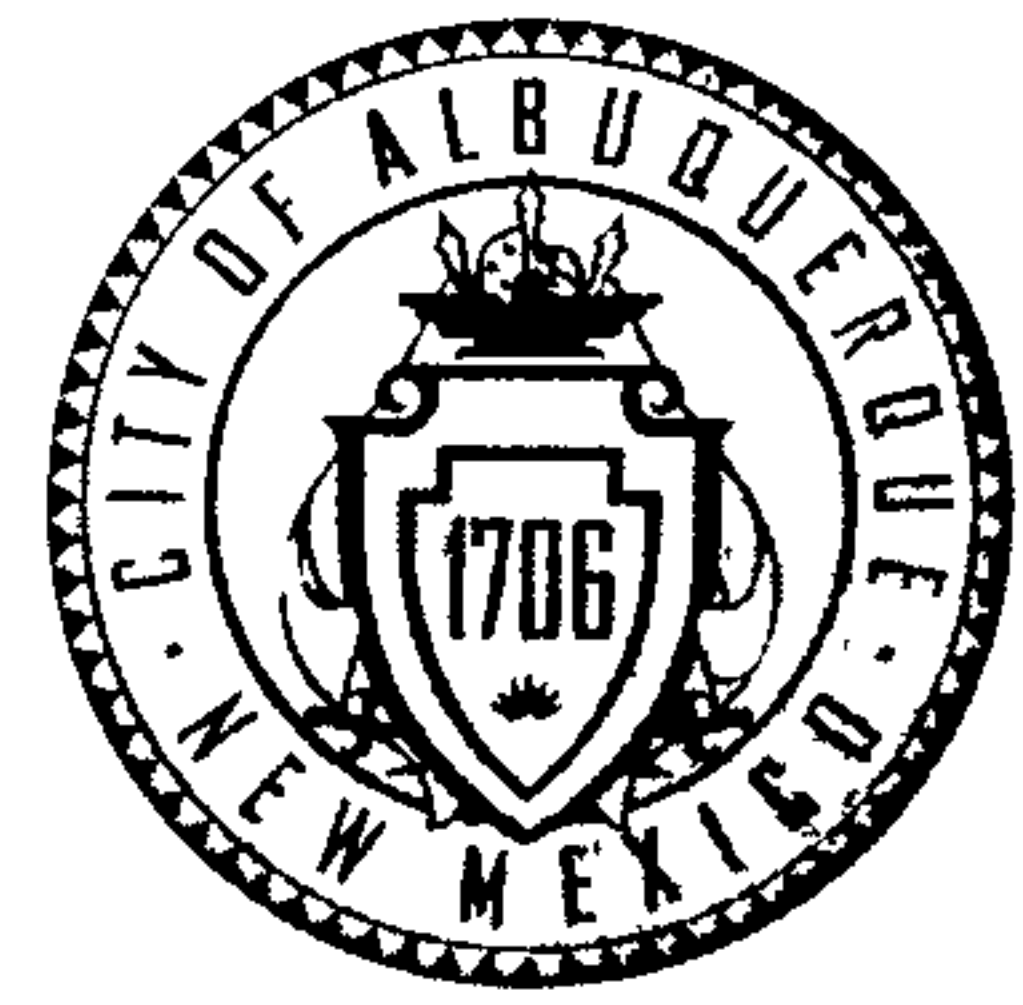


CITY OF ALBUQUERQUE

PLANNING DEPARTMENT – Development Review Services



September 22, 2016

Diane Hoelzer, P.E.

Mark Goodwin & Associates, P.A.

P.O. Box 90606

Albuquerque, NM 87199

Richard J. Berry, Mayor

RE: The 24's Uptown- Louisiana Condo Project (File: H19D001)
Drainage Report, Engineer's Stamp Date 8-31-2016
Grading and Drainage Plan, Engineer's Stamp Date 8-31-2016

Dear Ms. Hoelzer:

Based upon the information provided in your submittal received 8-31-16, the above referenced plan is approved for Building Permit. Please attach a copy of this approved plan in the construction sets when submitting for a building permit.

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

PO Box 1293

Albuquerque

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

New Mexico 87103

www.cabq.gov

Sincerely,

Rita Harmon, P.E.
Senior Engineer, Planning Dept.
Development Review Services

Orig: Drainage file

*%D = 0.307 Ae -
Free*



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 02/2013)

H190001

Project Title: The 24's @ UPTOWN - Louisiana Condo Project Building Permit #: _____ City Drainage #: H 18/
DRB#: _____ EPC#: _____ Work Order#: _____
Legal Description: LOT 3-A-1 IN BLOCK C OF LOUISIANA SUBDIVISION, ALBUQUERQUE, NM
City Address: _____

Engineering Firm: MARK GGODWIN & ASSOCIATES, PA Contact: DIANE HOELZER, PE
Address: 8916 ADAMS NE, ABQ, NM 87113
Phone#: 828-2200 Fax#: _____ E-mail: diane@goodwinengineers.com

Owner: GHL, LLC Contact: _____
Address: _____
Phone#: _____ Fax#: _____ E-mail: _____

Architect: KEVIN DEGRAAUW Contact: _____
Address: _____
Phone#: _____ Fax#: _____ E-mail: kdegrauw@hotmail.com

Surveyor: N/A Contact: _____
Address: _____
Phone#: _____ Fax#: _____ E-mail: _____

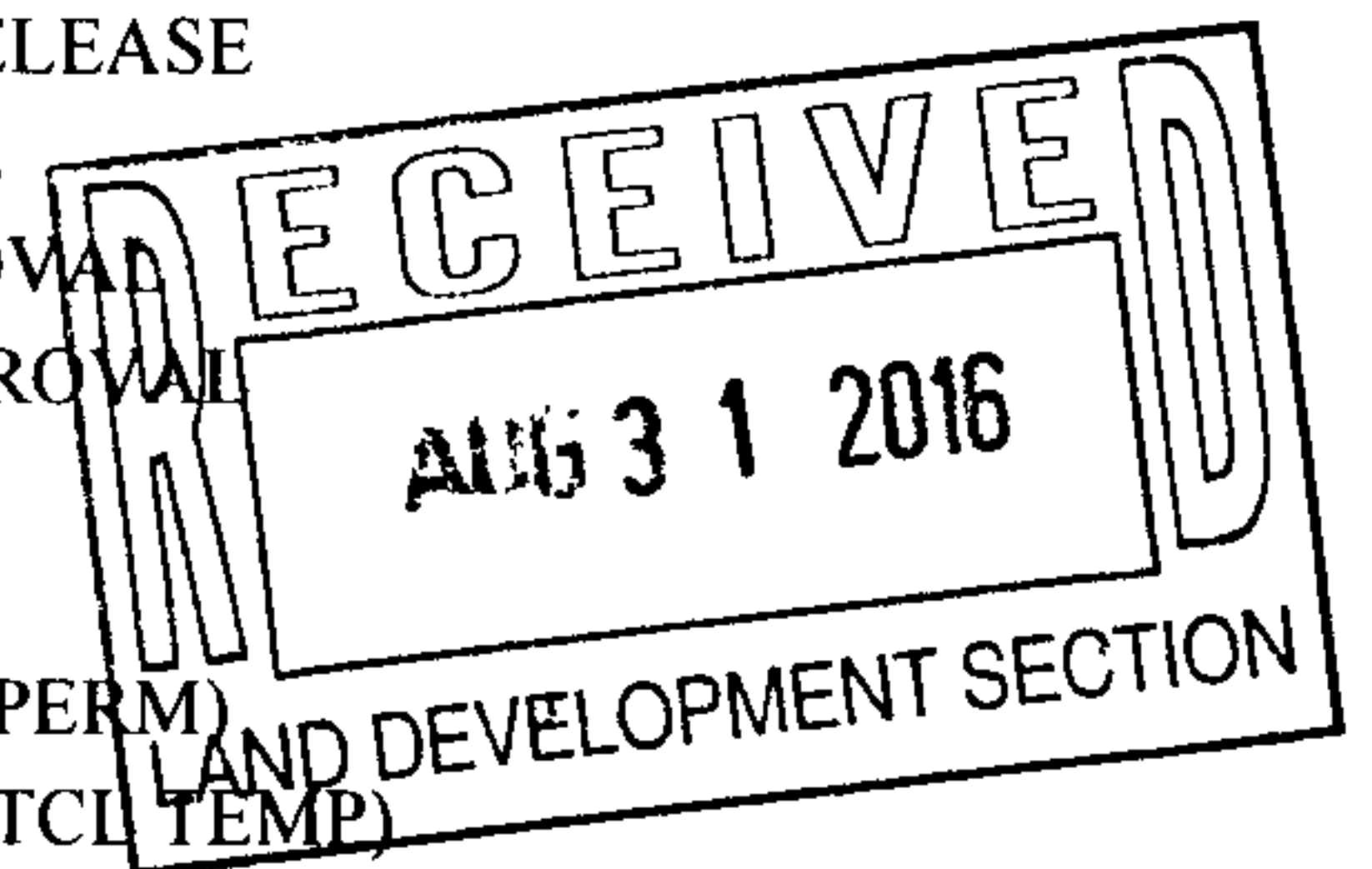
Contractor: SUN VISTA ENTERPRISES, INC. Contact: Irwin Harms
Address: _____
Phone#: _____ Fax#: _____ E-mail: Irwin@sunvista.net

TYPE OF SUBMITTAL:

- ☒ DRAINAGE REPORT
- ☐ DRAINAGE PLAN 1st SUBMITTAL
- ☐ DRAINAGE PLAN RESUBMITTAL
- ☐ CONCEPTUAL G & D PLAN
- ☒ GRADING PLAN
- ☐ EROSION & SEDIMENT CONTROL PLAN (ESC)
- ☐ ENGINEER'S CERT (HYDROLOGY)
- ☐ CLOMR/LOMR
- ☐ TRAFFIC CIRCULATION LAYOUT (TCL)
- ☐ ENGINEER'S CERT (TCL)
- ☐ ENGINEER'S CERT (DRB SITE PLAN)
- ☐ ENGINEER'S CERT (ESC)
- ☐ SO-19
- ☐ OTHER (SPECIFY) _____

CHECK TYPE OF APPROVAL/ACCEPTANCE 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
- ☐ CERTIFICATE OF OCCUPANCY (PERM)
- ☐ CERTIFICATE OF OCCUPANCY (TCL TEMP)
- ☐ FOUNDATION PERMIT APPROVAL
- ☒ BUILDING PERMIT APPROVAL
- ☐ GRADING PERMIT APPROVAL
- ☐ PAVING PERMIT APPROVAL
- ☐ WORK ORDER APPROVAL
- ☐ GRADING CERTIFICATION
- ☐ SO-19 APPROVAL
- ☐ ESC PERMIT APPROVAL
- ☐ ESC CERT. ACCEPTANCE
- ☐ OTHER (SPECIFY) _____



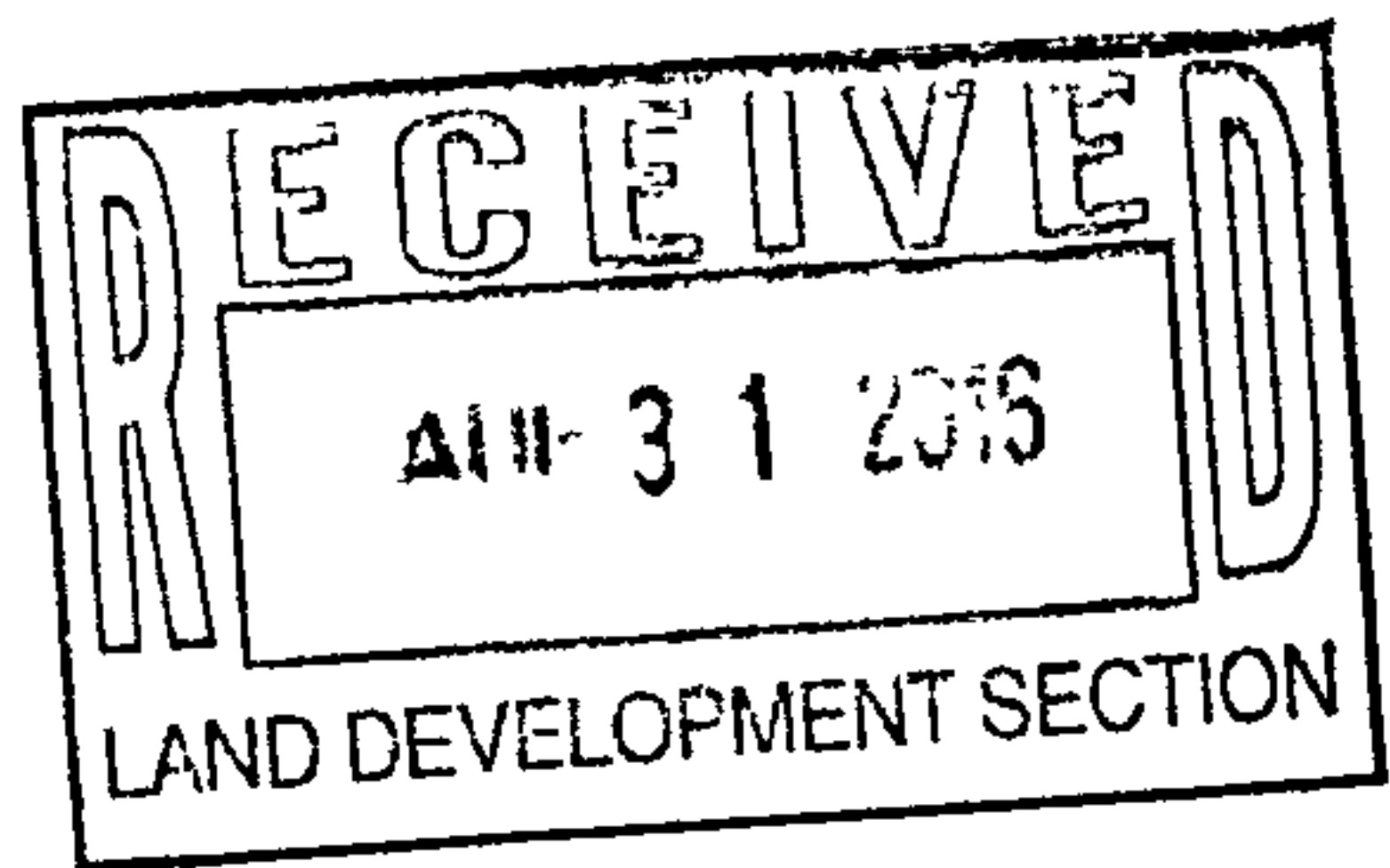
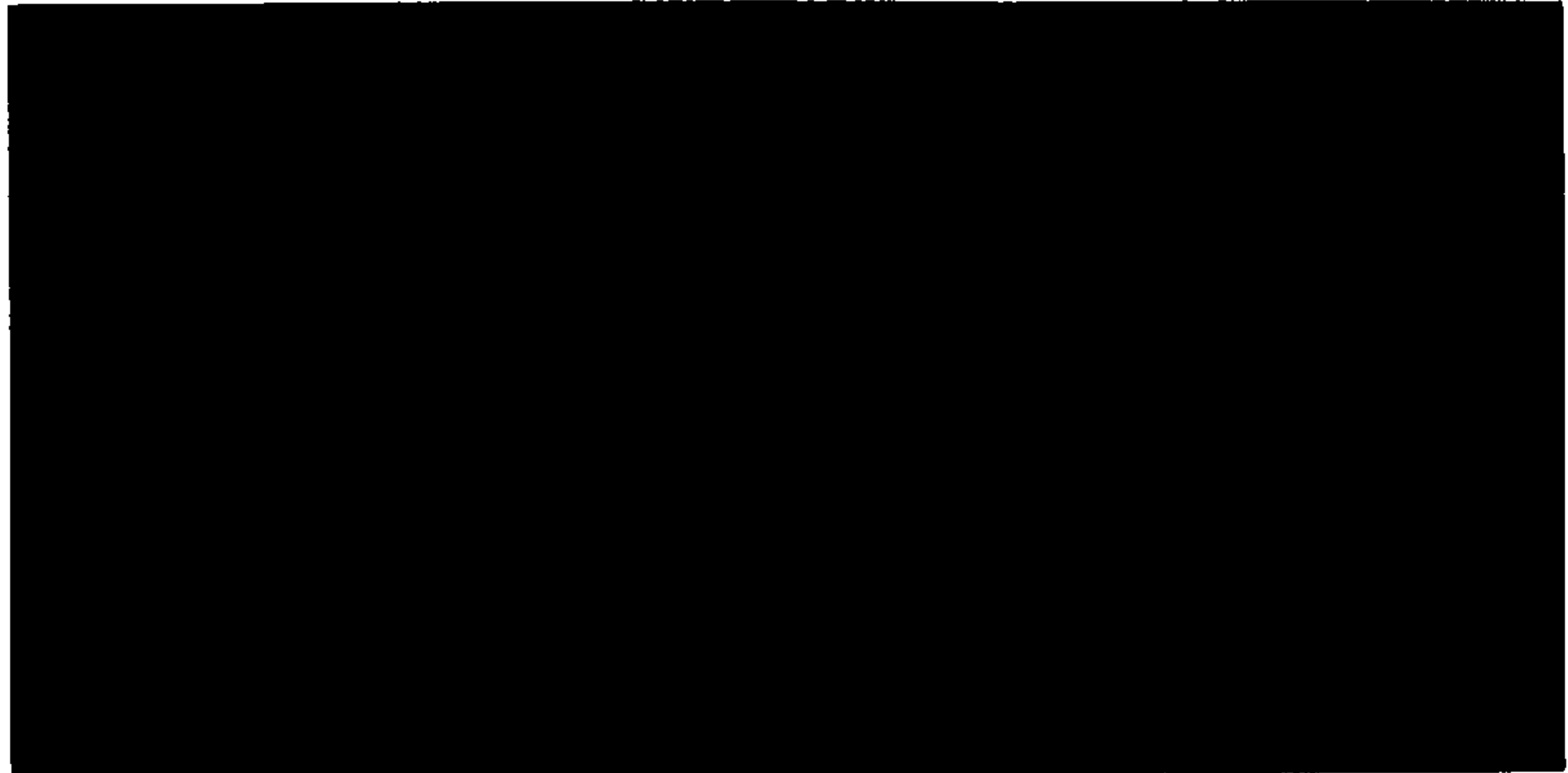
100.00

WAS A PRE-DESIGN CONFERENCE ATTENDED: _____ Yes ☒ No _____ Copy Provided _____

DATE SUBMITTED: AUGUST 31, 2016 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 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
- 4 **Erosion and Sediment Control Plan:** Required for any new development and redevelopment site with 1-acre or more of land disturbing area, including project less than 1-acre than are part of a larger common plan of development



MARK GOODWIN

& ASSOCIATES
CONSULTING ENGINEERS

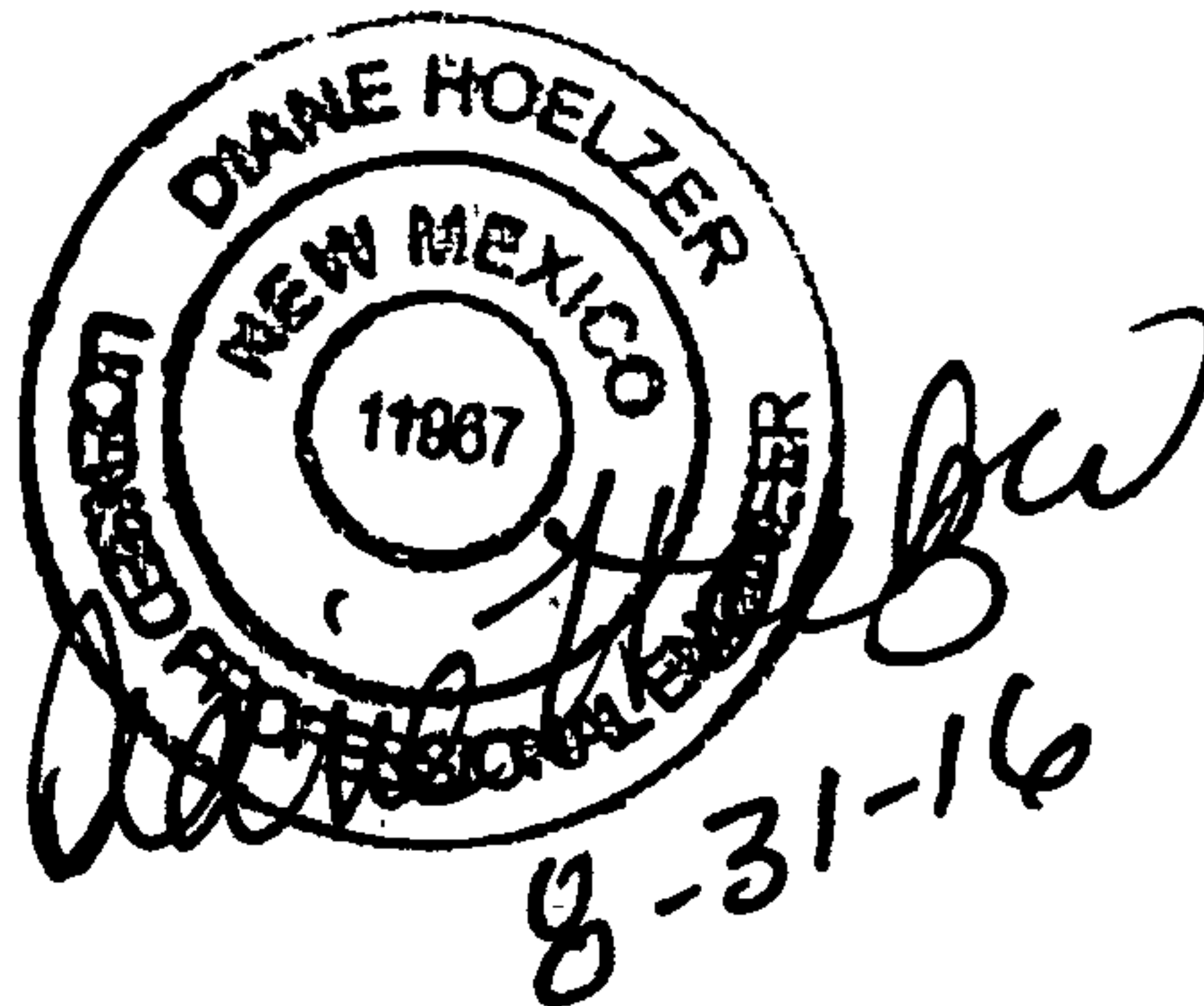
dmg

*The 24's @ Uptown
Louisiana Condominium Project*

Drainage Management Plan

*Prepared by
Mark Goodwin & Associates, P.A.*

August 2016



*THE 24'S @ UPTOWN
Louisiana Condominium Project*

Table of Contents

- I. PROJECT DESCRIPTION*
- II. DESIGN CRITERIA AND PREVIOUS REPORTS*
- III. EXISTING DRAINAGE CONDITIONS*
- IV. DEVELOPED DRAINAGE CONDITIONS*
- V. FIRST FLUSH TREATMENT*

FIGURE 1 Vicinity Map
FIGURE 2 Project Site Existing Conditions- Google Map
Limits of Project Site-Existing
Limits of Project Site-Developed

APPENDIX A HYDROLOGY/HYDRAULICS
Hydrology Summary Table 1
Sub Basin Boundary Exhibit
AHYMO Output Files
Example Inlet Type

POCKET 1 GRADING AND DRAINAGE PLAN

I. PROJECT DESCRIPTION

The 24's @ Uptown Project involves the renovation of an existing building, converting the upper level to six condominium units as well as the construction of an underground parking structure. The existing surface parking area will be modified to allow for a drive thru ATM machine and a ramp to the underground parking area. Refer to the google map for existing conditions view. The construction area will cover approximately .72 acres. The existing building-project site is roughly bounded by Louisiana Blvd. to the west, Prospect Place to the north and east and Cutler Avenue to the south.

II. DESIGN CRITERIA AND PREVIOUS DEVELOPMENT

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 and sizing of the storm drain outfall using $P(1\text{-hr})=2.05"$, $P(6\text{-hr})=2.42"$ and $P(24\text{-hr})=2.85"$. The onsite Land Treatment values used were determined by measuring the total impervious area.

III. EXISTING DRAINAGE CONDITIONS

Under existing drainage conditions, the existing east parking lot runoff flows to an existing sump inlet near the entrance door on the east side of the building. This inlet drains to another connecting inlet on the south side of the building which connects to a series of inlets and underground storm pipe to the west. Runoff from the parking area and the landscape area generally flows south and west.

IV. DEVELOPED DRAINAGE CONDITIONS

Under developed conditions, the modified parking area and landscape area will continue to flow in a general southerly direction and end up in the same existing inlet located on the south side of the building. Referring to the "Sub Basin Boundary Exhibit", Sub Basin A will flow into a depressed landscape area in Sub Basin B. This ponding area will have capacity to contain 122% of the 100 year 6 hour storm event. Sub Basins E and D will have depressed landscaped areas that will contain the 100 year runoff. Sub Basin D will spill into the parking area (Sub Basin C) and Sub Basin E will spill into the driveway through an opening in the curb as shown on the plan that will also end up in Sub Basin C. All runoff in Sub Basin C will be intercepted by a new inlet at the southwest corner of the parking lot. This inlet will connect to the existing underground storm pipe that ultimately connects to the existing inlet #2.

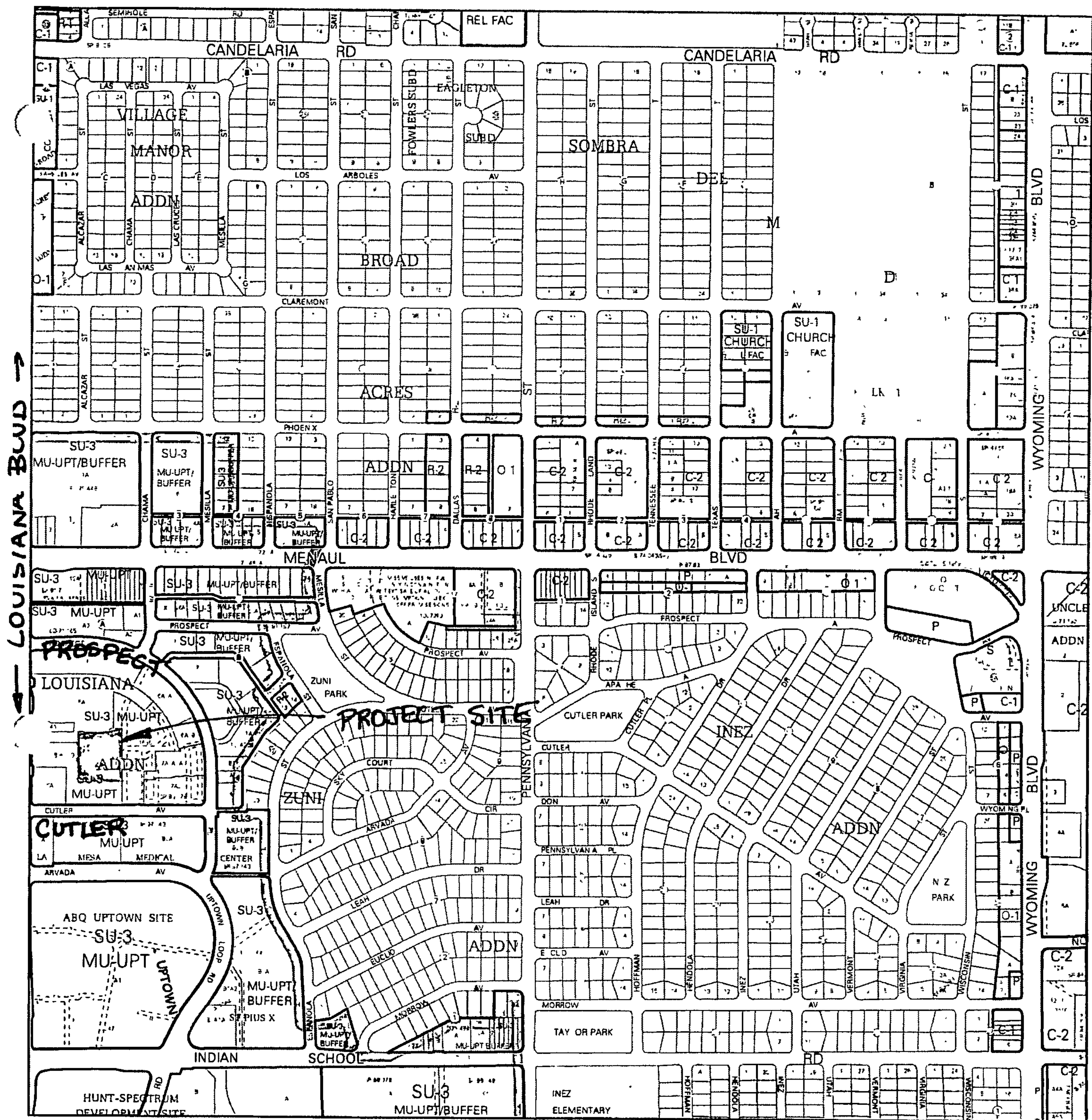
The only runoff in the underground parking garage will be the small amount that falls on the ramp or is on the cars when they drive down after a rain or snowfall. This runoff will be directed to the SW corner of the parking garage and then pumped to the surface through a 3" diameter pipe to a point near the existing southern inlet.

