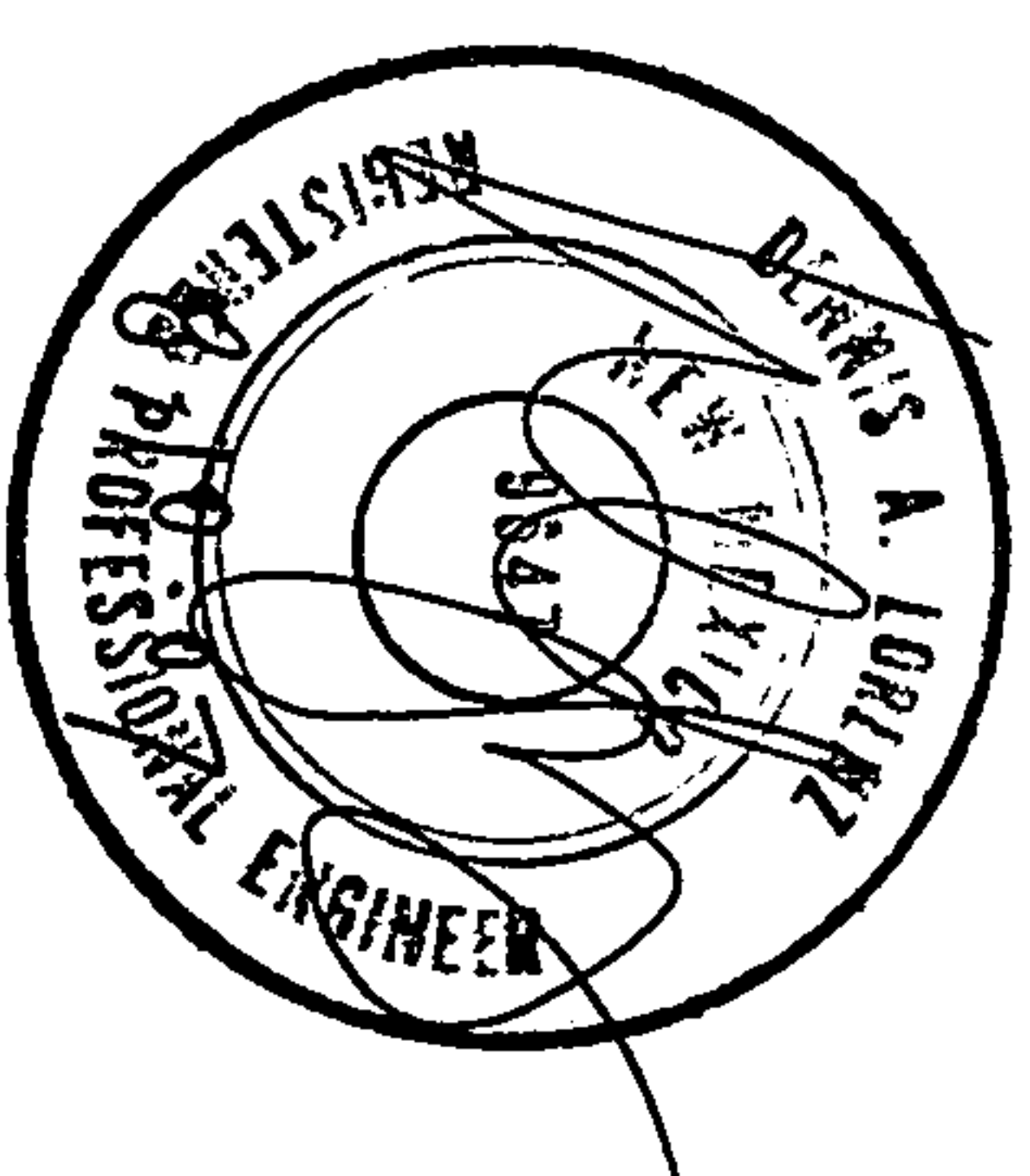
encl

SUPPLEMENTAL CALCULATIONS
FOR
FOUR HILLS COUNTRY CLUB
PRACTICE TEE AND TEACHING CENTER

911 Four Hills Road SE
Albuquerque, New Mexico 87181

Prepared For:

Four Hills Country Club
911 Four Hills Road SE
Albuquerque, New Mexico 87181



Prepared by:



BRASHER & LORENZ, INC.
Consulting Engineers
2201 San Pedro NE, Building 1, Suite 1300
Albuquerque, New Mexico 87110

August 2007

PROJECT HYDROLOGY EXECUTIVE SUMMARY

Four Hills Country Club presently accepts storm runoff from offsite drainage basins located east and south of the site. Runoff generally enters the property from the residential areas and drains overland across the golf course and exists at predetermined locations along the north and west boundaries of the site.

Runoff flows from the site within existing public and private drainage easements which include various levels of storm drainage improvements.

The project site contains approximately 2.66-acres, consisting of the existing practice tees, chipping green and a remote parking lot. Runoff from the project site drains overland through the golf course and parking lot as described above.

The site is also impacted by offsite drainage basins. Basins 100 through 103, containing approximately 74.6-acres, contribute approximately 155.5 cfs at AP-C which is located at the south entry to the remote parking lot, at Sagebrush Trail SE. Divided flow conditions exist at AP-A and AP-B as described below:

1. At AP-A, Basin 100 divides, 50% draining north down Stagecoach Lane, 50% draining west within Sagebrush Trail.
2. At AP-B, Basin 101 and divided Basin 100.1 divide, 50% draining north within an easement channel, 50% draining west within Sagebrush Trail.
3. At AP-C, divided Basin 101.3 combines with Basin 102, resulting in a peak flow of 155.5 cfs.
4. At AP-D, AP-C combines with Basins B and C resulting in a peak flow of 158.4 cfs.
5. At AP-E, Basin 103 combines with divided Basin 101.2 resulting in a peak flow of 61.6 cfs.

All runoff from these offsite basins flows through the parking lot to the north site entry at Four Hills Road SE. Four Hills Road drains north to an easement arroyo just south of Stagecoach Road.

