CITY OF
Albuquerque

September 29, 1997

Martin J. Chávez, Mayor

Ronald Bohannan, P.E.
Tierra West, LLC
4421 McLeod Road NE
Suite D
Albuquerque, NM 87109

RE: MARKET PLACE AT JOURNAL CENTER - PHASE 1 (D17-D3B1). ENGINEER'S CERTIFICATION FOR RELEASE OF FINANCIAL GUARANTEES. ENGINEER'S CERTIFICATION DATED JULY 21, 1997.

Dear Mr. Bohannan:

Based on the information provided on your September 22, 1997 submittal, City Hydrology accepts the Engineer's Certification of grading and drainage for Release of Financial Guarantees.

Prior to Certificate of Occupancy approval, an Engineer's Certification will be required.

If I can be of further assistance, please feel free to contact me at 924-3984.

Sincerely,

Lisa Ann Manwill, P.E.
Hydrology

c: Terri Martin
Andrew Garcia
File

CITY OF
Albuquerque

August 12, 1997

Martin J. Chávez, Mayor

Ronald Bohannan, P.E.
4421 McLeod Road NE
Suite D
Albuquerque, NM 87109

RE: MARKET PLACE AT JOURNAL CENTER - PHASE 1 (D17-D3B1).
ENGINEER'S CERTIFICATION FOR CERTIFICATE OF OCCUPANCY.
ENGINEER'S CERTIFICATION DATED JULY 29, 1997.

Dear Mr. Bohannan:

Based on the information provided on your July 29, 1997 submittal, the above referenced plan is approved for Certificate of Occupancy.

If I can be of further assistance, please feel free to contact me at 924-3984.

Sincerely,

Lisa Ann Manwill
Engineering Assoc./Hyd.

c: Andrew Garcia
File

JN 960039
Drainage
Inventory

CITY OF
Albuquerque

July 21, 1997

Martin J. Chávez, Mayor

Shahab Biazar, P.E.
4421 McLeod Road NE
Suite D
Albuquerque, NM 87109

RE: MARKET PLACE AT JOURNAL CENTER (D17-D3B1). UPDATED GRADING PLAN FOR BUILDING PERMIT APPROVAL. ENGINEER'S STAMP DATED JULY 15, 1997.

Dear Mr. Biazar:

Based on the updated information provided on your July 15, 1997 submittal, the above referenced plan is approved for Building Permit.

Prior to Certificate of Occupancy approval, an Engineer's Certification will be required. Be certain to certify the drawing approved per this letter (stamped 7-15-97).

If I can be of further assistance, please feel free to contact me at 924-3984.

Sincerely,

Lisa Ann Manwill
Engineering Assoc./Hyd.

c: Andrew Garcia
File

RECEIVED
SEP 09 1998
HYDROLOGY SECTION

CITY OF
Albuquerque

City of Albuquerque

P. O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103
PUBLIC WORKS DEPARTMENT

September 25, 1997

CERTIFICATE OF WORK ORDER COMPLETION

Journal Center Corporation
7777 Jefferson St. NE
Albuquerque, NM 87109

Re: Market Place at Journal Center PROJECT NO. 5584.81 (MAP NO. D-17)

Dear Sir:

This is to certify that the City of Albuquerque accepts Project No. 5584.81 as being completed according to approved plans and construction specifications. Please be advised this certificate of completion shall only become effective upon final plat approval and filing in the office of the Bernalillo County Clerk's Office.

The project is described as follows:

- Storm Sewer Improvements and relocation in the Public Easement. Easement is on-site on the south edge of the property.
- Sanitary Sewer Improvements on-site within P.U.E. parallel to Jefferson St. from South Property Line to North Pino Arroyo.
- Construction of a 50' Median turn bay on Jefferson Blvd. into the West Entrance of the site.
- Construction of a Deceleration Lane on Jefferson Blvd. into Sun Avenue. Included the relocation of the sidewalk, and construction of a new handicap ramp.
- Construction of a 6" and 8" Fire Water Line from Sun Avenue to the West Property Line and a New 2" Water Service.

The contractor's correction period began the date of this letter and is effective for a period of one (1) year.

CITY OF
Albuquerque
Public Works Department

January 29, 1997

Martin J. Chávez, Mayor

Robert E. Gurulé, Director

Shahab Biazar
4421 McLeod Road NE
Suite D
Albuquerque, NM 87109

RE: MARKET PLACE AT JOURNAL CENTER (D17-D3B1). UPDATED GRADING PLAN FOR BUILDING PERMIT APPROVAL. ENGINEER'S STAMP DATED JANUARY 24, 1997.

Dear Mr. Biazar:

Based on the updated information provided on your January 24, 1997 submittal, the above referenced plan is approved for Building Permit.

Prior to Certificate of Occupancy approval, an Engineer's Certification will be required.

If I can be of further assistance, please feel free to contact me at 924-3984.

Sincerely,

Lisa Ann Manwill
Engineering Assoc./Hyd.

c: Andrew Garcia
File

CITY OF
Albuquerque

January 13, 1997

Martin J. Chávez, Mayor

Shahab Biazar
4421 McLeod Road NE
Suite D
Albuquerque, NM 87109

RE: MARKET PLACE AT JOURNAL CENTER (D17-D3B1). GRADING PLAN BUILDING PERMIT APPROVAL. ENGINEER'S STAMP DATED 12-17-96.

Dear Mr. Biazar:

Based on the information provided on your December 18, 1996 submittal and your letter dated January 2, 1997, the above referenced plan is approved for Building Permit.

If I can be of further assistance, please feel free to contact me at 768-3622.