H19 0001 (D001A
D002A)

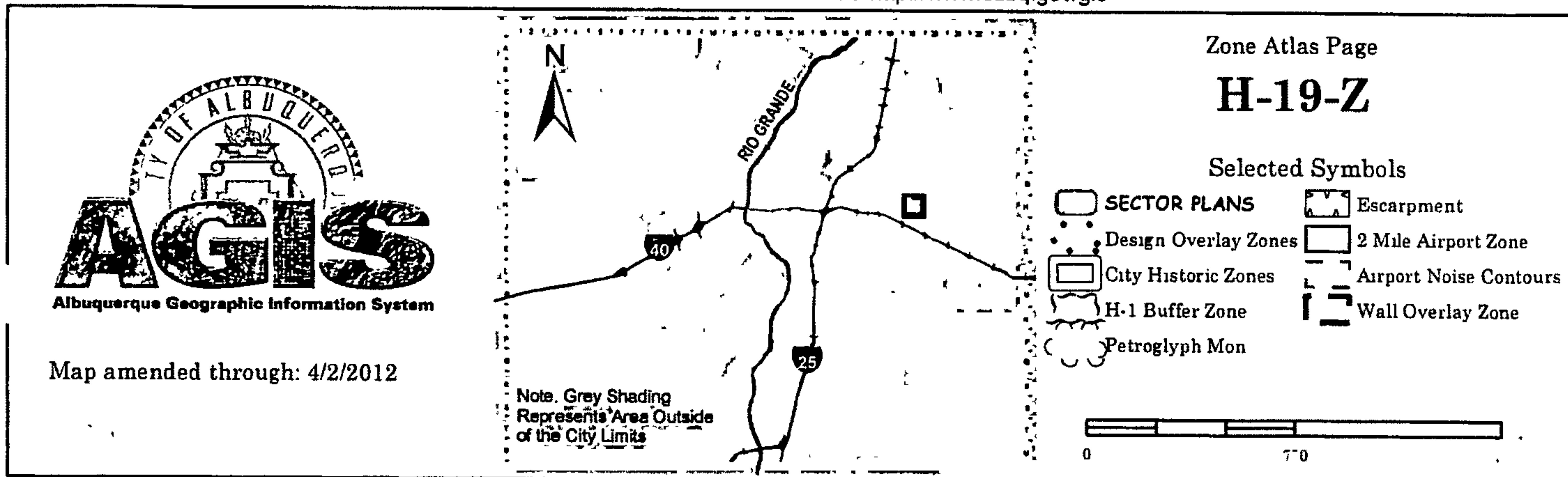
V. FIRST FLUSH

Under the existing drainage conditions there was no "First Flush" requirement. Under the proposed conditions, the landscape areas will be depressed by at least 6 inches and in Sub Basin B the landscape area is depressed to a 2 foot depth.

It our intent to receive credit for "first flush" volume from the depressed areas in Sub Basins B, D and E. The project has taken advantage of all proposed landscape areas to this end. In addition, the overall impervious area has been reduced. Comparison of the Project Limits "Existing" and "Developed" Exhibits shows the increase in pervious area with the addition of several additional landscape strips.



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





Ex. East Sump Inlet #1

Ex. South Inlet #2

© 2016 Google

PROJECT SITE EXISTING CONDITIONS-Google Map

LOT 5-A, BLOCK C,
LOUISIANA SUBDIVISION
(05/05/87, C33-122)

BUILDING RENOVATION

EXISTING
LOUISIANA CONDO'S
LIMITS OF PROJECT SITE

LOT 5-A, BLOCK C,
LOUISIANA SUBDIVISION
(05/05/87, C33-122)

BUILDING RENOVATION

EXISTING
LOUISIANA CONDO'S
LIMITS OF PROJECT SITE

LOT 5-A, BLOCK C
LOUISIANA SUBDIVISION
(05/05/87, C33-122)

BUILDING RENOVATION

EXISTING
LOUISIANA CONDO'S
LIMITS OF PROJECT SITE

LOT 5-A, BLOCK C
LOUISIANA SUBDIVISION
(05/05/87, C33-122)

BUILDING RENOVATION

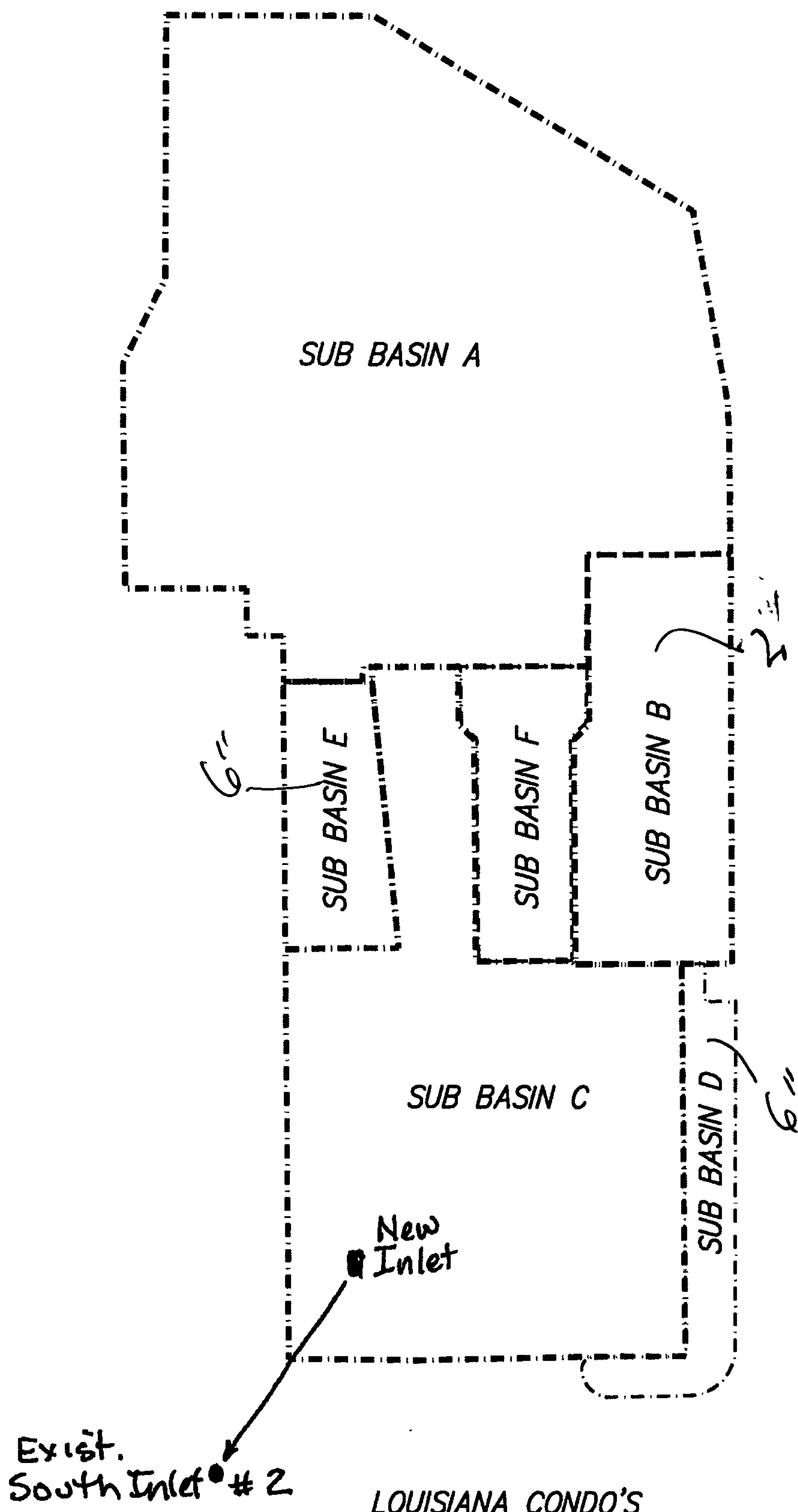
EXISTING
LOUISIANA CONDO'S
LIMITS OF PROJECT SITE

LOT 5-A, BLOCK C
LOUISIANA SUBDIVISION
(05/05/87, C33-122)

BUILDING RENOVATION

DEVELOPED

LOUISIANA CONDO'S
LIMITS OF PROJECT SITE



LOUISIANA CONDO'S
SUBBASIN BOUNDARY EXHIBIT

APPENDIX – HYDROLOGY/HYDRAULICS

*Hydrology Summary Table 1
Sub Basin Boundary Exhibit
AHYMO Output Files
Example Inlet Type*

TABLE 1

The 24's @ Uptown Summary of Hydrology Parameters										
Sub Basin ID	Area sq.ft	Area acre	Area sq.mi.	Land Treatment Values				100 YEAR-6 HOUR		
				A	B	C	D	Discharge cfs	Volume Acre-Feet	Volume Cu.Ft.
A	11,395.0	0.26	0.000409	0.0	55.0	0.0	45.0	1.01	0.033	1,446
B	2,259.0	0.05	0.000081	0.0	80.0	20.0	0.0	0.17	0.005	196
C	6,761.0	0.16	0.000243	0.0	0.0	0.0	100.0	0.78	0.028	1,224
D	901.0	0.02	0.000032	0.0	100.0	0.0	0.0	0.07	0.002	74
E	983.0	0.02	0.000035	0.0	50.0	0.0	50.0	0.10	0.003	131
								100 YEAR-24 HOUR		
F	1,087.0	0.02	0.000039	0.0	0.0	0.0	100.0	0.13	0.005	235

			DESIGN	100 YEAR
LANDSCAPE AREAS		DEPTH	VOLUME	VOLUME
DEPRESSED AREA	B	24"	2007 CF	1642
DEPRESSED AREA	D	6"	270.5 CF	74
DEPRESSED AREA	E	6"	150.7 CF	131

PRECIP VALUES	
P(60)	2.05"
P(6)	2.42"
P(24)	2.85"

FIRST FLUSH CALCULATIONS			
SUBASIN ID	IMPRV AREA	x(0.34")	NOTES:
A (pvmt)	3343 SF	94.7 CF	flows to Sub basin B
E (sdwk)	529 SF	15 CF	flows to depressed area E

REVISED 9-22-16 DLH

TABLE 1

The 24's @ Uptown Summary of Hydrology Parameters										
Sub Basin	Area	Area	Area	Land Treatment Values				100 YEAR-6 HOUR		
								Discharge	Volume	Volume
ID	sq.ft	acre	sq.mi.	A	B	C	D	cfs	Acre-Feet	Cu.Ft.
A	11,395.0	0.26	0.000409	0.0	55.0	0.0	45.0	1.01	0.033	1,446
B	2,259.0	0.05	0.000081	0.0	80.0	20.0	0.0	0.17	0.005	196
C	6,761.0	0.16	0.000243	0.0	0.0	0.0	100.0	0.78	0.028	1,224
D	901.0	0.02	0.000032	0.0	100.0	0.0	0.0	0.07	0.002	74
E	983.0	0.02	0.000035	0.0	50.0	0.0	50.0	0.10	0.003	131
								100 YEAR-24 HOUR		
F	1,087.0	0.02	0.000039	0.0	0.0	0.0	100.0	0.13	0.005	235

			DESIGN	100 YEAR
LANDSCAPE AREAS		DEPTH	VOLUME	VOLUME
DEPRESSED AREA	B	24"	2007 CF	1642
DEPRESSED AREA	D	6"	270.5 CF	74
DEPRESSED AREA	E	6"	150.7 CF	131

PRECIP VALUES

P(60)	2.05"
P(6)	2.42"
P(24)	2.85"

REVISED 8-30-16 DLH



AHYMO PROGRAM (AHYMO-S4) - Version: S4.01a - Rel: 01a
 RUN DATE (MON/DAY/YR) = 08/17/2016
 START TIME (HR:MIN:SEC) = 14:49:01 USER NO.= M-GoodwinNMSiteA90075759
 INPUT FILE = C:\Program Files (x86)\AHYMO-S4\LCONDO_6.DAT

*S*****

*S LOUISIANA CONDO SUBDIVISION
 *S PROPOSED DRAINAGE CONDITIONS
 *S 100 YEAR 6 HOUR STORM EVENT
 *S FILE: LCONDO_6.DAT
 *S LAST REVISED: 8-17-16
 *S NOAA ATLAS 2, VOL IV ZONE B-18
 START TIME=0.0 HR PUNCH CODE=0 PRINT LINES=-6
 LOCATION NEW MEXICO

State of New Mexico soil infiltration values (LAND FACTORS) used for computations.

Land Treatment	Initial Abstr.(in)	Unif. Infilt.(in/hour)
A	0.65	1.67
B	0.50	1.25
C	0.35	0.83
D	0.10	0.04

RAINFALL TYPE=1 RAIN QUARTER=0.0
 RAIN ONE=2.05 IN RAIN SIX=2.42 IN
 RAIN DAY=2.85 IN DT=0.0333 HRS

6-HOUR RAINFALL DIST. - BASED ON NOAA ATLAS 14 FOR CONVECTIVE AREAS (NM & AZ) - D1
 DT = 0.033300 HOURS END TIME = 5.994000 HOURS

*S*****

*S PROPOSED DRAINAGE CONDITIONS
 *** *****
 *** BASIN A
 *** NORTH AREA- PAVED AND LANDSCAPING
 *** AREA= 11395 SF
 *** *****

COMPUTE NM HYD ID=1 HYD NO=100.A AREA= 0.000409 SQ MI
 PER A=0 PER B=55 PER C=0 PER D=45
 TP=-.1333 HR MASS RAIN=-1

K = 0.072649HR TP = 0.133300HR K/TP RATIO = 0.545000 SHAPE CONSTANT, N = 7.106428
 UNIT PEAK = 0.72664 CFS UNIT VOLUME = 0.9840 B = 526.28 P60 = 2.0500
 AREA = 0.000184 SQ MI IA = 0.10000 INCHES INF = 0.04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.033300

K = 0.132570HR TP = 0.133300HR K/TP RATIO = 0.994525 SHAPE CONSTANT, N = 3.549819
 UNIT PEAK = 0.54669 CFS UNIT VOLUME = 0.9760 B = 323.95 P60 = 2.0500
 AREA = 0.000225 SQ MI IA = 0.50000 INCHES INF = 1.25000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.033300

PRINT HYD ID=1 CODE=1

HYDROGRAPH FROM AREA 100.A

```

RUNOFF VOLUME =      1.52211 INCHES      =      0.0332 ACRE-FEET
PEAK DISCHARGE RATE =      1.01 CFS  AT  1.532 HOURS  BASIN AREA =  0.0004 SQ. MI.

*** *****
*** *****
*** BASIN B
*** LANDSCAPE DEPRESSED AREA
*** AREA= 2259 SF
*** *****
COMPUTE NM HYD      ID=2  HYD NO=100.B AREA= 0.000081 SQ MI
                    PER A=0  PER B=80  PER C=20  PER D=0
                    TP=-.1333 HR  MASS RAIN=-1

K =  0.127636HR    TP =  0.133300HR    K/TP RATIO =  0.957506    SHAPE CONSTANT, N =  3.690278
UNIT PEAK =  0.20294    CFS    UNIT VOLUME =  0.9326    B =  333.97    P60 = 2.0500
AREA =  0.000081 SQ MI    IA =  0.47000 INCHES    INF =  1.16600 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  0.033300

PRINT HYD          ID=2 CODE=1

```

HYDROGRAPH FROM AREA 100.B

```

RUNOFF VOLUME =      1.03944 INCHES      =      0.0045 ACRE-FEET
PEAK DISCHARGE RATE =      0.17 CFS  AT  1.532 HOURS  BASIN AREA =  0.0001 SQ. MI.

ADD HYD          ID=22  HYD=114  ID I=2  ID II=1
PRINT HYD        ID=22 CODE=1

```

PARTIAL HYDROGRAPH 114.00

```

RUNOFF VOLUME =      1.44176 INCHES      =      0.0377 ACRE-FEET
PEAK DISCHARGE RATE =      1.17 CFS  AT  1.532 HOURS  BASIN AREA =  0.0005 SQ. MI.

```

```

*** *****
*s*****
*s* ROUTE THRU LANDSCAPE POND
*s  EMERGENCY OVERFLOW ELEVATION CREST= 93.0
*s  MAX WSEL 93.5
*s*****
ROUTE RESERVOIR      ID=12  HYD=POND.12  INFLOW=22  CODE=100
                    OUTFLOW(CFS)  STORAGE(ACFT)  ELEV(FT)
                    0.00          0.0000        92.0
                    0.01          0.01724       93.0
                    0.67          0.03037       93.5

```

* * * * *

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
0.00	0.00	92.00	0.000	0.00

0.80	0.00	92.00	0.000	0.00
1.60	0.98	93.12	0.020	0.17
2.40	0.03	93.07	0.019	0.10
3.20	0.00	93.00	0.017	0.01
4.00	0.00	92.96	0.017	0.01
4.80	0.00	92.93	0.016	0.01
5.59	0.00	92.91	0.016	0.01
6.39	0.00	92.88	0.015	0.01
7.19	0.00	92.85	0.015	0.01
7.99	0.00	92.82	0.014	0.01
8.79	0.00	92.79	0.014	0.01
9.59	0.00	92.76	0.013	0.01
10.39	0.00	92.73	0.013	0.01
11.19	0.00	92.70	0.012	0.01
11.99	0.00	92.67	0.012	0.01
12.79	0.00	92.65	0.011	0.01
13.59	0.00	92.62	0.011	0.01
14.39	0.00	92.60	0.010	0.01
15.18	0.00	92.58	0.010	0.01
15.98	0.00	92.56	0.010	0.01
16.78	0.00	92.54	0.009	0.01
17.58	0.00	92.52	0.009	0.01
18.38	0.00	92.50	0.009	0.00

PEAK DISCHARGE = 0.395 CFS - PEAK OCCURS AT HOUR 1.76
 MAXIMUM WATER SURFACE ELEVATION = 93.292
 MAXIMUM STORAGE = 0.0249 AC-FT INCREMENTAL TIME= 0.033300HRS

PRINT HYD ID=12 CODE=1

HYDROGRAPH FROM AREA POND.12

RUNOFF VOLUME = 1.44043 INCHES = 0.0376 ACRE-FEET
 PEAK DISCHARGE RATE = 0.40 CFS AT 1.765 HOURS BASIN AREA = 0.0005 SQ. MI.

*** *****
 *** BASIN C
 *** SOUTH PARKING AREA
 *** AREA= 6761 SF
 *** *****

COMPUTE NM HYD ID=1 HYD NO=100.C AREA= 0.000243 SQ MI
 PER A=0 PER B=0 PER C=0 PER D=100
 TP=-.1333 HR MASS RAIN=-1

K = 0.072649HR TP = 0.133300HR K/TP RATIO = 0.545000 SHAPE CONSTANT, N = 7.106428
 UNIT PEAK = 0.95938 CFS UNIT VOLUME = 0.9880 B = 526.28 P60 = 2.0500
 AREA = 0.000243 SQ MI IA = 0.10000 INCHES INF = 0.04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.033300

PRINT HYD ID=1 CODE=1

HYDROGRAPH FROM AREA 100.C

RUNOFF VOLUME = 2.17178 INCHES = 0.0281 ACRE-FEET
 PEAK DISCHARGE RATE = 0.78 CFS AT 1.499 HOURS BASIN AREA = 0.0002 SQ. MI.

```

*** *****
*** BASIN D
*** LANDSCAPE AREA EAST
*** AREA= 901 SF
*** *****
COMPUTE NM HYD      ID=3  HYD NO=100.D AREA= 0.000032 SQ MI
                    PER A=0  PER B=100  PER C=0  PER D=0
                    TP=-.1333 HR  MASS RAIN=-1

K = 0.132570HR      TP = 0.133300HR      K/TP RATIO = 0.994525      SHAPE CONSTANT, N = 3.549819
UNIT PEAK = 0.77768E-01CFS\  UNIT VOLUME = 0.8702      B = 323.95      P60 = 2.0500
AREA = 0.000032 SQ MI      IA = 0.50000 INCHES      INF = 1.25000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.033300

```

```

PRINT HYD      ID=3 CODE=1

```

HYDROGRAPH FROM AREA 100.D

```

RUNOFF VOLUME = 0.99055 INCHES = 0.0017 ACRE-FEET
PEAK DISCHARGE RATE = 0.07 CFS AT 1.532 HOURS BASIN AREA = 0.0000 SQ. MI.

```

```

*** *****
*s* ROUTE THRU LANDSCAPE AREA
*s*****
ROUTE RESERVOIR      ID=13  HYD=POND.13  INFLOW=3  CODE=100
                    OUTFLOW(CFS)  STORAGE(ACFT)  ELEV(FT)
                    0.00          0.0000        95.0
                    0.01          0.00621        95.5

```

```

* * * * *

```

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
0.00	0.00	95.00	0.000	0.00
0.80	0.00	95.00	0.000	0.00
1.60	0.06	95.08	0.001	0.00

```

PEAK DISCHARGE = 0.003 CFS - PEAK OCCURS AT HOUR 1.93
MAXIMUM WATER SURFACE ELEVATION = 95.129
MAXIMUM STORAGE = 0.0016 AC-FT INCREMENTAL TIME= 0.033300HRS

```

```

PRINT HYD      ID=13 CODE=1

```

HYDROGRAPH FROM AREA POND.13

```

RUNOFF VOLUME = 0.98785 INCHES = 0.0017 ACRE-FEET
PEAK DISCHARGE RATE = 0.00 CFS AT 1.931 HOURS BASIN AREA = 0.0000 SQ. MI.

```

```

*** *****
*** BASIN E
*** LANDSCAPE AREA WEST, NEXT TO BUILDING
*** AREA= 983 SF
*** *****

```

COMPUTE NM HYD ID=4 HYD NO=100.E AREA= 0.000035 SQ MI
PER A=0 PER B=50 PER C=0 PER D=50
TP=-.1333 HR MASS RAIN=-1

K = 0.072649HR TP = 0.133300HR K/TP RATIO = 0.545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 0.69091E-01CFS UNIT VOLUME = 0.8872 B = 526.28 P60 = 2.0500
AREA = 0.000018 SQ MI IA = 0.10000 INCHES INF = 0.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.033300

K = 0.132570HR TP = 0.133300HR K/TP RATIO = 0.994525 SHAPE CONSTANT, N = 3.549819
UNIT PEAK = 0.42530E-01CFS UNIT VOLUME = 0.8702 B = 323.95 P60 = 2.0500
AREA = 0.000018 SQ MI IA = 0.50000 INCHES INF = 1.25000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.033300

PRINT HYD ID=4 CODE=1

HYDROGRAPH FROM AREA 100.E

RUNOFF VOLUME = 1.58117 INCHES = 0.0030 ACRE-FEET
PEAK DISCHARGE RATE = 0.10 CFS AT 1.532 HOURS BASIN AREA = 0.0000 SQ. MI.

*** *****

s ROUTE THRU LANDSCAPE AREA

*g*****

ROUTE RESERVOIR ID=14 HYD=POND.14 INFLOW=4 CODE=100
OUTFLOW(CFS) STORAGE(ACFT) ELEV(FT)
0.00 0.0000 93.85
0.01 0.00346 94.30

* * * * *

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
---------------	-----------------	----------------	-------------------	------------------

0.00	0.00	93.85	0.000	0.00
0.80	0.00	93.85	0.000	0.00
1.60	0.08	94.08	0.002	0.01
2.40	0.00	94.16	0.002	0.01
3.20	0.00	94.10	0.002	0.01
4.00	0.00	94.06	0.002	0.00

PEAK DISCHARGE = 0.007 CFS - PEAK OCCURS AT HOUR 1.96

MAXIMUM WATER SURFACE ELEVATION = 94.176

MAXIMUM STORAGE = 0.0025 AC-FT INCREMENTAL TIME= 0.033300HRS

PRINT HYD ID=13 CODE=1

HYDROGRAPH FROM AREA POND.13

RUNOFF VOLUME = 0.98785 INCHES = 0.0017 ACRE-FEET
PEAK DISCHARGE RATE = 0.00 CFS AT 1.931 HOURS BASIN AREA = 0.0000 SQ. MI.

FINISH

NORMAL PROGRAM FINISH END TIME (HR:MIN:SEC) = 14:49:01

AHYMO PROGRAM (AHYMO-S4) - Version: S4.01a - Rel: 01a
RUN DATE (MON/DAY/YR) = 08/17/2016
START TIME (HR:MIN:SEC) = 16:03:08 USER NO.= M-GoodwinNMSiteA90075759
INPUT FILE = C:\Program Files (x86)\AHYMO-S4\LCONDO24.DAT

*S*****

*S LOUISIANA CONDO SUBDIVISION
*S PROPOSED DRAINAGE CONDITIONS
*S 100 YEAR 24 HOUR STORM EVENT
*S FILE: LCONDO24.DAT
*S LAST REVISED: 8-17-16
*S NOAA ATLAS 2, VOL IV ZONE B-18
START TIME=0.0 HR PUNCH CODE=0 PRINT LINES=-6
LOCATION NEW MEXICO

State of New Mexico soil infiltration values (LAND FACTORS) used for computations.

Land Treatment	Initial Abstr.(in)	Unif. Infilt.(in/hour)
A	0.65	1.67
B	0.50	1.25
C	0.35	0.83
D	0.10	0.04

RAINFALL TYPE=2 RAIN QUARTER=0.0
RAIN ONE=2.05 IN RAIN SIX=2.42 IN
RAIN DAY=2.85 IN DT=0.0333 HRS

24-HOUR RAINFALL DIST. - BASED ON NOAA ATLAS 14 FOR CONVECTIVE AREAS (NM & AZ) - D1
DT = 0.033300 HOURS END TIME = 24.009300 HOURS

*S*****

*S PROPOSED DRAINAGE CONDITIONS

*** *****

*** BASIN F

*** AREA= 1087 SF

*** *****

COMPUTE NM HYD ID=1 HYD NO=100.F AREA= 0.000039 SQ MI
PER A=0 PER B=0 PER C=0 PER D=100
TP=-.1333 HR MASS RAIN=-1

K = 0.072649HR TP = 0.133300HR K/TP RATIO = 0.545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 0.15397 CFS UNIT VOLUME = 0.9284 B = 526.28 P60 = 2.0500
AREA = 0.000039 SQ MI IA = 0.10000 INCHES INF = 0.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.033300

PRINT HYD ID=1 CODE=1

HYDROGRAPH FROM AREA 100.F

RUNOFF VOLUME = 2.60124 INCHES = 0.0054 ACRE-FEET
PEAK DISCHARGE RATE = 0.13 CFS AT 1.499 HOURS BASIN AREA = 0.0000 SQ. MI.

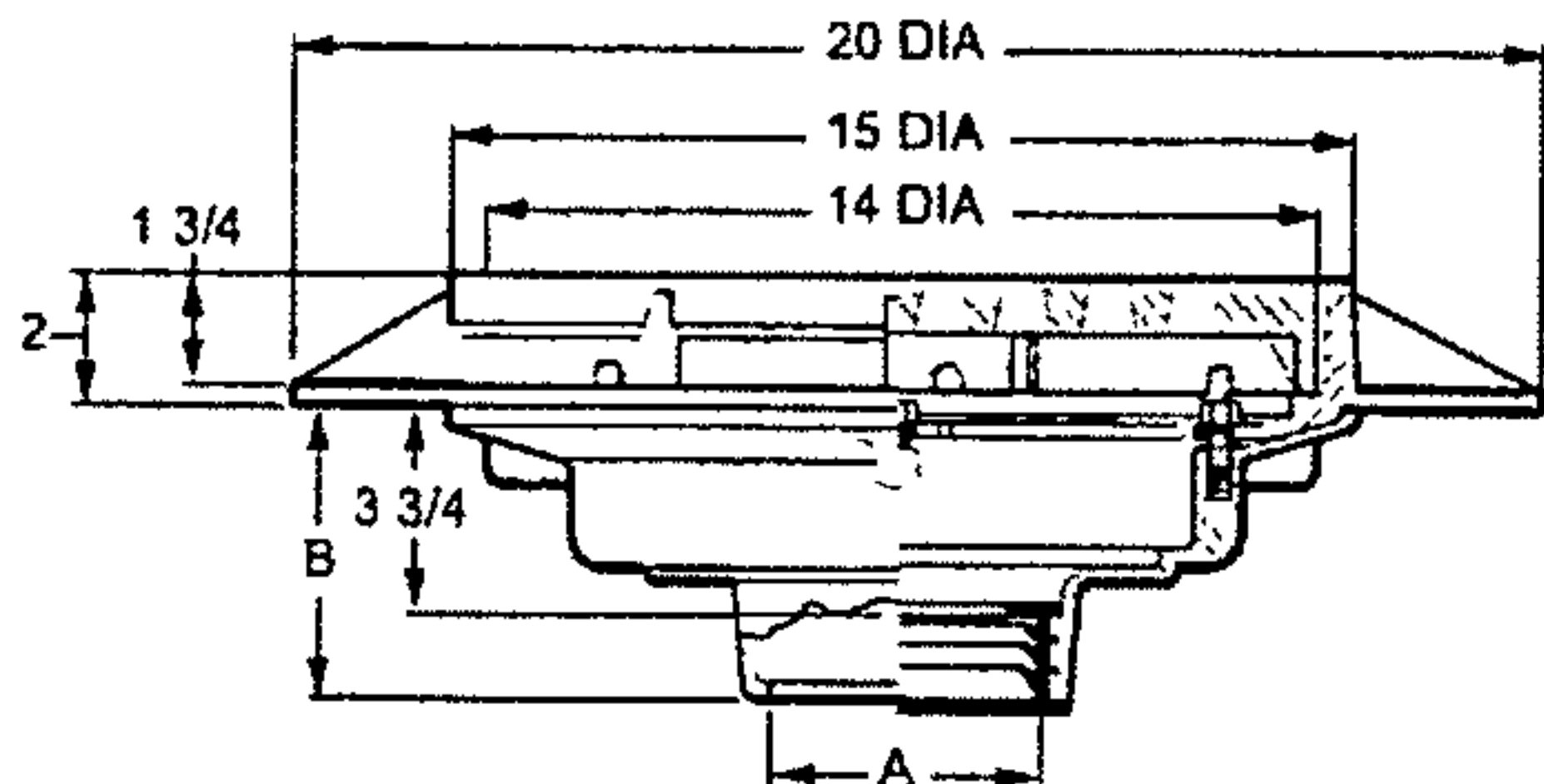
FINISH

NORMAL PROGRAM FINISH END TIME (HR:MIN:SEC) = 16:03:08

FLOOR DRAINS

FIG. 2624 FLOOR DRAIN WITH HEAVY DUTY WIDE FLANGE FLASHING COLLAR

FUNCTION: Used in parking decks with precast construction where core drilling or boxing out for drain is desired for cost effective installation. The wide reinforced flange provides maximum support of drain.



A OUTLET SIZE	TOP SIZE	FREE AREA SQ IN	†DUCO CI	DUCO CI PB TOP	DUCO CI NB TOP	APPROX. WEIGHT LBS
02, 03, 04"	15"	45	1,793.00	2,562.00	2,725.00	44
05, 06"	15"	45	1,793.00	2,562.00	2,725.00	44
08, 10"	16"	45	2,009.00	2,778.00	2,941.00	48

REGULARLY FURNISHED: Duco Cast Iron Body, Heavy Duty Wide Flange Flashing Collar with Heavy Duty Tractor Grate.

OUTLET VARIATIONS (Specify type of outlet and pipe size in inches.)

