CITY OF
Albuquerque

Martin J. Chávez, Mayor

October 8,1997

Diane Hoelzer
D. Mark Goodwin & Associates
P.O. Box 90606
Albuquerque, New Mexico 87199

K-9/D23

RE: REVISED DRAINAGE PLAN FOR CLIFFORD WEST BUSINESS PARK ~~(K10/D23)~~
REVISION DATED 9/12/97

Dear Ms. Hoelzer:

Based on the information provided on your September 15,1997 resubmittal, the above referenced site is approved for Preliminary and Final Plat.

Also, please be advised that a site specific drainage plan for each lot will be required prior to Building Permit release.

If I can be of further assistance, please feel free to contact me at 924-3986.

C: Andrew Garcia
File

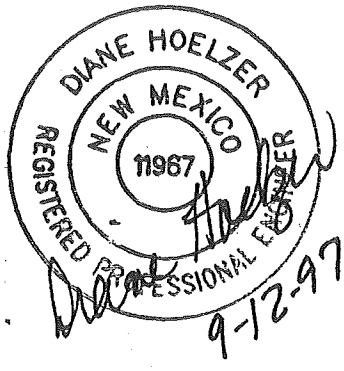
Sincerely

Bernie J.Montoya CE
Associate Engineer

DRAINAGE REPORT
for
CLIFFORD WEST BUSINESS PARK

MARK GOODWIN & ASSOCIATES
CONSULTING ENGINEERS
dmg

DRAINAGE REPORT
for
CLIFFORD WEST BUSINESS PARK



SEPTEMBER 1997

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D. Mark Goodwin & Associates, P.A.
Consulting Engineers

P.O. BOX 90606, ALBUQUERQUE, NM 87199
(505) 828-2200 FAX 797-9539
e-mail: dmg@swcp.com

September 12, 1997

Mr. Bernie Montoya
City of Albuquerque
One Stop - Hydrology Dept.
P.O. Box 1293
Albuquerque, NM 87199

K-9/D23

Re: ***Clifford West Business Park Grading and Drainage Plan ~~(K10-D23)~~***
Engineer's stamp 9-12-97

Dear Mr. Montoya:

This letter is in response to you concerns addressed in your letter dated September 2, 1997.

1. *The stub-outs for each lot will extend from a manhole in the main storm drain to the property line. As each lot develops a detention pond and a restrictive outfall structure will be constructed on site. I met with Glenn Jurgensen and have included his written concurrence with this drainage plan.*

2. *The proposed drainage easement has been extended into lot 9 as reflected on the revised G&D plan.*

3. *All easements have been identified on the revised grading and drainage plan.*

4. *There are no proposed inlets on Unser Blvd. There are existing inlets in Unser Blvd. This drainage plan is to tap into the existing inlets and extend an 18" SD to the property line and discharge directly into the main storm drain in Unser Blvd.* 12"

5. *The 20' public drainage easements have been changed to 10' private drainage easements.*

6. *Top of curb data has been added to the revised grading and drainage plan.*

7. *All contours on the grading and drainage plan are existing contours. A grading permit is not being sought with this submittal. Grading permits will be sought when individual grading and drainage plans are submitted for each lot.*

8. *I spoke with Richard Dourte and he has no problem with the temporary drainage swale within the right of way. I revised the offsite drainage basin area that contributes runoff to Los Volcanes Road and have provided more detail on the G & D Plan for the temporary swale and temporary spillway into Los Volcanes.*

9. *I have included a copy of the revised infrastructure list with this submittal.*

D. Mark Goodwin & Associates, P.A.
Consulting Engineers

P.O. BOX 90606, ALBUQUERQUE, NM 87199
(505) 828-2200 FAX 797-9539
e-mail: dmg@swcp.com

10. I have added a note on the grading and drainage plan that addresses the use of temporary erosion and sediment control berms and temporary diversion swales.

If you have any questions, please call me.

Sincerely,

MARK GOODWIN AND ASSOCIATES, P.A.

Diane Hoelzer, P.E.

DLH:sb

Attachment

b:\clifford\drainage.ltr

CITY OF
Albuquerque

Martin J. Chávez, Mayor

September 2,1997

Diane Hoelzer
D. Mark Goodwin & Associates
P.O. Box 90606
Albuquerque, New Mexico 87199

K-9/D23

RE: DRAINAGE PLAN FOR CLIFFORD WEST BUSINESS PARK (~~K10-D22~~) ENGINEER'S STAMP DATED 7/30/97

Dear Ms. Hoelzer:

Based on the information provided on your July 30,1997 submittal, listed are some concerns that will need to be addressed prior to Preliminary Plat and Grading approval:

1. Where do you propose to install the stub-outs from each lot ? Glenn Jurgensen from Arroyo Maintenance will need to review your concept.

2. You will need to extend the proposed drainage easement further into lot 9 .

3. Please identify all the easements shown on the plan drawing.

4. Proposed inlets on Unser must be "A"s .

5. Proposed drainage easements must be private.

6. Top of curb and flowline elevations on all the streets.

7. Please label the existing contours and the proposed if you are also seeking a Grading Permit.

8. What type of erosion and sediment control do you propose within the proposed 12" inch deep detention ditch on the south side of Los Volcanes Rd.. You will need Traffics concurrence.

9. Copy of the new infrastructure list.

If I can be of further assistance, please feel free to contact me at 924-3986.

C: Andrew Garcia
File

Sincerely

Bernie J. Montoya CE
Associate Engineer

I. LOCATION AND DESCRIPTION

The proposed Clifford West Business Park , which was part of the larger Atrisco Business Park is comprised of approximately 52.2 acres and is located south of I-25, just west of Unser Blvd. between Los Volcanes Road and Bluewater Road. Proposed development includes the infrastructure to support the individual development of 29 commercial sites.

The topographic relief in the area is in an southeasterly direction at a slope of approximately 2.0 percent.

The FEMA map indicates that a portion of the site is within the 100-year floodplain. Presently AMAFCA is working on a LOMR for the Unser Diversion. The Unser Diversion infrastructure has been built.

II. DRAINAGE DESIGN CRITERIA AND ASSUMPTIONS

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 drainage management plan for this site is based entirely on the previously approved Atrisco Business Park Master Drainage Plan for fully developed conditions dated October 22, 1993. In accordance with that plan the allowable discharge from this site is 56.6 cfs and the 100-year peak discharge from this site is 217.1 cfs. These two values are the basis for all the drainage calculations in this report.

IV. EXISTING DRAINAGE CONDITIONS

Under existing drainage conditions, on-site runoff flows in a southeasterly direction. All of these flows are intercepted by either Unser Blvd. or Bluewater Road. There is an existing swale on this site just north of Bluewater Road that intercepts flows and conveys the runoff to the east toward Unser Blvd. After some ponding the flows spill over into Unser Blvd. at the intersection with Bluewater Road.

Off-site flows along the east and south property line continue in the southeasterly direction, away from the project site. Off-site flows north of the project site flow in a southeasterly direction through the site. All flows west of the site are intercepted by the Unser Diversion facility.

There is an existing storm drain in Unser Blvd. that includes stub-outs in Los Volcanes Road and Bluewater Road and four inlets in the west flowline of Unser Blvd. This system includes two inlets at the intersection of Los Volcanes Rd./Unser Blvd. and four inlets at the intersection of Bluewater Road/Unser Bvld.