Sincerely,

Lisa Ann Manwill
Engineering Assoc./Hyd.

c: Andrew Garcia
File

DRAINAGE REPORT
FOR

Market Place at Journal Center

TRACT 3A-1C-1
OF
JOURNAL CENTER

Prepared by:

Tierra West Development Management Services
4421 McLeod Rd., NE, Suite D
Albuquerque, New Mexico 87109

August, 1996
Revised October, 1996

I certify that this report was prepared under my supervision, and I am a registered professional engineer in the state of New Mexico in good standing.

RONALD RAY BOHANNAN REGISTERED NEW MEXICO 7868 PROFESSIONAL ENGINEER 10-23-96

Ronald R. Bohannan
PE NO. 7868

Job No 960039

RECEIVED
OCT 24
HYDROLOGY DIVISION

AF

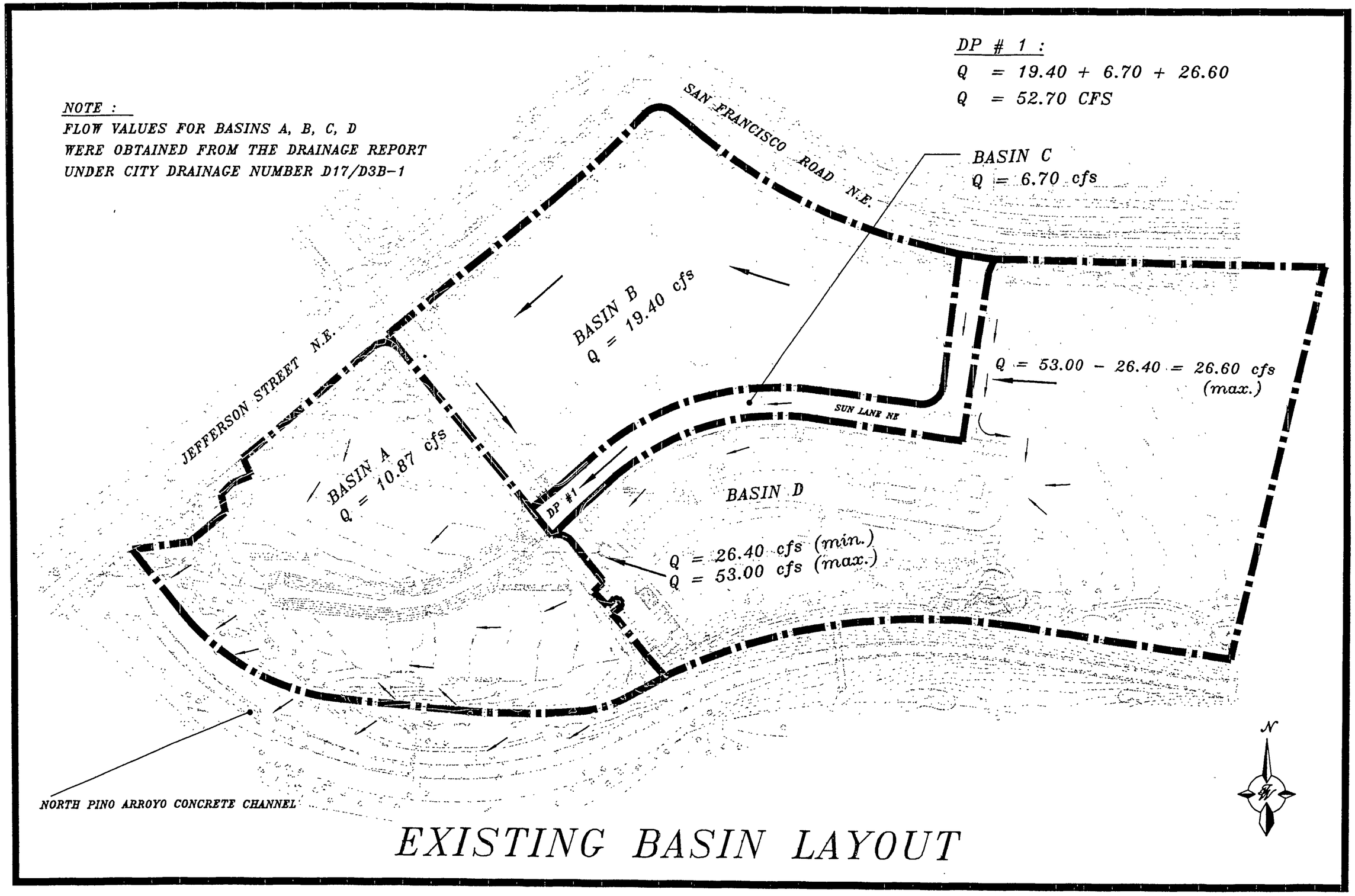
Location

Tract 3A-1C-1 of the Journal Center is located at the southeast corner of the North Pino Arroyo Concrete Channel and Jefferson Street. The site is approximately 4.6302 acres and is the location of several proposed commercial/retail buildings. The purpose of this report is to provide the drainage analysis and management plan for the site.

Existing Drainage Conditions

The site is currently undeveloped. The natural slope is from east to west at approximately 2.5 percent. The site falls within basin F (±13.1 acres) of the Journal Center Master Drainage Plan. Under City Drainage number D17/D3B-1, the site is divided into several basins. See the attached "Existing Basin Layout" exhibit (sheet number 1.3 of this report). All upland basins drain to an existing storm sewer pipe that turns into an open channel. This channel drains to an existing desilting pond within this site and finally discharges to the North Pino Arroyo Concrete Channel via a 42" RCP. A summary of the existing flows on the site are as followings:

- Basin A (with a runoff of 10.87 cfs) flows east and south to an existing desilting pond within Tract 3A-1C-1 and the southerly portion surface flows to the North Pino Arroyo Concrete Channel.
- Basin B, which is a combination of three smaller basins (under City Drainage number D17/D3B-1), discharges a total runoff of 19.40 cfs west and south to Sun Lane to Tract 3A-1C-1 into the channel and then to the desilting pond.