AHYMO OUTPUT FILES

AHYMO PROGRAM SUMMARY TABLE (AHYMO 97) -
INPUT FILE = P:\07513--1\CALCUL~1\4HILLS~1.TXT

- VERSION: 1997.02d

RUN DATE (MON/DAY/YR) =08/09/2007
USER NO.= AHYMO-I-9702c01000T35-AH

COMMAND	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= RAIN6=
RAINFALL TYPE= 1											.00
COMPUTE NM HYD		100.EX	-	.06270	142.21	4.790	1.43240	1.500	3.544	PER IMP=	15.00
COMPUTE NM HYD		101.EX	-	.01000	27.14	1.028	1.92812	1.500	4.241	PER IMP=	50.00
COMPUTE NM HYD		102.EX	-	.03920	106.33	4.031	1.92812	1.500	4.238	PER IMP=	50.00
COMPUTE NM HYD		103.EX	-	.00460	12.50	.473	1.92812	1.500	4.245	PER IMP=	50.00
DIVIDE HYD		100.10	1	.03135	71.10	2.395	1.43240	1.500	3.544		
		100.20	and	.03135	71.10	2.395	1.43240	1.500	3.544		
ADD HYD		AP.A	26 5	.04135	98.24	3.423	1.55227	1.500	3.712		
DIVIDE HYD		101.20	7	.02068	49.12	1.712	1.55227	1.500	3.712		
		101.30	and	.02068	49.12	1.712	1.55227	1.500	3.712		
ADD HYD		AP.B	46 8	.02528	61.62	2.185	1.62067	1.500	3.809		
ADD HYD		AP.C	36 9	.05988	155.45	5.743	1.79834	1.500	4.057		
COMPUTE NM HYD		A.EX	-	.00215	4.22	.133	1.15803	1.500	3.071	PER IMP=	4.00
COMPUTE NM HYD		B.EX	-	.00112	2.66	.094	1.57418	1.500	3.696	PER IMP=	31.00
COMPUTE NM HYD		C.EX	-	.00011	.23	.007	1.17034	1.500	3.272	PER IMP=	5.00
COMPUTE NM HYD		D.EX	-	.00078	1.47	.045	1.07600	1.500	2.939	PER IMP=	.00
COMPUTE NM HYD		A.DEV	-	.00215	4.09	.127	1.10731	1.500	2.980	PER IMP=	2.00
COMPUTE NM HYD		B.DEV	-	.00112	2.54	.088	1.46735	1.500	3.526	PER IMP=	25.00
COMPUTE NM HYD		C.DEV	-	.00011	.38	.015	2.64141	1.500	5.387	PER IMP=	100.00
COMPUTE NM HYD		C.EX	-	.00078	1.47	.045	1.07600	1.500	2.939	PER IMP=	.00
ADD HYD		B.C.DEV	17&18	.00123	2.91	.103	1.57081	1.500	3.690		
ADD HYD		AP.D	20&11	.06111	158.36	5.846	1.79375	1.500	4.049		
FINISH			21								

AHYMO PROGRAM (AHYMO 97) -

- Version: 1997.02d

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FOUR HILLS COUNTRY CLUB

PROJECT HYDROLOGY

AUGUST 2007

START

TIME=0.0 PUNCH CODE=0

RAINFALL

TYPE=1 RAIN QUARTER=0.0 RAIN ONE=2.23

RAIN SIX=2.90 RAIN DAY=3.65 DT=0.03333 HRS

COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 HR.
DT = .033330 HOURS END TIME = 5.999400 HOURS

.0000	.0055	.0110	.0167	.0225	.0284	.0345
.0406	.0469	.0534	.0600	.0668	.0738	.0809
.0882	.0958	.1035	.1115	.1197	.1282	.1370
.1461	.1555	.1653	.1754	.1860	.1971	.2086
.2207	.2334	.2469	.2530	.2596	.2667	.2818
.3156	.3677	.4425	.5446	.6787	.8498	1.0629
1.3228	1.5642	1.6650	1.7500	1.8257	1.8946	1.9579
2.0168	2.0718	2.1233	2.1719	2.2176	2.2608	2.3018
2.3405	2.3773	2.4122	2.4453	2.4767	2.4850	2.4927
2.5002	2.5074	2.5143	2.5210	2.5275	2.5338	2.5400
2.5459	2.5518	2.5575	2.5630	2.5685	2.5738	2.5790
2.5841	2.5891	2.5940	2.5988	2.6036	2.6082	2.6128
2.6173	2.6218	2.6262	2.6305	2.6347	2.6389	2.6431
2.6471	2.6512	2.6552	2.6591	2.6630	2.6668	2.6706
2.6743	2.6780	2.6817	2.6853	2.6889	2.6925	2.6960
2.6995	2.7029	2.7063	2.7097	2.7131	2.7164	2.7197
2.7229	2.7262	2.7294	2.7325	2.7357	2.7388	2.7419
2.7450	2.7480	2.7511	2.7541	2.7570	2.7600	2.7629
2.7658	2.7687	2.7716	2.7745	2.7773	2.7801	2.7829
2.7857	2.7885	2.7912	2.7939	2.7966	2.7993	2.8020
2.8046	2.8073	2.8099	2.8125	2.8151	2.8177	2.8202
2.8228	2.8253	2.8279	2.8304	2.8329	2.8353	2.8378
2.8402	2.8427	2.8451	2.8475	2.8499	2.8523	2.8547
2.8571	2.8594	2.8618	2.8641	2.8664	2.8687	2.8710
2.8733	2.8756	2.8779	2.8801	2.8824	2.8846	2.8868
2.8890	2.8912	2.8934	2.8956	2.8978	2.9000	

* OFFSITE BASINS

* BASIN 100 - 40.11 ACRES

COMPUTE NM HYD

ID=1 HYD NO=100.EX DA=0.0627 SQ MI
PER A=10 PER B=30 PER C=45 PER D=15
TP=0.1333 HR MASS RAIN=-1

K = .072650HR TP = .133300HR K/TP RATIO = .545009 SHAPE CONSTANT, N = 7.106267
UNIT PEAK = 37.131 CFS UNIT VOLUME = .9991 B = 526.27 P60 = 2.2300
AREA = .009405 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033330

K = .124510HR TP = .133300HR K/TP RATIO = .934057 SHAPE CONSTANT, N = 3.786695
UNIT PEAK = 136.21 CFS UNIT VOLUME = 1.000 B = 340.69 P60 = 2.2300
AREA = .053295 SQ MI IA = .43824 INCHES INF = 1.07706 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033330