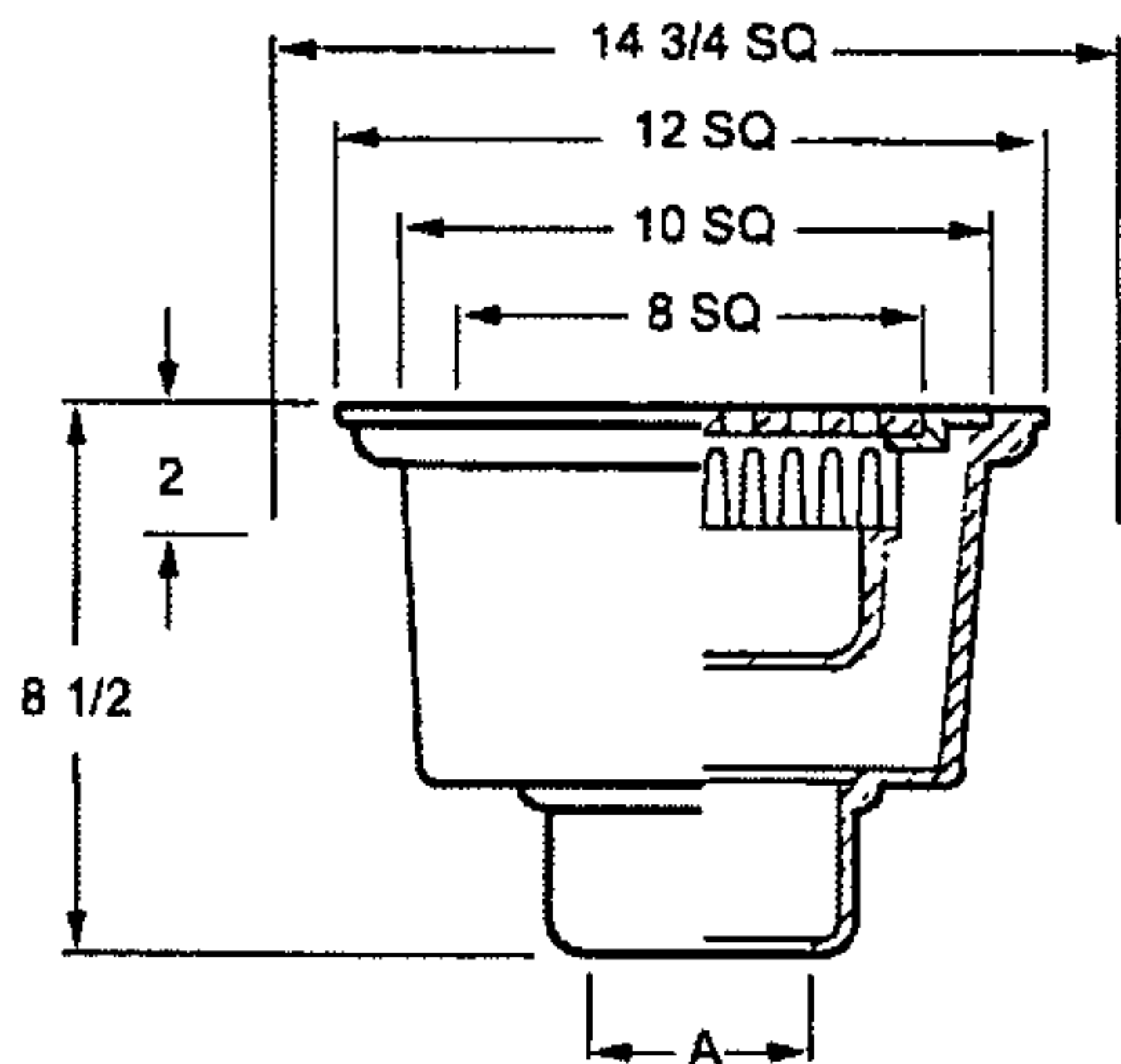
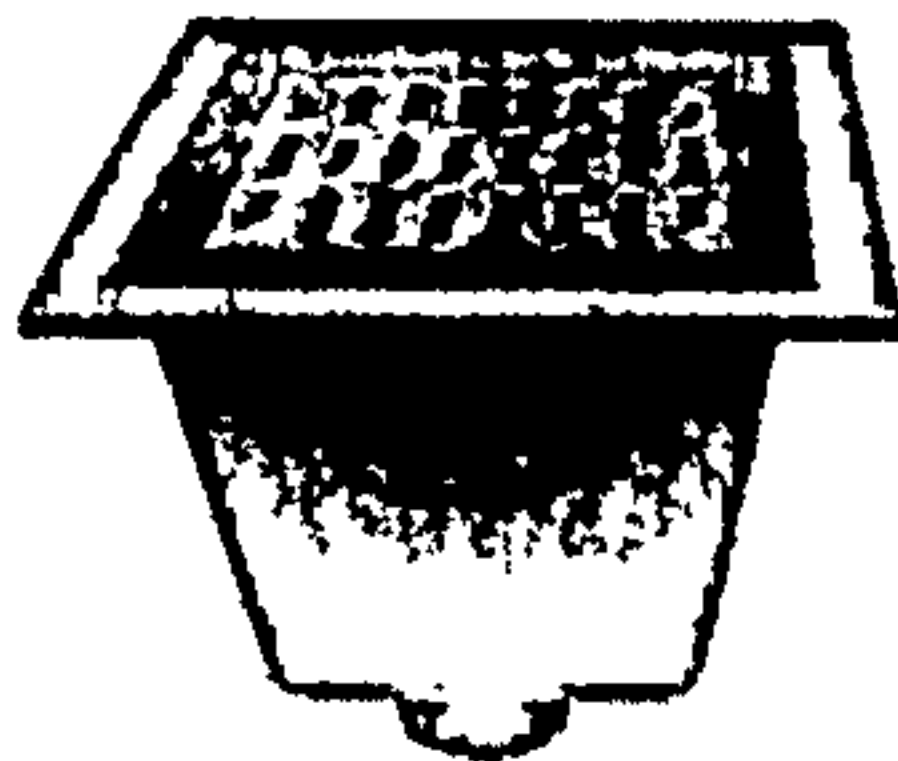
Outlet Type	Outlet Designation Outlet Type/Pipe Size	"B" Body HT. DIM.	ADD
Inside Caulk	C02, C03, C04, C05, C06	5"	N/C
	C08, C10	6"	N/C
Speedi-Set SW	L02, L03, L04	5"	N/C
Speedi-Set XH	LXH02, LXH03, LXH04	5"	N/C
Threaded	T02, T03, T04, T05, T06	3 3/4"	55.00
	T08, T10	5"	55.00
No-Hub	Y02, Y03, Y04, Y05, Y06	5"	N/C
	Y08, Y10	6"	N/C
Side Outlet			See Fig. 2648S

OPTIONS:	ADD
-C Underdeck Clamp	171.00
-DBSCI Dome Bottom Strainer, CI	68.00
-FBSCI Flat Bottom Strainer, CI	42.00
-G Galvanized CI	777.00
-M Ductile Iron Grate	467.00
-R Sump Receiver	191.00
-S Square Top, CI	334.00
-SNB Square Top, add to CI	1,398.00
-SPB Square Top, add to CI	1,209.00
-U Vandal Proof Screws	104.00

FIG. 2630 LIGHT DUTY HOPPER DRAIN WITH SEDIMENT BUCKET AND GRATE

FUNCTION: Hopper type drain for use in areas not subject to traffic.

(THIS ONE)



A OUTLET SIZE	TOP SIZE	FREE AREA SQ IN	†DUCO CI	DUCO CI PB TOP	DUCO CI NB TOP	APPROX. WEIGHT LBS
02, 03, 04"	12" SQ	23	873.00	1,561.00	1,692.00	30

REGULARLY FURNISHED: Duco Cast Iron Body with Sediment Bucket and Grate.

OUTLET VARIATIONS (Specify type of outlet and pipe size in inches.)

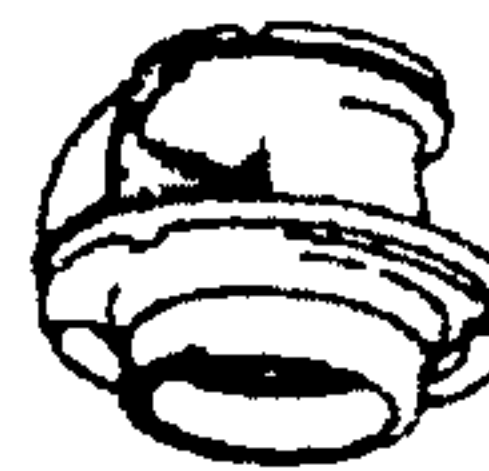
Outlet Type	Outlet Designation Outlet Type/Pipe Size	ADD
Inside Caulk	C02, C03, C04	N/C
No-Hub	Y02, Y03, Y04	See Fig. 2646Y
Threaded	T02, T03, T04	55.00

OPTIONS:	ADD
-BT Bell Trap Assembly	125.00
-F Flange, Cast Iron	260.00
-FC Flange w/Flashing Clamp	411.00
-G Galvanized CI	516.00
-M Ductile Iron Grate	242.00
-MBG Ductile Iron Bucket & Grate	376.00
-P Trap Primer Connection	136.00
-U Vandal Proof Screws	104.00
-12 Half Grate	86.00
-13 Three Quarter Grate	86.00

C-3085

IMPELLER PERFORMANCE CURVES

WASTEWATER



SECTION

3

SUPERSEDES

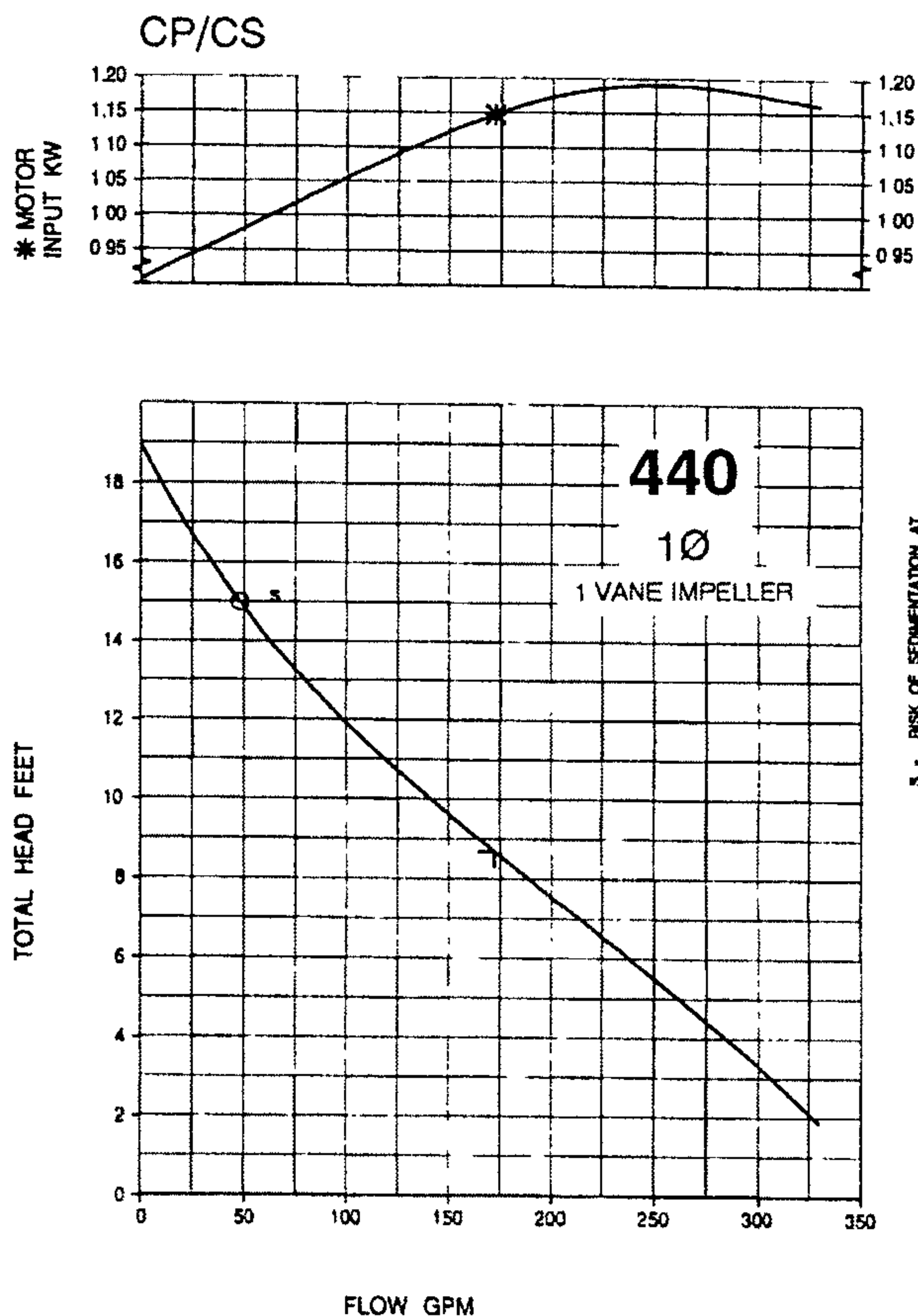
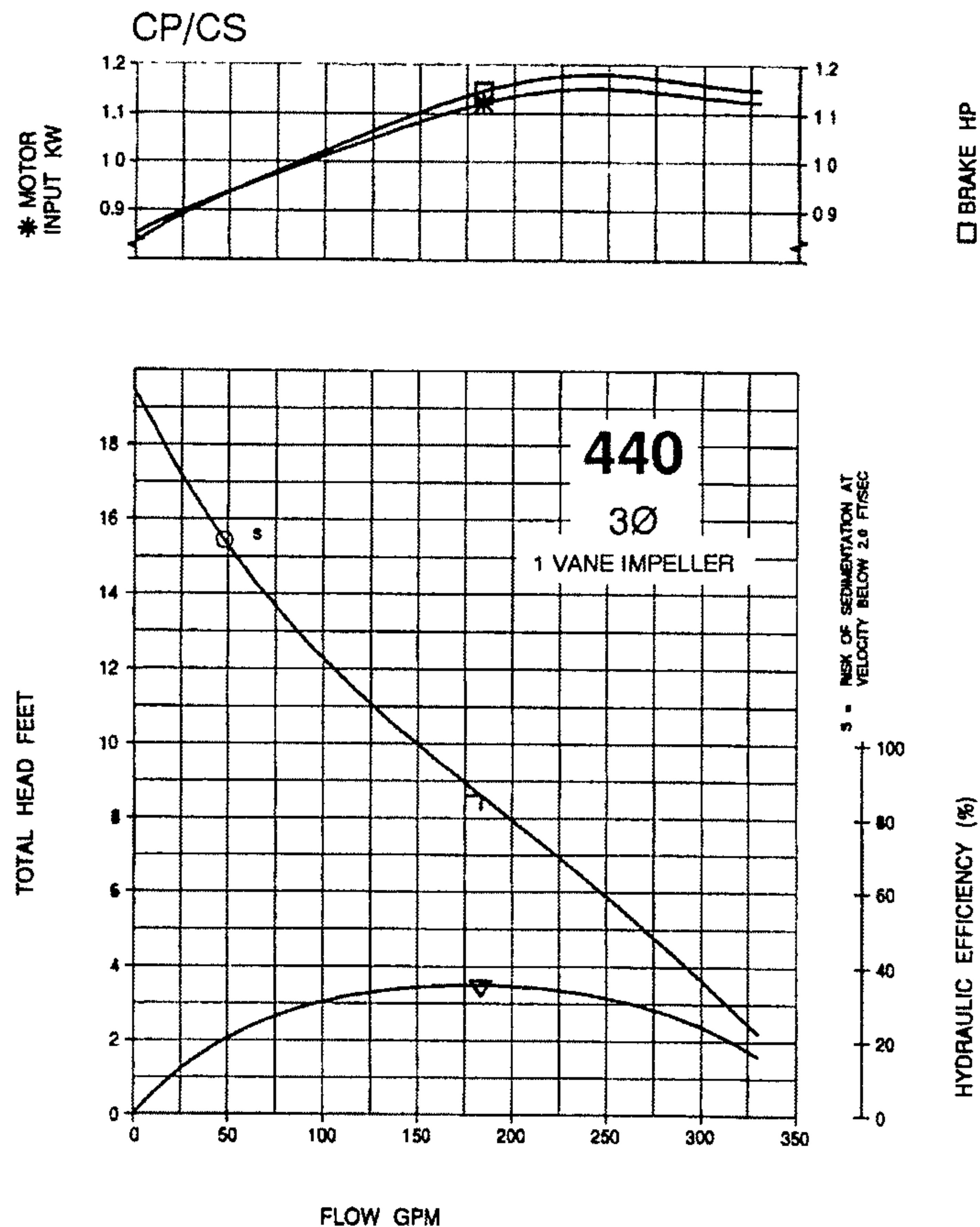
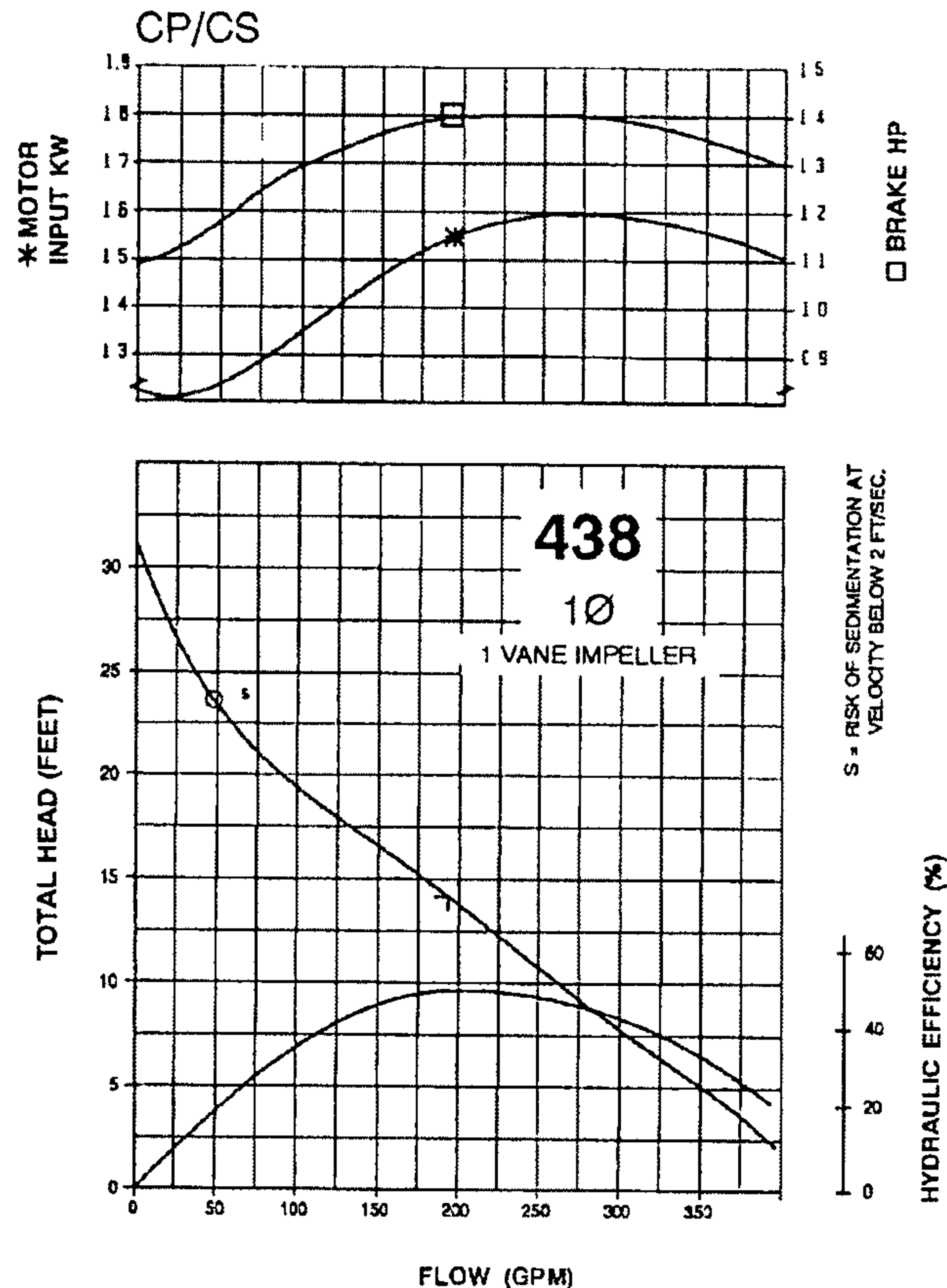
2/88

PAGE

2

ISSUED

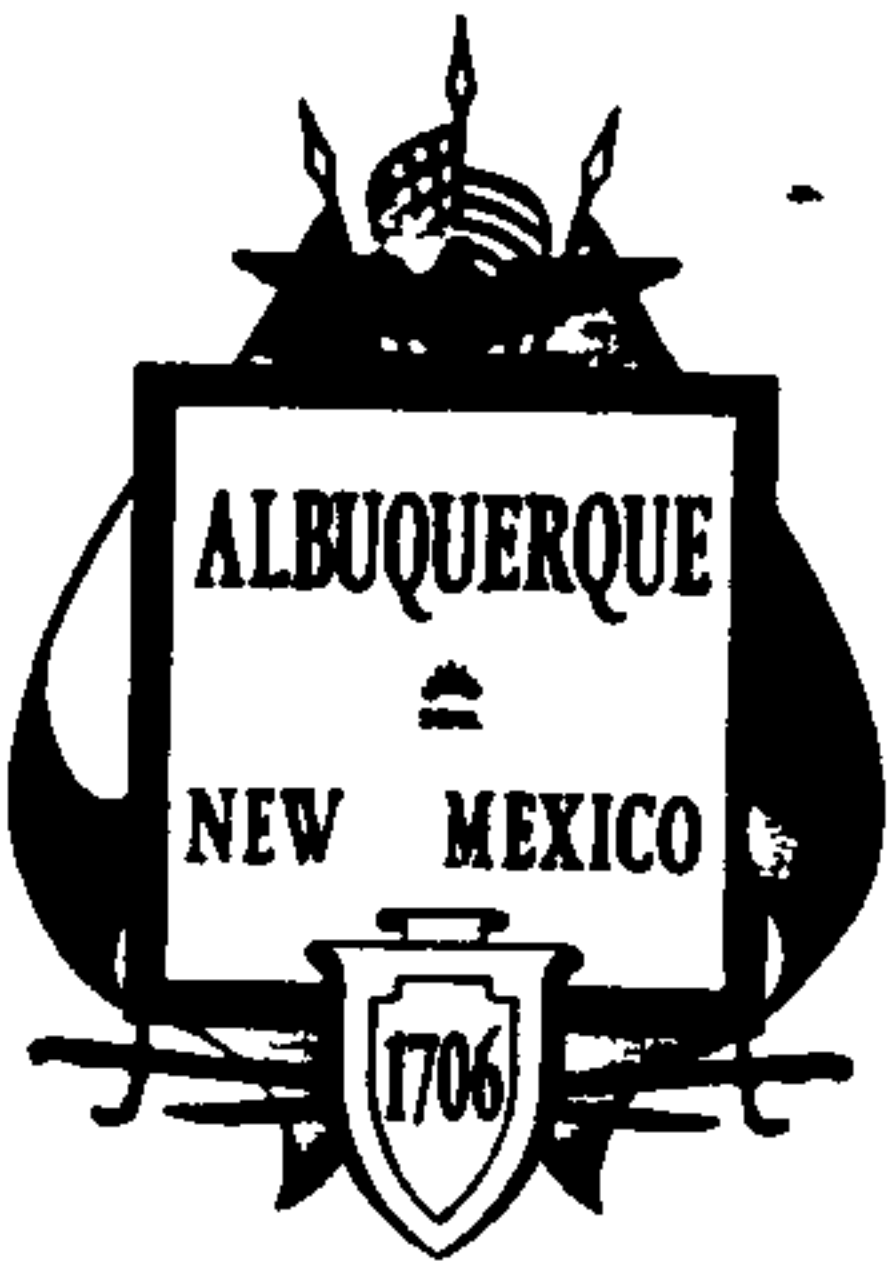
6/90



$$Q_p = 0.78 \text{ cfs}$$

$$= 350 \text{ gpm}$$

$$H = \pm 18'$$



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

January 16, 2002

Larry D. Read, PE
Larry Read & Associates
12836-B Lomas NE
Albuquerque, NM 87112

Re: AFC – 5 Parking Lot Drainage Report
Engineer's Stamp dated 1-10-02, (H19/D1)

Dear Mr. Read,

Based upon the information provided in your submittal dated 1-11-02, the above referenced plan is approved for Paving Permit and Site Plan for Building Permit action by the DRB.

Upon completion of the project, please submit a certified as-built for our files. If I can be of further assistance, please contact me at 924-3986.

Sincerely,

Bradley L. Bingham, PE
Sr. Hydrology, PWD
Development and Building Services

C: file

DRAINAGE INFORMATION SHEET
(REV. 11/01/2001)

H-19/D1

PROJECT TITLE: AFC-5 Additional Parking ZONE MAP/DRG. FILE #: H-19
DRB #: 1001636 EPC#: _____ WORK ORDER#: _____
LEGAL DESCRIPTION: Lot 6A1C1
CITY ADDRESS: 2100 Louisiana Blvd. NE, Albuquerque NM 87110
ENGINEERING FIRM: Larry Read & Assoc., Inc. CONTACT: Larry Read
ADDRESS: 7800 Juan Tabo Blvd. Suite 200 PHONE: 237-8721
CITY, STATE: Albuquerque NM ZIP CODE: 87111
OWNER: AFC Partners Limited Partnership CONTACT: William J. Bailey
ADDRESS: 2100 Louisiana Blvd NE Bldg 3 PHONE: 998-1758
CITY, STATE: Albuquerque NM ZIP CODE: 87110
ARCHITECT: N/A CONTACT: _____
ADDRESS: _____ PHONE: _____
CITY, STATE: _____ ZIP CODE: _____
SURVEYOR: Cartesian Surveys CONTACT: Will Plotner
ADDRESS: P.O. Box 74914 PHONE: 350-5198
CITY, STATE: Rio Rancho NM ZIP CODE: 87174
CONTRACTOR: N/A CONTACT: _____
ADDRESS: _____ PHONE: _____
CITY, STATE: _____ ZIP CODE: _____

CHECK TYPE OF SUBMITTAL:

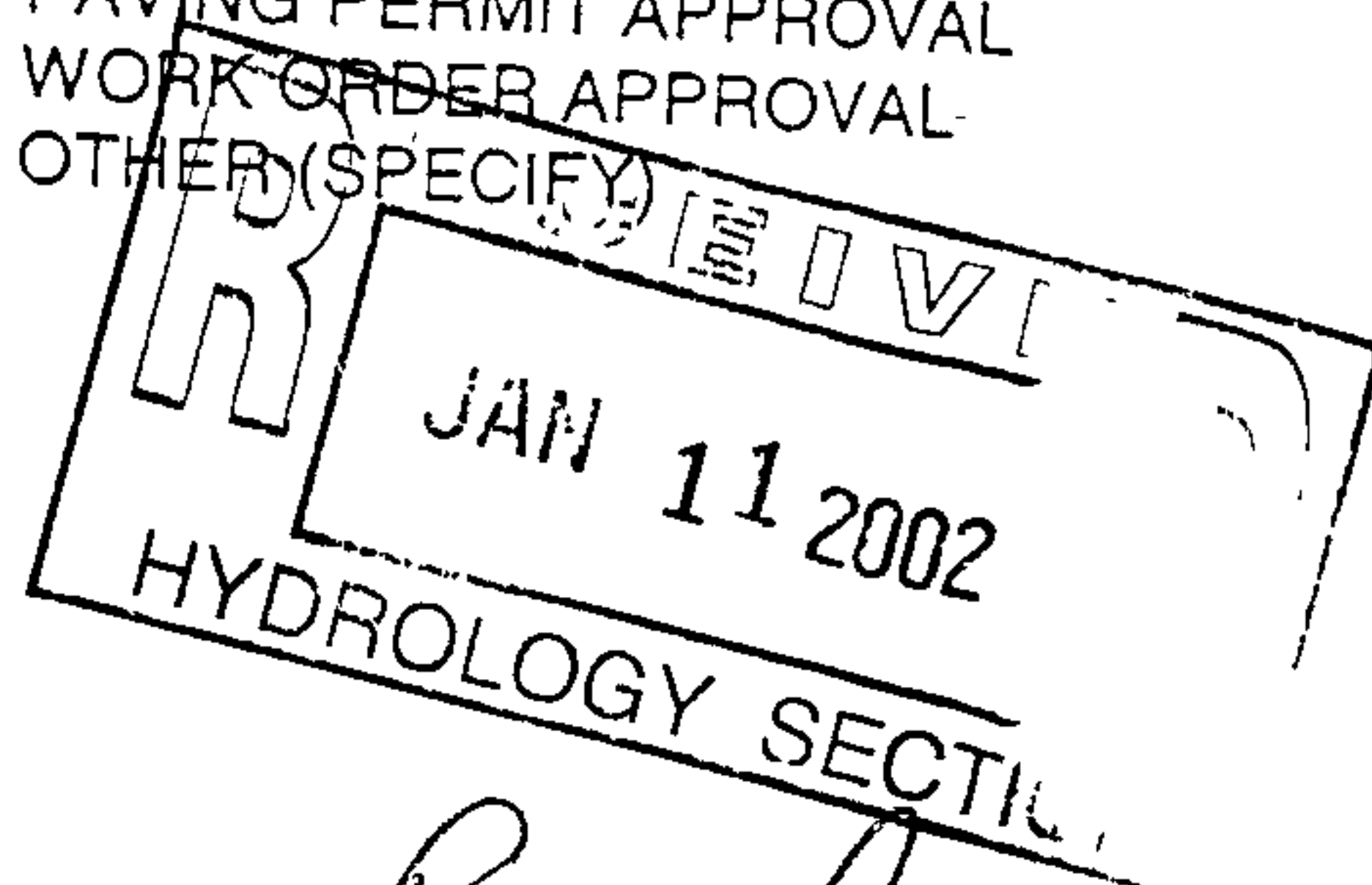
- ☒ DRAINAGE REPORT
- ☐ DRAINAGE PLAN
- ☐ CONCEPTUAL GRADING & DRAINAGE PLAN
- ☐ GRADING PLAN
- ☐ EROSION CONTROL PLAN
- ☐ ENGINEER'S CERTIFICATION (HYDROLOGY)
- ☐ CLOMR/LOMR
- ☐ TRAFFIC CIRCULATION LAYOUT (TCL)
- ☐ ENGINEERS CERTIFICATION (TCL)
- ☐ ENGINEERS CERTIFICATION (DRB APPR. SITE PLAN)
- ☐ OTHER