EXISTING BASIN LAYOUT

- Basin C, which includes the runoff from the Sun Lane, flows to the west end of Sun Lane to and then enters the channel and finally to the desilting pond.
- Basin D is not fully developed, but the runoff values are computed for developed conditions. At the present time the entire basin drains to the southern end of the basin to a 42" storm sewer pipe via two drop inlets and then to the desilting pond within basin A. The easterly portion of the basin drains to a storm sewer drop inlet and from there, via a storm sewer pipe, the flow is carried to the west end of the basin. The rest of the runoff from the basin is intercepted by another drop inlet at the west end of the project. Then the runoff drains to the desilting pond within Tract 3A-1C-1 via a 42" RCP at a maximum discharge rate of 53 cfs.

Phase III (easterly portion of Basin D) development of Sun Heathcare Group, Inc. is being prepared by Bohannan Huston Inc. Their drainage basin management plan will be used to design the storm structures on Tract 3A-1C-. A copy of Sun Healthcare Inc. basin layout in enclosed in the map pocket.

FEMA Map and Soil Conditions

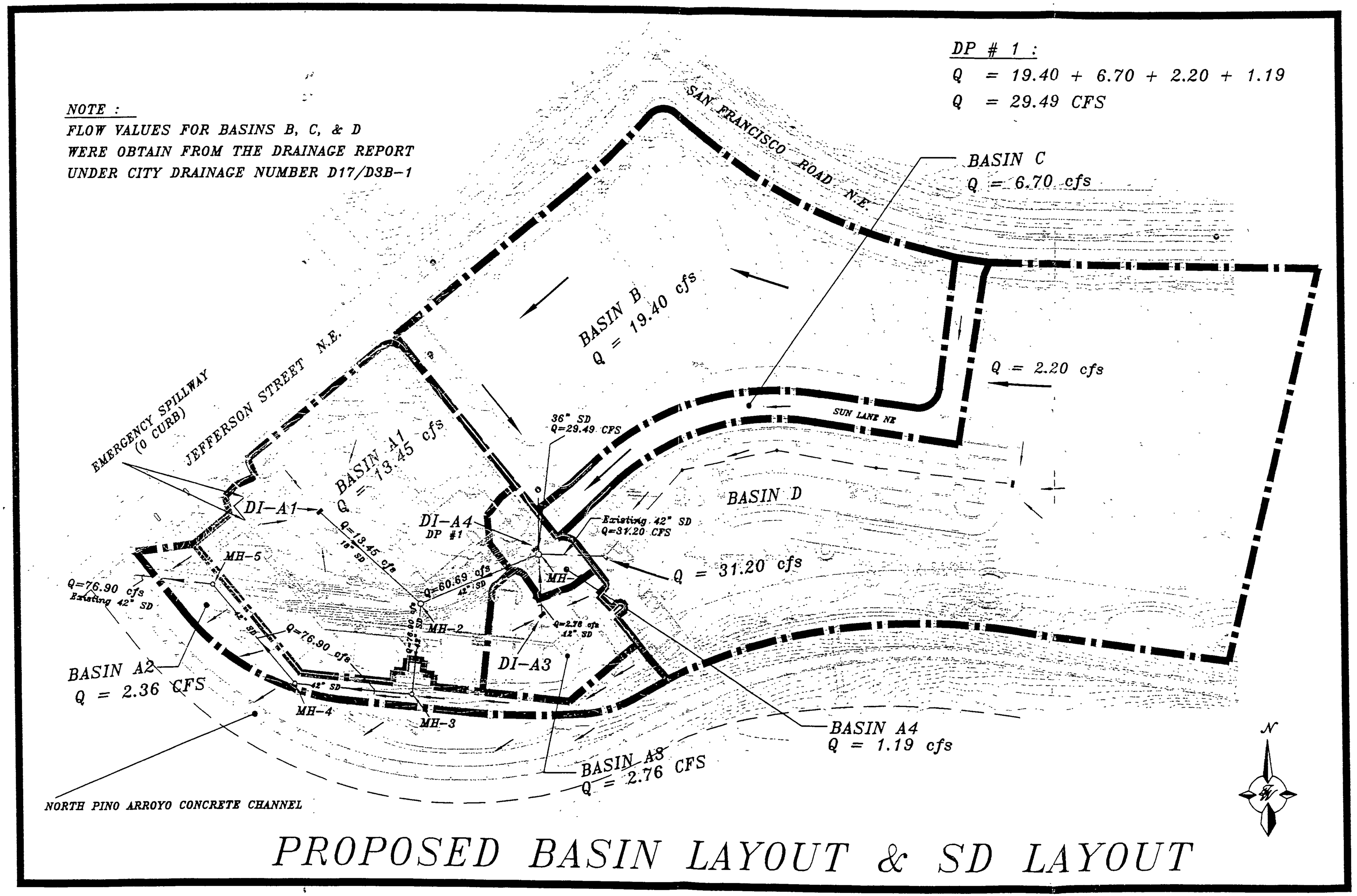
The site is located on FEMA Map section 350002 panel 9 as shown on the attached excerpt (sheet number 1.5 of this report). The map shows that the site does not lie within a 100-year flood plain. A 100-year flood plain is contained within the Pino Arroyo and lies adjacent to the site. Based on sheet number 11 of the Soil Conservation Service Soil Survey of Bernalillo County, the site contains one soil type. This soil is an Embudo gravelly fine sandy loam (EmB).