V. PROPOSED DRAINAGE CONDITIONS

A. MASTER DRAINAGE PLAN

For this drainage plan the primary drainage requirement is that every individual commercial site will be required to retain a certain amount of their runoff on-site and all runoff from the site must discharge directly into the adjacent storm drain. The allowable discharge from each lot within the project site was calculated based on the approved master drainage plan for Atrisco Business Park and is summarized in a Table in Figure 3 and shown on the grading and drainage plan. Drainage calculations are in the Appendix A Hydrology.

The storm drain in Bluewater Road will be extended west to the Unit 1/3 boundary divide and in Oliver Ross Road and Saul Bell Road within the project site. Storm drain stub-outs will be provided to the property line for each of the 29 lots. Four 18" storm drain laterals will be extended from the existing inlets in Unser Blvd. to the property line to allow direct discharge from the seven properties adjacent to Unser Blvd. The storm drain in

Bluewater will include four stub-outs to the property line to service those lots that drain in a southerly direction.

Street flows in Los Volcanes Road will be intercepted by the existing inlets at the Unser Blvd. Intersection. Street flows in Bluewater Road will be intercepted by the existing inlets at the intersection of Unser Blvd. Street flows in Saul Bell Road will be intercepted by two new inlets located just west of the Unser Blvd. intersection.

Off-site flows originating from the west are intercepted by the Unser Diversion Facility. Off-site flows originating from the north will be intercepted by a temporary drainage swale located within the public right-of-way along the north side of Los Volcanes Road before discharging into the street at the intersection of Unser Blvd. and Los Volcanes Road. The profile for Los Volcanes road is being constructed lower than the surrounding area to help prevent the possibility of offsite flows originating from the north from entering the project site as it is developing.

The Atrisco Business Park Master Plan Fully Developed Conditions exhibit is included in the back pocket of this report to facilitate in the understanding of the big picture for development of the area. Another close up exhibit of the area and the drainage basin areas used in the master plan is included in Appendix A Hydrology.

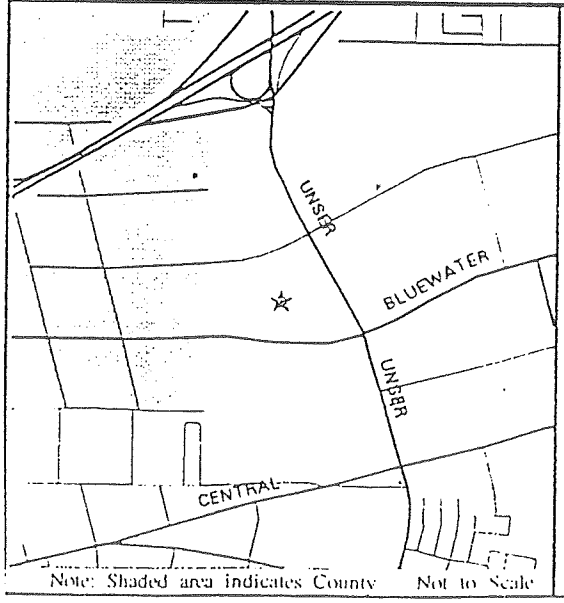
TABLE 1

SUMMARY OF STREET CAPACITY AND INLET CALCULATIONS

Clifford West Industrial Park

LOCATION	LOCATION	WIDTH ft.	SLOPE %	Q cfs	DEPTH ft	Q per INLET cfs	# of INLETS	REMAIN Q (cfs)	ADDITIONAL Q (cfs)
Oliver Ross Rd	@ Bluewater	40' FF	1.54	7.88	0.31	2.50	2	2.88	—
Saul Bell Rd	@ Unser	40' FF	0.60	4.24	0.29	1.65	2	0.94	—
Bluewater	@ Unser	40' FF	2.00	12.81	0.34	3.80	2	5.21	—
Bluewater	@ Unser	40' FF	0.005	5.21	0.32	1.90	2	1.41	—

f:\clifford.wst\condition.tbl



Note: Shaded area indicates County Not to Scale

LAND USE MAP

KEY to Land Use Abbreviations

AGRI Agricultural
COMM Commercial - Retail, Service, Wholesale
DRNG Drainage
EDUC Public or Private School
GOLF Golf Course
MED Medical Office or Facility
MFG Manufacturing or Mining
MH Mobile Home
MULT Multi-Family or Group Home
OFF Office
ORG Social or Civic Organization
PARK Park, Recreation or Open Space
PRKG Parking
PUBF Public Facility
RELG Religious Facility
SF Single Family
TRAN Transportation Facility
UTIL Utility
VAC Vacant Land or Abandoned Bldgs
WH Warehousing & Storage

A G I S

Scale 1" = 400'