PRINT HYD ID=1 CODE=5

HYDROGRAPH FROM AREA 100.EX

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.500	142.2	3.000	1.4	4.500	.4	5.999	.4
.167	.0	1.667	78.1	3.166	1.0	4.666	.4	6.166	.2
.333	.0	1.833	38.7	3.333	.8	4.833	.4	6.333	.0
.500	.0	2.000	21.6	3.500	.7	4.999	.4	6.499	.0
.667	.6	2.166	11.0	3.666	.6	5.166	.4	6.666	.0
.833	1.3	2.333	6.4	3.833	.5	5.333	.4	6.833	.0
1.000	1.7	2.500	4.2	4.000	.5	5.499	.4	6.999	.0
1.167	1.4	2.666	2.8	4.166	.4	5.666	.4		
1.333	29.4	2.833	1.9	4.333	.4	5.833	.4		

RUNOFF VOLUME = 1.43240 INCHES = 4.7899 ACRE-FEET
PEAK DISCHARGE RATE = 142.21 CFS AT 1.500 HOURS BASIN AREA = .0627 SQ. MI.

* BASIN 101 - 6.44 ACRES
COMPUTE NM HYD ID=2 HYD NO=101.EX DA=0.0100 SQ MI
PER A=0 PER B=30 PER C=20 PER D=50
TP=0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 19.740 CFS UNIT VOLUME = .9988 B = 526.28 P60 = 2.2300
AREA = .005000 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033330

K = .124816HR TP = .133300HR K/TP RATIO = .936354 SHAPE CONSTANT, N = 3.776996
UNIT PEAK = 12.754 CFS UNIT VOLUME = .9992 B = 340.02 P60 = 2.2300
AREA = .005000 SQ MI IA = .44000 INCHES INF = 1.08200 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033330

PRINT HYD ID=2 CODE=5

HYDROGRAPH FROM AREA 101.EX

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.500	27.1	3.000	.4	4.500	.2	5.999	.2
.167	.0	1.667	14.3	3.166	.3	4.666	.2	6.166	.1
.333	.0	1.833	8.3	3.333	.3	4.833	.2	6.333	.0
.500	.0	2.000	5.5	3.500	.3	4.999	.2	6.499	.0
.667	.3	2.166	2.6	3.666	.2	5.166	.2	6.666	.0
.833	.7	2.333	1.4	3.833	.2	5.333	.2	6.833	.0
1.000	.9	2.500	.9	4.000	.2	5.499	.2		
1.167	.7	2.666	.7	4.166	.2	5.666	.2		
1.333	7.2	2.833	.5	4.333	.2	5.833	.2		

RUNOFF VOLUME = 1.92812 INCHES
 PEAK DISCHARGE RATE = 27.14 CFS AT 1.500 HOURS BASIN AREA = .0100 SQ. MI.

* BASIN 102 - 25.09 ACRES
 COMPUTE NM HYD ID=3 HYD NO=102.EX DA=0.0392 SQ MI
 PER A=0 PER B=30 PER C=20 PER D=50
 TP=0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = 77.382 CFS UNIT VOLUME = .9992 B = 526.28 P60 = 2.2300
 AREA = .019600 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033330

K = .124816HR TP = .133300HR K/TP RATIO = .936354 SHAPE CONSTANT, N = 3.776996
 UNIT PEAK = 49.995 CFS UNIT VOLUME = 1.000 B = 340.02 P60 = 2.2300
 AREA = .019600 SQ MI IA = .44000 INCHES INF = 1.08200 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033330

PRINT HYD ID=3 CODE=5

HYDROGRAPH FROM AREA 102.EX

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.500	106.3	3.000	1.6	4.500	.8	5.999	.8
.167	.0	1.667	56.0	3.166	1.3	4.666	.8	6.166	.3
.333	.0	1.833	32.4	3.333	1.1	4.833	.8	6.333	.1
.500	.0	2.000	21.4	3.500	1.0	4.999	.8	6.499	.0
.667	1.3	2.166	10.3	3.666	1.0	5.166	.8	6.666	.0
.833	2.6	2.333	5.5	3.833	.9	5.333	.8	6.833	.0
1.000	3.5	2.500	3.7	4.000	.9	5.499	.8	6.999	.0
1.167	2.9	2.666	2.6	4.166	.8	5.666	.8	7.166	.0
1.333	28.1	2.833	2.0	4.333	.8	5.833	.8		

RUNOFF VOLUME = 1.92812 INCHES
 PEAK DISCHARGE RATE = 106.33 CFS AT 1.500 HOURS BASIN AREA = .0392 SQ. MI.

* BASIN 103 - 2.95 ACRES
COMPUTE NM HYD ID=4 HYD NO=103.EX DA=0.0046 SQ MI
PER A=0 PER B=30 PER C=20 PER D=50
TP=0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 9.0805 CFS UNIT VOLUME = .9981 B = 526.28 P60 = 2.2300
AREA = .002300 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033330

K = .124816HR TP = .133300HR K/TP RATIO = .936354 SHAPE CONSTANT, N = 3.776996
UNIT PEAK = 5.8668 CFS UNIT VOLUME = .9979 B = 340.02 P60 = 2.2300
AREA = .002300 SQ MI IA = .44000 INCHES INF = 1.08200 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033330

PRINT HYD ID=4 CODE=5

HYDROGRAPH FROM AREA 103.EX

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.500	12.5	3.000	.2	4.500	.1	5.999	.1
.167	.0	1.667	6.6	3.166	.2	4.666	.1	6.166	.0
.333	.0	1.833	3.8	3.333	.1	4.833	.1	6.333	.0
.500	.0	2.000	2.5	3.500	.1	4.999	.1	6.499	.0
.667	.2	2.166	1.2	3.666	.1	5.166	.1	6.666	.0
.833	.3	2.333	.6	3.833	.1	5.333	.1		
1.000	.4	2.500	.4	4.000	.1	5.499	.1		
1.167	.3	2.666	.3	4.166	.1	5.666	.1		
1.333	3.3	2.833	.2	4.333	.1	5.833	.1		

RUNOFF VOLUME = 1.92812 INCHES .4730 ACRE-FEET
PEAK DISCHARGE RATE = 12.50 CFS AT 1.500 HOURS BASIN AREA = .0046 SQ. MI.