It has a moderate hazard of water erosion and runoff is medium. See attached soil map (sheet number 1.6 of this report).

On-site Drainage Management Plan

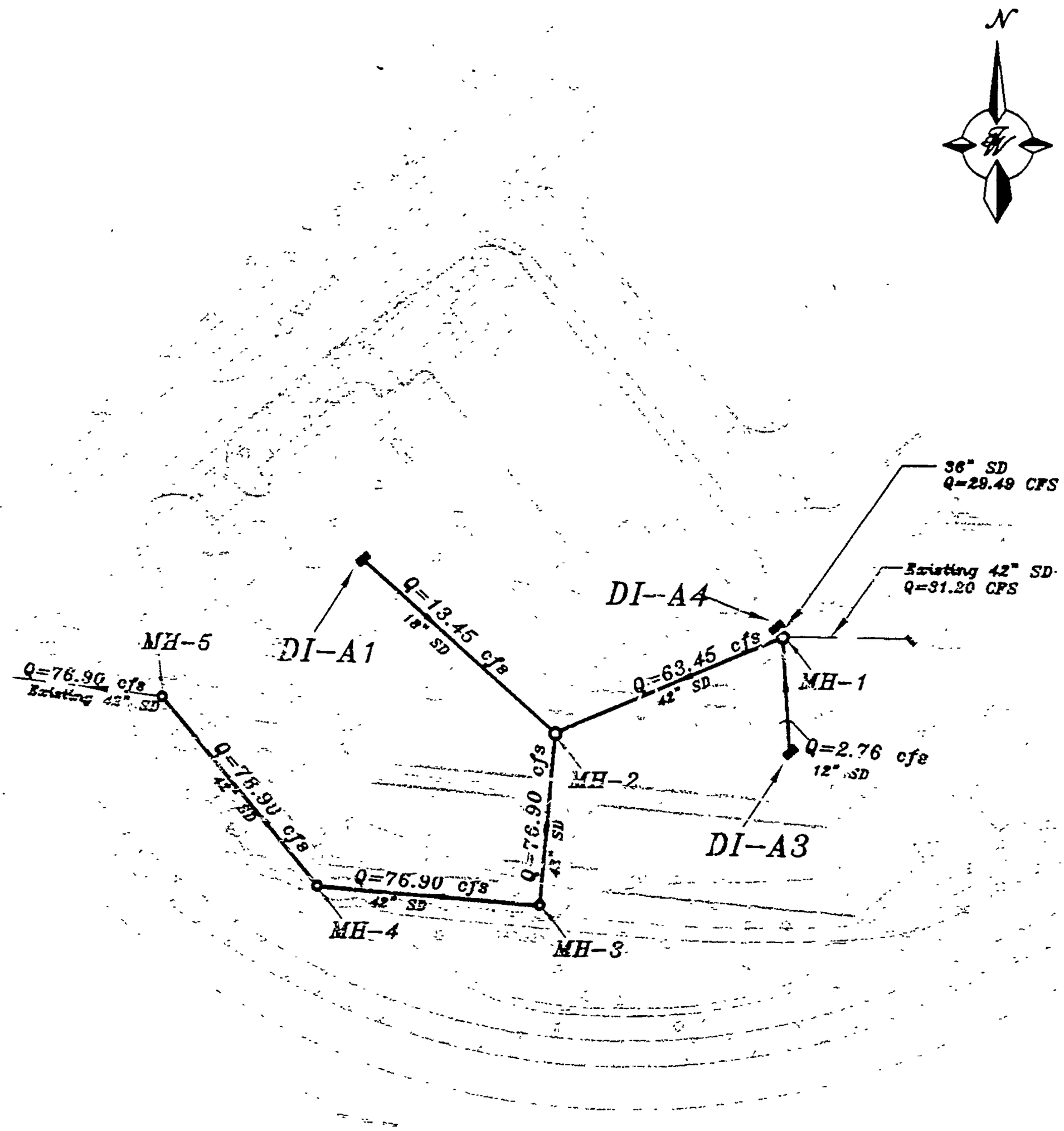
Under the proposed conditions, the overall pattern for the offsite drainage basins (B, C, & D) will remain the same. Also see the proposed Sun Healthcare Inc. basin layout prepared by Bohannan Huston Inc. enclosed in the map pocket. Based on Bohannan Huston's basin layout we have prepared an overall drainage basin layout. See attached "Proposed Basin Layout" exhibit (sheet number 1.8 of this report). Basins B, C, and a portion of D will surface flow to the easterly entrance of the tract at a maximum flow rate of 29.49 cfs. From that point, the runoff will drain to a proposed double "A" (DI-A4) inlet (with side sweepers on each side). The rest of Basin D drains to an existing drop inlet on the west end of Basin D and then to Tract 3A-1C-1 at a minimum flow rate of 31.20 cfs via a 42" RCP. See attached "Drop Inlet & Storm Sewer Manhole Locations" exhibit (sheet number 1.9 of this report).

Basin A is further broken into four smaller sub-basins under the developed conditions. Sub-basin A1 drains to a single "D" (DI-A1) inlet at a flow rate of 13.45 cfs. The runoff then drains to MH-2 (a 6' diameter manhole) via an 18" storm drain pipe. Sub-basin A2, at a flow rate of 2.36 cfs, sheet flows to the North Pino Arroyo Concrete Channel. Sub-basin A3 (at a flow rate of 2.76 cfs) drains to a single "D" (DI-A3) inlet, and then drains to MH-1 (an 8' diameter manhole) via a 12" storm sewer pipe. Basin A4 (at a flow rate of 1.19 cfs) will drain to a double "A" (DI-A4) inlet, the same inlet that intercepts the offsite runoff at the east entrance of the site.