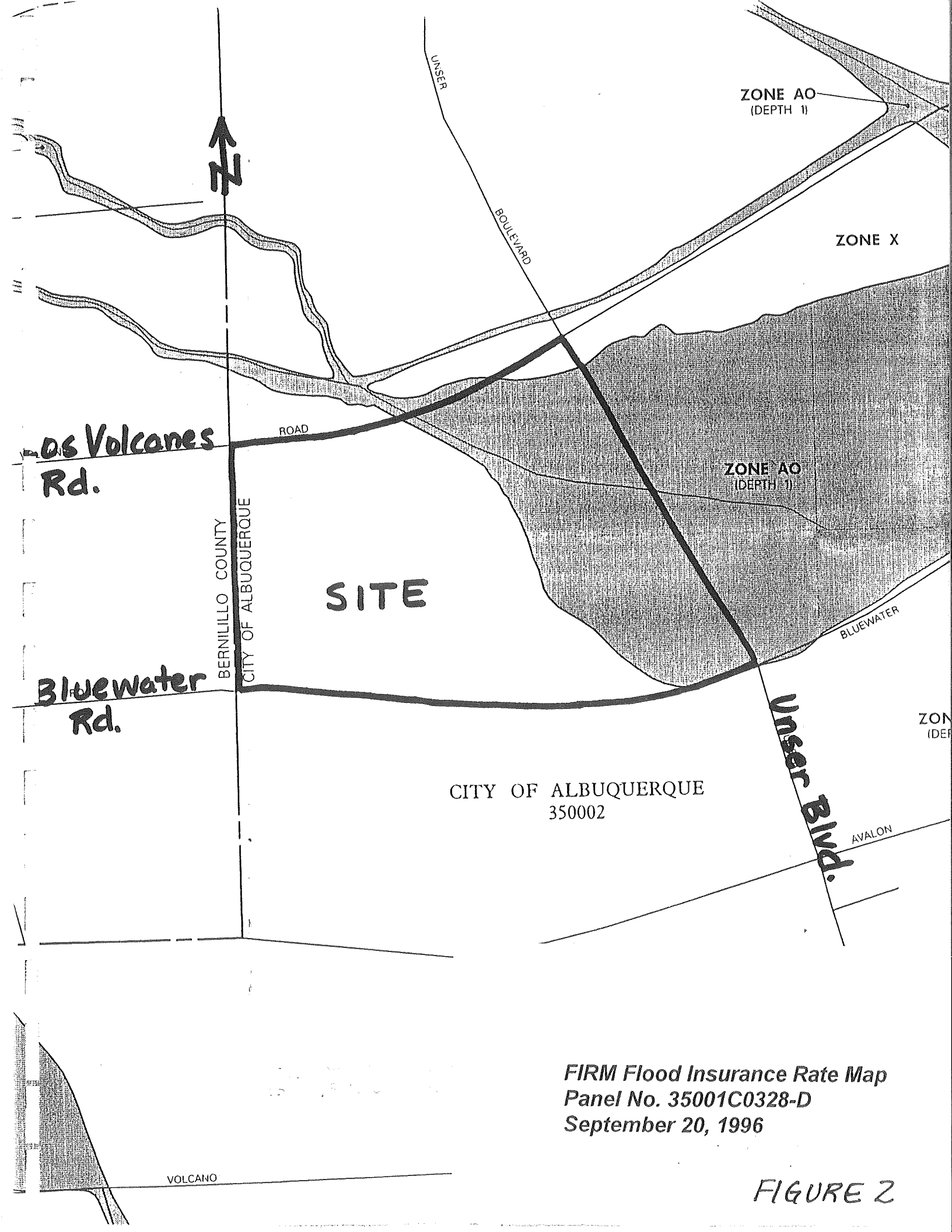
CASE PLANNER

HEARING DATE
1-16-97

MAP NO.
K-9/K-10

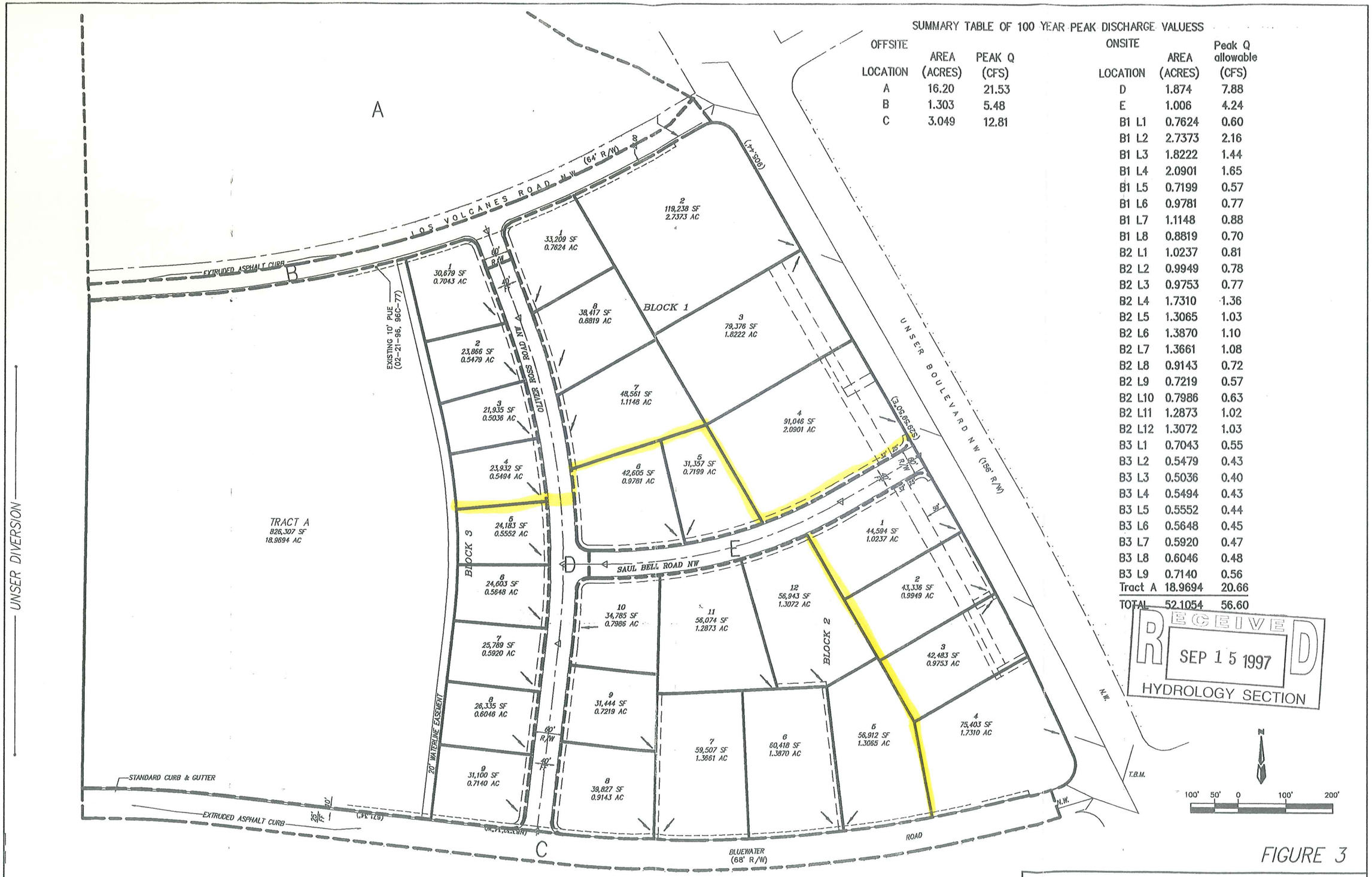
FILE NO.
Z-97-11

FIGURE 1



FIRM Flood Insurance Rate Map
Panel No. 35001C0328-D
September 20, 1996

FIGURE 2



SUMMARY TABLE OF 100 YEAR PEAK DISCHARGE VALUESS

OFFSITE LOCATION	AREA (ACRES)	PEAK Q (CFS)
A	16.20	21.53
B	1.303	5.48
C	3.049	12.81

ONSITE LOCATION	AREA (ACRES)	Peak Q allowable (CFS)
D	1.874	7.88
E	1.006	4.24
B1 L1	0.7624	0.60
B1 L2	2.7373	2.16
B1 L3	1.8222	1.44
B1 L4	2.0901	1.65
B1 L5	0.7199	0.57
B1 L6	0.9781	0.77
B1 L7	1.1148	0.88
B1 L8	0.8819	0.70
B2 L1	1.0237	0.81
B2 L2	0.9949	0.78
B2 L3	0.9753	0.77
B2 L4	1.7310	1.36
B2 L5	1.3065	1.03
B2 L6	1.3870	1.10
B2 L7	1.3661	1.08
B2 L8	0.9143	0.72
B2 L9	0.7219	0.57
B2 L10	0.7986	0.63
B2 L11	1.2873	1.02
B2 L12	1.3072	1.03
B3 L1	0.7043	0.55
B3 L2	0.5479	0.43
B3 L3	0.5036	0.40
B3 L4	0.5494	0.43
B3 L5	0.5552	0.44
B3 L6	0.5648	0.45
B3 L7	0.5920	0.47
B3 L8	0.6046	0.48
B3 L9	0.7140	0.56
Tract A	18.9694	20.66
TOTAL	52.1054	56.60