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



DATE SUBMITTED: 1/8/2002 BY: Larry Read

Requests for approvals of Site Development Plans and/or Subdivision Plans 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
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 constituting five (5) acres or

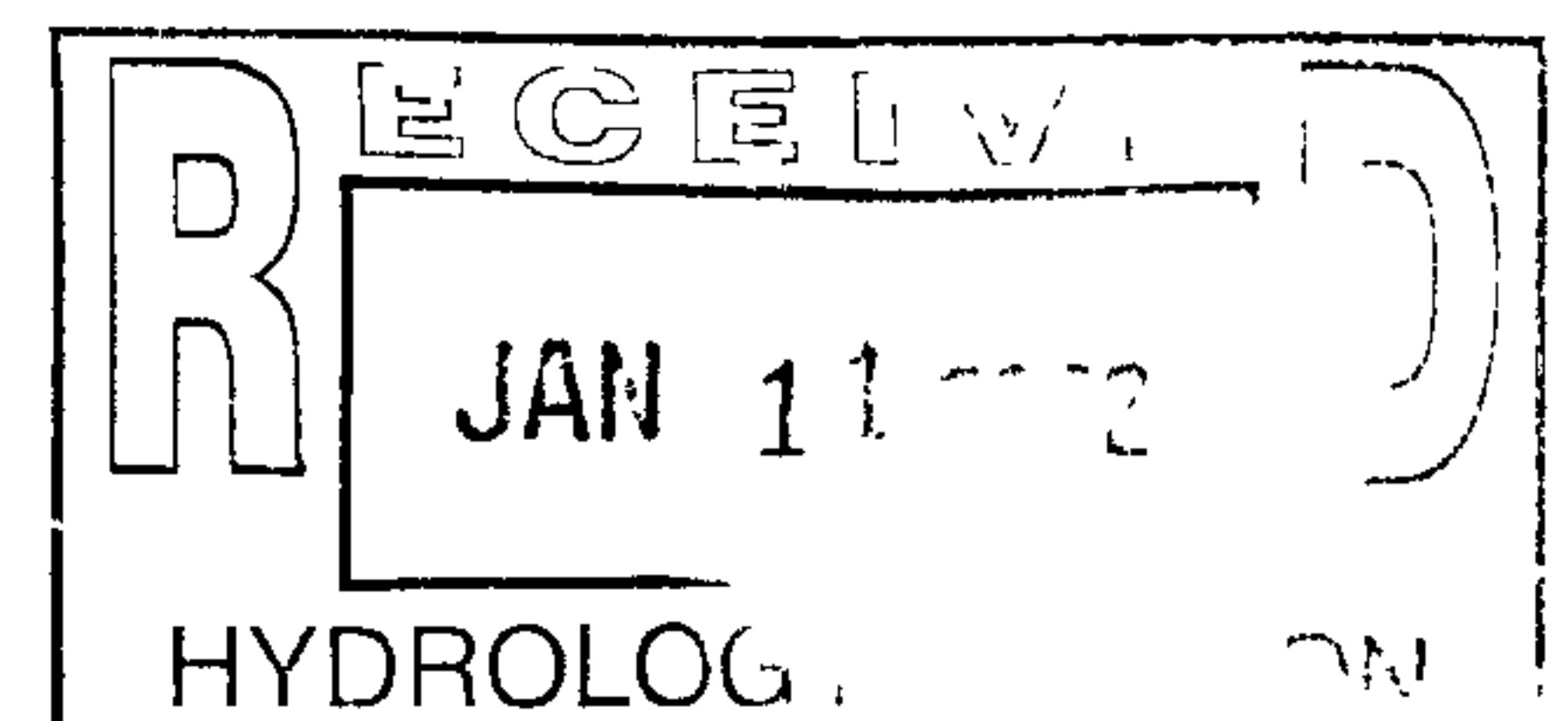
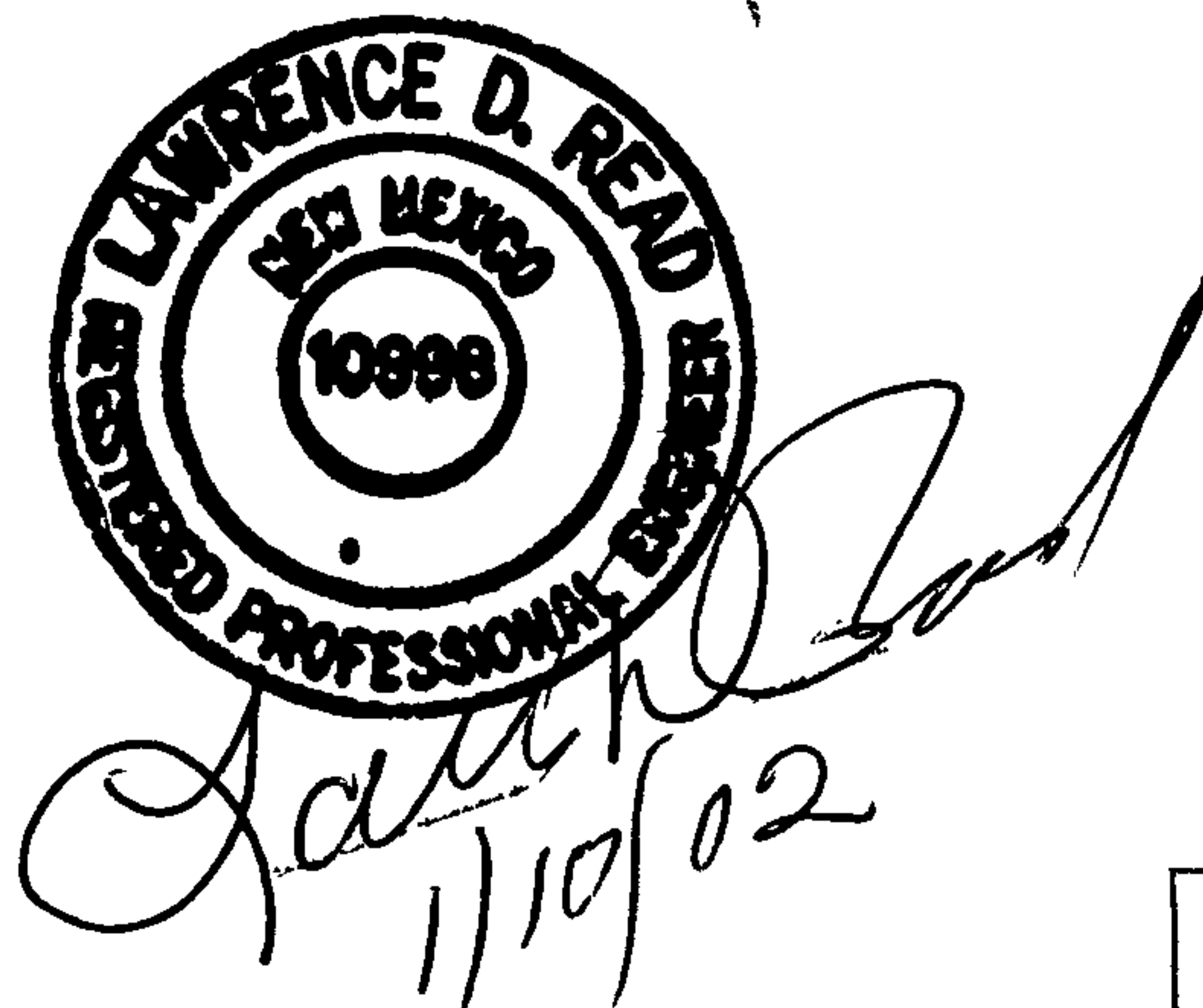
DRAINAGE REPORT

for

PROPOSED NEW PARKING for AFC-5

Albuquerque, New Mexico

January 11, 2002



PREPARED BY
LARRY D. READ, PE
4800 Juan Tabo Blvd., NE Suite C
Albuquerque, New Mexico 87111
(505) 237-8421

TABLE OF CONTENTS

<u>Item</u>	<u>Description</u>	<u>Page Number</u>
•	Purpose	1
•	Existing Drainage Conditions	1
•	Offsite Drainage	2
•	Floodplain Status	2
•	Methodology	2
•	Fully Developed Condition	2

APPENDIX

A AHYMO Printouts

EXHIBITS

1	Vicinity Map	3
2	FIRM Map Panel	4
3	Drainage Basin Map	Pocket
4	Grading and Drainage Plan	Pocket

DRAINAGE REPORT

for

PROPOSED NEW PARKING for AFC-5

Albuquerque, New Mexico

January 11, 2002

PURPOSE

Most of the American Financial Center Site was developed between the early 1980's and the mid 1990's. Some renovations to existing buildings occurred as late as 1999. However, this central area of the site, although many previous plans have been developed, has never developed.

The owners of American Financial Center Building 5 have historically been short of parking area. They are proposing to develop this remaining central area as additional parking. The proposed parking will help bring AFC-5 into the range of parking normally accepted in the real estate market and, due to it's location, will help alleviate the parking problems throughout the American Financial Center.

This project will add approximately 2.1 acres of asphalt paved parking and associated landscaping in the central site area.

EXISTING DRAINAGE CONDITIONS

The existing developed areas of the site were guided by a Master Drainage Plan prepared by Bohannon Huston in 1984. Per the Master Drainage Plan, the runoff from each basin is limited by the installation of a 4" orifice plate.

This site includes Basin 1, Basin 3C, and Basin 3B from the Master Drainage Plan. This is true of all existing development except Master Drainage Plan Basin 2 (Basin 1 in this report) which attempted to control the discharge using 4" PVC discharge pipes.

One significant deviation from the MDP noted during the survey of this site is the discharge from the parking area south of AFC-1. The MDP indicated this discharge was directed to the existing inlet in Basin 5. However the topographic survey found that the most likely route for this discharge is west into the system that connects directly into the 60" storm drain in Louisiana Blvd. This is evidenced in the fact that the discharge invert of the existing inlet in Basin 5 is above the inverts of the inlets in the AFC-1 parking lot and the fact that there are no connections to the existing inlet in Basin 5 from the west.

OFFSITE DRAINAGE

As shown in the Master Drainage Plan (MDP), this site accepts runoff from MDP Basin 2. Although the existing development slightly modified the basin boundaries, this is true as can be seen on the Drainage Basin Map in the pocket of this report as Basins 1 and Basin 2.

FLOOD PLAIN STATUS

As shown on FIRM Panels 350001C0352 D, effective September 20, 1996, no portion of the existing building or site is included in a 100-year floodplain. An excerpt from this map is included with the site located.

METHODOLOGY

The hydrology for this project was analyzed using the 1997 version of AHYMO and the June 1997 release of the City of Albuquerque Development Process Manual, Section 22.2.

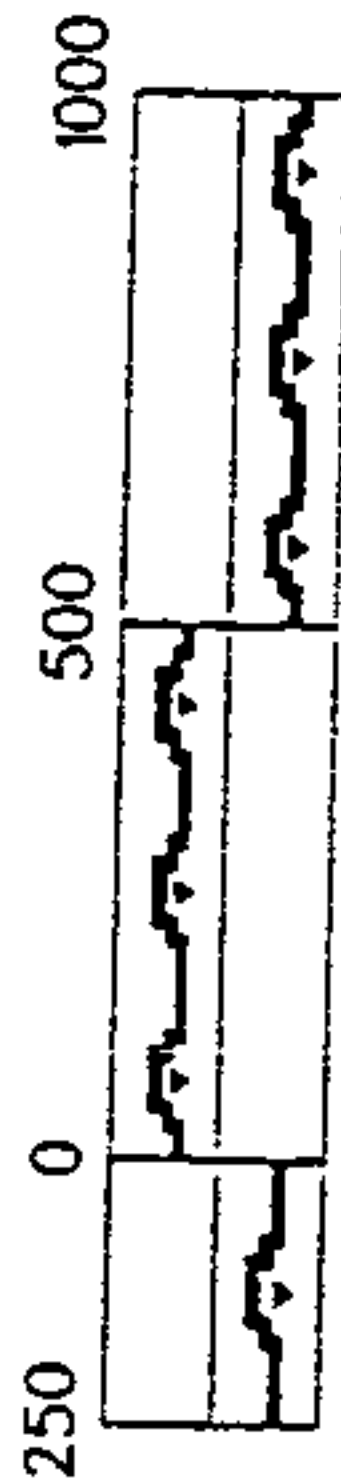
This site is within Precipitation Zone 3.

FULLY DEVELOPED CONDITION

The proposed development follows the 1984 Master Drainage Plan by limiting the discharge from each Basin using a 4" diameter orifice plate and the storm inlet. The proposed drainage basins, including offsite basins, very closely match the MDP basin areas as discussed above. The proposed additional paved area is divided into 2 basins (Basin 3 and Basin 4) as shown on the Drainage Basin Map in the pocket of this report. The total peak discharge from new Basin 3 and 4 plus the existing drainage from Basin 5 will be slightly less than 2cfs, significantly below the capacity of the existing 12" storm drain and 48" sidewalk culvert on Cutler Ave.

As a result of this development, the 100-year storm event runoff will not be increased and may have a minor decrease to Culter Ave. Therefore, there is no adverse downstream effect due to this development.

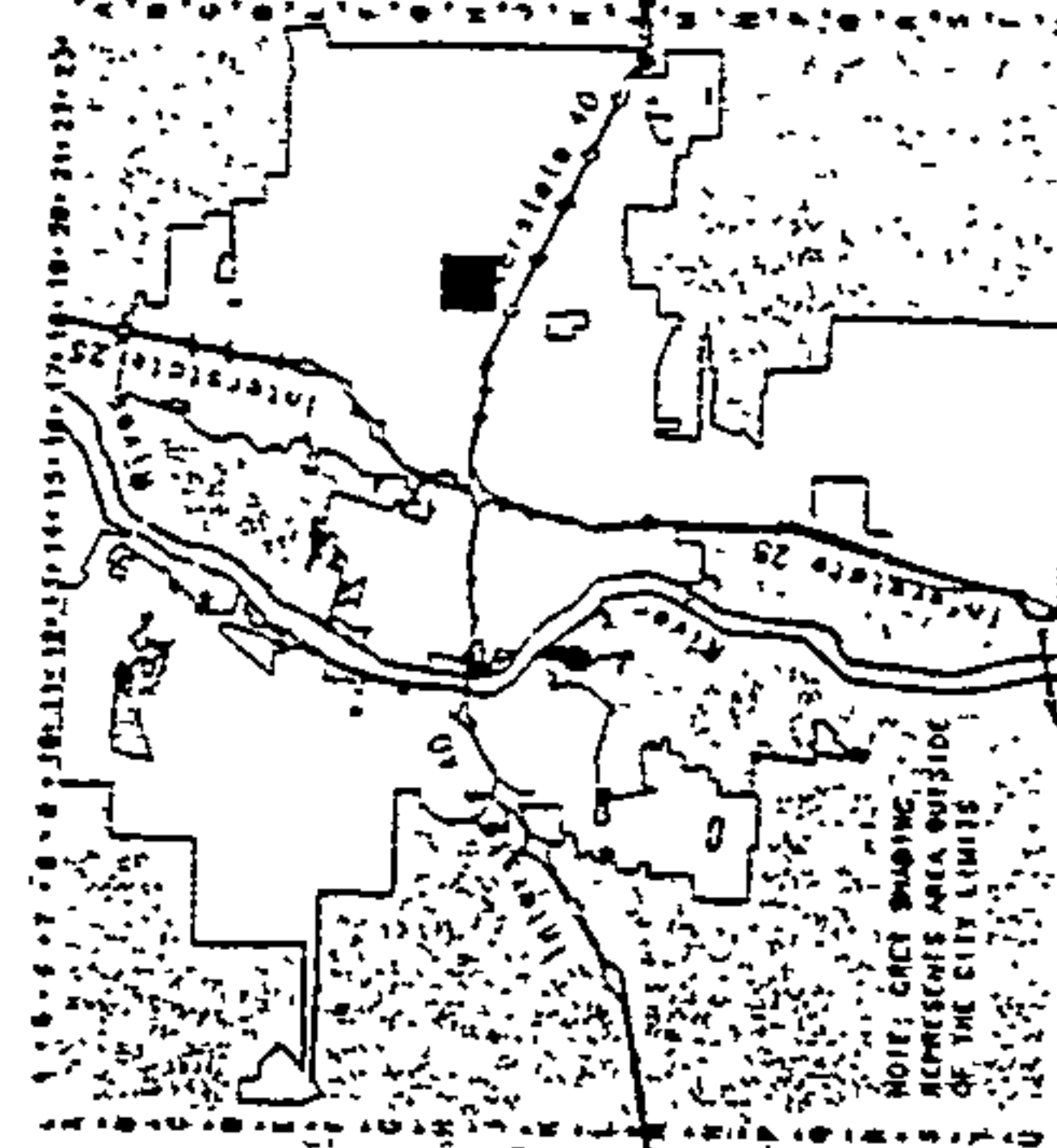
GRAPHIC SCALE IN FEET



CITY OF
ALBUQUERQUE

ALBUQUERQUE
PLANNING DEPARTMENT
© Copyright 1996

Map Amended through February 20, 1996



LEGAL DESCRIPTION

TION
P4E
SEC 7

UNIFORM PROPERTY CODE

1 019-068

H-19-Z



12

CITY OF ALBUQUERQUE
350002

NOTE: MAP AREA SHOWN ON THIS PANEL
IS LOCATED WITHIN TOWNSHIP 10 NORTH, RANGE 3 EAST
AND TOWNSHIP 10 NORTH, RANGE 4 EAST.

SITE

ZONE X

7

BOULEVARD

PROSPECT

AVENUE

ESPAÑOLA
STREET

JICARILLA
PLACE

PLACE

SKY
COURT
CIRCLE

PROSPECT

CUTLER

AVENUE

AVENUE

ARVADA

AVENUE

DRIVE

ZONE AO
(DEPTH 1)

INDIANA
STREET

LIMIT OF
DETAILED
STUDY

AVENUE

JEANNEDALE

LIMIT OF
DETAILED STUDY

100 - YEAR FLOOD
CONFINED TO
CONSTRUCTED CHANNEL

ZONE AO
(DEPTH 1)

ZONE A

Channel

DRIVE

PARKWAY

AMERICAS

MARRIOTT

40

ZIMMERMAN

AVENUE

ZONE X

STREET

STREET

AVENUE

STREET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP
BERNALILLO COUNTY,
NEW MEXICO AND
INCORPORATED AREAS

PANEL 352 OF 825
(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS COMMUNITY	NUMBER	PANEL	SUFFIX
ALBUQUERQUE CITY OF	350002	0352	D

MAP NUMBER
3500100352 D
EFFECTIVE DATE:
SEPTEMBER 20, 1996



Federal Emergency Management Agency

APPENDIX A

DRAINAGE CALCULATIONS

AHYMO PROGRAM SUMMARY TABLE (AHYMO_97) -

INPUT FILE = C:\ACADFI~1\ACADPR~1\AFC\AFC-8\FINALD~1\AHYMOI~2.TXT

- VERSION: 1997.02c

RUN DATE (MON/DAY/YR) =01/11/2002

USER NO.= AHYMO-I-9702a0100001A-SH

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
*S PROPOSED CONDITIONS											
*S***** 100 YEAR, 6-HOUR STORM (Section 22.2 Hydrology)											
START										TIME=	.00
LOCATION			DEFAULT								
RAINFALL TYPE= 1										RAIN6=	2.600
*S											
*S BASIN AFC6/AFC7 (BASIN 1)											
COMPUTE NM HYD	A.0	-	1	.00154	4.74	.184	2.24528	1.518	4.814	PER IMP=	91.50
*S											
ROUTE RESERVOIR	POND.1	1	11	.00154	2.26	.184	2.24914	1.683	2.302	AC-FT=	.036
*S											
*S											
*S BASIN AFC7/AFC7 (BASIN 2)											
COMPUTE NM HYD	A.0	-	2	.00037	1.17	.045	2.28551	1.518	4.925	PER IMP=	94.30
*S											
*S											
*S BASIN AFC-5 NORTH PARKING LOT (BASIN 3)											
COMPUTE NM HYD	A.0	-	3	.00206	6.30	.245	2.22431	1.518	4.775	PER IMP=	89.90
*S											
*S											
ADD HYD	31.00	11& 3	31	.00360	8.47	.429	2.23484	1.518	3.677		
*S											
*S											
ROUTE RESERVOIR	POND.1	31	32	.00360	.63	.430	2.23764	2.343	.273	AC-FT=	.331
*S											
*S											
*S BASIN AFC-4 PARKING LOT (BASIN 4)											
*S											
COMPUTE NM HYD	A.0	-	4	.00105	3.29	.128	2.29761	1.518	4.913	PER IMP=	94.60
*S											
*S											
*S											
ROUTE RESERVOIR	POND.1	4	41	.00105	.63	.129	2.30296	2.079	.938	AC-FT=	.068
*S											
FINISH											

AHYMO PROGRAM (AHYMO_97) - - Version: 1997.02c
 RUN DATE (MON/DAY/YR) = 01/11/2002
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*S PROPOSED CONDITIONS

*S***** 100 YEAR, 6-HOUR STORM (Section 22.2 Hydrology)

START 0.00

LOCATION ALBUQUERQUE ZONE 3

Soil infiltration values (LAND FACTORS) for this location are not available.
 The following default values were used.

Land Treatment	Initial Abstr.(in)	Unif. Infilt.(in/hour)
A	0.65	1.67
B	0.50	1.25
C	0.35	0.83
D	0.10	0.04

RAINFALL TYPE=1 RAIN QUARTER=0.0 RAIN ONE=2.14
 RAIN SIX=2.60IN DAY=3.1 DT=0.033

COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 HR.

DT = .033000 HOURS END TIME = 5.973000 HOURS

.0000	.0027	.0055	.0083	.0112	.0141	.0171
.0202	.0234	.0266	.0299	.0333	.0368	.0403
.0440	.0478	.0517	.0557	.0598	.0641	.0685
.0731	.0778	.0828	.0879	.0933	.0988	.1047
.1108	.1173	.1241	.1303	.1364	.1430	.1520
.1792	.2221	.2848	.3717	.4870	.6353	.8211
1.0492	1.3244	1.4475	1.5337	1.6092	1.6774	1.7399
1.7978	1.8518	1.9024	1.9499	1.9947	2.0370	2.0771
2.1150	2.1510	2.1851	2.2176	2.2484	2.2692	2.2764
2.2833	2.2899	2.2961	2.3022	2.3080	2.3136	2.3190
2.3242	2.3292	2.3342	2.3389	2.3436	2.3481	2.3525
2.3568	2.3610	2.3652	2.3692	2.3731	2.3770	2.3807
2.3844	2.3881	2.3916	2.3952	2.3986	2.4020	2.4053
2.4086	2.4118	2.4150	2.4181	2.4212	2.4242	2.4272
2.4302	2.4331	2.4360	2.4388	2.4416	2.4444	2.4471
2.4498	2.4525	2.4551	2.4577	2.4603	2.4628	2.4654
2.4679	2.4703	2.4728	2.4752	2.4776	2.4799	2.4823
2.4846	2.4869	2.4892	2.4914	2.4937	2.4959	2.4981
2.5003	2.5024	2.5046	2.5067	2.5088	2.5109	2.5130
2.5150	2.5171	2.5191	2.5211	2.5231	2.5250	2.5270
2.5290	2.5309	2.5328	2.5347	2.5366	2.5385	2.5403
2.5422	2.5440	2.5459	2.5477	2.5495	2.5513	2.5530
2.5548	2.5566	2.5583	2.5600	2.5618	2.5635	2.5652
2.5669	2.5686	2.5702	2.5719	2.5735	2.5752	2.5768
2.5784	2.5801	2.5817	2.5833	2.5848	2.5864	2.5880
2.5896	2.5911	2.5927	2.5942	2.5957	2.5973	2.5988

*S
*S BASIN AFC6/AFC7 (BASIN 1)
COMPUTE NM HYD ID=1 HYD=A.0 DA=0.001537 SQ MI
%A= 0.00 %B= 4.9 %C= 3.6 %D= 91.50
TP=0.1333 RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 5.5524 CFS UNIT VOLUME = .9972 B = 526.28 P60 = 2.1400
AREA = .001406 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033000

K = .123176HR TP = .133300HR K/TP RATIO = .924053 SHAPE CONSTANT, N = 3.829633
UNIT PEAK = .33680 CFS UNIT VOLUME = .9589 B = 343.65 P60 = 2.1400
AREA = .000131 SQ MI IA = .43647 INCHES INF = 1.07212 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033000

PRINT HYD ID=1 CODE=1

HYDROGRAPH FROM AREA A.0

RUNOFF VOLUME = 2.24528 INCHES = .1841 ACRE-FEET
PEAK DISCHARGE RATE = 4.74 CFS AT 1.518 HOURS BASIN AREA = .0015 SQ. MI.

*S
ROUTE RESERVOIR ID=11 HYD=POND.1 INFLOW ID=1 CODE=10
OUTFLOW (CFS) STORAGE (AC_FT) ELEVATION
0.00 0.0000 0.00
2.04 0.000064 2.83
2.58 0.0865 4.40

* * * * *

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
.00	.00	.00	.000	.00
.33	.00	.00	.000	.00
.66	.00	.00	.000	.00
.99	.05	.07	.000	.05
1.32	1.25	1.73	.000	1.25
1.65	2.59	3.47	.036	2.26
1.98	1.20	3.22	.021	2.17
2.31	.27	.79	.000	.57
2.64	.11	.32	.000	.23
2.97	.07	.19	.000	.14

3.30	.05	.13	.000	.09
3.63	.04	.10	.000	.07
3.96	.04	.08	.000	.06
4.29	.04	.07	.000	.05
4.62	.04	.06	.000	.04
4.95	.04	.06	.000	.04
5.28	.04	.06	.000	.04
5.61	.04	.06	.000	.04
5.94	.04	.06	.000	.04
6.27	.01	.01	.000	.01
6.60	.00	.00	.000	.00

PEAK DISCHARGE = 2.265 CFS - PEAK OCCURS AT HOUR 1.68
 MAXIMUM WATER SURFACE ELEVATION = 3.483
 MAXIMUM STORAGE = .0360 AC-FT INCREMENTAL TIME= .033000HRS

*S
PRINT HYD ID=11 CODE=1

HYDROGRAPH FROM AREA POND.1

RUNOFF VOLUME = 2.24914 INCHES = .1844 ACRE-FEET
 PEAK DISCHARGE RATE = 2.26 CFS AT 1.683 HOURS BASIN AREA = .0015 SQ. MI.

*S
*S BASIN AFC7/AFC7 (BASIN 2)
COMPUTE NM HYD ID=2 HYD=A.0 DA=0.000370 SQ MI
%A= 0.00 %B= 2.2 %C= 3.5 %D= 94.30
TP=0.1333 RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = 1.3775 CFS UNIT VOLUME = .9908 B = 526.28 P60 = 2.1400
 AREA = .000349 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033000

K = .118463HR TP = .133300HR K/TP RATIO = .888691 SHAPE CONSTANT, N = 3.991280
 UNIT PEAK = .56101E-01CFS UNIT VOLUME = .8744 B = 354.59 P60 = 2.1400
 AREA = .000021 SQ MI IA = .40789 INCHES INF = .99211 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033000

*S
PRINT HYD ID=2 CODE=1

HYDROGRAPH FROM AREA A.0

RUNOFF VOLUME = 2.28551 INCHES = .0451 ACRE-FEET
PEAK DISCHARGE RATE = 1.17 CFS AT 1.518 HOURS BASIN AREA = .0004 SQ. MI.

*S

*S BASIN AFC-5 NORTH PARKING LOT (BASIN 3)

COMPUTE NM HYD ID=3 HYD=A.0 DA=0.002063 SQ MI
%A= 0.00 %B= 5.9 %C= 4.2 %D= 89.9
TP=0.1333 RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 7.3222 CFS UNIT VOLUME = .9978 B = 526.28 P60 = 2.1400
AREA = .001855 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033000

K = .123367HR TP = .133300HR K/TP RATIO = .925480 SHAPE CONSTANT, N = 3.823434
UNIT PEAK = .53649 CFS UNIT VOLUME = .9759 B = 343.22 P60 = 2.1400
AREA = .000208 SQ MI IA = .43762 INCHES INF = 1.07535 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033000

*S

PRINT HYD ID=3 CODE=1

HYDROGRAPH FROM AREA A.0

RUNOFF VOLUME = 2.22431 INCHES = .2447 ACRE-FEET
PEAK DISCHARGE RATE = 6.30 CFS AT 1.518 HOURS BASIN AREA = .0021 SQ. MI.

*S

ADD HYD ID=31 HYD 31 ID I=11 ID II=3

*S

PRINT HYD ID=31 CODE=1

OUTFLOW HYDROGRAPH REACH 31.00

RUNOFF VOLUME = 2.23484 INCHES = .4291 ACRE-FEET
PEAK DISCHARGE RATE = 8.47 CFS AT 1.518 HOURS BASIN AREA = .0036 SQ. MI.

*S

ROUTE RESERVOIR ID=32 HYD=POND.1 INFLOW ID=31 CODE=10
OUTFLOW (CFS) STORAGE (AC_FT) ELEVATION

0.00	0.0000	90.26
0.45	0.000030	91.50
0.69	0.443371	93.00

* * * * *

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
---------------	-----------------	----------------	-------------------	------------------

.00	.00	90.26	.000	.00
.33	.00	90.26	.000	.00
.66	.00	90.26	.000	.00
.99	.12	90.58	.000	.11
1.32	2.90	91.53	.010	.46
1.65	5.71	92.09	.175	.54
1.98	3.76	92.46	.283	.60
2.31	.94	92.62	.331	.63
2.64	.38	92.60	.325	.63
2.97	.23	92.56	.314	.62
3.30	.16	92.52	.301	.61
3.63	.13	92.47	.287	.61
3.96	.11	92.43	.273	.60
4.29	.10	92.38	.260	.59
4.62	.09	92.33	.246	.58
4.95	.09	92.29	.233	.58
5.28	.09	92.24	.219	.57
5.61	.09	92.20	.206	.56
5.94	.10	92.16	.194	.55
6.27	.01	92.11	.180	.55
6.60	.00	92.06	.166	.54
6.93	.00	92.01	.151	.53
7.26	.00	91.96	.137	.52
7.59	.00	91.91	.122	.52
7.92	.00	91.87	.108	.51
8.25	.00	91.82	.095	.50
8.58	.00	91.77	.081	.49
8.91	.00	91.73	.068	.49
9.24	.00	91.68	.055	.48
9.57	.00	91.64	.042	.47
9.90	.00	91.60	.029	.47
10.23	.00	91.55	.016	.46
10.56	.00	91.51	.004	.45

PEAK DISCHARGE = .629 CFS - PEAK OCCURS AT HOUR 2.34
 MAXIMUM WATER SURFACE ELEVATION = 92.619
 MAXIMUM STORAGE = .3309 AC-FT INCREMENTAL TIME= .033000HRS

*S

PRINT HYD ID=32 CODE=1

HYDROGRAPH FROM AREA POND.1

RUNOFF VOLUME = 2.23764 INCHES = .4296 ACRE-FEET
PEAK DISCHARGE RATE = .63 CFS AT 2.343 HOURS BASIN AREA = .0036 SQ. MI.