PROPOSED BASIN LAYOUT & SD LAYOUT

1.80



DROP INLET & STORM SEWER MANHOLE LOCATIONS

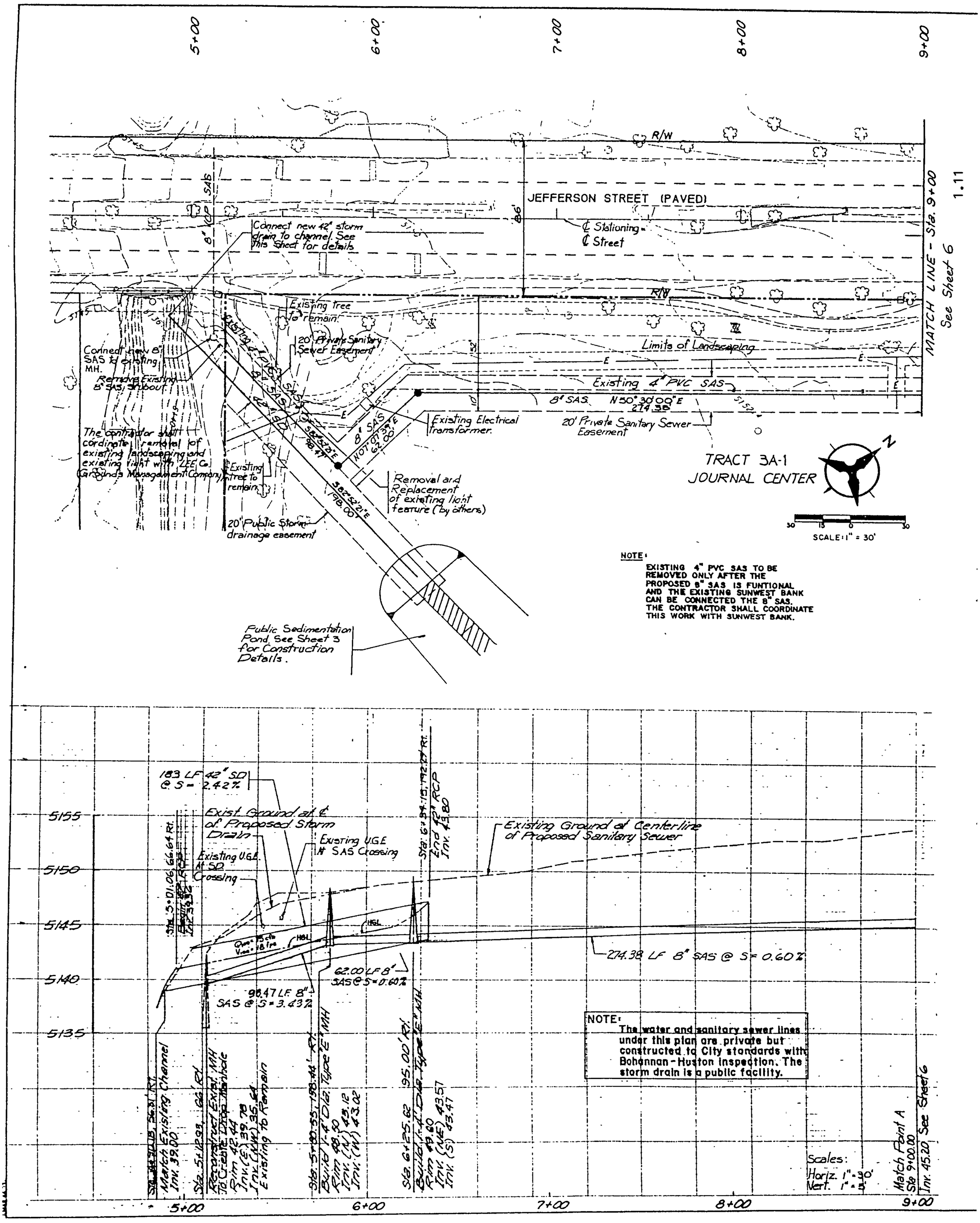
From there, the runoff drains to MH-1 via a 36" storm drain pipe. Finally, the entire runoff is carried through a 42" RCP at a rate of 76.90 cfs. The 42" RCP has been reanalyzed for its capacity and the capacity calculations are included in this report. The existing discharge from the 42" RCP to the North Pino Arroyo Concrete Channel is at a discharge rate of 75 cfs (see attached copy of the storm sewer plan and profile sheet 5 of 7 under City Project number 4656.90 for runoff discharge rate to the channel). We are only exceeding the existing discharge by 1.90 cfs.

Phasing Plan

This site will be built in three phases. The entire storm sewer system will be built as part of Phase One. A desilting pond will be placed at the phase lines to intercept the silt from the undeveloped phases. Each of the desilting ponds will be eliminated upon development of each phase.

Summary

The site is part of Basin F of the Journal Center Master Drainage Plan. All of the offsite sub-basins within Basin F drain to Tract 3A-1C-1 through an existing storm sewer system or surface flow at a total developed flow rate of 59.50 cfs. All the offsite runoff sheet flowing to the site will be picked up at the intersection (subbasin A4) through a Double A inlet (with design flow of 29.49 cfs). The entire runoff drains to the North Pino Arroyo Concrete Channel via a 42" RCP at a developed rate of 76.90 cfs. Tract 3A-1C-1 (Basins B, C, & D) will drain the runoff to the 42" RCP via several drop inlets at a flow rate of 17.40 cfs. In the case of an emergency the runoff