* ANALYSIS POINT A (AP#A) - DIVIDE BASIN 100

* DIVIDED FLOW AT AP#A
* 50% NORTH ON STAGECOACH LANE
* 50% WEST ON SAGEBRUSH TRAIL.

* DIVIDE BASIN 100 INTO 100.1 AND 100.2 BY PERCENTAGE
DIVIDE HYD ID=1 PER=-50 ID I=5 HYD=100.1
ID II=6 HYD=100.2
* ADD BASIN 100.1 TO 101
ADD HYD ID=7 HYD NO=AP.A ID I=2 ID II=5
PRINT HYD ID=7 CODE=5

HYDROGRAPH FROM AREA AP.A

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.500	98.2	3.000	1.1	4.500	.4	5.999	.4
.167	.0	1.667	53.3	3.166	.8	4.666	.4	6.166	.2
.333	.0	1.833	27.6	3.333	.7	4.833	.4	6.333	.0
.500	.0	2.000	16.3	3.500	.6	4.999	.4	6.499	.0
.667	.6	2.166	8.1	3.666	.5	5.166	.4	6.666	.0
.833	1.3	2.333	4.6	3.833	.5	5.333	.4	6.833	.0
1.000	1.7	2.500	3.0	4.000	.4	5.499	.4		
1.167	1.5	2.666	2.1	4.166	.4	5.666	.4		
1.333	21.9	2.833	1.5	4.333	.4	5.833	.4		

RUNOFF VOLUME = 1.55227 INCHES = 3.4233 ACRE-FEET
 PEAK DISCHARGE RATE = 98.24 CFS AT 1.500 HOURS BASIN AREA = .0414 SQ. MI.

 * ANALYSIS POINT B (AP#B) - DIVIDE BASIN 101.1

* DIVIDED FLOW AT AP#B
 * 50% NORTH THRU DRAINAGE EASEMENT TO FHCC GOLF COURSE
 * 50% WEST ON SAGEBRUSH TRAIL

 * DIVIDE BASIN 101.1 INTO 101.2 AND 101.3 BY PERCENTAGE
 DIVIDE HYD ID=7 PER=-50 ID I=8 HYD=101.2
 ID II=9 HYD=101.3

* ADD BASIN 101.2 TO 103
 ADD HYD ID=10 HYD NO=AP.B ID I=4 ID II=8
 PRINT HYD ID=10 CODE=5

AP#E

HYDROGRAPH FROM AREA AP.B

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.500	61.6	3.000	.7	4.500	.3	5.999	.3
.167	.0	1.667	33.2	3.166	.6	4.666	.3	6.166	.1
.333	.0	1.833	17.6	3.333	.5	4.833	.3	6.333	.0
.500	.0	2.000	10.6	3.500	.4	4.999	.3	6.499	.0
.667	.5	2.166	5.3	3.666	.4	5.166	.3	6.666	.0
.833	1.0	2.333	3.0	3.833	.3	5.333	.3	6.833	.0
1.000	1.3	2.500	1.9	4.000	.3	5.499	.3		
1.167	1.1	2.666	1.3	4.166	.3	5.666	.3		
1.333	14.2	2.833	1.0	4.333	.3	5.833	.3		

RUNOFF VOLUME = 1.62067 INCHES = 2.1846 ACRE-FEET
 PEAK DISCHARGE RATE = 61.62 CFS AT 1.500 HOURS BASIN AREA = .0253 SQ. MI.

 * ANALYSIS POINT C (AP#C) - ADD BASIN 102

 * TOTAL OFFSITE FLOW ENTERING SITE FROM SAGEBRUSH TRAIL

 * ADD BASIN 101.3 AND 102
 ADD HYD ID=11 HYD NO=AP.C ID I=3 ID II=9
 PRINT HYD ID=11 CODE=5

HYDROGRAPH FROM AREA AP.C

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.500	155.4	3.000	2.1	4.500	1.0	5.999	1.0
.167	.0	1.667	82.6	3.166	1.7	4.666	1.0	6.166	.4
.333	.0	1.833	46.2	3.333	1.5	4.833	1.0	6.333	.1
.500	.0	2.000	29.5	3.500	1.3	4.999	1.0	6.499	.1
.667	1.6	2.166	14.4	3.666	1.2	5.166	1.0	6.666	.0
.833	3.3	2.333	7.8	3.833	1.1	5.333	1.0	6.833	.0
1.000	4.3	2.500	5.2	4.000	1.1	5.499	1.0	6.999	.0
1.167	3.7	2.666	3.6	4.166	1.0	5.666	1.0	7.166	.0
1.333	39.0	2.833	2.7	4.333	1.0	5.833	1.0		

RUNOFF VOLUME = 1.79834 INCHES
 PEAK DISCHARGE RATE = 155.45 CFS AT 1.500 HOURS BASIN AREA = .0599 SQ. MI.

 * ONSITE BASINS

 * EXISTING BASIN A - 1.37 AC
 COMPUTE NM HYD ID=12 HYD NO=A.EX DA=0.002147 SQ MI
 PER A=0 PER B=90 PER C=6 PER D=4
 TP=0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = .33906 CFS UNIT VOLUME = .9664 B = 526.28 P60 = 2.2300
 AREA = .000086 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033330

K = .133191HR TP = .133300HR K/TP RATIO = .999180 SHAPE CONSTANT, N = 3.533228
 UNIT PEAK = 4.9904 CFS UNIT VOLUME = .9975 B = 322.75 P60 = 2.2300
 AREA = .002061 SQ MI IA = .49062 INCHES INF = 1.22375 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033330

PRINT HYD ID=12 CODE=5

HYDROGRAPH FROM AREA A.EX

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.333	.7	2.666	.1	4.000	.0	5.333	.0
.167	.0	1.500	4.2	2.833	.1	4.166	.0	5.499	.0
.333	.0	1.667	2.4	3.000	.0	4.333	.0	5.666	.0
.500	.0	1.833	1.0	3.166	.0	4.500	.0	5.833	.0
.667	.0	2.000	.5	3.333	.0	4.666	.0	5.999	.0
.833	.0	2.166	.3	3.500	.0	4.833	.0	6.166	.0
1.000	.0	2.333	.2	3.666	.0	4.999	.0		
1.167	.0	2.500	.1	3.833	.0	5.166	.0		

RUNOFF VOLUME = 1.15803 INCHES
 PEAK DISCHARGE RATE = 4.22 CFS AT 1.500 HOURS BASIN AREA = .0021 SQ. MI.