*S
*S BASIN AFC-4 PARKING LOT (BASIN 4)
*S
COMPUTE NM HYD ID=4 HYD=A.0 DA=0.001047 SQ MI
%A= 0.00 %B= 0.00 %C= 5.40 %D= 94.6
TP=0.1333 RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 3.9104 CFS UNIT VOLUME = .9965 B = 526.28 P60 = 2.1400
AREA = .000990 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033000

K = .108912HR TP = .133300HR K/TP RATIO = .817047 SHAPE CONSTANT, N = 4.373949
UNIT PEAK = .16091 CFS UNIT VOLUME = .9162 B = 379.38 P60 = 2.1400
AREA = .000057 SQ MI IA = .35000 INCHES INF = .83000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033000

*S
PRINT HYD ID=4 CODE=1

HYDROGRAPH FROM AREA A.0

RUNOFF VOLUME = 2.29761 INCHES = .1283 ACRE-FEET
PEAK DISCHARGE RATE = 3.29 CFS AT 1.518 HOURS BASIN AREA = .0010 SQ. MI.

*S
*S
ROUTE RESERVOIR ID=41 HYD=POND.1 INFLOW ID=4 CODE=10
OUTFLOW (CFS) STORAGE (AC_FT) ELEVATION
0.00 0.0000 89.46
0.45 0.000030 91.14
0.69 0.091400 92.08

* * * * *

TIME	INFLOW	ELEV	VOLUME	OUTFLOW
(HRS)	(CFS)	(FEET)	(AC-FT)	(CFS)

.00	.00	89.46	.000	.00
.33	.00	89.46	.000	.00
.66	.00	89.46	.000	.00
.99	.04	89.59	.000	.03
1.32	.89	91.15	.001	.45
1.65	1.80	91.67	.051	.58
1.98	.84	91.83	.067	.63
2.31	.19	91.79	.063	.62
2.64	.08	91.65	.050	.58
2.97	.05	91.51	.036	.55
3.30	.04	91.38	.023	.51
3.63	.03	91.25	.010	.48
3.96	.03	89.46	.000	.00
4.29	.03	89.52	.000	.02
4.62	.03	89.54	.000	.02
4.95	.03	89.55	.000	.02
5.28	.03	89.56	.000	.03
5.61	.03	89.56	.000	.03
5.94	.03	89.57	.000	.03
6.27	.00	89.47	.000	.00

PEAK DISCHARGE = .629 CFS - PEAK OCCURS AT HOUR 2.08
 MAXIMUM WATER SURFACE ELEVATION = 91.840
 MAXIMUM STORAGE = .0681 AC-FT INCREMENTAL TIME= .033000HRS

*S

PRINT HYD ID=42 CODE=1

OUTFLOW HYDROGRAPH REACH .00

RUNOFF VOLUME = .00000 INCHES = .0000 ACRE-FEET
 PEAK DISCHARGE RATE = .00 CFS AT .000 HOURS BASIN AREA = .0000 SQ. MI.

FINISH

NORMAL PROGRAM FINISH END TIME (HR:MIN:SEC) = 10:54:23

Cherne, Curtis

1/19/2012

From: Dourte, Richard H.
Sent: Tuesday, October 30, 2012 4:34 PM
To: 'Scott McGee'; Cherne, Curtis
Subject: RE: AFC-5 Drainage Easement

Scott,

After discussion with our attorney, it seems that this issue should be resolved by separate litigation outside of the City....

Richard

From: Scott McGee [mailto:scottmmcgee@gmail.com]
Sent: Tuesday, October 30, 2012 4:23 PM
To: Dourte, Richard H.; Cherne, Curtis
Subject: AFC-5 Drainage Easement

Hi Richard and Curtis,

I left copies of the attached documents at the last meeting, but can't recall who ended up with them. Attached you will find the April 5, 2002 Deed reflecting AFC-5 as the recorded owner and the April 15, 2002 easement recorded by the neighboring property. I have also attached a Grading and drainage plan.

Thanks-

Scott McGee PE

263-2905

11/5/2012

January 4, 2012



Via U.S. Mail

Sean R. Calvert
Calvert Menicucci
8900 Washington St., N.E., Suite A
Albuquerque, N.M. 87113

7310 Miramar Road

5th Floor

San Diego, CA 92126

Re: AFC-5/Prospect Place Property Encroachment and Invalid Easement

Phone: 858-547-1800

Dear Mr. Calvert:

Fax: 858-547-1900

Thank you for your recent letter regarding the above referenced matter. Furthermore, please pass on my thanks to your client, BP & G, Ltd. Co. ("BP&G") for ceasing its trespass and encroachment. As you may recall BP&G constructed a sump, installed related piping on AFC-5 property and drilled a hole through the AFC-5 parking lot curb without our consent. Fortunately, Mr. Wilson, on behalf of AFC-5 and Mr. Peltier, on behalf of BP&G, without legal counsel, reached a fair and satisfactory accord by directing the sump piping to a better outlet that did not trespass on the AFC-5 property.

<http://www.parsassets.com>

As you know, Mr. Wilson recently reached out to BP&G in an attempt to fairly and amicably resolve the BP&G invalid easement that is damaging AFC-5's title. Having considered your letter response, I disagree with your legal conclusion that BP&G cannot remove the private easement. In short, you argue that this private

Sean R. Calvert
January 4, 2012

easement between private land owners is for the benefit of third parties that are not signatories to the private easement. BP&G does not represent these third party beneficiaries and consequently cannot remove the private easement it originally created, executed and recorded. By your logic, if BP&G does not have the authority to remove this private easement it never had the authority to create, execute and record the private easement in the first place.

The fact remains that the 1995 private easement appears to have been signed by your client in 1995, but was not recorded until April of 2002. Assuming for the moment that a 1995 execution actually took place, your client, despite our previous request, has never been able to explain why the interested parties did not file this private easement of record for a period of seven years, and in fact, did not file it until after AFC-5 purchased the property.

Regardless, I believe you have previously acknowledged and indirectly acknowledge in your recent letter that the 1995 private easement was not of record at the time AFC-5 purchased the property. AFC-5 was not aware of the 1995 document until you brought it to our attention last year and AFC-5 has never stipulated to the existence of any easement for the benefit of BP&G. Based on the foregoing facts, you certainly must recognize,

Sean R. Calvert
January 4, 2012

that as a good faith purchaser without notice, the 1995 private easement does not burden AFC-5's property. While the City of Albuquerque may have certain drainage controls that apply to AFC-5's property and BP&G's property, those controls are not mandated or enforced through the invalid 1995 private easement that was recorded in 2002.

Having said that, I believe Mr. Peltier and you have misunderstood Mr. Wilson's good faith communication. As a good neighbor, AFC-5 is not opposed to entering into a fair and mutually beneficial drainage easement with BP&G; however, AFC-5 will not acknowledge or accept a one sided draconian easement that unilaterally benefits BP&G and is recorded behind AFC-5's back. If BP&G would like to enter into a valid drainage easement agreement with AFC-5, I would welcome the opportunity to consider and review BP&G's draft drainage easement.

Lastly, as to your damage allegations, contrary to your letter, you and I have never had any "prior conversations" about alleged damages your client is suffering. Furthermore, your ambiguous and conclusory damage allegations are meritless as far as I am concerned. If in fact BP&G is suffering damages, it is due to its own sole negligence and its failure to mitigate its self induced damages.

Sean R. Calvert
January 4, 2012

For example, BP&G appears to have a serious problem with the three inch drain on its property, connected to a large drainpipe running under the AFC-5 parking lot to an existing storm drain. When BP&G unilaterally trespassed and performed self serving work on the AFC-5 property, it had the opportunity to solve this drain problem located on its own property; however, BP&G chose to ignore this primary drainage problem and has continued to allow the bottle neck condition to exit, which causes water to overflow the BP&G curb and pour down the steps on the west side of the BP&G property and onto the AFC-5 property.

I remain optimistic and hopeful that AFC-5 and BP&G can resolve the drainage easement issue and any other issues amicably, without having to burden the already busy courts. Accordingly, please let me know if BP&G would like to enter into a valid drainage easement or if it will insist on continuing to damage AFC-5's title.

Sincerely,

A handwritten signature in black ink, appearing to read "Demetri Lahanas", with a long horizontal flourish extending to the right.

Demetri Lahanas
Asset Manager

WARRANTY DEED

AFC Partners Limited Partnership, a New Mexico limited partnership, Lauro G. Guaderrama, Jr., Brorama, LLC, Larry N. Brooks and Heidi T. Brooks, and Steven R. Fairfield, a single man, for consideration paid, grants to AFC-5 LLC, whose address is 2400 Louisiana NE, AFC5, Albuquerque, N.M. 87109, the following described real estate in Bernalillo County, New Mexico:

See Exhibit "A".

Subject to patent reservations, restrictions and easements of record and to taxes for the year 2002 and years thereafter.



2002044923
5851877
Page: 1 of 3
04/05/2002 11:21A
Bk-R34 Pg-4815

Mary Herrera

Bern. Co. 10

R 11.09

with warranty covenants.

WITNESS our hands and seals this 12 day of March, 2002.

AFC PARTNERS LIMITED PARTNERSHIP

By [Signature]
Its GENERAL PARTNER

BRORAMA, LLC

By [Signature]
Its Managing Member

[Signature]
LAURO G. GUADERAMA, JR.

[Signature]
LARRY N. BROOKS

[Signature]
HEIDI T. BROOKS

[Signature]
STEVEN R. FAIRFIELD

This Deed is being re-recorded to include the acknowledgement for AFC Partners.



2002020921
5851877
Page: 1 of 3
03/27/2002 11:52A
Bk-R34 Pg-9820

Mary Herrera

Bern. Co. 10

R 11.09

ACKNOWLEDGMENT

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

This instrument was acknowledged before me this 14 day of March, 2002, by WILLIAM J. BAILEY, as GENERAL PARTNER of AFC Partners Limited Partnership.

MY COMMISSION EXPIRES:

5-22-2003

Kathleen A. Carrillo
NOTARY PUBLIC

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

This instrument was acknowledged before me this 12th day of March, 2002, by Larry Brooks, as Managing Member of Eborama, LLC.

MY COMMISSION EXPIRES:

June 4, 2002

Laura K. Garcia
NOTARY PUBLIC

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

This instrument was acknowledged before me this 14 day of March, 2002, by Lauro G. Guaderrama, Jr.

MY COMMISSION EXPIRES:

5-22-2003

Kathleen A. Carrillo
NOTARY PUBLIC

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



2002041923
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Page: 2 of 3
04/05/2002 11:21A
R 11.00 Bk-A34 Pg-4815

This instrument was acknowledged before me this 12th day of March, 2002, by Larry N. Brooks and Heidi T. Brooks.

MY COMMISSION EXPIRES:

June 4, 2002

Laura K. Garcia
NOTARY PUBLIC

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

This instrument was acknowledged before me this 12th day of March, 2002, by Steven R. Fairfield.

MY COMMISSION EXPIRES:

June 4, 2002

Laura K. Garcia
NOTARY PUBLIC



2002031923
5848974
Page: 2 of 3
03/27/2002 11:52A
R 11.00 Bk-A33 Pg-3829

EXHIBIT "A"

Lot numbered Six-A-One-C-One (6-A-1-C-1), plat of Lots 6-A-1-C-1, & 7-A-1-A-1-A in Block lettered "C", LOUISIANA SUBDIVISION, Albuquerque, New Mexico, as the same is shown and designated on said plat, filed in the Office of the County Clerk of Bernalillo County, New Mexico, on March 18, 2002, in Plat Book 2002C, folio 92.


Mary Herrera Bern. Co. WD R 11.00 Bk-A34 Pg-4815
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04/05/2002 11:21A


Mary Herrera Bern. Co. WD R 11.00 Bk-A33 Pg-9829
2002020021
5648874
Page: 3 of 3
03/27/2002 11:52A

DECLARATION OF EASEMENT
AND
EASEMENT MAINTENANCE AGREEMENT

THIS AGREEMENT is entered effective April 25, 1995, by and between AFC 6, LTD. CO., a New Mexico Limited Liability Company ("AFC 6"), B P & G, LTD. CO., a New Mexico Limited Liability Company ("B P & G") and AFC PARTNERS LIMITED PARTNERSHIP, a New Mexico Limited Partnership ("AFC Partners").

WHEREAS, AFC 6 is the owner of the following described real property located in the County of Bernalillo, State of New Mexico, to-wit:

Lot 6-A-1-A, LOUISIANA SUBDIVISION, as the same is shown and designated on the Replat thereof filed in the Office of the County Clerk of Bernalillo County, New Mexico on February 9, 1995 in Volume 95C, Folio 48.

("Lot 6-A-1-A" or "Lot"); and

WHEREAS, B P & G is the owner of the following described real property located in the County of Bernalillo, State of New Mexico, to-wit:

Lot 6-A-1-B, LOUISIANA SUBDIVISION, as the same is shown and designated on the Replat thereof filed in the Office of the County Clerk of Bernalillo County, New Mexico on February 9, 1995 in Volume 95C, Folio 48.

("Lot 6-A-1-B" or "Lot"); and

WHEREAS, AFC Partners is the owner of the following described real property located in the County of Bernalillo, State of New Mexico, to-wit:

3208\esemen2.agr\fc



Mary Herrera

Bern. Co. DEC

R 19.88

2002040856

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04/15/2002 03:32P

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04/24/95

Lot 6-A-1-C, LOUISIANA SUBDIVISION, as the same is shown and designated on the Replat thereof filed in the Office of the County Clerk of Bernalillo County, New Mexico on February 9, 1995 in Volume 95C, Folio 48.

("Lot 6-A-1-C" or "Lot"); and

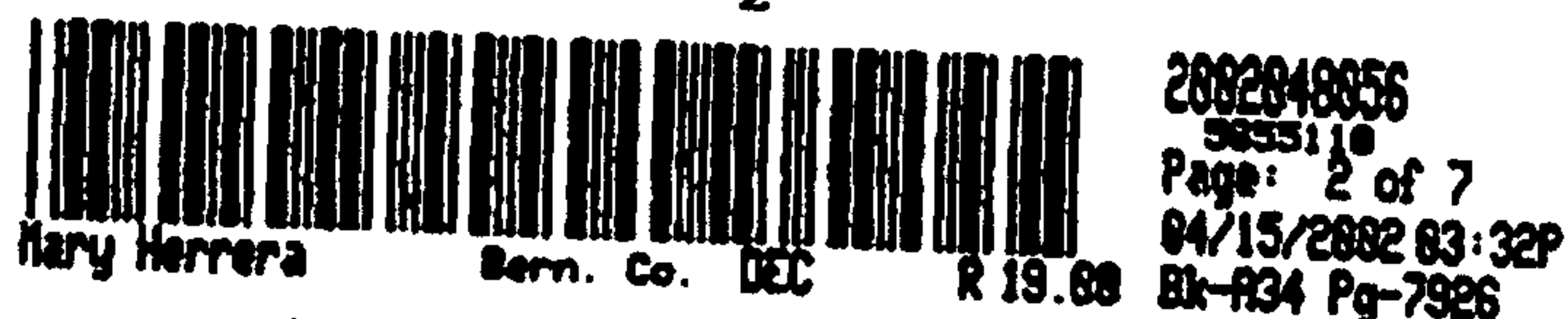
WHEREAS, the parties desire to provide for easements for access, drainage, maintenance of a trash storage container and parking.

NOW, THEREFORE, in consideration of the above and other good and valuable consideration, the receipt of which is hereby acknowledged, it is agreed as follows:

1. AFC 6 hereby declares that Lot 6-A-1-A is subject to a non-exclusive perpetual easement over, through and across the Access Areas (as hereinafter defined) located on Lot 6-A-1-A for the purpose of access, ingress, egress and movement by vehicular and pedestrian traffic for the benefit of Lot 6-A-1-B.

2. B P & G hereby declares that Lot 6-A-1-B is subject to a non-exclusive perpetual easement over, through and across the Access Areas located on Lot 6-A-1-B for the purpose of access, ingress, egress and movement by vehicular and pedestrian traffic for the benefit of Lot 6-A-1-A.

3. AFC Partners hereby declares that Lot 6-A-1-C is subject to a non-exclusive perpetual easement over, through and across the Access Areas located on Lot 6-A-1-C for the purpose of access, ingress, egress and movement by vehicular and pedestrian traffic for the benefit of Lot 6-A-1-B in conjunction with the Parking Easement as hereinafter defined.



4. "Access Areas" are the portions of each Lot designated and used by the owner thereof from time to time for vehicular and pedestrian ingress and egress.

5. Except as otherwise provided in this Declaration, the Access Areas shall always provide reasonable access to public rights of way (directly or through other granted easements) for a benefitted Lot or Lots. Access Areas shall not be blocked at any time, nor shall any barriers or obstructions be placed within or adjoining Access Areas to prevent the reasonable ingress and egress of vehicular traffic thereon.

6. AFC Partners hereby declares that Lot 6-A-1-C is subject to an exclusive perpetual easement for the parking of one (1) vehicle in a space of not less than 9 feet x 20 feet located on Lot 6-A-1-C in the area where Lot 6-A-1-C adjoins Lot 6-A-1-B ("Parking Easement"). To the extent the Parking Easement is not on the Lot line between the two Lots, the owner of Lot 6-A-1-B, its agents, employees, invitees, successors and assigns shall have a non-exclusive access easement from the Lot line to the Parking Easement. The owner of Lot 6-A-1-C shall have the right to locate the Parking Easement at the time Lot 6-A-1-C is developed, and pending said development, the owner of Lot 6-A-1-B may park one (1) vehicle on Lot 6-A-1-C in close proximity to the Lot line between said Lots.

7. AFC 6 hereby declares that Lot 6-A-1-A is subject to a non-exclusive perpetual easement for the benefit of Lot 6-A-1-B to



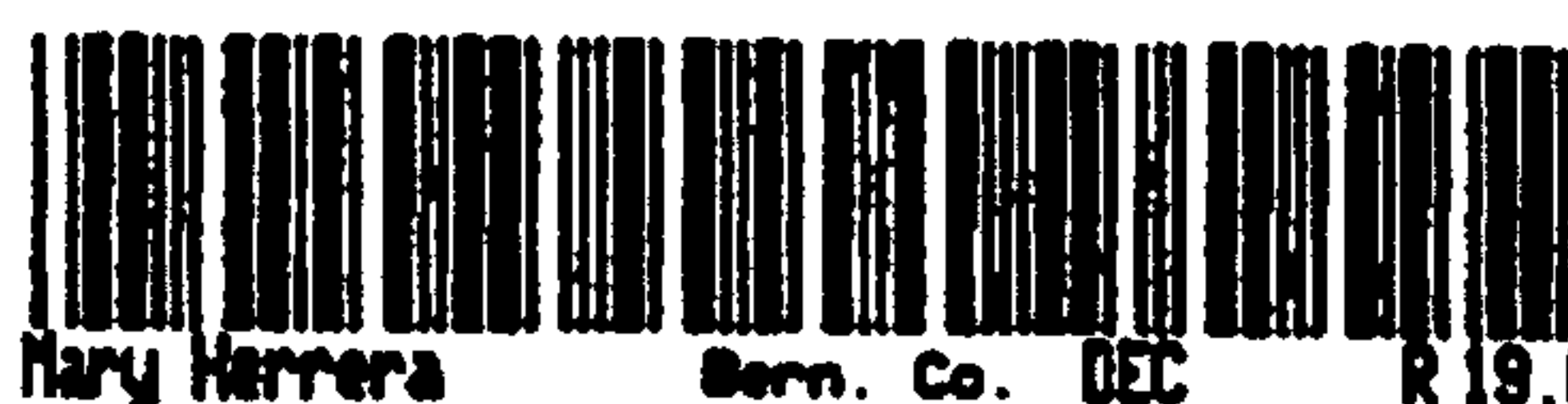
jointly use and maintain the trash storage bin on the portion of Lot 6-A-1-A included in the following description, to-wit:

SEE EXHIBIT "A" ("Trash Storage Easement").

8. AFC Partners hereby declares that Lot 6-A-1-C is subject to an exclusive perpetual easement for the benefit of Lot 6-A-1-A and Lot 6-A-1-B to jointly use and maintain the portion of the Trash Storage Easement on Lot 6-A-1-C.

9. The owner of Lot 6-A-1-B shall have the right to use the Access Areas on Lot 6-A-1-A to utilize the Trash Storage Easement. The cost for using and maintaining the Trash Storage Easement shall be shared prorata by the owners of Lot 6-A-1-A and Lot 6-A-1-B, based upon the heated square footage of the buildings located on each Lot.

(10) AFC Partners hereby declares that Lot 6-A-1-C is subject to a non-exclusive perpetual drainage easement for the benefit of Lot 6-A-1-A and Lot 6-A-1-B, which easement shall specifically include a portion of Lot 6-A-1-C designated on Exhibit "B", and such other areas of Lot 6-A-1-C as are designated by the Public Works Department of the City of Albuquerque or such other governmental entity which has authority over the approval of drainage plans related to the above-described properties, and provided that said drainage areas to be maintained on Lot 6-A-1-C shall not be relocated, obstructed, or otherwise modified without the prior written consent of the owners of Lot 6-A-1-A and Lot 6-A-1-B, and the applicable governmental authorities.

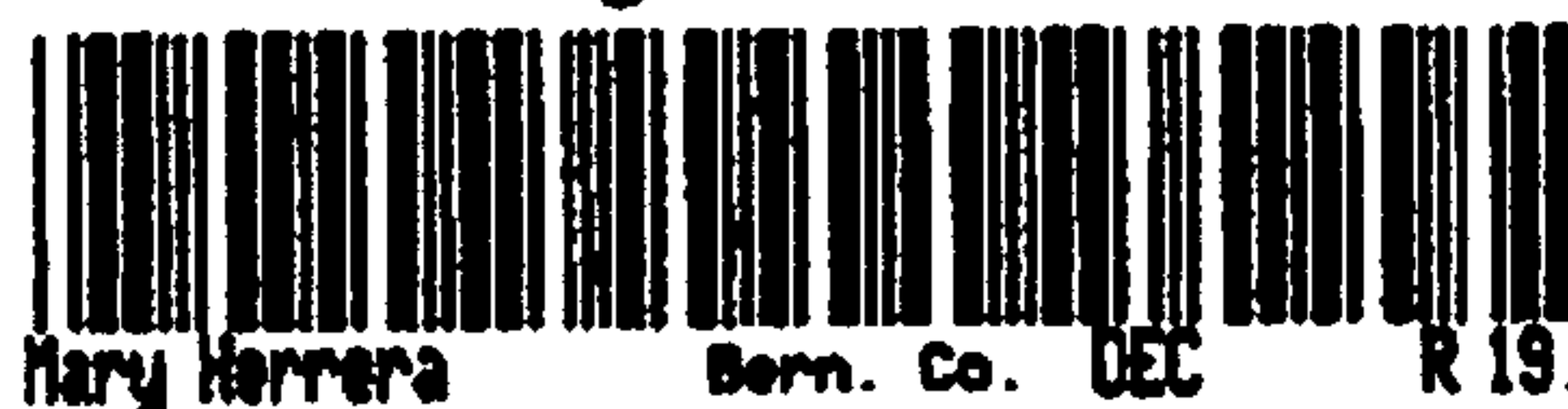


11. AFC 6 hereby declares that Lot 6-A-1-A is subject to a non-exclusive perpetual drainage easement for the benefit of Lot 6-A-1-B which shall be maintained pursuant to the drainage plan approved by the Public Works Department of the City of Albuquerque, or which may be approved in the future by another applicable governmental entity.

12. The owners of each Lot shall maintain all Access Areas, the Parking Easement and drainage easements on their respective Lots in good order and repair, including, but not limited to removing paper, debris, snow, ice, filth, and refuse, and repairing and replacing lights, asphalt, striping, and directional signs. If an owner does not maintain the Access Areas, Parking Easement and drainage easements, as required hereby, another owner of a Lot benefitted thereby, may undertake such maintenance after not less than fifteen (15) days prior written notice to the owner of the Lot on which the maintenance is proposed. In such event the owner providing the maintenance shall be reimbursed by the owner responsible for the maintenance for all reasonable costs thereof (including attorney's fees), together with interest at 15% per annum until paid after written notice demanding payment.

13. AFC Partners hereby declare that Lot 6-A-1-C is subject to a ten (10) foot non-exclusive perpetual easement for electrical power and telephone service for the benefit of Lot 6-A-1-A and Lot 6-A-1-B and more particularly described as follows:

SEE EXHIBIT "B" ATTACHED HERETO AND MADE A PART HEREOF BY REFERENCE.



AFC PARTNERS, its successors and assigns agree to execute a formal easement satisfactory to Public Service Company and U.S. West evidencing the easement provided for in this paragraph.

14. Notwithstanding the provisions of paragraph 12 above, if any damage beyond reasonable wear and tear is caused to a Lot or the improvements thereon, the owner of the damaged Lot shall have the right to seek reimbursement for the repair expenses related thereto from the party causing said damage.

15. In the event any of the parties hereto are required to enforce the provisions hereof by judicial proceedings, the prevailing party or parties shall be entitled to reasonable attorney's fees and court costs from the non-prevailing party.

16. This Declaration shall be deemed to run with the land, and shall be binding upon and inure to the benefit of the undersigned, their successors and assigns in all respects.

17. This Declaration may not be modified or amended without the written consent of the owners of the Lots affected thereby.

IN WITNESS WHEREOF, the undersigned have hereunto set their hands and seals this 25 day of April, 1995.

AFC 6, LTD. CO.,
a New Mexico Limited Liability Company

By:


WILLIAM J. BAILEY,
Executive Officer

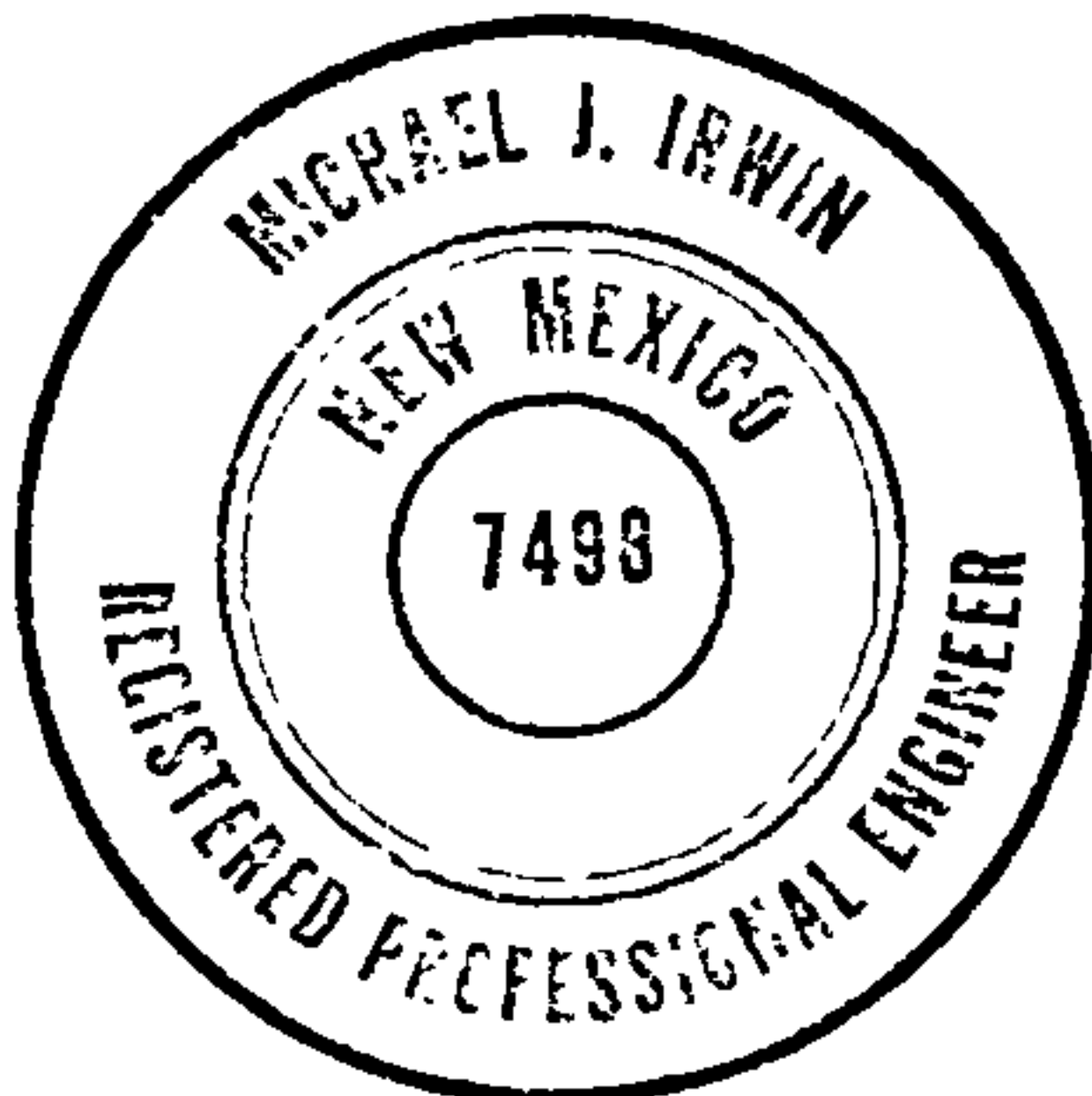


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**DRAINAGE REPORT
FOR
AMERICAN FINANCIAL CENTER
(FORMERLY AMERICAN PLAZA)
Zone Atlas Sheet H-19**

PREPARED BY

**Bohannon-Huston, Inc.
4125 Carlisle Blvd., N.E.
Albuquerque, New Mexico 87107**




Michael J. Irwin, P.E.
N.M.P.E. No. 7498

Job No. 0 133 1

H19D1

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**DRAINAGE REPORT
FOR
AMERICAN FINANCIAL CENTER
(FORMERLY AMERICAN PLAZA)**

INTRODUCTION

The purpose of this report is to determine the undeveloped and developed runoff from American Financial Center. Recommendations for development to ensure compliance with city guidelines are presented.