FIGURE 3

CLIFFORD WEST BUSINESS PARK
DRAINAGE BASIN BOUNDARIES
AND ALLOWABLE DISCHARGES

6135CLIF\CLIFEX3\9-12-97\DLH

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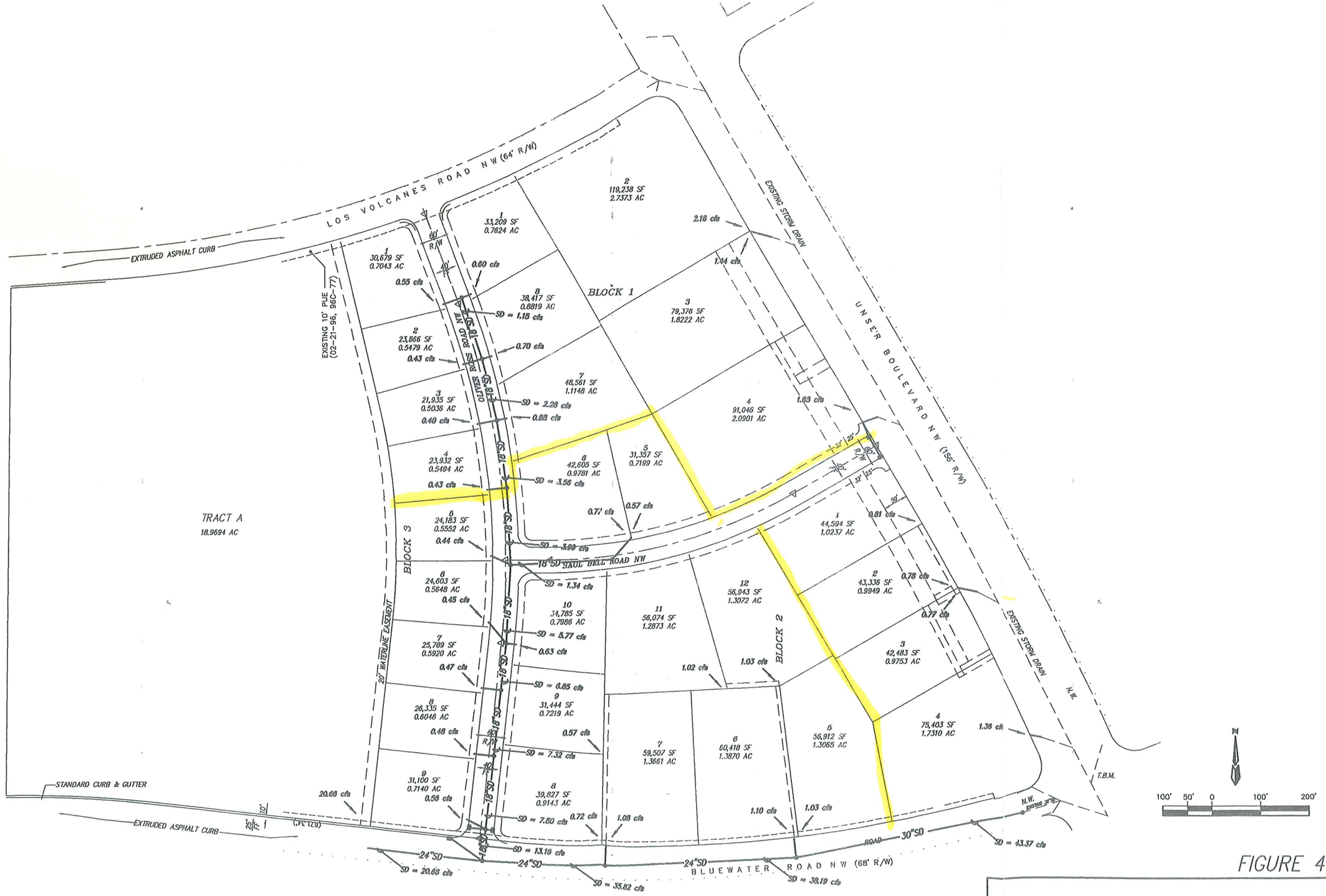

FIGURE 4

CLIFFORD WEST BUSINESS PARK
STORM DRAIN SCHEMATIC

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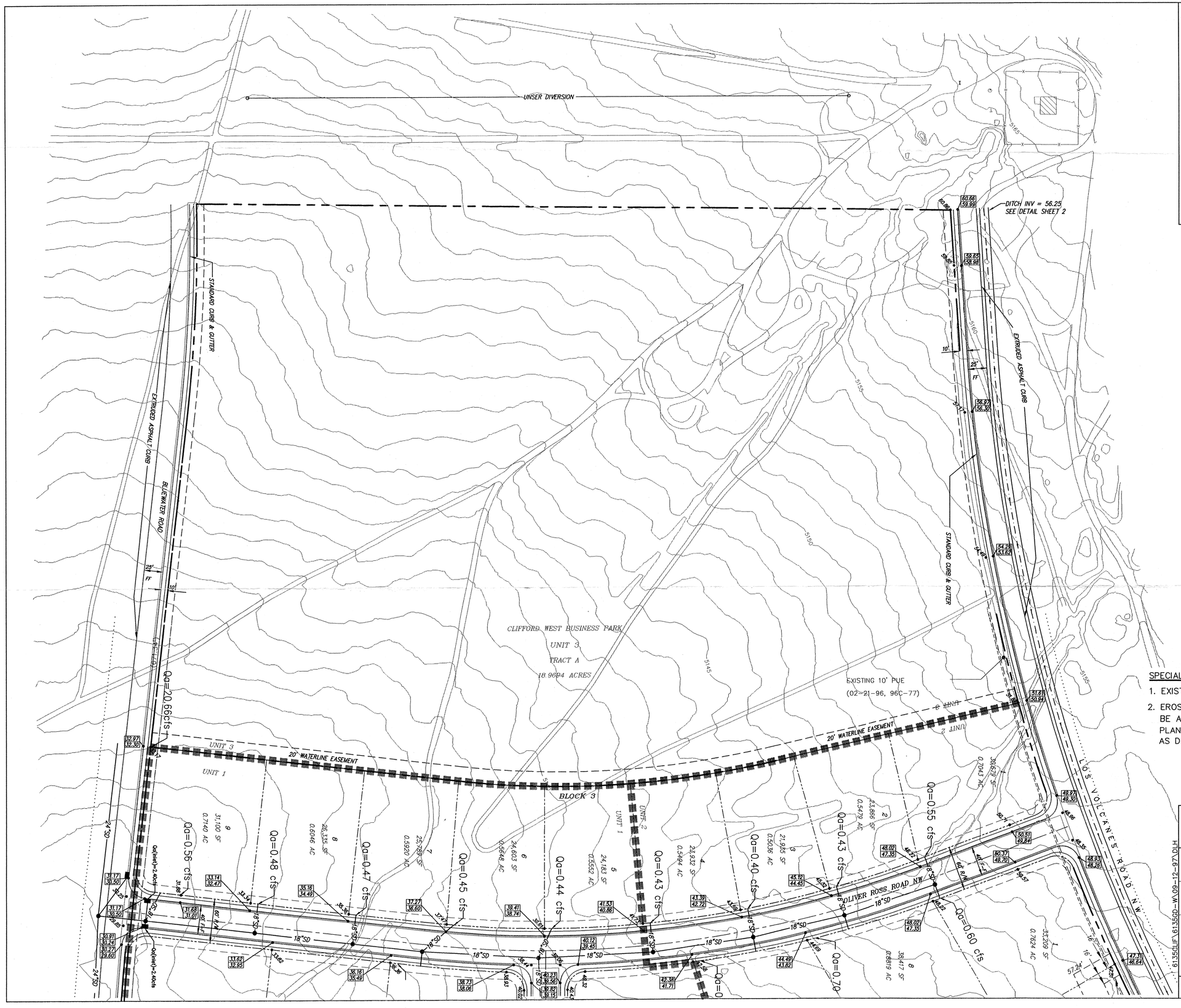