* EXISTING BASIN B - 0.72 AC
 COMPUTE NM HYD ID=13 HYD NO=B.EX DA=0.001124 SQ MI
 PER A=0 PER B=65 PER C=4 PER D=31
 TP=0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = 1.3757 CFS UNIT VOLUME = .9911 B = 526.28 P60 = 2.2300
 AREA = .000348 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033330

K = .133303HR TP = .133300HR K/TP RATIO = 1.000024 SHAPE CONSTANT, N = 3.530218
 UNIT PEAK = 1.8765 CFS UNIT VOLUME = .9933 B = 322.53 P60 = 2.2300
 AREA = .000776 SQ MI IA = .49130 INCHES INF = 1.22565 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033330

PRINT HYD ID=13 CODE=5

HYDROGRAPH FROM AREA B.EX

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.333	.6	2.666	.1	4.000	.0	5.333	.0
.167	.0	1.500	2.7	2.833	.0	4.166	.0	5.499	.0
.333	.0	1.667	1.4	3.000	.0	4.333	.0	5.666	.0
.500	.0	1.833	.7	3.166	.0	4.500	.0	5.833	.0
.667	.0	2.000	.5	3.333	.0	4.666	.0	5.999	.0
.833	.0	2.166	.2	3.500	.0	4.833	.0	6.166	.0
1.000	.1	2.333	.1	3.666	.0	4.999	.0		
1.167	.1	2.500	.1	3.833	.0	5.166	.0		

RUNOFF VOLUME = 1.57418 INCHES
 PEAK DISCHARGE RATE = 2.66 CFS AT 1.500 HOURS BASIN AREA = .0011 SQ. MI.

* EXISTING BASIN C - 0.07 AC
COMPUTE NM HYD ID=14 HYD NO=C.EX DA=0.000109 SQ MI
PER A=0 PER B=90 PER C=5 PER D=5
TP=0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = .21517E-01CFS UNIT VOLUME = .8874 B = 526.28 P60 = 2.2300
AREA = .000005 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .0333330

K = .133436HR TP = .133300HR K/TP RATIO = 1.001018 SHAPE CONSTANT, N = 3.526673
UNIT PEAK = .25035 CFS UNIT VOLUME = .9434 B = 322.27 P60 = 2.2300
AREA = .000104 SQ MI IA = .49211 INCHES INF = 1.22789 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .0333330

PRINT HYD ID=14 CODE=5

HYDROGRAPH FROM AREA C.EX

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	.500	.0	1.000	.0	1.500	.2
.167	.0	.667	.0	1.167	.0	1.667	.1
.333	.0	.833	.0	1.333	.0	1.833	.1

RUNOFF VOLUME = 1.17034 INCHES .0068 ACRE-FEET
PEAK DISCHARGE RATE = .23 CFS AT 1.500 HOURS BASIN AREA = .0001 SQ. MI.

* EXISTING BASIN D - 0.50 AC
COMPUTE NM HYD ID=15 HYD NO=D.EX DA=0.000781 SQ MI
PER A=0 PER B=100 PER C=0 PER D=0
TP=0.1333 HR MASS RAIN=-1

K = .134742HR TP = .133300HR K/TP RATIO = 1.010815 SHAPE CONSTANT, N = 3.492236
UNIT PEAK = 1.8735 CFS UNIT VOLUME = .9929 B = 319.76 P60 = 2.2300
AREA = .000781 SQ MI IA = .50000 INCHES INF = 1.25000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .0333330

PRINT HYD ID=15 CODE=5

HYDROGRAPH FROM AREA D.EX

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	.667	.0	1.333	.2	2.000	.2
.167	.0	.833	.0	1.500	1.5	2.166	.1
.333	.0	1.000	.0	1.667	.8	2.333	.1
.500	.0	1.167	.0	1.833	.3	2.500	.0

RUNOFF VOLUME = 1.07600 INCHES = .0448 ACRE-FEET
PEAK DISCHARGE RATE = 1.47 CFS AT 1.500 HOURS BASIN AREA = .0008 SQ. MI.

* DEVELOPED BASIN A - 1.37 AC

COMPUTE NM HYD ID=16 HYD NO=A.DEV DA=0.002147 SQ MI
PER A=0 PER B=98 PER C=0 PER D=2
TP=0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = .16953 CFS UNIT VOLUME = .9286 B = 526.28 P60 = 2.2300
AREA = .000043 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .0333330

K = .134742HR TP = .133300HR K/TP RATIO = 1.010815 SHAPE CONSTANT, N = 3.492236
UNIT PEAK = 5.0473 CFS UNIT VOLUME = .9976 B = 319.76 P60 = 2.2300
AREA = .002104 SQ MI IA = .50000 INCHES INF = 1.25000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .0333330

PRINT HYD ID=16 CODE=5

HYDROGRAPH FROM AREA A.DEV

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.333	.6	2.666	.1	4.000	.0	5.333	.0
.167	.0	1.500	4.1	2.833	.1	4.166	.0	5.499	.0
.333	.0	1.667	2.3	3.000	.0	4.333	.0	5.666	.0
.500	.0	1.833	1.0	3.166	.0	4.500	.0	5.833	.0
.667	.0	2.000	.5	3.333	.0	4.666	.0	5.999	.0
.833	.0	2.166	.3	3.500	.0	4.833	.0		
1.000	.0	2.333	.2	3.666	.0	4.999	.0		
1.167	.0	2.500	.1	3.833	.0	5.166	.0		

RUNOFF VOLUME = 1.10731 INCHES = .1268 ACRE-FEET
PEAK DISCHARGE RATE = 4.09 CFS AT 1.500 HOURS BASIN AREA = .0021 SQ. MI.