5+00
6+00
7+00
8+00
9+00
R/W
JEFFERSON STREET (PAVED)
℄ Stationing = ℄ Street
MATCH LINE - Sta. 9+00
See Sheet 6
1.11
SAS
Connect new 42" storm drain to channel. See this sheet for details
Existing tree to remain
20' Private Sanitary Sewer Easement
Connect new 8" SAS to existing MH.
Removing Existing 8" SAS, Stubout
Existing 4" PVC SAS
Limits of Landscaping
Existing 4" PVC SAS
8" SAS N50°30'00"E 274.38'
Existing Electrical Transformer.
20' Private Sanitary Sewer Easement
8" SAS N07°07'39"E 62.00'
S82°52'21"E 98.47'
S82°52'21"E 198.00'
The contractor shall cordinate removal of existing landscaping and existing light with LEE Co. Grounds Management Company
Existing tree to remain
Removal and Replacement of existing light feature (by others)
20' Public Storm drainage easement
Public Sedimentation Pond. See Sheet 3 for Construction Details.
TRACT 3A-1
JOURNAL CENTER
N
SCALE: 1" = 30'
NOTE:
EXISTING 4" PVC SAS TO BE REMOVED ONLY AFTER THE PROPOSED 8" SAS IS FUNTIONAL AND THE EXISTING SUNWEST BANK CAN BE CONNECTED THE 8" SAS. THE CONTRACTOR SHALL COORDINATE THIS WORK WITH SUNWEST BANK.
183 LF 42" SD @ S = 2.42%
Exist. Ground at ℄ of Proposed Storm Drain
Existing U.G.E. At SD Crossing
Existing U.G.E At SAS Crossing
Existing Ground at Centerline of Proposed Sanitary Sewer
5155
5150
5145
5140
5135
HGL
Q100 = 15 cfs V100 = 18 fps
62.00 LF 8" SAS @ S = 0.60%
98.47 LF 8" SAS @ S = 3.43%
274.38 LF 8" SAS @ S = 0.60%
NOTE:
The water and sanitary sewer lines under this plan are private but constructed to City standards with Bohannan-Huston inspection. The storm drain is a public facility.
Scales:
Horiz. 1" = 30'
Vert. 1" = 5'
Match Point A
Sta 9+00.00
Inv. 45.20 See Sheet 6
5+00
6+00
7+00
8+00
9+00

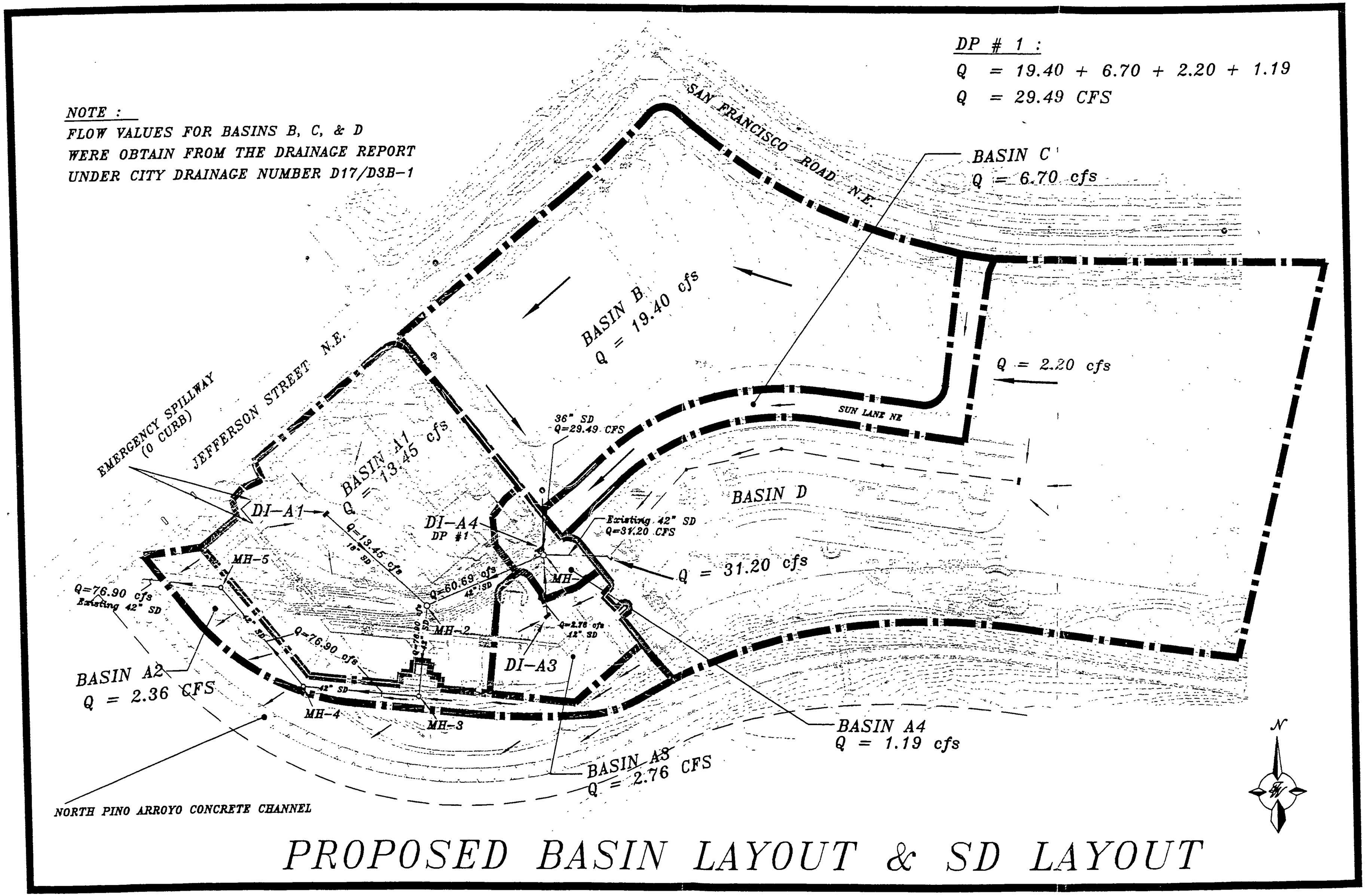
C 20 B 16 A 12

backs up in the parking lot and drains out through the southwest end of the parking lot. See enclosed grading and drainage plan (in the map pocket) for emergency spillway location. The 42" RCP will be a public storm sewer pipe, and the necessary easement will be granted as part of the replat of this Tract. See enclosed sketch plat in the map pocket for easement location.