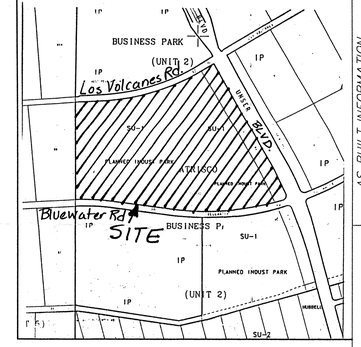

VICINITY MAP ZONE MAP: K-9,10

TBM (TEMPORARY BENCHMARK)

NORTH RIM OF MANHOLE LOCATED AT THE INTERSECTION OF UNSER BOULEVARD AND BLUEWATER ROAD NW ELEVATION= 5115.73

LEGAL DESCRIPTION

ATRISCO BUSINESS PARK UNIT NO. 2 TRACT K-1 AND UNSER DIVERSION CHANNEL CORRIDOR TRACT J-1 TOWN OF ATRISCO GRANT NOVEMBER, 1996.

LEGEND

Qa	ALLOWABLE DISCHARGE FROM LOT
	MOUNTABLE CURB & GUTTER
	STANDARD 8" CURB & GUTTER
28.53 •	PROPOSED SPOT ELEVATION
	3:1 SLOPE
—SD—	PROPOSED STORM DRAIN LINE
	PROPOSED SWALE
	LIMITS OF LAND DISTURBANCE
– 5135 –	EXISTING CONTOUR
TC= / FL=	EXISTING TOP OF CURB / EXISTING FLOWLINE
x 00.00	EXISTING SPOT ELEVATION
	EXISTING CURB AND GUTTER
	EXISTING SANITARY SEWER MANHOLE
	EXISTING CABLE T.V. PEDESTAL
	EXISTING WATER VALVE
—E—	EXISTING OVERHEAD ELECTRIC LINE
—T—	EXISTING OVERHEAD TELEPHONE LINE
	EXISTING POWER POLE
	EXISTING TELEPHONE PEDESTAL
	EXISTING FIRE HYDRANT
SMH	EXISTING STORM SEWER MANHOLE
	EXISTING DROP INLET
	EXISTING CONCRETE/SIDEWALK

SPECIAL NOTES:

1. EXISTING CONTOURS ARE 1.0' INCREMENTS.
2. EROSION AND SEDIMENT CONTROL PLANS WILL BE ADDRESSED IN THE DRAINAGE AND GRADING PLANS SUBMITTED TO HYDROLOGY FOR EACH LOT AS DEVELOPMENT OCCURS.

60' 30' 0 60' 120'

SCALE: 1" = 60'

AS BUILT INFORMATION
CONTRACTOR
WORK STAKED BY DATE
AS-BUILT CHECK BY
ACCEPTANCE BY DATE
FIELD LOCATION BY
DRAWINGS CORRECTED BY DATE

MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

BENCH MARKS
ACS MONUMENT LABELED "9-K10"
ELEVATION = 5114.99

SURVEY INFORMATION
FIELD NOTES
NO. BY DATE

ENGINEER'S SEAL
DANIEL HOELZER NEW MEXICO 12641 REGISTERED PROFESSIONAL ENGINEER

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	
DESIGNED BY		DLH	DATE 06-16-97
DRAWN BY		STAFF	DATE 06-16-97
CHECKED BY		DMG	DATE 06-16-97

D. MARK GOODWIN & ASSOCIATES, P.A.
CONSULTING ENGINEERS & SURVEYORS
P.O. BOX 90606
ALBUQUERQUE, NEW MEXICO 87199
(505) 828-2200

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

TITLE: *CLIFFORD WEST BUSINESS PARK GRADING AND DRAINAGE PLAN*

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.

CITY PROJECT NO. | ZONE MAP NO. K-9,10 | SHEET 1 OF 2

RECEIVED SEP 15 1997 HYDROLOGY SECTION

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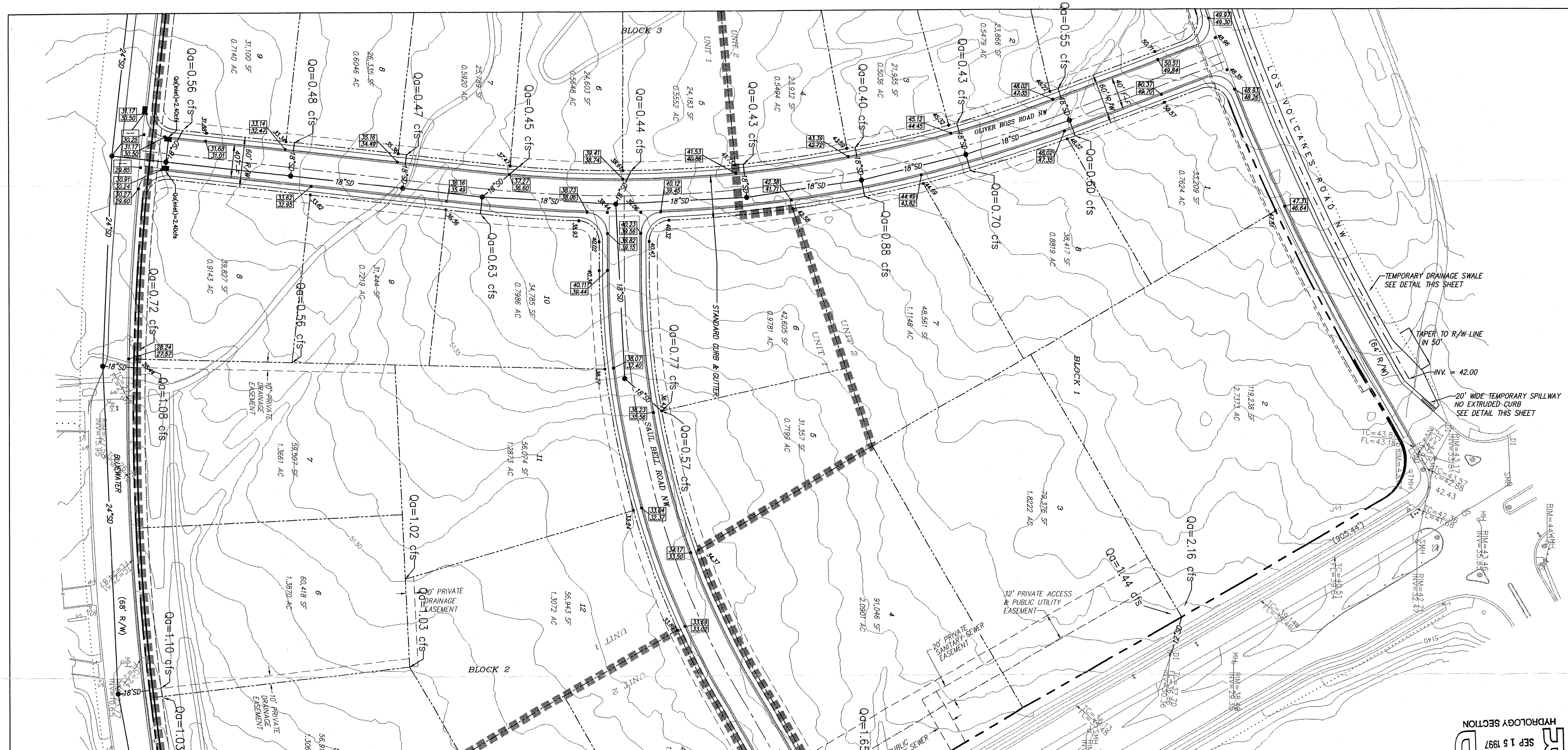