* DEVELOPED BASIN B - 0.72 AC
COMPUTE NM HYD ID=17 HYD NO=B.DEV DA=0.001124 SQ MI
PER A=0 PER B=75 PER C=0 PER D=25
TP=0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 1.1094 CFS UNIT VOLUME = .9897 B = 526.28 P60 = 2.2300
AREA = .000281 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .0333330

K = .134742HR TP = .133300HR K/TP RATIO = 1.010815 SHAPE CONSTANT, N = 3.492236
UNIT PEAK = 2.0222 CFS UNIT VOLUME = .9935 B = 319.76 P60 = 2.2300
AREA = .000843 SQ MI IA = .50000 INCHES INF = 1.25000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033330

PRINT HYD ID=17 CODE=5

HYDROGRAPH FROM AREA B.DEV

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.333	.5	2.666	.1	4.000	.0
.167	.0	1.500	2.5	2.833	.0	4.166	.0
.333	.0	1.667	1.4	3.000	.0	4.333	.0
.500	.0	1.833	.7	3.166	.0	4.500	.0
.667	.0	2.000	.4	3.333	.0	4.666	.0
.833	.0	2.166	.2	3.500	.0	4.833	.0
1.000	.1	2.333	.1	3.666	.0	4.999	.0
1.167	.0	2.500	.1	3.833	.0	5.166	.0
						5.333	.0
						5.499	.0
						5.666	.0
						5.833	.0
						5.999	.0
						6.166	.0
						6.333	.0

RUNOFF VOLUME = 1.46735 INCHES
PEAK DISCHARGE RATE = 2.54 CFS AT 1.500 HOURS BASIN AREA = .0011 SQ. MI.

* DEVELOPED BASIN C - 0.07 AC
COMPUTE NM HYD ID=18 HYD NO=C.DEV DA=0.000109 SQ MI
PER A=0 PER B=0 PER C=0 PER D=100
TP=0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = .43034 CFS UNIT VOLUME = .9711 B = 526.28 P60 = 2.2300
AREA = .000109 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033330

PRINT HYD ID=18 CODE=5

HYDROGRAPH FROM AREA C.DEV

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.333	.1	2.666	.0	4.000	.0
.167	.0	1.500	.4	2.833	.0	4.166	.0
.333	.0	1.667	.2	3.000	.0	4.333	.0
.500	.0	1.833	.1	3.166	.0	4.500	.0
.667	.0	2.000	.1	3.333	.0	4.666	.0
.833	.0	2.166	.0	3.500	.0	4.833	.0
1.000	.0	2.333	.0	3.666	.0	4.999	.0
1.167	.0	2.500	.0	3.833	.0	5.166	.0
						5.333	.0
						5.499	.0
						5.666	.0
						5.833	.0
						5.999	.0
						6.166	.0

RUNOFF VOLUME = 2.64141 INCHES
PEAK DISCHARGE RATE = .38 CFS AT 1.500 HOURS BASIN AREA = .0001 SQ. MI.

* DEVELOPED BASIN D - 0.50 AC
COMPUTE NM HYD ID=19 HYD NO=C.EX DA=0.000781 SQ MI
PER A=0 PER B=100 PER C=0 PER D=0
TP=0.1333 HR MASS RAIN=-1

K = .134742HR TP = .133300HR K/TP RATIO = 1.010815 SHAPE CONSTANT, N = 3.492236
UNIT PEAK = 1.8735 CFS UNIT VOLUME = .9929 B = 319.76 P60 = 2.2300
AREA = .000781 SQ MI IA = .50000 INCHES INF = 1.25000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033330

PRINT HYD ID=19 CODE=5

HYDROGRAPH FROM AREA C.EX

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	.667	.0	1.333	.2	2.000	.2	2.666	.0
.167	.0	.833	.0	1.500	1.5	2.166	.1	2.833	.0
.333	.0	1.000	.0	1.667	.8	2.333	.1	3.000	.0
.500	.0	1.167	.0	1.833	.3	2.500	.0	3.166	.0

RUNOFF VOLUME = 1.07600 INCHES .0448 ACRE-FEET
PEAK DISCHARGE RATE = 1.47 CFS AT 1.500 HOURS BASIN AREA = .0008 SQ. MI.

* ANALYSIS POINT D (AP#D) ADD BASINS B & C TO AP#3

* ADD BASIN B & C
ADD HYD ID=20 HYD NO=B.C.DEV ID I=17 ID II=18
PRINT HYD ID=20 CODE=5

HYDROGRAPH FROM AREA B.C.DEV

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.333	.6	2.666	.1	4.000	.0	5.333	.0
.167	.0	1.500	2.9	2.833	.0	4.166	.0	5.499	.0
.333	.0	1.667	1.6	3.000	.0	4.333	.0	5.666	.0
.500	.0	1.833	.8	3.166	.0	4.500	.0	5.833	.0
.667	.0	2.000	.5	3.333	.0	4.666	.0	5.999	.0
.833	.1	2.166	.2	3.500	.0	4.833	.0	6.166	.0
1.000	.1	2.333	.1	3.666	.0	4.999	.0	6.333	.0
1.167	.1	2.500	.1	3.833	.0	5.166	.0		

RUNOFF VOLUME = 1.57081 INCHES .1033 ACRE-FEET
PEAK DISCHARGE RATE = 2.91 CFS AT 1.500 HOURS BASIN AREA = .0012 SQ. MI.