PROJECT LOCATION AND DESCRIPTION

American Financial Center lies approximately 500 feet south of Menaul Boulevard on the east side of Louisiana Boulevard. The site is bordered by Louisiana Boulevard, Cutler Avenue, and Prospect Place.

The site contains approximately six acres that are to be developed as a two, four, and twelve story office complex. Since the property is expensive and small, none of it is used for a detention area without other functions, therefore retention is impractical.

HYDROLOGY

Peak runoff rates were determined using the Rational Formula for a 100-year, 6-hour storm. Rainfall intensities were computed from curves presented in the AMAFCA Resolution 1980—15, Appendix A. The 5-year storm intensity curves were computed using rainfall records for the Albuquerque area. Detention basin volume requirements were based on the modified rational method analysis, as presented in *Practices in Detention of Urban Storm Water Runoff*, prepared by the American Public Works Association. Computations are provided in the Appendix.

EXISTING DRAINAGE

The site slopes from east to west basically but it has been modified by previous on-site grading. Existing runoff discharges to the southwest into the existing development and eventually to Louisiana Boulevard and Cutler Avenue. No upland drainage is anticipated to impact the site. The five year undeveloped flow rate for the site is 4.58 CFS.

HISTORY

The project has been divided into four phases for development. The two phases addressed in this report are the third and last portions of the development. The previous two phases were developed under a different basic drainage criteria. The basic assumption of this criteria was that runoff flow rates after development must be controlled to the 100-year undeveloped runoff flow rates (AMAFCA Resolution 1972–2). These last two phases have been designed to control the 100-year developed runoff flow rates to the 5 year undeveloped runoff flow rates (Interim Drainage Guidelines).

DRAINAGE AFTER DEVELOPMENT

The third and fourth phases have been divided into six internal basins for development of a drainage control plan. Three of the basins have detention with a controlled discharge, one basin has complete retention, and two of the basins have uncontrolled discharge. The following is a description of each basin's drainage control plan.

Basin A–1

Basin A–1 contains approximately 1.36 acres of parking, roof and landscaped areas. The basin will contain an inlet in the center of the parking area which will have an orifice to control the maximum discharge to 2.00 CFS. The excess runoff will pond in the parking area until the storm recedes, reaching a maximum depth of 6 inches. The inlet will drain to a manhole and then to an existing double "C" drop inlet in Louisiana Boulevard by way of a 12 inch CMP. The 12 inch CMP will be inserted directly in the back of the existing drop inlet. Computations are provided in the appendix for basin detention storage requirements.

Basin A—2

Basin A—2 contains approximately 0.09 acres of sidewalks and landscaped areas which borders the existing system developed under phase one. This basin has an uncontrolled flow rate of 0.48 CFS which discharges into Louisiana Boulevard. Computations are provided in the Appendix.

Basin A—3

Basin A—3 contains approximately 3.65 acres of parking, roofs, and landscaped areas. The basin will have a ponding area between the four and twelve story buildings. The eastern portion of the basin will contain a two story parking structure. To facilitate drainage of the roadway leading to the bottom deck of the parking structure, the bottom of the pond will be set such that gravity outflow from the pond is impossible. This necessitates the use of a pump to drain the pond since storage of the 100-year runoff volume is impractical. The pump station should have a duplex pump system with each pump capable of the design 500 GPM constant flow rate. To further safeguard the system, it is recommended that an emergency power source be furnished. The pump station would discharge through a 6 inch discharge line. The discharge line should be connected to the back of the Double "C" drop inlet, as shown on Plate 1. The discharge pipe should be directly opposite the outflow line for the inlet and at the invert for the drop inlet. The pond is in such close proximity to the two buildings that infiltration could adversely affect the foundation. Therefore, lining of the pond should be considered as a solution to the problem. Computations and a sketch of the proposed pond are provided in the appendix.

Basin A—4

Basin A—4 contains approximately 0.29 acres of landscaped area. The basin will have permanent retention with all runoff being ponded in the center of the basin. The southern portion, approximately one-third of the basin, is part of the existing system developed under phase one. Computations are provided in the appendix for basin retention storage requirements.

Basin A—5

Basin A—5 contains approximately 0.53 acres of parking and landscaped areas. The basin will have an inlet in the center of the parking area which will have an orifice to control the maximum discharge to 0.60 CFS. The excess runoff will pond in the parking area until the storm recedes, reaching a maximum depth of 6 inches. The inlet will drain to an existing inlet approximately 170' south of the proposed inlet by way of a 12 inch CMP. The basin boundary for this basin has encroached on the existing basin boundary to the south. This will reduce the area draining to the existing inlet, and the total volume of ponded water, but will not significantly reduce its outflow rate. Computations are provided in the appendix for basin detention storage requirements.

Basin A—6

Basin A—6 contains approximately 0.07 acres of landscaped area. This basin has an uncontrolled flow rate of 0.37 CFS which discharges south into the existing system developed under phase one. This added discharge combined with the reduction in discharge retained in Basin A—4 net a reduction in the total area draining to Phase 1. Computations are provided in the Appendix.

RECOMMENDATIONS

In summary, the proposed drainage solutions are listed below:

Basin A—1: Pond the excess runoff in the parking area with a controlled discharge to the existing drop inlet in Louisiana Boulevard.

Basin A—2: Allow the uncontrolled discharge to flow into Louisiana Boulevard.

Basin A—3: Pond all excess runoff in the ponding area between the two buildings. Pump ponded runoff to the existing inlet in Louisiana Boulevard through a 6 inch discharge line. The pump station should have a duplex pump system with each pump capable of the design 500 GPM constant flow rate. An emergency power supply should be furnished. The building foundation should be protected from infiltration with a pond liner or alternate measures.

Basin A—4: Retain all runoff in the landscaped area in the center of the basin.

Basin A—5: Pond the excess runoff in the parking area with a controlled discharge to the existing inlet south of the basin.

Basin A—6: Allow the uncontrolled discharge to flow south into Phase I.

CONCLUSIONS

Summing up the discharge flow rates from the ponds, the runoff after development is 4.48 CFS, compared to 4.58 CFS for the 5-year undeveloped flow rate. The storage volumes provide for retention and detention and satisfy those specified in the interim drainage guidelines.

The drainage control plan for this parcel has reduced the 100-year developed runoff rate to the five year undeveloped runoff rate. With this minimal discharge, additional volume should not adversely affect the downstream system.

APPENDIX

RATIONAL FORMULA

A-1

Analysis Assumptions

Rational Formula

$$Q = CIA$$

Where

Q = Flow Rate in CFS

C = Runoff Coefficient (See A-2)

I = Rainfall Intensity (See A-3)

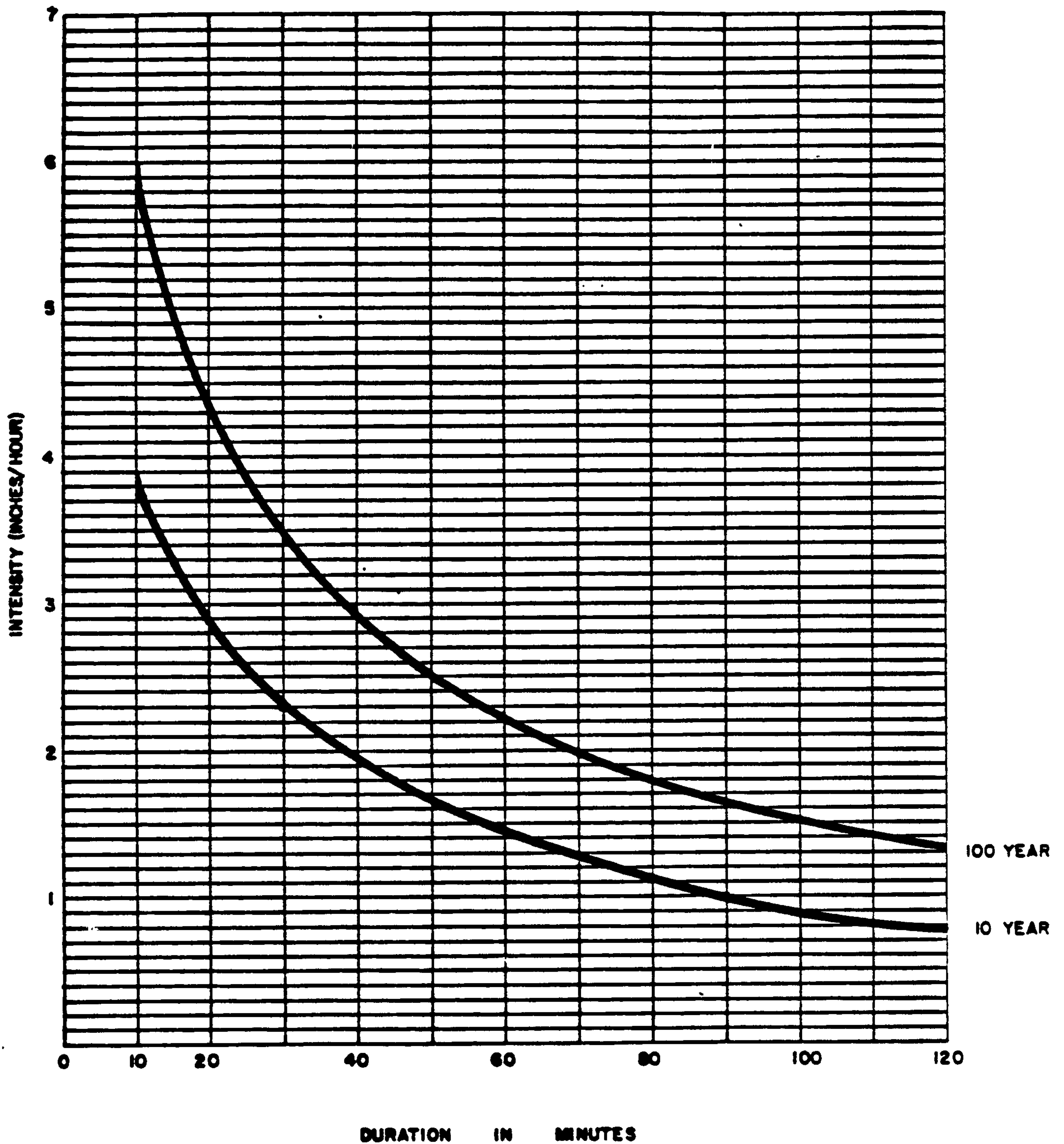
A = Area in Acres (By planimeter, Plate 1)

RATIONAL COEFFICIENTS FOR URBAN AREAS

A-2

AREA DESCRIPTION	RUNOFF COEFFICIENT, C
Streets	
Asphaltic	0.70 - 0.95
Concrete	0.80 - 0.95
Gravel roadways & shoulders	0.40 - 0.60
Industrial Areas	
Flat commercial - about 90% of area impervious	0.80
Heavy areas	0.60 - 0.90
Light areas	0.50 - 0.80
Business Areas	
Downtown areas	0.70 - 0.95
Neighborhood areas	0.50 - 0.70
Residential Areas	
Lawns - flat	0.05 - 0.15
- steep	0.15 - 0.35
Suburban areas	0.25 - 0.40
Single family areas	0.30 - 0.50
Multi-unit areas	0.40 - 0.60
Apartment areas	0.50 - 0.70
Parks, Cemeteries	0.10 - 0.25
Playgrounds	0.20 - 0.35

**Source. New Mexico State Highway Department Drainage Manual
Rational Coefficients for Urban Areas, Table 7**



NOTE:
 CURVE IS BASED ON DATA CONTAINED IN NOAA ATLAS 2,
 DATED 1973.

TIME OF CONCENTRATION t_c
A-4

$$t_c = \text{Log}^{-1} [.3641(B) + .3854 \text{ Log } (L) - .197 \text{ Log } (S) - .3613] *$$

Where:

B = Ground Factor
L = Length to Farthest Point
S = Slope in Percent

* Adapted from nomograph from Data Book for Civil Engineers, design by Elwyn E. Seelye.

PG. 18-01 Fig H. — Overland Flow Time

B = .77	Paved
B = 1.52	Bare Soil
B = 1.84	Poor Grass
B = 2.16	Average Grass
B = 2.57	Dense Grass

Combinations of these may be used to compute combinations of surfaces.

t_c = 10 minutes (minimum)

Information for drainage flows was supplied by Drainage Reports, Field Surveys and the AMAFCA Topo Sheets

COMPUTATIONS

AMERICAN FINANCIAL CENTER

COMPUTATIONS

EXISTING FLOW RATES (5 YR)

$$B = 1.52$$

$$L = 930'$$

$$S = 1.34\%$$

$$t_c = \log^{-1} [.3641(1.52) + .3854(\log 930) - .197(\log 1.34) - .3613]$$

$$= 20.5 \text{ min}$$

$$I = \frac{68}{t_c + 24} *$$

$$= \frac{68}{20.5 + 24}$$

$$= 1.53$$

$$C = .50$$

$$A = 5.99$$

$$Q = (.50)(1.53)(5.99)$$

$$Q = 4.58 \text{ CFS}$$

* FROM RAINFALL RE-

CORDS FOR CITY OF ALBU.



PROJECT NAME AMERICAN FINANCIAL CEN. SHEET 1

PROJECT NO. 01331

SUBJECT DRAINAGE

BY CBA

CH'D

OF 11

DATE 1/15/01

DATE

BASIN A-1

A = 1.36 ACRE

C = 0.90

I = FROM AMHFEA

RESOLUTION 1900.15

Q = CIA

Q_{OUT} = 2.00 CFS PEAK

Q_{OUT} = 1.60 CFS AVE.

USE

Q_{OUT} = 1.60 CFS

FOR COMPUTATIONS

STORM DURATION (min)	I (in/hr)	Q (CFS)	RUNOFF VOLUME (CF)	RELEASE VOLUME (CF)	REQUIRED STORAGE VOLUME (CF)
10	5.89	7.21	4326	960	3366
20	4.36	5.34	6404	1920	4484
30	3.48	4.26	7667	2880	4787
40	2.93	3.59	8607	3840	4767



PROJECT NAME AMERICAN FINANCIAL CENTER

PROJECT NO. 01331

SUBJECT DRAINAGE

SHEET 2

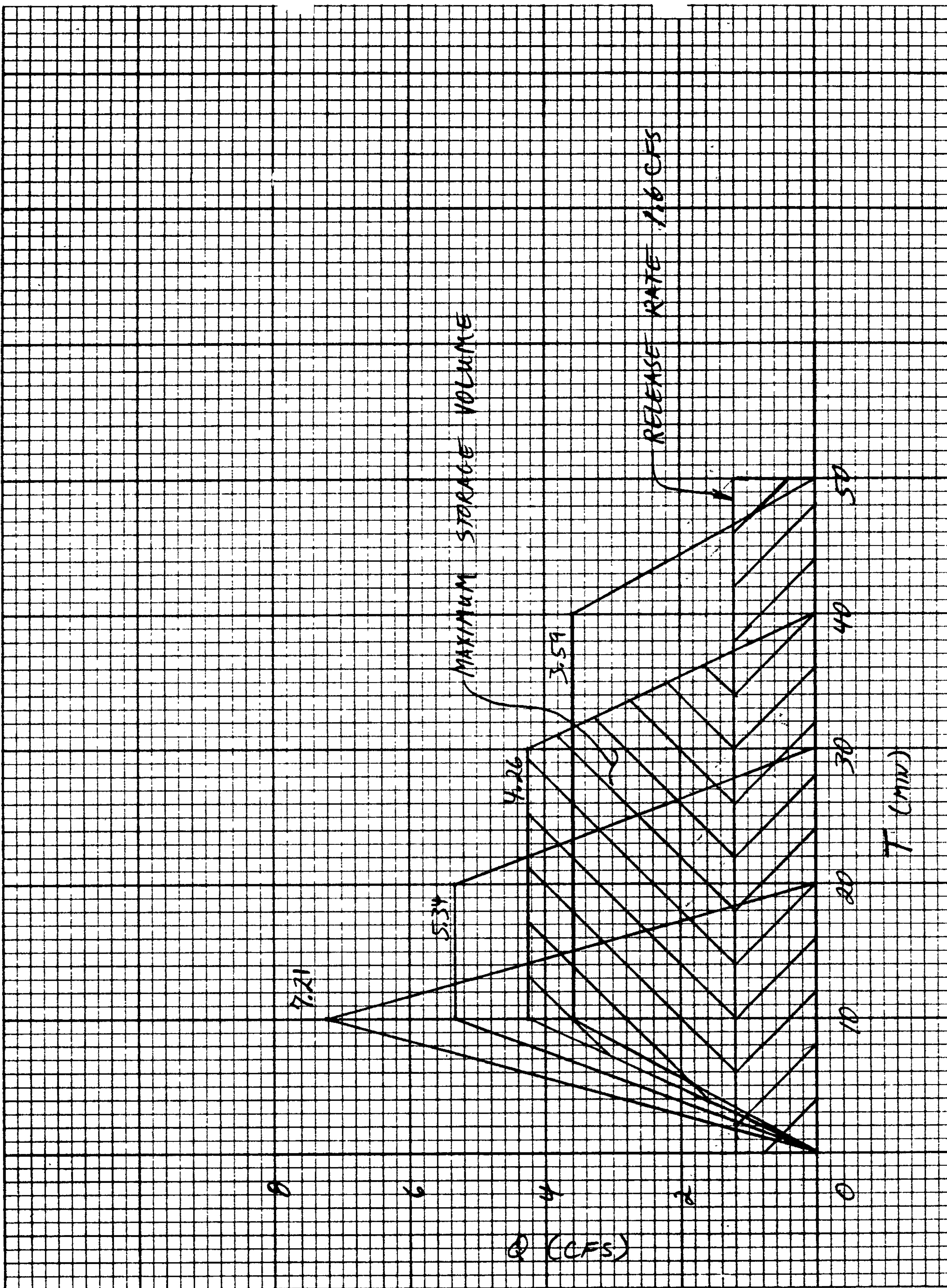
BY JAA

CND EA

OF 11

DATE 1/14/81

DATE 1/15/81



PROJECT NAME AMERICAN FINANCIAL CENTER

SHEET 3

OF 11

PROJECT NO. 01331

BY JAA

DATE 1/14/81

SUBJECT DRAINAGE

CH'D JA

DATE 1/15/81

BASIN A-2

AREA = 0.09 ACRES

C = 0.90

I - FROM AMAFCA
RESOLUTION 1980.15

Q = CIA

FOR 100-YEAR STORM, T = 10 MIN

$$Q = 0.9 (5.89) (0.09) = \underline{0.48 \text{ CFS}}$$



PROJECT NAME AMERICAN FINANCIAL CENTER

SHEET

4

OF

11

PROJECT NO.

01331

BY

JAA

DATE

1/14/81

SUBJECT

DRAINAGE

CH'D

CM

DATE

1/15/81

BASIN A-3

A = 3.65 ACRES

C = 0.90

E = FROM AREA

RESOLUTION 1980.15

Q = CIA

Q_{out} = 1.1 CFS AVE

USE

Q_{out} = 1.1 CFS

FOR COMPUTATIONS

STORM DURATION (min)	I (in/hr)	Q (CFS)	RUN OFF VOLUME (CF)	RELEASE VOLUME (CF)	REQUIRED STORAGE VOLUME (CF)
20	4.36	14.32	17,187	1320	15,867
40	2.93	9.63	23,100	2640	20,460
60	2.23	7.33	26,372	3960	22,412
80	1.80	5.91	28,382	5280	23,102
100	1.52	4.99	29,959	6600	23,359
120	1.33	4.37	31,457	7920	23,537
140	1.15	3.78	31,733	9240	22,493



PROJECT NAME AMERICAN FINANCIAL CENTER

PROJECT NO. 01331

SUBJECT DRAINAGE

SHEET 5

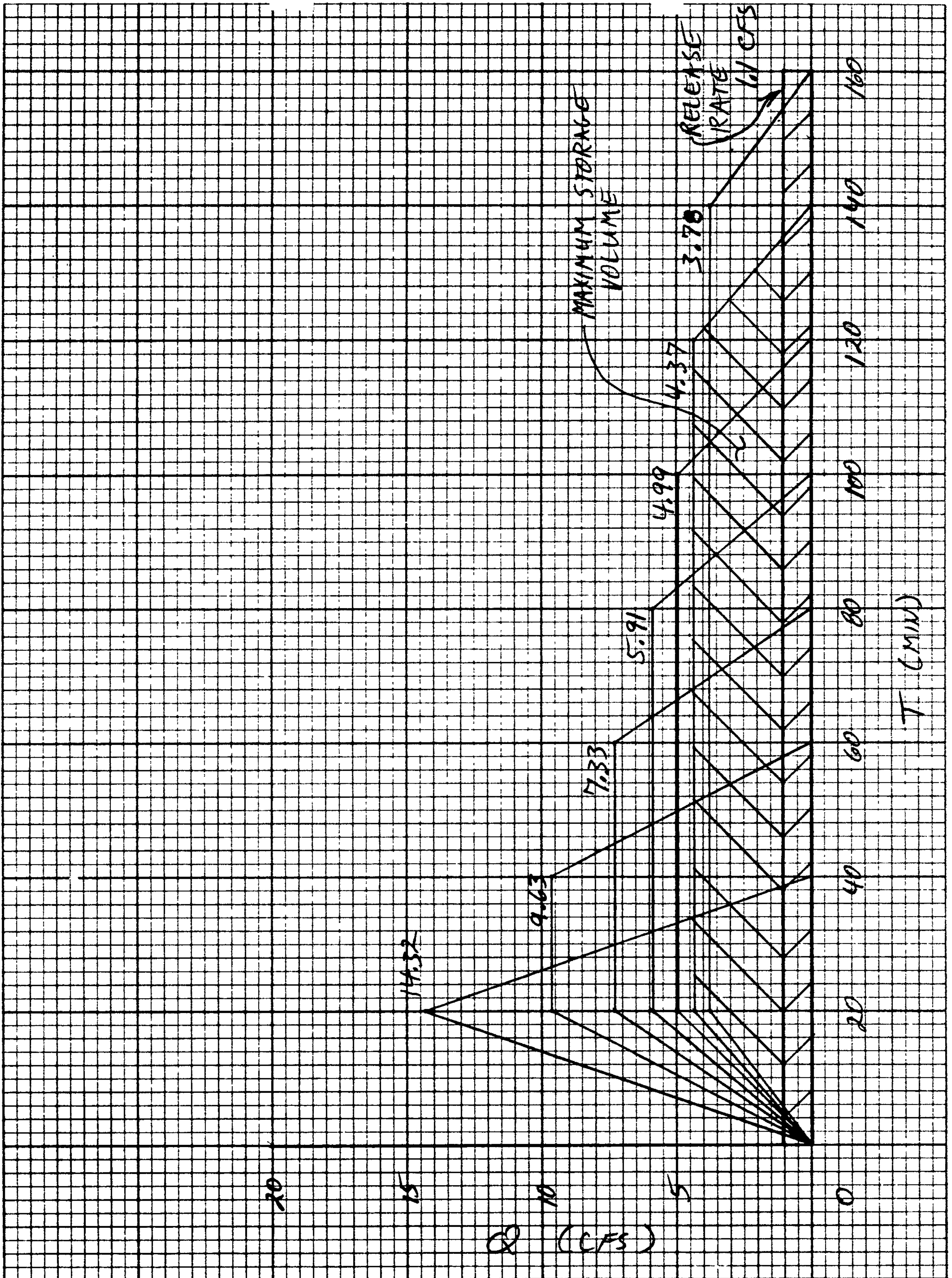
BY JAA

CH'D CA

OF 11

DATE 1/14/81

DATE 1/15/81



PROJECT NAME AMERICAN FINANCIAL CENTER

SHEET 6

OF 11

PROJECT NO. 01331

BY JAA

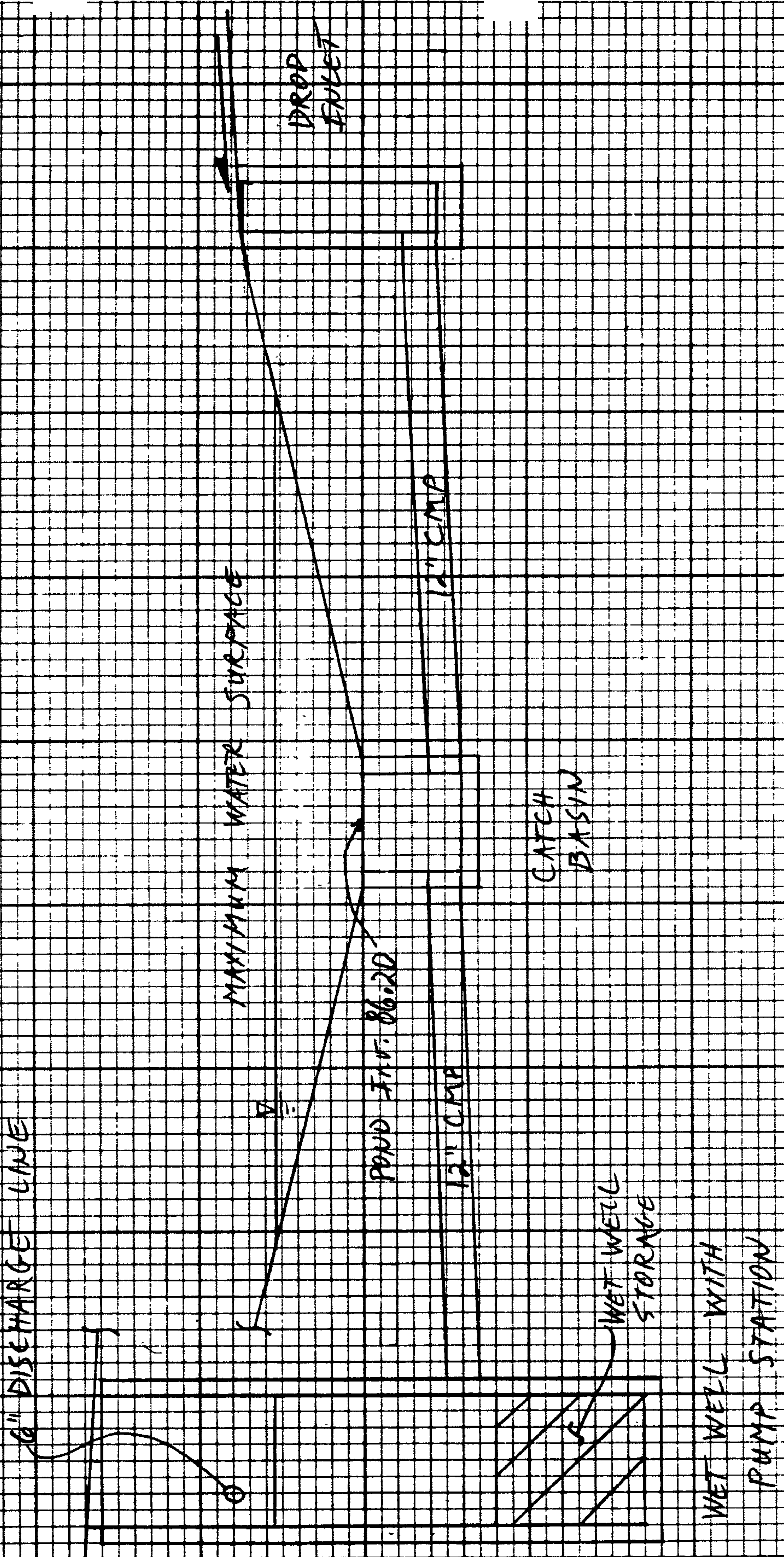
DATE 1/14/81

SUBJECT DRAINAGE

CH'D JA

DATE 1/15/81

BASIN A-3 - PONDING AREA SCHEMATIC



PROJECT NAME	AMERICAN FINANCIAL CENTER	SHEET	7	OF	11
PROJECT NO.	01331	BY	JAA	DATE	1/15/81
SUBJECT	DRAINAGE	CH'D	W	DATE	1/15/81

BASIN A-4

AREA = 0.29 ACRES

C = 0.90

I - FROM AMAFCA

RESOLUTION 1980.15

Q = CIA

= 0.9(5.89)(0.29)

Q = 1.54 CFS

$$\begin{aligned}\text{VOLUME} &= (R \text{ (in inches)})^* (\text{AREA}) (C) \\ &= 3.0 (.29) (43560) (11.2) (.9) \\ &= 2842 \text{ CF}\end{aligned}$$

* 100 YR 6 HR STORM R = 3" APRIL.



PROJECT NAME AMERICAN FINANCIAL CENTER

SHEET 8

OF 11

PROJECT NO. 01331

BY JAA

DATE 1/14/81

SUBJECT DRAINAGE

CH'D JAA

DATE 1/15/81

BASIN A-5

A = 0.53 ACRE

C = 0.90

I - FROM AMAFCA
RESOLUTION 1980.15

Q = CIA

$Q_{out} = 0.60$ CFS PEAK

$Q_{out} = 0.50$ CFS AVE.