SPECIAL NOTES:

1. EXISTING CONTOURS ARE 1.0' INCREMENTS.
2. EROSION AND SEDIMENT CONTROL PLANS WILL BE ADDRESSED IN THE DRAINAGE AND GRADING PLANS SUBMITTED TO HYDROLOGY FOR EACH LOT AS DEVELOPMENT OCCURS.

RECEIVED SEP 15 1997 HYDROLOGY SECTION

60' 30' 0 60' 120'

SCALE: 1" = 60'

TEMPORARY SPILLWAY DETAIL

1.5" ASPHALT; EXTRUDED CURB 20' OPENING; POND BOTTOM; 3:1 MAX; 3'

Q=C x L x (H**1.5)
Q = 20.53 cfs
C = 2.95
L = 20'
H = 0.5'

TEMPORARY DRAINAGE SWALE DETAIL

64' R/W; 29'; 25' PAVEMENT; 10; VARIES; 4'; 6'; 4' SIDEWALK; EXISTING GROUND; 3:1 MAX; 6'; 3'; 2%; 2%; 2%; EXTRUDED CURB

NOT TO SCALE
Q=21.5 cfs
S=0.008ft/ft
D=0.73'
V=3.6 fps

dmg D. MARK GOODWIN & ASSOCIATES, P.A.
CONSULTING ENGINEERS
P.O. BOX 90606
ALBUQUERQUE, NEW MEXICO 87199
(505) 828-2200

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

TITLE: CLIFFORD WEST BUSINESS PARK
GRADING AND DRAINAGE PLAN

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	MO./DAY/YR.	MO./DAY/YR.
		LAST DESIGN UPDATE	

CITY PROJECT NO.	ZONE MAP NO.	SHEET	OF
	K-9,10	2	2

6135CLIF\6135GD-E\09-12-97\DLH

AS BUILT INFORMATION

CONTRACTOR	DATE
WORK STAKED BY	DATE
INSPECTOR'S ACCEPTANCE BY	DATE
FIELD VERIFICATION BY	DATE
DRAWINGS CORRECTED BY	DATE

MICRO-FILM INFORMATION

RECORDED BY	DATE
NO.	