* ADD BASINS B, C AND AP.C
ADD HYD ID=21 HYD NO=AP.D ID I=20 ID II=11
PRINT HYD ID=21 CODE=5

HYDROGRAPH FROM AREA AP.D

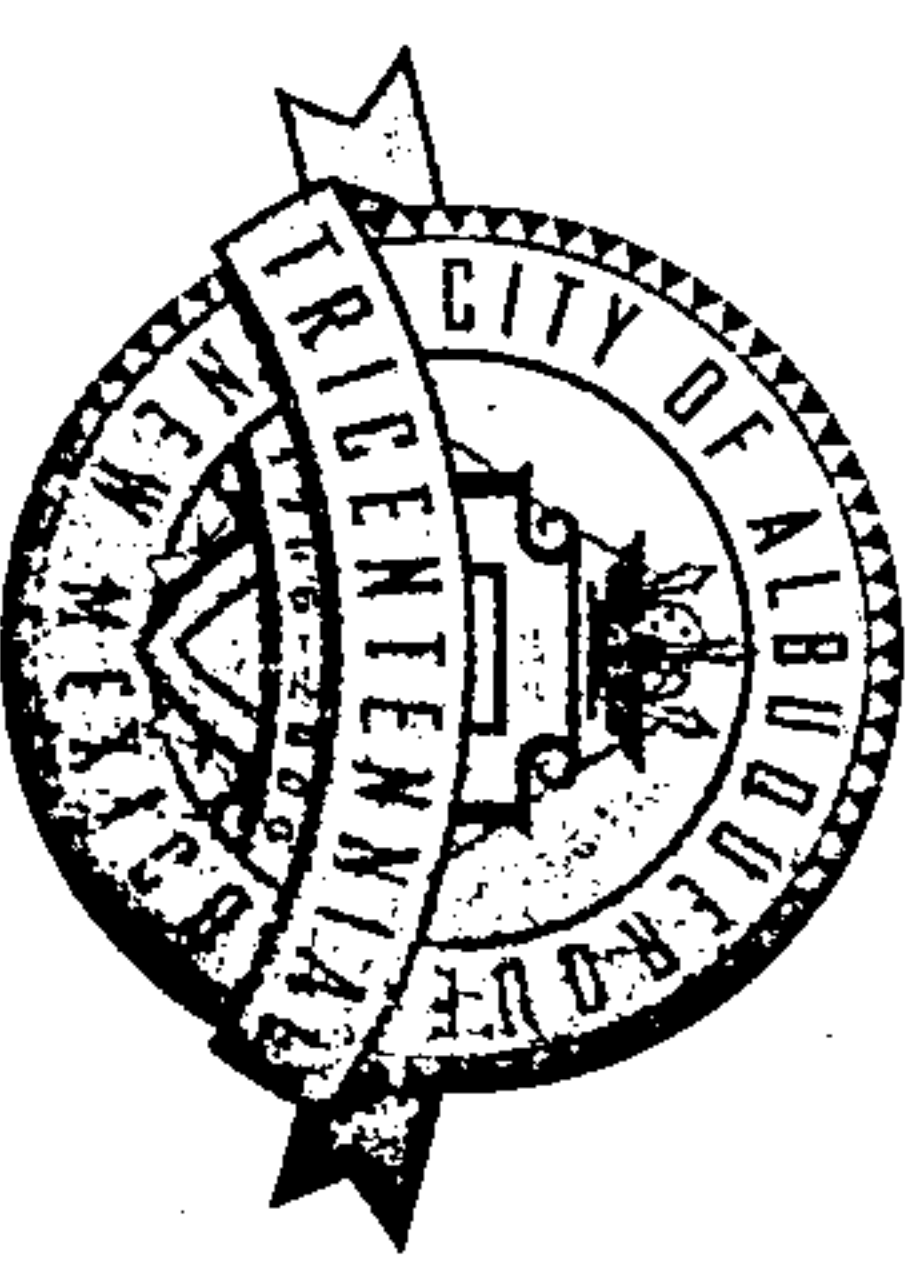
TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.500	158.4	3.000	2.1	4.500	1.0	5.999	1.0
.167	.0	1.667	84.2	3.166	1.7	4.666	1.0	6.166	.4
.333	.0	1.833	47.0	3.333	1.5	4.833	1.0	6.333	.1
.500	.0	2.000	30.0	3.500	1.3	4.999	1.0	6.499	.1
.667	1.7	2.166	14.7	3.666	1.2	5.166	1.0	6.666	.0
.833	3.3	2.333	8.0	3.833	1.2	5.333	1.0	6.833	.0
1.000	4.4	2.500	5.3	4.000	1.1	5.499	1.0	6.999	.0
1.167	3.7	2.666	3.7	4.166	1.1	5.666	1.0	7.166	.0
1.333	39.7	2.833	2.7	4.333	1.0	5.833	1.0		

RUNOFF VOLUME = 1.79375 INCHES = 5.8459 ACRE-FEET
PEAK DISCHARGE RATE = 158.36 CFS AT 1.500 HOURS BASIN AREA = .0611 SQ. MI.

FINISH

NORMAL PROGRAM FINISH END TIME (HR:MIN:SEC) = 16:56:23

CITY OF ALBUQUERQUE



July 31, 2007

Dennis Lorenz, P.E.
Brasher & Lorenz
2201 San Pedro NE, Building 1 Suite 1200
Albuquerque, NM 87110

**Re: Four Hills Country Club Practice Tees and Teaching Center Addition,
911 Four Hills Road SE, Grading and Drainage Plan
Engineer's Stamp dated 7-20-07 (M22-D13A)**

Dear Mr. Lorenz,

Based upon the information provided in your submittal received 7-20-07, the above referenced plan cannot be approved for Building Permit until the following comments are addressed:

P.O. Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

- ✓ 1. According to your write up, Basins 100 through 103 contribute 155.5 cfs entering the site at the south side of the parking lot. What about the rest of the 288.1 cfs that Basins 100 through 103 generate?
- ✓ 2. Show the project limits on the grading and drainage plan.
- ✓ 3. Your write up (Existing Drainage Conditions) refers to an "easement arroyo" located "just south of Stagecoach Road." Where is this arroyo? Please show this on the plan.
- ✓ 4. More information is needed regarding the underground drainage system. Some pipes appear to be perforated, while others are not. Please provide additional information (inverts, length, slope, pipe type, etc.) for this system. *- system is for irrigation.*
- ✓ 5. Your write up (Proposed Drainage Conditions) indicates the "direction of the drainage flows are given by flow arrows." Where are these arrows?
- ✓ 6. Where is Four Hills Road with regard to this site? Please show this on the plan.

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

Sincerely,

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

C: File

City of Albuquerque Planning Department
One Stop Shop – Development and Building Services

07/20/2007 Issued By: PLNABG

Permit Number: 2007 060 005

Category Code 970

Application Number: 07REV-60005, Review - Drainage Plan Or Traffic Impact

Address:

Location Description: 911 FOUR HILLS

Project Number: null

**Applicant
Four Hills Country Club**

Agent / Contact

NM

Application Fees	
441008/4983000	REV Actions \$50.00
TOTAL: \$50.00	

City Of Albuquerque
Treasury Division

7/20/2007 3:45PM LDC: ANNX
WS# 006 TRANS# 0057
RECEIPT# 00079917-00079917
PERMIT# 2007060005 TRSCCS
Trans Amt \$50.00
REV Actions \$50.00
CK \$50.00
CHANGE \$0.00

Thank You

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(Rev. 06/22/2005)