The following tables show the detailed runoff calculations for the site along with the AHYMO runs for review.

Hydrology Analysis

Hydrological Aspects of this site were evaluated using AMAFCA's AHYMO program according to guidelines presented in the City of Albuquerque DPM, Section 22.2 (January 1993). All of the pertinent hydrologic parameters and calculations are located on the following sheets.



PROPOSED BASIN LAYOUT & SD LAYOUT

SAMPLE CALCULATIONS FOR THE BASINS

The site is @ Zone 2

LAND TREATMENT

Treatment D:

D = 90 %

Treatment B:

B = 10 %

DEPTH (INCHES) @ 100-YEAR STORM

P_{60} = 2.01 inches

P_{360} = 2.35 inches

P_{1440} = 2.75 inches

DEPTH (INCHES) @ 10-YEAR STORM

P_{60} = 2.01 x 0.667
= 1.34 inches

P_{360} = 1.57

P_{1440} = 1.83

See the summary output from AHYMO calculations.

Also see the following summary tables.

RUNOFF SUMMARY TABLE

DRAINAGE BASINS

SUB-BASIN	AREA (SF)	AREA (AC)	AREA (MI^2)
A1	131283.61	3.0139	0.00471
A2	26759.55	0.6143	0.00096
A3	33966.71	0.7798	0.00122
A4	11465.57	0.2632	0.00041