BENCH MARKS

ACS MONUMENT LABELED "9-K10"
ELEVATION = 5114.99

SURVEY INFORMATION

FIELD NOTES

NO.	BY	DATE

ENGINEER'S SEAL

DUANE HOELZER NEW MEXICO 12587 REGISTERED PROFESSIONAL ENGINEER

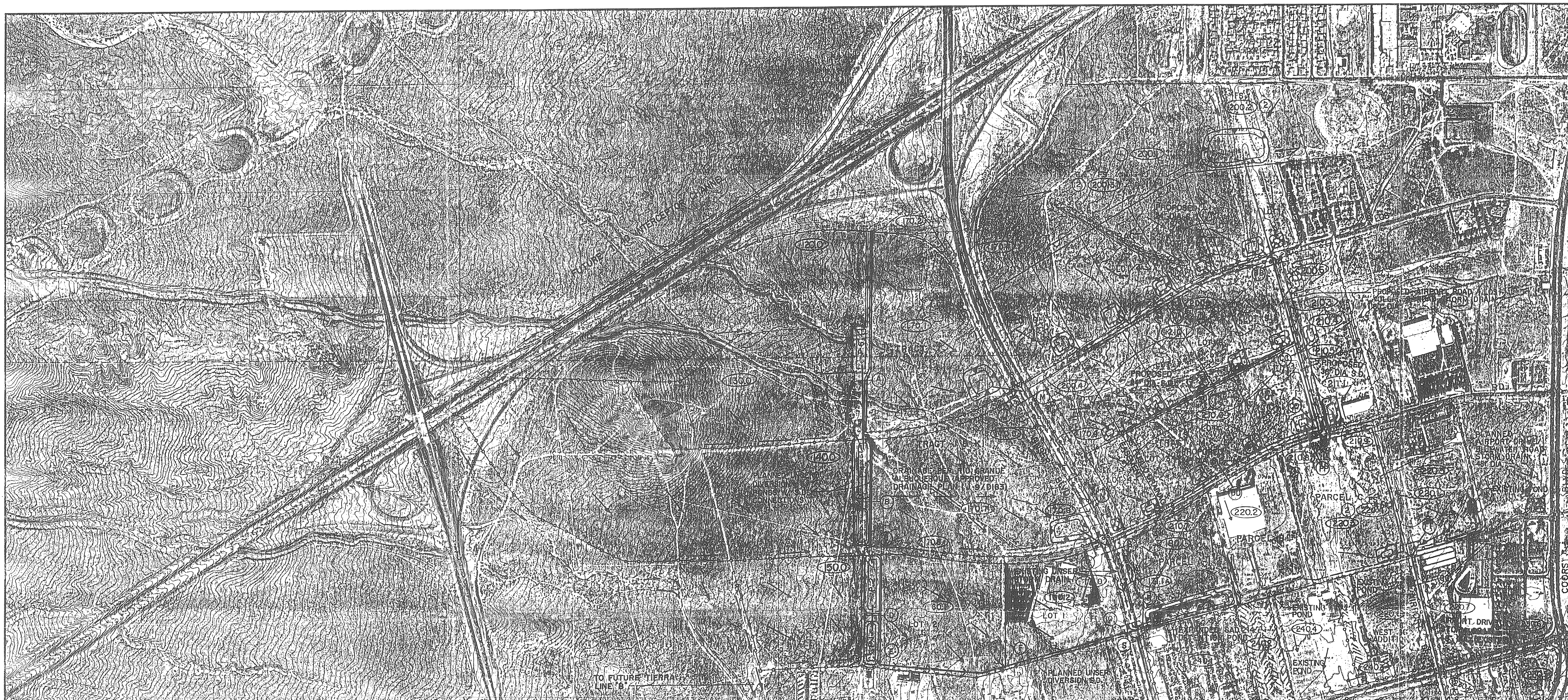
REMARKS

REVISIONS

NO.	DATE	DESIGN	BY

DESIGNED BY	DLH	DATE	06-16-97
DRAWN BY	STAFF	DATE	06-16-97
CHECKED BY	DMG	DATE	06-16-97

RECEIVED OCT 09 1997 HYDROLOGY SECTION



ANALYSIS POINT	STREET FLOW								STORM DRAIN FLOW				
	SIDE	AHYMO HYD #	Q_{10} (cfs)	Q_{100} (cfs)	SLOPE (ft./ft.)	FLOW DEPTH (ft.) d_{10}	FLOW DEPTH (ft.) d_{100}	V_{10} (fps)	AHYMO HYD #	Q_{10} (cfs)	Q_{100} (cfs)	DIA. (ft.)	SLOPE (ft./ft.)
L	BOTH	170.30	6.3	9.7	0.015	0.31	0.35	2.5	--				
M	WEST	170.45	9.6	32.1	0.017	0.41	0.63	3.5	170.44	41	41.0	30"	0.010
N	WEST	--	0	0	0.020	0	0	0	170.52	50.6	75.1	36"	0.015
O	BOTH	170.80	9.1	14.1	0.014	0.34	0.39	2.7	--				
P	EAST	170.94	0	6.8	0.018	0	0.39	0	170.92	92.0	92.0	42"	0.008
	WEST	170.95	12.0	48.0	0.019	0.44	0.68	3.8					
Q	EAST	171.11	3.6	7.4	0.011	0.33	0.41	2.3	170.97	92.3	92.9	42"	0.009
	WEST	171.02	12.6	51.0	0.011	0.47	0.76	3.1					
R									160.21	78.8	111.1	38"x60"	0.005
									171.13	96.4	99.4	42"	0.010
S	EAST	171.14	0	0	0.008	0	0.20	0	180.14	310.0	226.8	72"	0.010
	WEST	171.04	0	31.1	0.008		0.66						
AA	BOTH	200.41	17.8	28.4	0.008	0.46	0.52	2.6	--		2.2	24"	0.005
BB	BOTH	200.51	16.7	28.3	0.005	0.48	0.57	2.1	200.62	12.4	18.3	30"	0.005
CC	BOTH	210.31	16.0	27.7	0.005	0.47	0.57	2.1	210.43	16.4	31.1	36"	0.005
DD	BOTH	210.70	5.2	8.2	0.003	0.36	0.42	1.4	--		2.3	24"	0.005
EE		--							211.12	48.1	78.4	48"	0.003
FF	BOTH	220.10	5.5	8.7	0.004	0.36	0.41	1.6	211.13	45.4	73.3	48"	0.003
GG	BOTH	220.70	4.2	6.7	0.004	0.32	0.38	1.5	220.72	55.9	89.3	48"	0.004
HH	BOTH	230.31	12.7	19.0	0.008	0.41	0.46	2.3	220.73	54.6	86.3	48"	0.004
II		--							230.51	5.0	6.5	24"	0.006
JJ		--							230.82	27.1	38.4	30"	0.010
KK		--							230.84	83.3	133.1	48"	0.050
LL		270.22	0.0	16.0	0.029	0	0.43	0	270.23	190.3	269.2	54"	0.021
MM		--							280.31	201.5	287.3	72"	0.010
NN		--							290.12	221.7	315.6	72"	0.005
OO		--							290.21	226.6	323.7	72"	0.006
PP	BOTH	210.91	8.9	14.6	0.003	0.43	0.50	1.4	--				
QQ	BOTH	210.51	16.1	30.0	0.005	0.40	0.49	1.7	--				
RR		--							230.32	60.8	99.8	48"	0.020

NOTE: STREET FLOW DEPTHS IN OFF-SITE AREAS WERE NOT ANALYZED IN LOCATIONS WHERE THE STORM DRAIN HAS THE CAPACITY TO CARRY ALL OF THE FLOW FROM THE UPSTREAM STREET

DEVELOPED CONDITION DRAINAGE BASIN DATA

BASIN I.D. NUMBER	ASSUMED LAND USE/ZONING	AREA (AC)	RUNOFF Q_{100} (cfs)	RUNOFF V_{100} (Ac-Ft)	MAX. ALLOWED Q_{100} RELEASE (cfs)
120.0	IP	72.0	273.9	12.10	[3] 93.6
130.0	IP	44.0	167.8	7.39	[3] 57.2
140.0	IP	95.0	284.1	15.96	[3] 123.5
150.0	IP	27.5	104.9	4.62	[3] 35.8
160.1	IP	33.0	126.1	5.56	126.1
160.2	IP	22.4	85.3	3.76	85.3
170.1	IP	40.5	160.2	7.03	47.2
170.7	IP	55.0	217.1	9.90	56.6
180.1	IP	21.6	77.9	3.38	77.9
200.1	IP	133.2	513.4	23.19	13.3
[2] 200.2	Future Street	2.7	10.2	0.45	10.2
[2] 200.3	Future Street	4.9	18.0	0.82	18.0
200.6	IP	4.5	17.4	0.78	0.5
210.1	IP	47.9	185.7	8.34	4.8
[2] 210.2	Future Street	5.0	18.1	0.84	18.1
210.4	IP	7.5	29.1	1.30	0.7
210.6	IP	44.8	173.8	7.80	4.5
211.1	IP	7.5	29.1	1.30	0.8
220.2	IP	20.0	77.8	3.49	2.0
220.3	IP	28.6	111.1	4.98	2.9
[2] 220.4	Future Street	1.2	4.4	0.19	4.4
220.5	IP	20.0	77.8	3.49	2.0
220.6	C-2	12.7	49.2	2.21	1.3
230.1	C-2	1.2	4.5	0.20	3.8
230.2	C-2	3.3	12.9	0.58	10.9
230.5	C-2	4.2	16.6	0.74	6.5
230.8	C-2	7.2	28.1	1.26	15.8
240.1	IP	21.3	81.2	3.58	[1]
240.2	IP	8.0	25.7	1.32	[1]
240.3	C-2	5.1	20.1	0.90	[1]
240.4	Church	14.8	42.5	2.26	[1]
250.1	C-2, RT	15.8	62.0	2.77	[1]
250.2	R-1, C-2	5.0	14.9	0.60	[1]
260.1	C-2, 0-1	25.5	97.1	4.28	[1]
270.1	Mobile Home Park	14.2	54.2	2.39	[1]
280.1	RA-1	4.2	16.1	0.71	6.6
290.1	Residential	20.1	67.5	2.79	28.8

[1] The aggregate peak Q_{100} from basins 240.1, 240.2, 240.3, 240.4, 240.5, 240.6, 250.1, 250.2, 260.1, and 270.1 shall not exceed 146 cfs at the point of discharge to the Coors Connection Storm Drain.