USE

$Q_{out} = 0.50$ CFS

FOR COMPUTATIONS

STORM DURATION (min)	I (in/hr)	Q (CFS)	RUN OFF VOLUME (CF)	RELEASE VOLUME (CF)	REQUIRED STORAGE VOLUME (CF)
10	5.89	2.81	1686	300	1386
20	4.36	2.08	2496	600	1896
30	3.48	1.66	2988	900	2088
40	2.93	1.40	3364	1200	→ 2164 ←
50	2.52	1.20	3606	1500	2106



PROJECT NAME AMERICAN FINANCIAL CENTER SHEET 9

PROJECT NO. 01331

SUBJECT DRAINAGE

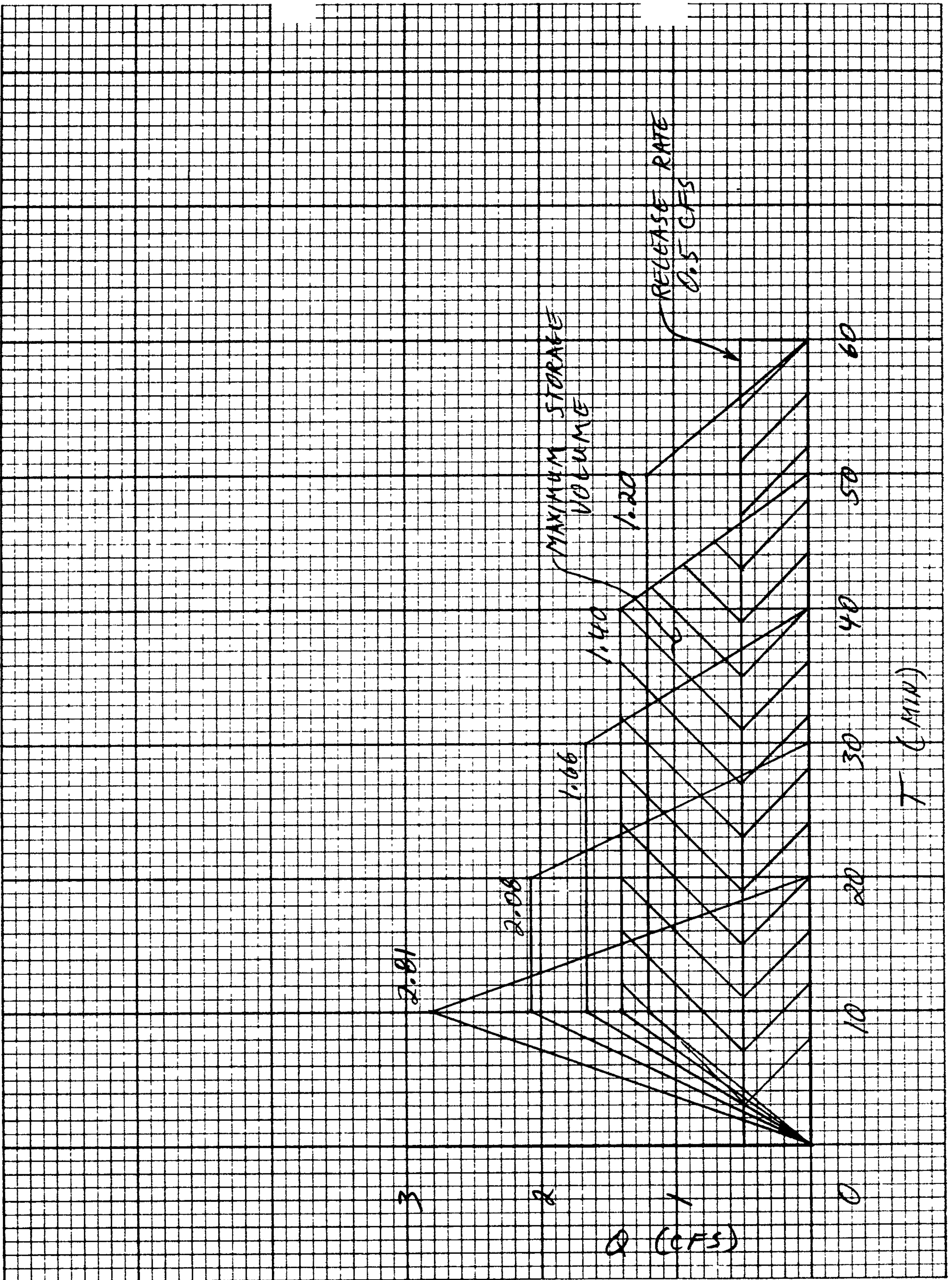
BY JAA

CMD CH

OF 11

DATE 1/14/81

DATE 1/15/81



PROJECT NAME AMERICAN FINANCIAL CENTER
 PROJECT NO. 01331
 SUBJECT DRAINAGE

SHEET 10
 BY JAA
 CH'D CH

OF 11
 DATE 1/14/81
 DATE 1/15/81

BASIN A-6

AREA = 0.07 ACRES

C = 0.90

I - FROM AMAFCA

RESOLUTION 1980.15

$Q = CIA$

FOR 100-YEAR STORM, $T = 10 \text{ MIN}$

$Q = 0.9(5.89)(0.07) = 0.37 \text{ CFS}$



PROJECT NAME AMERICAN FINANCIAL CENTER

SHEET 11

OF 11

PROJECT NO. 01331

BY JAA

DATE 1/14/81

SUBJECT DRAINAGE

CH'D JA

DATE 1/15/81

**AMENDED
DRAINAGE REPORT
FOR
AMERICAN FINANCIAL
CENTER**

PREPARED FOR:

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PREPARED BY:

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**DAVID M.Y. MILLIKAN, P.E.
N.M.P.E. NO. 7547**

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PROPOSED CONDITIONS	2
SUMMARY AND RECOMMENDATIONS	3

FIGURES

FIGURE 1 — PROJECT AREA

PLATES (in rear pocket)

— DRAINAGE PLATE FROM JANUARY 1981 REPORT
PLATE 3 — EXISTING CONDITIONS
PLATE 4 — DEVELOPED CONDITIONS

APPENDIX 1

1 — DEVELOPED RUNOFF CONDITION COMPUTATIONS AND
GRAPHS

PURPOSE

The purpose of this report is to present a drainage management plan for the undeveloped portion of the American Financial Center complex. Plans for the proposed development will be in accordance with criteria and guidelines established by the City of Albuquerque.

LOCATION AND SITE DESCRIPTION

American Financial Center lies approximately 500 feet south of Menaul Boulevard and immediately east of Louisiana Boulevard. The site is bordered by Louisiana Boulevard, Cutler Avenue, and Prospect Place. Figure 1 identifies the project area.

The site is relatively flat except for the northeast corner of the site adjacent to Prospect Place. A 4'-5' drop occurs in this area due to grading which took place at the time Prospect Place was constructed. Soils class for the site is designated as Tijeras Group and is listed as SCS Soil Type 'B'. The Master Drainage Study indicates that flooding does occur downstream of the site at the intersection of Indian School Road and Louisiana Boulevard.

METHOD OF ANALYSIS

Criteria outlined in Section 22.2 of the Development Process Manual (DPM) is used to compute existing and developed flowrates.

More specifically:

- o 'C' Value: Plate 22.2 C-1
- o Times of Concentration: Plates 22.2 B-1 and B-2
- o Rainfall Amounts: Plate 22.2 D-1
- o Flowrate Computations: Rational Formula

As outlined in the City Drainage Ordinance, runoff from the development will be controlled such that the downstream capacity of the existing street and storm sewer system is not exceeded.

EXISTING CONDITIONS

Plate 3 identifies the existing topography on-site. Approximately 2/3 of the area contains buildings and parking lots.

Under present conditions, runoff discharges from the site either by surface flow or by a drain system tied to the main storm sewer line in Cutler Avenue and Louisiana Boulevard. This system was constructed in the mid-1970's when AMAFCA's Resolution 1972-2 was in effect. This criteria stated that runoff flowrates, after development, must be controlled to the 100-year undeveloped runoff flowrate.

Plate 3 identifies the runoff trends for the existing conditions.

PROPOSED CONDITIONS

In January, 1981, a Drainage Report entitled "Drainage Report for American Financial Center" (DR No. H19-D1A and contained in rear pocket) was submitted to the City Hydrology Section. This report outlined a drainage management plan for Phases III and IV of the project (Phases I and II are complete). The key element of this plan was the use of a pump system for draining the main ponding area. This type of system was required since the finished floor of the proposed two-story parking structure was depressed, thus making positive drainage to a public infrastructure impossible. The entire system was designed to release the 100-year developed flowrates at the 5-year undeveloped flowrate as outlined in the Interim Drainage Guidelines, which were in effect at the time the report was prepared.

Since approval of this report, the site layout for Phases III and IV has been slightly modified. Plate 4 indicates the proposed layout. The major changes from the earlier report include:

1. The removal of the 2-story building, to be replaced by parking area;
2. The 4-story building to be converted to a 7-story structure;
3. The 12-story building to be converted to a 10-story structure, and
4. The 2-story parking structure to be modified such that the first floor is at grade with existing ground.

As indicated earlier, flooding occurs downstream of the site indicating that the existing storm drain in Louisiana Boulevard and Indian School Road are running at full capacity. This condition has been observed during heavy rainstorms, with the replacement of "floated" manhole lids at the intersection of Indian School Road and Louisiana Boulevard. Therefore, runoff from the site will be controlled to a minimum discharge rate. The following assumptions apply to the runoff analysis:

1. The downstream drainage infrastructure consisting of streets and storm sewers is running at full capacity during the 100-year storm.
2. Storm drain lines internal to the site may tie to existing facilities.
3. Roof tops of buildings and parking structures will be constructed to detain runoff and release it at a minimal controlled rate.
4. Controlled discharge from the inlets to the downstream drainage infrastructure will be at a rate of 0.5 cfs.
5. Nuisance runoff will be controlled, where practical.

Pertinent runoff computations and graphs are included in Appendix 1.

SUMMARY AND RECOMMENDATIONS

Details contained in the management plan (Plate 4) meet the criteria and assumptions outlined above. The system controls runoff to a minimum rate to the downstream conveyance system. Prior to release of a building permit for any of the new buildings, an approved copy of "Construction of Private Drainage Facilities in Public Right-of-Way" for the inlet connection in Louisiana Boulevard will be obtained from the City Engineer's Office.

FIGURE 1
PROJECT AREA

APPENDIX 1

DEVELOPED RUNOFF CONDITION COMPUTATIONS AND GRAPHS

PROJECT NAME AMERICAN FINANCIAL CENTER SHEETPROJECT NO. 32140BY BB

OF

SUBJECT BASIN CHARACTERISTICS

CH'D

DATE 1-84

DATE

BASIN CHARACTERISTICS

BASIN NO.	AREA (ACRES)	% IMPERVIOUS 'C' FACTOR	100-YEAR RAIN (IN.)	t_e (MIN)	I (IN/HR)	Q_{100} (CFS) CIA	V_{100} (FT ³)	Q_{100} (CFS) CONTROLLED AFTER DEVELOPMENT
1	1.4	95/1.0	2.3	10	4.8	6.7	11,700	0.5
2	1.2	95/1.0	2.3	10	4.8	5.8	10,020	0.4
3A	.36	95/1.0	2.3	10	4.8	1.7	3010	0.4*
3B	.53	95/1.0	2.3	10	4.8	2.5	4425	0.0**
3C	.36	95/1.0	2.3	10	4.8	1.7	3010	0.4*
4	1.6	95/1.0	2.3	10	4.8	7.7	13,400	0.5
5	.88	95/1.0	2.3	10	4.8	4.2	7,350	0.5

* RUNOFF FROM THESE BASINS CONTROLLED BY
2-4" ROOF DRAINS - EACH DRAIN DELIVERING
0.2 CFS

** NON-CONTRIBUTING BASIN - RUNOFF WILL PROBABLY
BE DIRECTED TO COURT YARD AREA

FLOWS TO INLETS		
INLET NO.	CONTRIBUTING BASINS	TOTAL Q
1	1 - 6.7 cfs 3B - 0 cfs 1/2 of 2 - 0.2 cfs	6.9 cfs
2	3A - 0.4 cfs 4 - 7.7 cfs 1/2 of 2 - 0.2 cfs	8.3 cfs
3	5 - 4.2 cfs	4.2 cfs



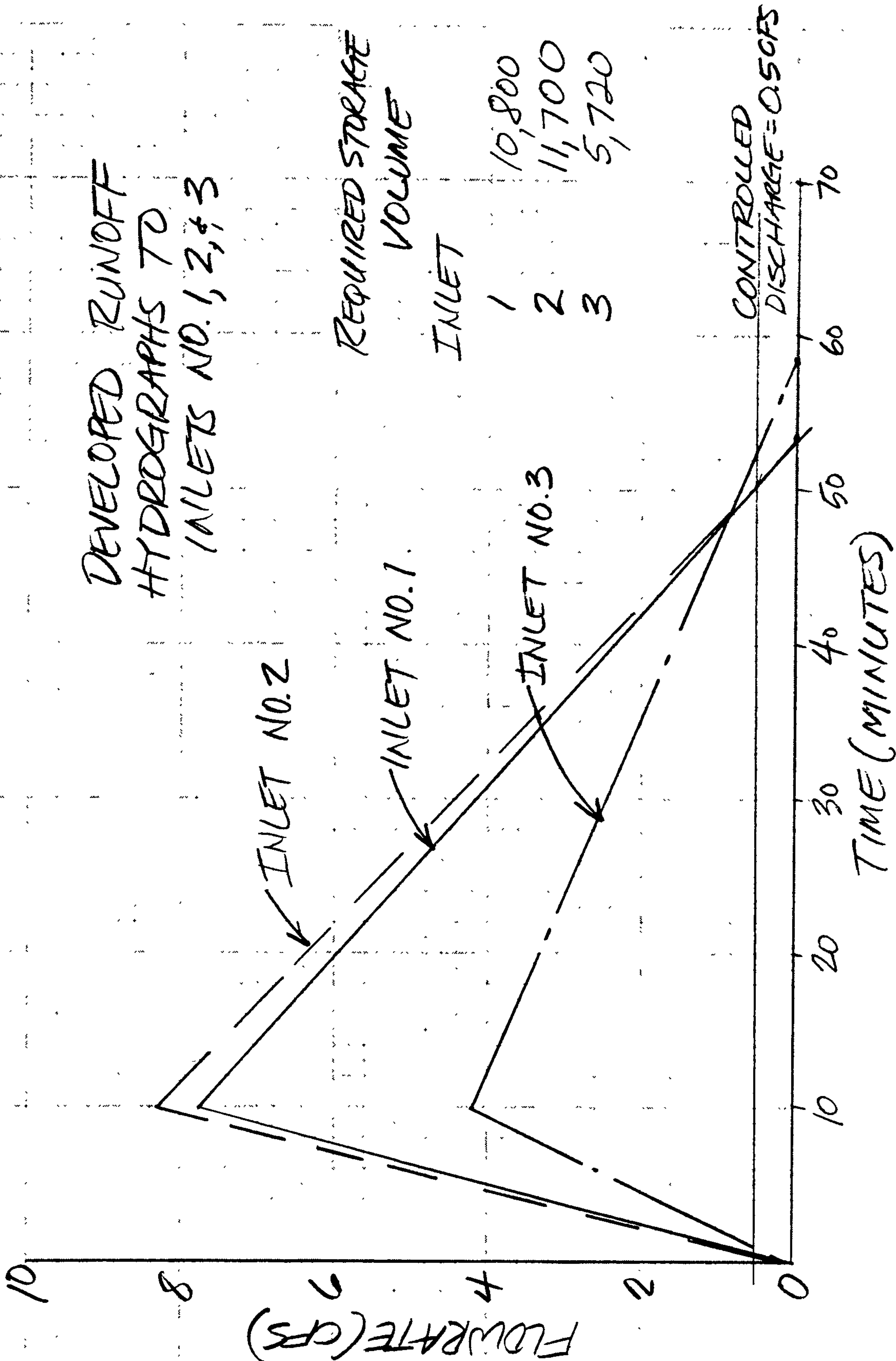
PROJECT NAME AMERICAN FINANCIAL CENTER SHEET _____ OF _____
 PROJECT NO. 32140 BY BB DATE 1-84
 SUBJECT FLOWS TO INLETS CH'D _____ DATE _____

DEVELOPED RUNOFF
HYDROGRAPHS TO
INLETS NO. 1, 2, & 3

REQUIRED STORAGE
VOLUME

INLET

1 10,800
2 11,700
3 5,720



PROJECT NAME AMERICAN FINANCIAL CENTER SHEET

PROJECT NO. 32140

SUBJECT RUNOFF HYDROGRAPHS

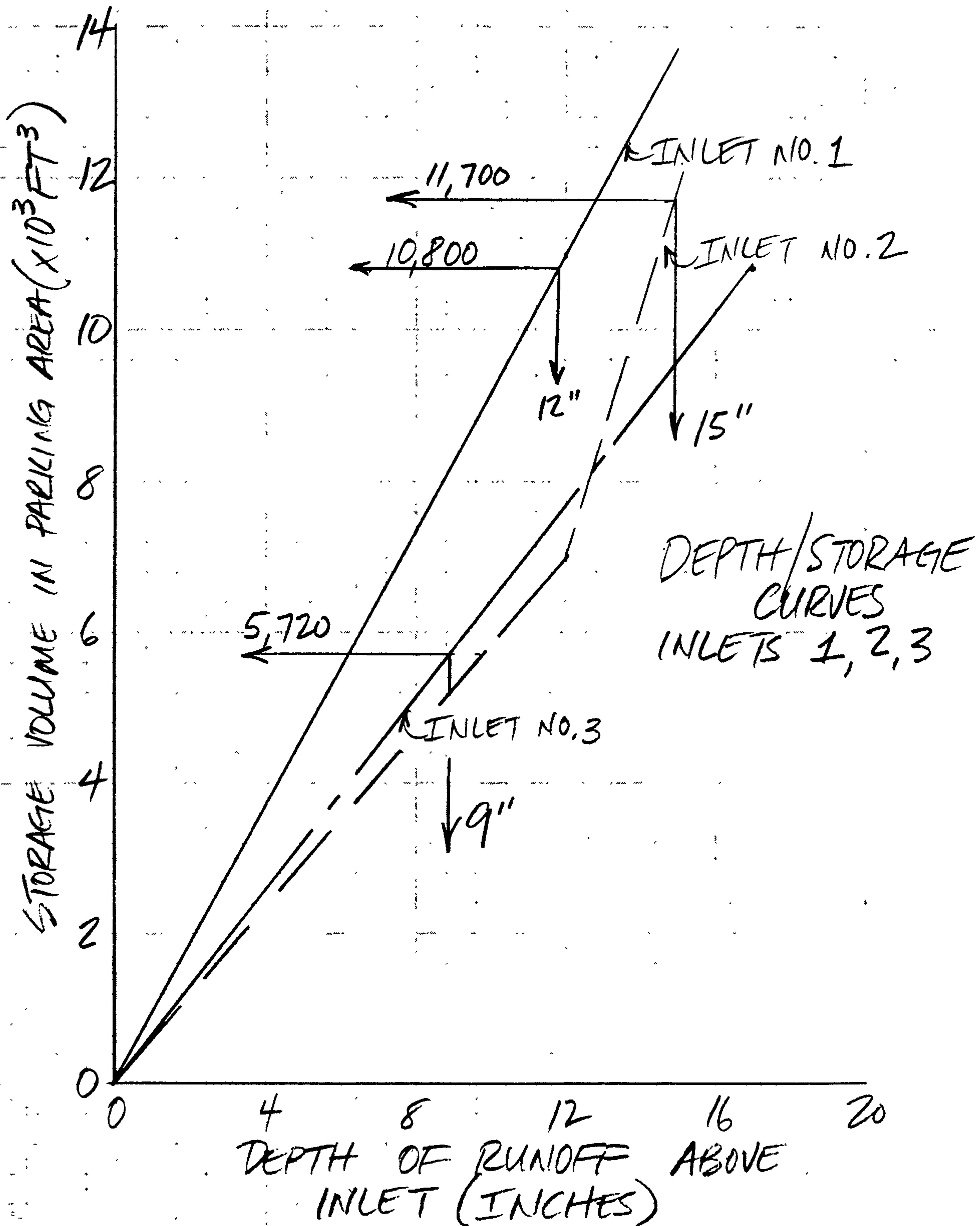
BY BB

CH'D

OF

DATE 1-84

DATE



PROJECT NAME AMERICAN FINANCIAL CENTER SHEET _____ OF _____

PROJECT NO. 32140 BY BB DATE 1-84

SUBJECT DEPTH/STORAGE CURVES CH'D _____ DATE _____



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

February 13, 1984

Mr. Michial Emery, V.P.
Bohannon-Huston, Inc.
4125 Carlisle Boulevard NE
Albuquerque, NM 87107

REF: AMENDED DRAINAGE REPORT FOR AMERICAN FINANCIAL CENTER (H19-D1)
RECEIVED JANUARY 18, 1984

Dear Mr. Emery:

I have reviewed the above referenced submittal. The grading and drainage plan, dated January 17, 1984, is approved for drainage.

Please attach a copy of this plan, excluding the basin delineations, along with the appropriately approved "Construction Within Public R/W" document to the construction set prior to sign-off.

If I can be of further assistance, please contact me at 766-7644.

Yours truly,

Billy J. Goolsby, PE
City/County Flood Plain Admin.

BJG:mrk

BOHANNAN-HUSTON INC.



4125 CARLISLE BLVD., N.E. ALBUQUERQUE, NEW MEXICO 87107 505 881-2000
 6713 VISCOUNT BLVD., EL PASO, TEXAS 79925 915 778-4491
 330 GARFIELD, SANTA FE, NEW MEXICO 87501 505 988-7671

January 16, 1984

Mr. Fred J. Aguirre
 Civil Engineer/Hydrology
 City of Albuquerque
 P.O. Box 1293
 Albuquerque, NM 87103

Re: American Financial Center Drainage Plan

Dear Fred:

Enclosed are two copies of a drainage plan for the undeveloped portion of American Financial Center. Please note that this report amends Drainage Report No. H19-D1A which was submitted to your office in January, 1981.

If you have any questions, please call Brian Burnett or me.

Sincerely yours,

Michial M. Emery, P.E.
 Vice President

Enclosures

cc: Mr. Robert Wharton

BB/mw

PRINCIPALS

JERRY R. BOHANNAN, P.E. & L.S.

LARRY W. HUSTON

MICHAL M. EMERY, P.E.

INFORMATION SHEET

PROJECT TITLE AMERICAN FINANCIAL CENTER TYPE OF SUBMITTAL DRAINAGE PLAN

ZONE ATLAS PAGE NO. H19 CITY ADDRESS 2400 Louisiana NE

LEGAL DESCRIPTION N/A

ENGINEERING FIRM Bohannon-Huston, Inc. CONTACT Brian Burnett

ADDRESS 4125 Carlisle Boulevard NE PHONE 881-2000

OWNER Jack M. Clifford & Company CONTACT Bob Wharton

ADDRESS 2400 Louisiana NE PHONE 884-5573

ARCHITECT N/A CONTACT _____

ADDRESS _____ PHONE _____

SURVEYOR N/A CONTACT _____

ADDRESS _____ PHONE _____

CONTRACTOR N/A CONTACT _____

ADDRESS _____ PHONE _____

PRE-DESIGN MEETING:

☐ YES

☒ NO

☐ COPY OF CONFERENCE RECAP SHEET PROVIDED

PLEASE CHECK TYPE OF APPROVAL EXPECTED WITH THIS SUBMITTAL:

☐ SKETCH PLAT APPROVAL

☐ PRELIMINARY PLAT APPROVAL

☐ SITE DEVELOPMENT PLAN APPROVAL

☐ FINAL PLAT APPROVAL

☐ BUILDING PERMIT APPROVAL

☐ CERTIFICATE OF OCCUPANCY APPROVAL

☐ ROUGH GRADING PERMIT APPROVAL

☐ GRADING/PAVING PERMIT APPROVAL

☒ OTHER Drainage Plan (SPECIFY)

DATE SUBMITTED: January 16, 1984

BY: _____



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

H19-D1

July 23, 1981

Jack Clifford
Jack M Clifford & Co.
2201 San Pedro N.E.
Building 2 - Suite 201
Albuquerque, N.M. 87110

RE: AMERICAN FINANCIAL CENTER DRAINAGE REPORT DATED JANUARY 1981

Dear Mr. Clifford

The referenced drainage report is approved in concept. Since this report is conceptual and the drainage scheme is contingent on specific elevations being constructed in the field, I would strongly recommend that you have an engineer prepare the grading plan and certify to lend coordination between the design and the construction.

If you have any questions concerning the above, please feel free to call me.

Very truly yours,

Fred J. Aguirre, P.E.
Civil Engineer/Hydrology

FJA/tsl

cc: Dave Millikan, Bohannon-Huston, Inc.
Drainage Files

MUNICIPAL DEVELOPMENT DEPARTMENT



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

DESIGN HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

August 8, 1984

Mr. Victor J. Chavez
Chavez-Grieves Consult. Engineers
4520 Montgomery NE
Albuquerque, New Mexico 87109

RE: DRAINAGE PLAN FOR AMERICAN FINANCIAL CENTER AT 2400 LOUISIANA
BLVD. NE (H-19-2 D-1A) RECEIVED JULY 19, 1984

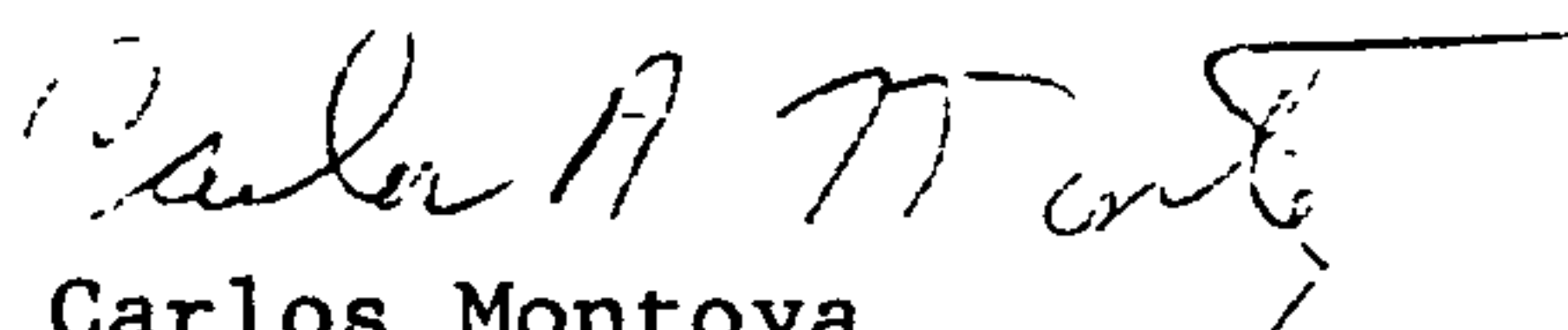
Dear Victor,

The above referenced plan, dated July 19, 1984, is approved.

Please attach a copy of this approved plan along with the appropriately approved "Drainage Facilities Within City Right-of-Way" document to the construction set prior to release of the building permit.

If I can be of further assistance, please contact me at 766-7644.

Sincerely,


Carlos Montoya
Civil Engineer/Hydrology

CM/cl

MUNICIPAL DEVELOPMENT DEPARTMENT

C. Dwayne Sheppard, P.E., City Engineer

ENGINEERING DIVISION

Telephone (505) 766-7467

AN EQUAL OPPORTUNITY EMPLOYER

PRE-DESIGN CONFERENCE

LEGAL DESCRIPTION: Lot 3A Block C - Parking Structures

APPROVAL REQUESTED:

<u> </u>	PRELIMINARY PLAT	<u> </u>	FINAL PLAT
<u> X </u>	SITE DEVELOPMENT PLAN	<u> X </u>	BUILDING PERMIT
<u> </u>	GRADING/PAVING PERMIT	<u> </u>	OTHER

ATTENDANCE: GILBERT AIDAZ WHO REPRESENTING
FRED J. AGUIAR

• An approved conceptual grading & drainage plan is required for site plan approval. The drainage plan must follow the concept identified by the Bohannon Dwn Dater 1/17/84.

- ° An approved drainage plan will be required for TDR approval.
(that must be resolved)

- The existing "C"s must be replaced with ~~the~~^{an} equivalent number of "C"s

- * CERTIFICATE OF OCCUPANCY APPROVAL WILL REQUIRE CERTIFICATION PER THE DPM

DATE: 11/7/94 DATE: 11-07-94

****NOTE** PLEASE PROVIDE A COPY OF THIS PRE-DESIGN FORM WITH THE DRAINAGE SUBMITTAL.**

2-24-81

To : Bruno

From : F.J. Aguirre

Subject : American Financial Center Drainage Report

I THE PROPOSED DRAINAGE SCHEME FOR THE REFERENCED REPORT EXCEEDS THE DRAINAGE REQUIREMENTS OUTLINED IN THE INTERIM DRAINAGE GUIDELINES BY ROUTING THE MAJORITY OF THE 6 ACRES STORM RUNOFF TO PONDS AND RELEASING THIS FLOW AT NO GREATER RATE THAN THE ϕ_5 UNDEVELOPED. THIS SCHEME ALSO EXCEEDS THE ORIGINAL DRAINAGE REPORT REQUIREMENTS BY USING A DISCHARGE RATE OF ϕ_5 UNDEVELOPED AS OPPOSED TO THE ϕ_{100} UNDEVELOPED USED IN THE ORIGINAL REPORT DATED DECEMBER, 1975.

II HOWEVER, I DO HAVE PROBLEMS WITH THE FOLLOWING ITEMS:

- A) THE METHOD USED FOR ROUTING THRU THE POND IS NOT FAMILIAR TO ME. THE METHOD USED IS "PRACTICES IN DETENTION OF URBAN WATER RUNOFF".
- B) THE EXISTING GROUND COVER WAS NOT INDICATED IN THE REPORT TO JUSTIFY A 'C' VALUE OF .5.
- C) THE INTENSITY EQUATION FOR A 5 YR FREQUENCY IS UNREFERENCED, OTHER THAN TO SAY IT WAS OBTAINED FROM RAINFALL RECORDS FOR THE CITY OF ALBUQUERQUE. SEE COMPUTATION SHEET 1 OF 11 FOR THE 5 YR INTENSITY FORMULA.
- D) A SOIL INVESTIGATION SHOULD BE REQUIRED FOR THE CLOSE PROXIMITY PONDING TO THE 4 STORY BUILDINGS.

III THIS REPORT WAS REVIEWED IN CONCEPT ONLY SINCE THE DETAILS PROVIDED ARE NOT ADEQUATE FOR CONSTRUCTION.

Gen
Chuck assigned

CITY PLANNING DIVISION
P.O. Box 1293
Albuquerque, New Mexico 87103

APPLICATION FOR:

Subdivision

Site Approval

S - SC--SC-6

PL Map NO.: H-19

Annexation AX-

Hearing Date: 19 March 81

Zone Map Change Z- 2-1502-1

Vacation V-

I. APPLICANT INFORMATION (Sections 1 thru 4 to be Completed by the Applicant)

Applicant: Jack M. Clifford & Co. - Jack J. Clifford Phone: 884-4309

Mailing Address: 2201 SAN PEDRO NE, Bldg 2-Suite 201, Albuquerque, New Mexico 87110

Agent: (Same as above) Phone: _____

Mailing Address: (Same as above)

Applicant's Interest in the Property: Part owner & agent

Signature: Jack J. Clifford Date: Jan. 21, 1981

2. REASON FOR REQUEST: (Please Use a Separate Sheet) ON ZONE CHANGE APPLICATION, YOUR REASON FOR REQUEST SHOULD ADDRESS ITSELF TO THE POLICIES FOR ZONE MAP CHANGES ATTACHED TO THIS APPLICATION.