M22/13A

PROJECT TITLE: FOUR HILLS COUNTRY CLUB ZONE MAP/DRG. FILE # M443DRB#: — EPC#: — WORK ORDER#: —LEGAL DESCRIPTION: FOUR HILLS COUNTRY CLUBCITY ADDRESS: 911 FOUR HILLS ROAD SEENGINEERING FIRM: BRASHER + LORENZADDRESS: 2201 SAN PEDRO NECITY, STATE: ALBU, NMCONTACT: D. LORENZPHONE: 888-6088ZIP CODE: 87110OWNER: FOUR HILLS COUNTRY CLUBADDRESS: 911 FOUR HILLS RD SECITY, STATE: ALBU NMCONTACT: SCOTT GATESPHONE: 244-9555ZIP CODE: 87123ARCHITECT: NONEADDRESS: —CITY, STATE: —CONTACT: —PHONE: —ZIP CODE: —SURVEYOR: PRECISION SURVEYSADDRESS: 8414.5 JEFFERSON NECITY, STATE: ALBU NMCONTACT: L. MEDRANOPHONE: 856-5700ZIP CODE: 87113CONTRACTOR: FRANKLIN'S EXCAVATINGADDRESS: 2425 JEFFERSON NECITY, STATE: ALBU NMCONTACT: JOHN ELLISPHONE: 884-6947ZIP CODE: 87110

TYPE OF SUBMITTAL:

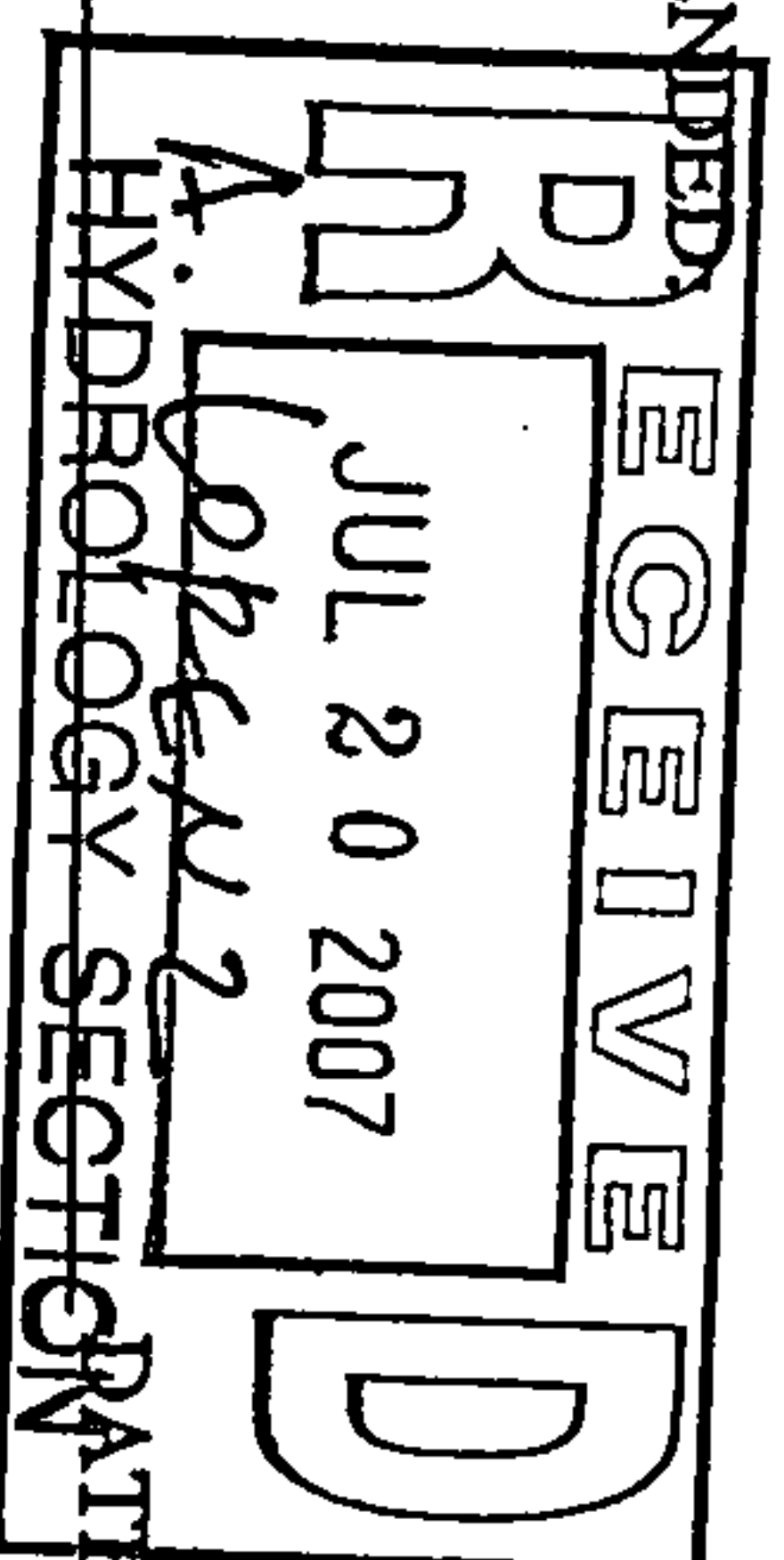
DRAINAGE REPORT

☒ DRAINAGE PLAN 1st SUBMITTAL☐ DRAINAGE PLAN RESUBMITTAL☐ CONCEPTUAL G & D PLAN☐ GRADING PLAN☐ EROSION CONTROL PLAN☐ ENGINEER'S CERT (HYDROLOGY)☐ CL OMR/LOMR☐ TRAFFIC CIRCULATION LAYOUT☐ ENGINEER'S CERT (TCL)☐ ENGINEER'S CERT (DRB SITE PLAN)☐ OTHER

CHECK TYPE OF APPROVAL SOUGHT:

☐ SITE/FINANCIAL GUARANTEE RELEASE☐ PRELIMINARY PLAT APPROVAL☐ S. DEV. PLAN FOR SUB'D APPROVAL☐ S. DEV. 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 PROVIDEDSUBMITTED BY: BENNISDATE: 7.20.07

Requests for approvals of Site Development Plans and/or Subdivision Plans shall be accompanied by a drainage submittal. The particular nature, location and scope to 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 subdivision containing more than ten (10) lots or constituting five (5) acres or more.