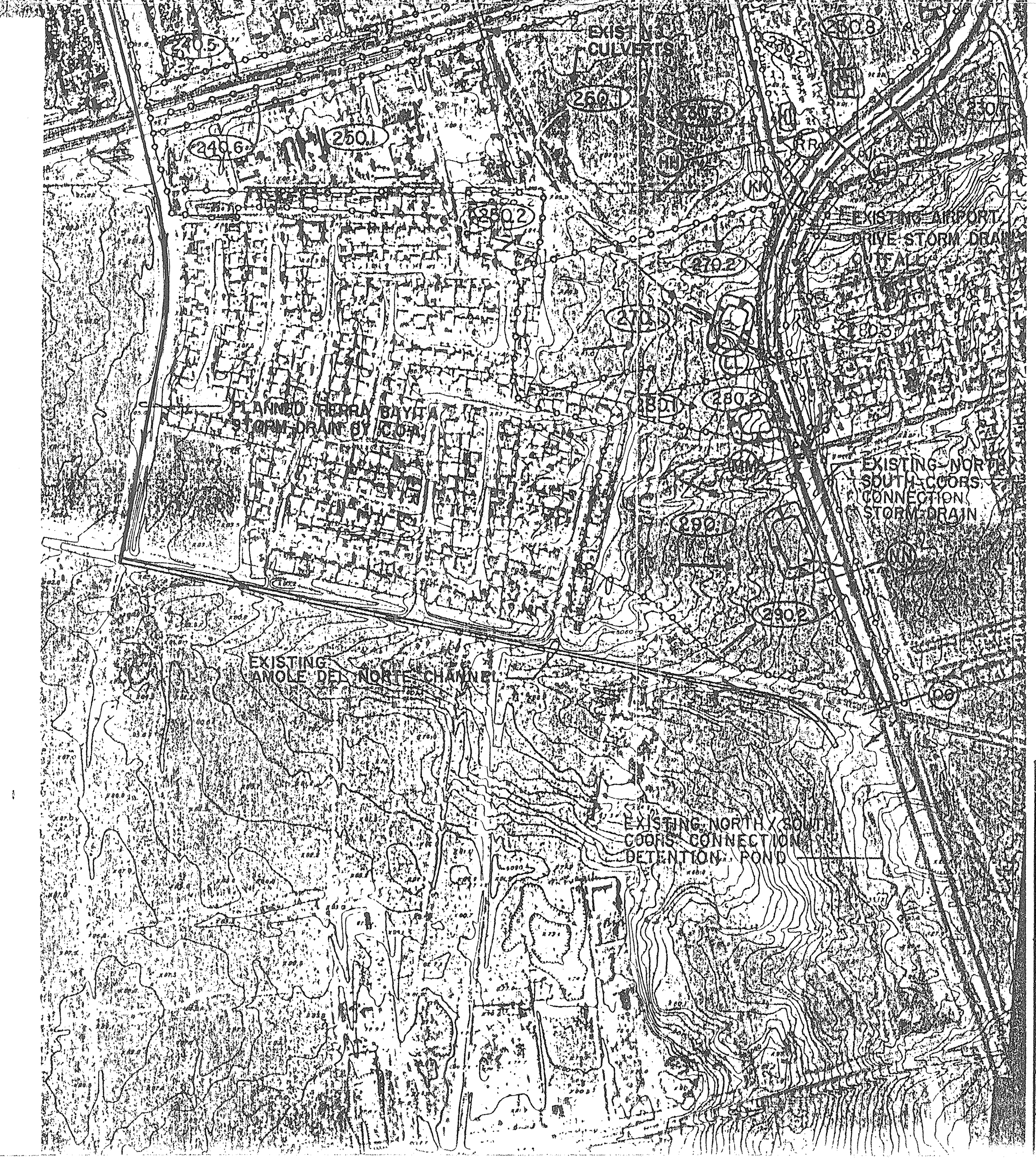
[2] Basin modeled to verify capacity for future public streets.

[3] Release rate based on the 1.3 cfs per acre criteria included in the 8-25-93 Agreement for Atrisco Business Park Storm Water Improvements. Actual maximum allowed release rate should be based on downstream capacity as this property is master planned.

UNSER DIVERSION STORM DRAIN DATA SUMMARY

ANALYSIS POINT	AHYMO HYD#	PIPE DIAMETER (FT)	PIPE SLOPE (FT/FT)	FULL PIPE CAPACITY (CFS)	FULL PIPE VELOCITY (FPS)	¼ FULL PIPE CAPACITY (CFS)	¼ FULL PIPE VELOCITY (FPS)	Q_{100} (CFS)*
A	120.02	36"	0.0270	109.6	15.5	15.0	10.9	65.2
B	130.03	42"	0.0130	114.7	11.9	15.7	8.4	98.6
C	130.05	42"	0.0100	100.6	10.5	13.9	7.4	93.2
D	140.03	48"	0.0125	160.6	12.8	22.0	9.0	144.4
E	150.03	42"	0.0165	129.2	13.4	17.7	9.4	125.0
F	160.12	48"	0.0190	198.0	15.8	27.1	11.0	147.6

*These peak flow rates are based on assumed detention in the watershed controlling flows to the Unser Diversion to between 2.2 to 2.5 cfs/acre.



LEGEND

- DRAINAGE BASIN BOUNDARY
- DRAINAGE BASIN I.D. NUMBER (XXX.X)
- ANALYSIS POINT (XX)
- PROPOSED CHANNEL
- PROPOSED STORM DRAIN
- EXISTING STORM DRAIN
- FUTURE DETENTION POND (POND X)
- FUTURE STREET BASIN (FS XX.X)

THIS BASE MAP WAS PRODUCED BY COMPOSITING THE CONTOURS GENERATED BY BOHANNAN-HUSTON, INC., ALBUQUERQUE, NEW MEXICO, FOR THE 1983 FEMA FLOODWAY MAPS AND 1991 RECTIFIED AERIAL PHOTOGRAPHY.

500 250 0 500 1000
Scale 1" = 500' Feet

GENERAL NOTES

1. FUTURE PONDS ARE SHOWN SCHEMATICALLY ON THIS PLAN ONLY TO REPRESENT THAT CONTROL OF THE FLOW FROM THE UPSTREAM WATERSHED IS REQUIRED. LOCATION AND CONFIGURATION OF ACTUAL DETENTION PONDS SHALL BE APPROPRIATE FOR THE TYPE OF DEVELOPMENT WHICH OCCURS IN THE WATERSHED TO BE CONTROLLED.

2. REFER TO THE REPORT FOR THE MASTER DRAINAGE PLAN FOR THE ATRISCO BUSINESS PARK FOR COMPLETE AHYMO ANALYSIS SUMMARY TABLES AND INPUT DATA.

KEYED NOTES ○

(1) FOR THE PURPOSE OF ANALYSIS TRACT "S-1," AND TRACT "M" WERE MODELED AS SINGLE BASINS WITH SINGLE DETENTION PONDS. IF PROPERTY DEVELOPS PER CURRENT SUBDIVISION, EACH LOT WILL REQUIRE A DETENTION POND AS ILLUSTRATED. ALL LOTS WITHIN THESE LARGE TRACTS ARE SUBJECT TO A MAXIMUM ALLOWABLE 100 YEAR PEAK DISCHARGE OF 0.1 CFS/ACRE.

(2) TO FACILITATE POSSIBLE FUTURE SUBDIVISION, SOME ESTIMATED FUTURE STREET AREAS WERE INCLUDED IN THE AHYMO MODELING OF THE SYSTEM.

SEP 5 1997
HYDROLOGY SECTION

10–93 REVISION

— REVISED UNSER DIVERSION SYSTEM
— UP-DATED RUNOFF DATA TO REFLECT THIS CHANGE

ATRISCO BUSINESS PARK
MASTER DRAINAGE PLAN
OVERALL DRAINAGE PLAN
FULLY DEVELOPED CONDITION

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DESIGNED BY:	DRAWN BY:	CHECKED BY:	
V.S.F.	C.L.B.	C.M.E.	Plate 2
JOB NO.: 3321	DATE: FEB. 1992		