3. PROJECT DETAILS:

Zoning	Present	Proposed	Developments	Land Area Land Area Acres or Sq. Ft.	Dwelling Units			Estimated	
					No. of Owner Units	No. of Rental Units	Per Gross Acre	Per Net Acre	Date(s) of Construction Start Finish
Site Approval Plan	C-2	C-2	(Office)	Phase III ~ 3 acres	Phase III A				September 1981 - Start Feb 1982 Finish
					Phase III B				April 1982 Start January 1983 Finish
	C-2	C-2	(Office)	Phase IV ~ 3.6 acres	Phase IV				April 1983 Start Oct 1984 Finish

4. LOCATION OF REQUEST:

Legal Description (Use Extra Sheet If Necessary)

Lot(s): (Undeveloped portion of Lot 5) Block: C Plat: _____

Louisiana Subdivision

Street Address (No. If Any): 2400 Louisiana Blvd NE 87110

Between (Streets): Cutler Bldgs. 5, 6 & 7 and Prospect

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103



MAYOR
Harry E. Kinney

CHIEF
ADMINISTRATIVE OFFICER
Frank A. Kleinhenz

January 12, 1976

Mr. Michial M. Emery
Bohannon, Westman, Huston & Assoc., Inc.
4125 Carlisle Blvd. NE
Albuquerque, New Mexico 87107

RE: DRAINAGE REPORT - AMERICAN PLAZA

Dear Mr. Emery:

The concept of the subject drainage report and letter of January 5, 1976 is approved. Construction in public rights of way shall be performed in accordance with plans approved by the City Engineer.

Very truly yours,

K. H. Laws

Assist. City Engineer-Hydrology

KHL/fs

cc: Mr. John Robert

Public Works Department

Director — Erwin F. Hensch, P. E. 766-7467
Engineering 766-7441 — V. M. Kimmick, P. E.
Street Maint. 766-7755 — G. E. Paul, P. E.

Ass't. Director — Harold R. Orr, Jr. P. E.
Liquid Waste 766-7535 — R. P. Lowe, P. E.
Water 766-7437 — W. H. Otto, P. E.

CITY OF ALBUQUERQUE

ALBUQUERQUE, NEW MEXICO

*cc Inter Office
: Am Plaza*

INTER-OFFICE CORRESPONDENCE

May 14, 1979

REF. NO. _____

RECEIVED

MAY 15 1979

CITY ENGINEERS

TO: Richard Heller, City Engineer

FROM: Rip Orr, Deputy Director of MDD *Rip*

SUBJECT: American Square ✓

Mr. Bob Sheppard of Flatow-Moore has talked with me about drainage plan approval for the American Savings & Loan Midrise Bldg. and Fred Aguirre provided the attached drawing C-2 (Site Plan) with drainage pond outlines and storage capacity volumes annotated.

The parking lot west of pond 'A' is existing (not the east end planters) and has a definite visible grade break, however, the break is not precisely defined by as-built elevations. None of the other pavement is existing. The volumes are calculated as base area times one-half the difference between the overflow and the inlet elevation. However, when calculated as cones (1/3) the ponds seem to provide 10,000 cubic feet of storage volume which, according to Mr. Sheppard is the requirement of the approved area drainage plan recognizing that the building is relocated and that increased parking area storage is substituted for the formerly planned roof top storage.

Our concern is that the parking areas be constructed to provide the necessary volume. In discussing this with Mr. Sheppard, he offered to have the subgrade checked by a surveyor before placing any pavement.

With this commitment, I'd suggest approval of the plan although construction details are very skimpy.

HRO/fs

cc - Bruno Conegliano ✓

Fred Aguirre

Bob Sheppard, *F.M. & Assoc.*



1217 First Street, N.W. • P.O. Box 25027
Albuquerque, New Mexico 87125
Phone (505) 765-1200

May 15, 1980

City of Albuquerque
Flood Control
Albuquerque, New Mexico

Attention: Mr. Bernie Montoya

RE: American Savings & Loan Mid-Rise

Gentlemen:

This is to advise that the storm drains at subject project are
installed as shown on the contract drawings.

Very truly yours,

BRADBURY & STAMM CONSTRUCTION COMPANY, INC.

Robert H. McAfee
Vice President

RHMcA:ikw



SKILL • RESPONSIBILITY • INTEGRITY
AN EQUAL OPPORTUNITY EMPLOYER



MAY 31 1979

**flatow
moore
bryan &
associates**

william jette
leon ross
rusty shaffer
wayne andrews
jon moore

ARCHITECTS
ENGINEERS
PLANNERS

5608 zuni s.e.
p.o. box 8266
albuquerque, n.m. 87198
telephone 505/268-6783

May 30, 1979

Public Works Dept.
City of Albuquerque
P. O. Box 1293
Albuquerque, N. M. 87103

Re: Coronado East Office Building

Attn: Fred Aquirre

Dear Fred:

We are submitting the following calculations for your approval:

Roof Area = $128 \times 78 = 9984\text{sf}$
Roof equally divided in 6 equal areas = 1664sf/RD

3RD (front) tied together and go into inlet via 6' cast iron line
@ 0.5% gradient.

Max. flow at the inlet (from the drainage study) is 1.8 cfs.

Pipe flow presently:
 $Q = 0.196 \times \frac{1.486}{0.013} \times 0.25 \times .071 = 0.40 \text{ cfs}$

Flow from the water shed (Nos. 5 & 6) on the drainage report is:

$$Q = 1.44 \times .9 \times 7.13 = 9.24 \text{ cfs.}$$

This flow thru the pipe reduced at the same ratio would be:

$$\frac{x}{0.40} :: \frac{1.8}{9.24}$$

$$x = 0.08 \text{ cfs} = \text{reduced } Q$$

Change must be by reduction of pipe area.

RECEIVED

MAY 31 1979

CITY ENGINEER

Public Works Dept.
Coronado East
May 30, 1979
Page 2

From the former computation:

$$v = \frac{Q}{A} = \frac{0.40}{0.196} = 2.04 \text{ fps}$$

The throttling venturi therefore is:

$$A = \frac{Q}{v} = \frac{0.08}{2.04} = 0.04 \text{ sf} = 5.6 \text{ sq. in.}$$

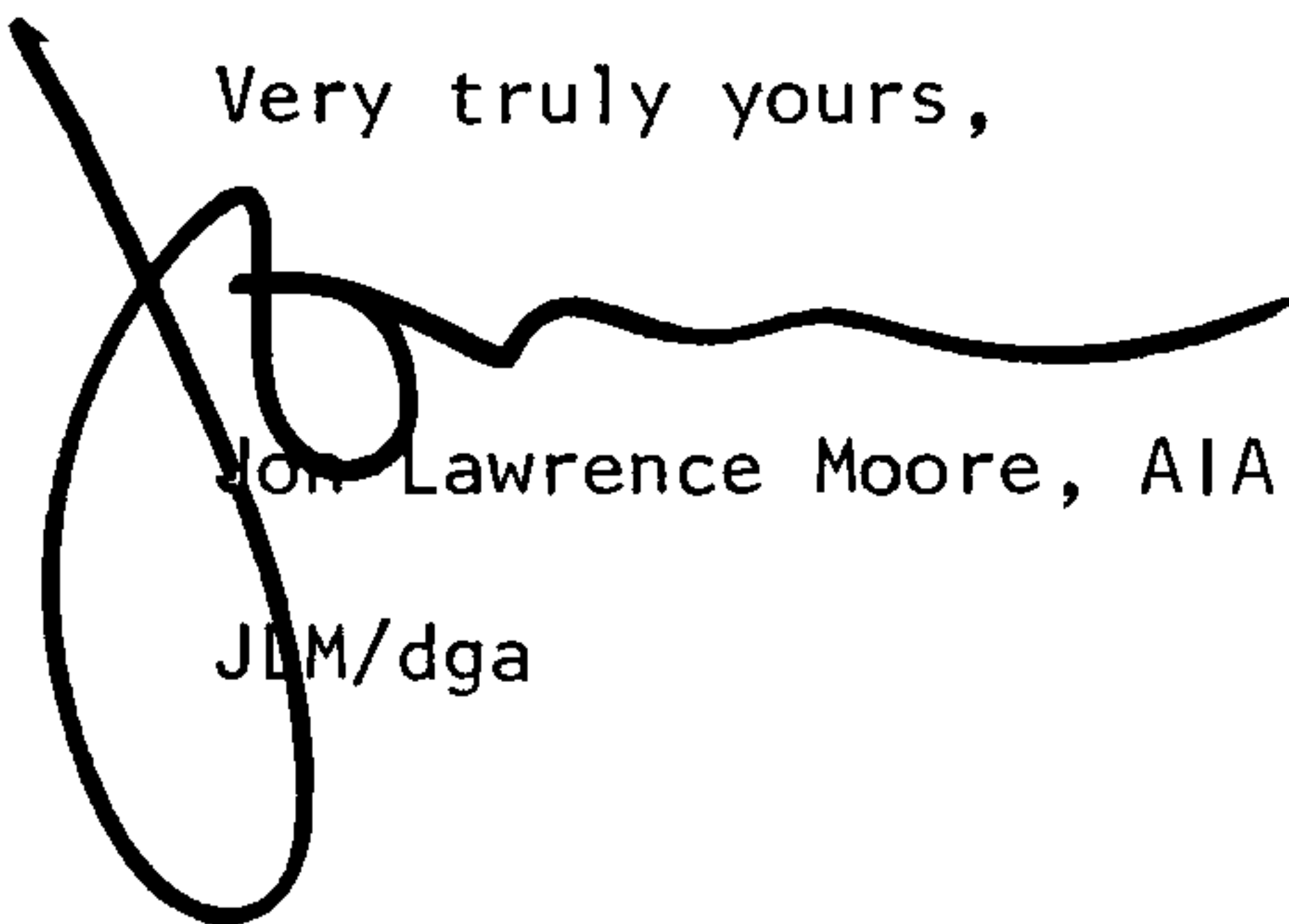
Flow thru the 3" restriction:

$$Q = 0.049 \times \frac{1.486}{0.013} \times 0.157 \times 0.071 = 0.06 \text{ cfs.}$$

Bolt a 3/8" steel plate with a 3" drain hole on the end of the existing 6" storm drain line. Off-center hole to provide a continuous flowline.

If you have further questions please call at your earliest convenience.

Very truly yours,

A large, stylized handwritten signature in black ink, appearing to read 'Jon Lawrence Moore', is written over the typed name and initials.

Jon Lawrence Moore, AIA

JLM/dga

INFORMATION SHEET

PROJECT TITLE <u>AMERICAN FINANCIAL CENTER</u>	TYPE OF SUBMITTAL <u>DRAINAGE PLAN</u>
ZONE ATLAS PAGE NO. <u>H-19-2</u> ^{D/A}	CITY ADDRESS <u>2400 LOUISIANA BLVD N.E., CITY 87110</u>
LEGAL DESCRIPTION <u>LOT 5, BLOCK C, LOUISIANA SUBDIVISION</u>	
ENGINEERING FIRM <u>CHAVEZ-GRIEVES CONSULT.ENGRS</u>	CONTACT <u>VICTOR J. CHAVEZ</u>
ADDRESS <u>4520 MONTGOMERY N.E., CITY 87109</u>	PHONE <u>(505) 881-7376</u>
OWNER <u>JACK M. CLIFFORD & CO.</u>	CONTACT <u>LARRY ADAMS</u>
ADDRESS <u>P.O. BOX 35640 STATION D, CITY 87176</u>	PHONE <u>(505) 345-9011</u>
ARCHITECT <u>W.C. KRUGER & ASSOCIATES</u>	CONTACT <u>PHIL CUSTER</u>
ADDRESS <u>P.O. BOX 1084, CITY 87103</u>	PHONE <u>(505) 842-8663</u>
SURVEYOR <u>HALL SURVEYING CO.</u>	CONTACT <u>VERLON E. HALL</u>
ADDRESS <u>2625 PENNSYLVANIA AVE. N.E., CITY</u>	PHONE <u>(505) 884-6200</u>
CONTRACTOR <u>WESTERN EMPIRE CONSTRUCTORS, INC.</u>	CONTACT <u>MARK SHUMATE</u>
ADDRESS <u>4200 OSUNA N.E., CITY</u>	PHONE <u>(505) 345-2501</u>

PRE-DESIGN MEETING:

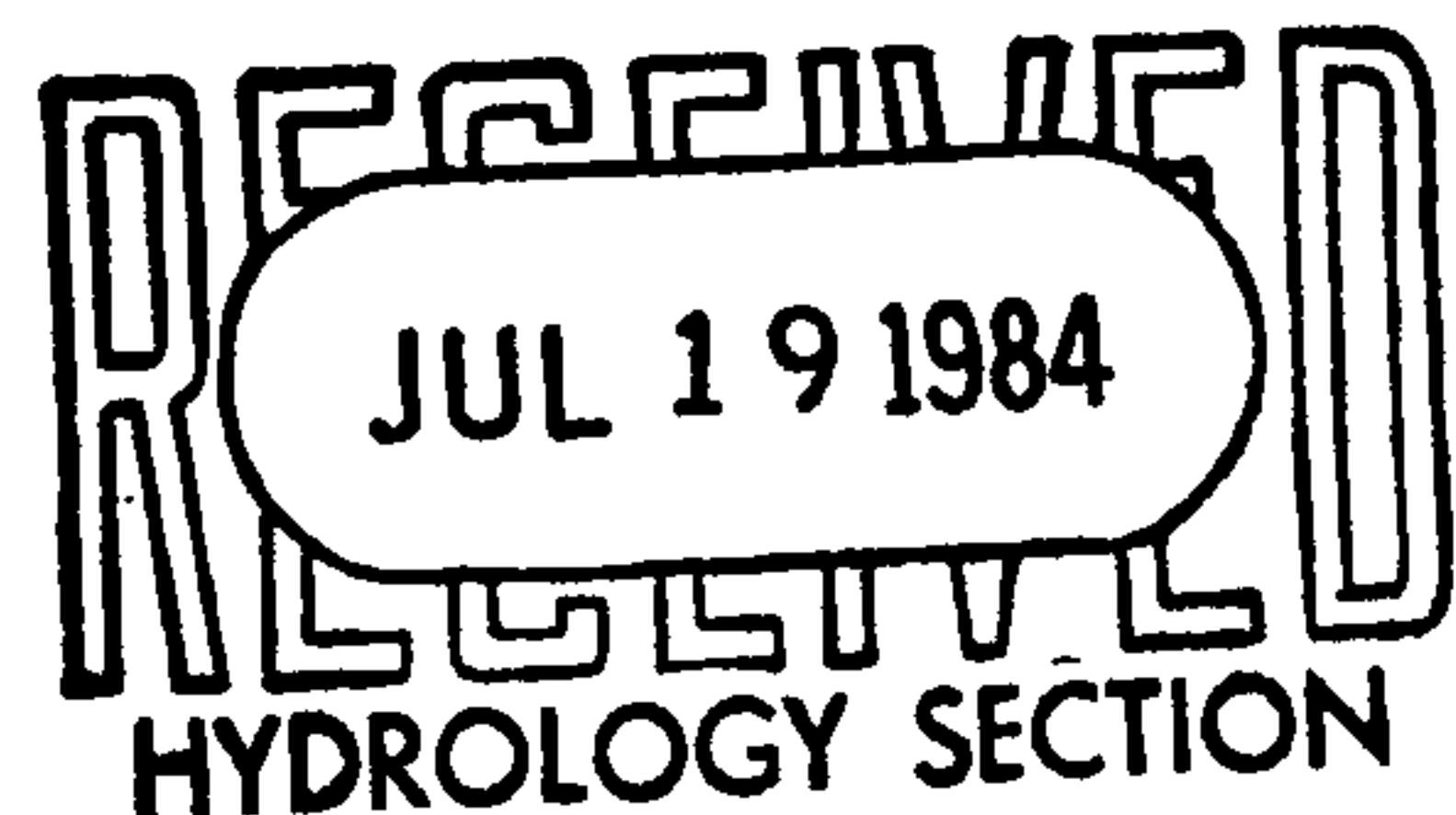
☐ YES
☐ NO
☒ COPY OF CONFERENCE RECAP SHEET PROVIDED

PLEASE CHECK TYPE OF APPROVAL EXPECTED WITH THIS SUBMITTAL

☐ SKETCH PLAT APPROVAL
☐ PRELIMINARY PLAT APPROVAL
☐ SITE DEVELOPMENT PLAN APPROVAL
☐ FINAL PLAT APPROVAL
☒ BUILDING PERMIT APPROVAL
☐ CERTIFICATE OF OCCUPANCY APPROVAL
☐ ROUGH GRADING PERMIT APPROVAL
☐ GRADING/PAVING PERMIT APPROVAL
☐ OTHER _____ (SPECIFY)

DATE SUBMITTED 7/18/84

BY: VICTOR J. CHAVEZ, P.E.





**CHAVEZ
GRIEVES / CONSULTING ENGINEERS, INC.**

4520 MONTGOMERY BLVD., SUITE 3
ALBUQUERQUE, N.M. 87109
(505) 881-7376

LETTER OF TRANSMITTAL

TO: THE CITY OF ALBUQUERQUE
HYDROLOGY DEPT.

DATE: JULY 18, 1984
JOB NO. K01-115-50
RE: AMERICAN FINANCIAL CENTER

GENTLEMEN:

H 1901A

We are sending you ☒ ATTACHED ☐ UNDER SEPARATE COVER the following items:

☐ SHOP DRAWINGS	☐ CHANGE ORDER	☐ SPECIFICATIONS
☒ COPY OF LETTER	☐ PLANS	☐
☒ PRINTS	☐ SAMPLES	☐

COPIES	DATE	NO.	DESCRIPTION
1			INFORMATION SHEET
1			CONFERENCE RECAP SHEET
2			DRAINAGE PLAN

THESE ARE TRANSMITTED as checked below:

☒ FOR APPROVAL	☐ RETURNED FOR CORRECTIONS
☐ FOR YOUR USE	☐ RESUBMIT ☐ COPIES FOR APPROVAL
☐ AS REQUESTED	☐ SUBMIT ☐ COPIES FOR DISTRIBUTION
☐ FOR REVIEW AND COMMENT	☐ RETURN ☐ CORRECTED PRINTS
☐ APPROVED AS SUBMITTED	☐ PRINTS RETURNED AFTER LOAN TO US
☐ APPROVED AS NOTED	☐ FOR BIDS DUE ☐ 19 ☐

REMARKS:

RECEIVED
JUL 19 1984
HYDROLOGY SECTION

COPY TO: FILE

SIGNED: VICTOR J. CHAVEZ, P.E.

If enclosures are not as noted, kindly notify us at once.

INFORMATION SHEET

PROJECT TITLE AMERICAN FINANCIAL CENTER #5 TYPE OF SUBMITTAL GRADING & DRAIN

ZONE ATLAS PAGE NO. H-192 CITY ADDRESS 2400 LOUISIANA

LEGAL DESCRIPTION LOUISIANA SUBD. BLOCK C, LOT 5

ENGINEERING FIRM BOHANNAN HUSTON ~~W C KRUEGAR~~ CONTACT DAVID MALLIKAN

ADDRESS 4125 CARLISLE PHONE _____

OWNER JACK M CLIFFORD CONTACT _____

ADDRESS 2400 LOUISIANA PHONE _____

ARCHITECT W C KRUEGAR CONTACT PHIL CUSTER

ADDRESS BANK OF NM BUDG PHONE 842 8663

SURVEYOR VERLON HALL SURVEY CONTACT VERLON HALL

ADDRESS 2625 PENNSYLVANIA PHONE 884 - 6200

CONTRACTOR WESTERN EMPIRE CONTACT JIM COX, MARK SHUMATE

ADDRESS 2400 LOUISIANA PHONE 888 5845

PRE-DESIGN MEETING:

- ☐ YES
☐ NO
☐ COPY OF CONFERENCE RECAP SHEET PROVIDED

PLEASE CHECK TYPE OF APPROVAL EXPECTED WITH THIS SUBMITTAL:

- ☐ SKETCH PLAT APPROVAL
☐ PRELIMINARY PLAT APPROVAL
☒ SITE DEVELOPMENT PLAN APPROVAL
☐ FINAL PLAT APPROVAL
☐ BUILDING PERMIT APPROVAL
☐ CERTIFICATE OF OCCUPANCY APPROVAL
☒ ROUGH GRADING PERMIT APPROVAL
☒ GRADING/PAVING PERMIT APPROVAL
☒ OTHER FOUNDATION PLAN (SPECIFY)

Approved
6/29/84

RECEIVED
JUN 25 1984
HYDROLOGY SECTION

DATE SUBMITTED: _____

BY: _____



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

FILE COPY

DESIGN HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

April 13, 1984

Mr. Victor Chavez
Chavez-Grieves
4520 Montgomery Boulevard Suite 3
Albuquerque, NM 87109

REF: AMERICAN FINANCIAL CENTER-BUILDING #5 (H19-D1) RECEIVED
MARCH 30, 1984

Dear Vic:

Prior to issuance of a building permit for the above referenced site, a copy of the approved plan will need to be attached to the construction set.

Also, this office will require that your client's engineer provide certification that the site is constructed according to and in compliance with the approved plan.

Should you have any questions or comments, please contact me at 766-7644.

Yours truly,

Billy J. Goolsby, PE
City/County Flood Plain Admin.

BJG:mrk

MUNICIPAL DEVELOPMENT DEPARTMENT

C. Dwayne Sheppard, P.E., City Engineer

ENGINEERING DIVISION

Telephone (505) 766-7467

AN EQUAL OPPORTUNITY EMPLOYER



**CHAVEZ
GRIEVES / CONSULTING ENGINEERS, INC.**

4520 MONTGOMERY BLVD., SUITE 3
ALBUQUERQUE, N.M. 87109
(505) 881-7376

March 28, 1984

Mr. Bill Goolsby
The City of Albuquerque
Hydrology Department
P. O. Box 1293
Albuquerque, New Mexico 87103

RE: AMERICAN FINANCIAL CENTER - BUILDING #5

Dear Billy:

As a result of our meeting on March 26, 1984, it is my understanding that a new drainage plan will not be required for the above-referenced project. It will be necessary, however, to comply with the previously approved plan titled "American Financial Center Drainage Plan" and assigned file No. H19-D1. ■

It is also my understanding that the facilities shown on the referenced plan are adequate and it will not be necessary to re-create the previously submitted hydrologic or hydraulic calculations, but it will be necessary to show that the original sub-basins, coefficients of runoff and grading parameters, are satisfied.

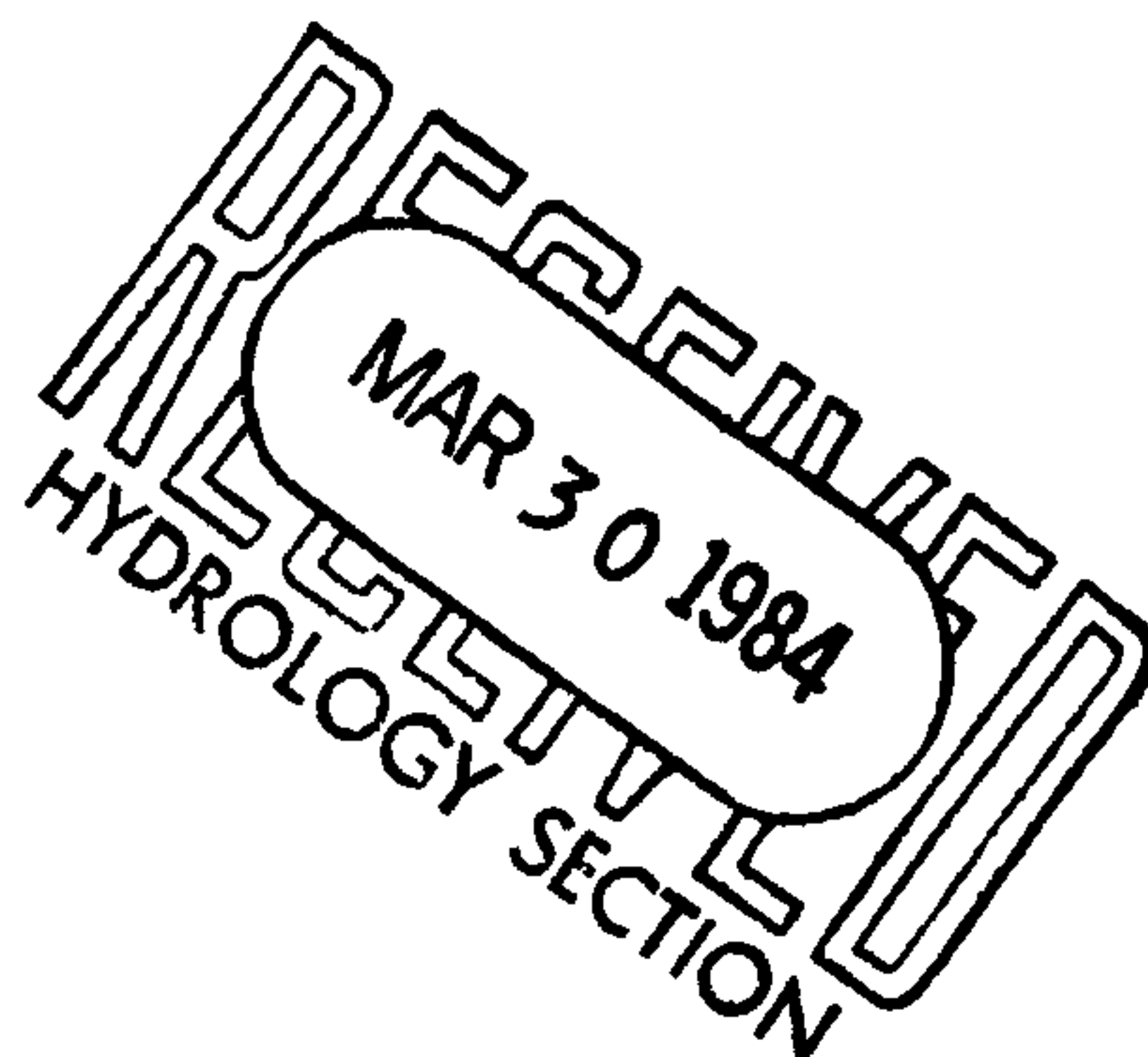
If these requirements are satisfactory, please indicate by signing the attached copy and returning to this office.

Sincerely,

CHAVEZ-GRIEVES CONSULTING ENGINEERS, INC.

Victor J. Chavez
Victor J. Chavez, P.E.

VJC:mf





January 5, 1976

Mr. Kleston H. Laws
Assistant City Engineer, Hydrology
City of Albuquerque
P.O. Box 1293
Albuquerque, New Mexico 87103

Re: Drainage Report, American Plaza Shopping Center

Dear Mr. Laws:

This letter is in response to your verbal comments on the referenced drainage report concerning the orifice and drain configuration and upland flows which could potentially affect the property.

Shown on sheet one of the computations is a preliminary sketch of the proposed drain and orifice plate configuration, along with the orifice equation used to describe its performance in the computer analysis. Adjusting the orifice datum location from the surface of the parking lot to .3 feet below the surface so that a protective grate could be employed required that an adjustment be made to the orifice opening. The six inch diameter was reduced to five inches. Shown on sheet two of the computations are the performance characteristics of the two orifice plates at their respective datums. The performance characteristics are essentially the same for depths of water above the grates that will be experienced during the 100 year storm. We reran area A4 with the slightly revised stage discharge characteristics of the five inch orifice and have included it for your review. As you can see, the results are essentially identical.

Upland flows which can affect the site would flow onto Prospect Place at its intersection with Chama. These flows could reach this intersection off of Menaul by way of Mesilla, Prospect Avenue, and Chama. In addition, a small amount of water reaches this intersection as localized runoff from the area west of Pennsylvania Avenue.

Field inspection of the streets along the south side of Menaul between Louisiana Boulevard and Wyoming Boulevard indicated that many of them would potentially allow water to flow south off of Menaul if an extremely heavy flow was experienced on Menaul. Mesilla is one of these streets.

Mr. Kleston H. Laws
January 5, 1976
Page 2

To quantify the amount of water that reaches the intersection of Chama and Prospect via Mesilla is difficult. Determining the quantity of water that will be turned 90° off of Menaul as it travels past at high velocity would result in uncertain answers due to the many and varied assumptions that would have to be made. Even determining the amount of water on Menaul at Mesilla would be difficult, due to the numerous streets similar to and east of Mesilla which could potentially pirate flows from Menaul.

For the above reasons, it was determined that actions should be taken to prevent flooding of the subject property if extreme flows should be experienced on Prospect at its intersection with Chama. To accomplish this, the height of the water block at the north entrance was increased to 98.4 feet; and the retaining wall already anticipated along the north boundary of the project was increased to a comparable elevation as shown on the modified copy of sheet 1 of 3. This will allow water to pond in the intersection and move west on Prospect to Louisiana. Computations show that approximately 700 cfs could flow west on Prospect without entering the site (see computations). It appears unlikely that this magnitude of flow would be experienced at this location.

I hope this additional data will aid in your review of the drainage plan, and I hope to hear from you soon concerning its approval. We are anxious to begin rough grading of the site for marketing purposes.

Sincerely,



Michael M. Emery
Chief Design Engineer

Enclosures

cc: Jack M. Clifford and Company
Attention: Mr. Vern Hagen

MME/sh
Job Number E75-231

Received 11 Dec 75

December 11, 1975

Mr. Kleston H. Laws
Assistant City Engineer, Hydrology
City of Albuquerque
P.O. Box 1293
Albuquerque, New Mexico 87103

Re: Drainage Study for the Proposed American Plaza Complex

Dear Mr. Laws:

Enclosed for your review are three copies of the referenced drainage study. The study demonstrates the effectiveness and method by which drainage from the parcel will be controlled to levels that exist before development.

If the method of handling internal drainage is satisfactory and concern about upland flows still exists, we would be anxious to further discuss this aspect with you.

Sincerely yours,


Michial M. Emery
Chief Design Engineer

Enclosures

MME/sh
Job Number E75-231

BOHANNAN WESTMAN HUSTON & ASSOCIATES INC.



4125 CARLISLE BLVD., N.E.
ALBUQUERQUE, NEW MEXICO 87107
PHONE 505 345-2681