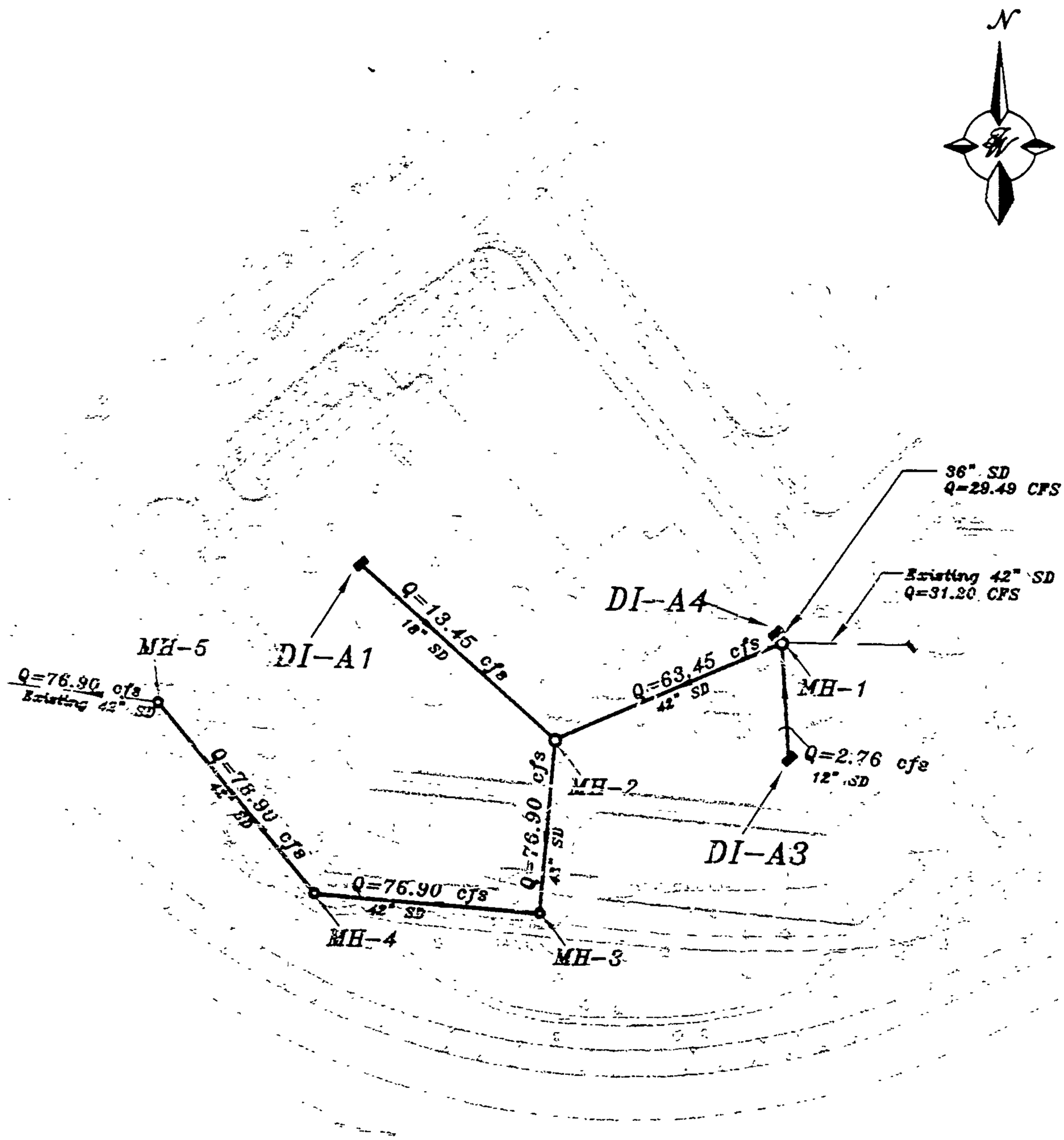
BASINS RUNOFF CALCULATION RESULTS

UNDER PROPOSED CONDITIONS

BASIN	Q-100 CFS	Q-10 CFS
A1	13.45	8.71
A2	2.36	1.23
A3	2.76	1.78
A4	1.19	0.77

UNDER EXISTING CONDITIONS

BASIN	Q-100 CFS	Q-10 CFS
A1	6.87	2.82
A2	1.98	0.9
A3	1.41	1.21
A4	0.61	0.52



DROP INLET & STORM SEWER MANHOLE LOCATIONS

STORM DRAIN INLET

EFFECTIVE AREA ASSUMING A 50% CLOGGING FACTOR

SINGLE 'D':

Area at the grate:

L = 38.375" - 7 (1/2" $_{\text{middle bars}}$)
= 34.875"
= 2.906'

$40'' - 9(\frac{1}{2}'') = 35.5''$
$= 2.96'$

$= 41.375'' - 2(3'')$
$= 35.375''$
$= 2.95'$

W = 25.5" - 13 (1/2" $_{\text{middle bars}}$)
= 19"
= 1.583'

Area = 1.583 x 2.906
= 4.601 ft^2

Effective Area = 4.601- .5 (4.601) $_{\text{Clogging Factor}}$
= 2.30 ft^2 at the grate

DI - A1

$Q = CA\sqrt{(2gh)}$

Q = 13.45 cfs, A = 2.30 ft^2

$$h = \left(\frac{Q}{CA}\right)^2 \frac{1}{2g}$$

$\therefore$ h = 1.5'

DI - A3

Q = 2.76 cfs, A = 2.30 ft^2

$\therefore$ h = 0.1'

$Q = CLh^{3/2}$

$h = \left(\frac{2.76}{3(1+3)2}\right)^{2/3} = 0.24'$

DOUBLE 'Grade' (For Double-A inlet)

Area at the grate:

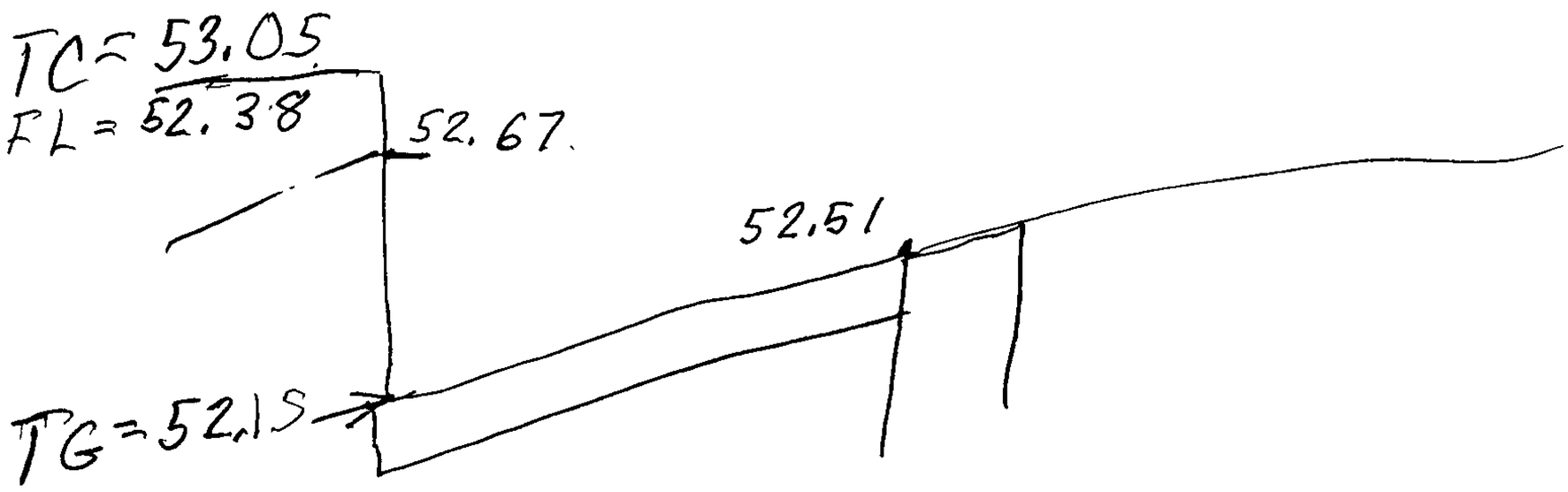
L $= 76.75" - 14\ (1/2"_{\text{middle bars}}) - 6"_{\text{center piece}}$
$= 63.75"$
$= 5.3125'$

W $= 25.5" - 13\ (1/2_{\text{middle bars}})$
$= 19"$
$= 1.583'$

Area $= 1.583' \times 5.3125'$
$= 8.410\ ft^2$

Effective Area $= 8.410 - .5\ (8.410)$
$= 4.21\ ft^2$

MWSEL = 53.05



Throat

$h = 53.05 - 52.15 - 0.26 = 0.64'$

$Q = 0.6(7.03)\sqrt{64.4(0.64)} = 27.1 \text{ cfs}$

Grate

$h = 53.05 - 52.15 - 0.18 = 0.72'$

$Q = 0.6(4.6)\sqrt{64.4(0.72)} = 18.8 \text{ cf}$

$\Sigma Q = 27.1 + 18.8 = 45.9 \text{ cfs} > 29.5 \text{ cfs}$ OK

Check Weir

Grate

$Q = 3.0(1 + 6.5 + 1)(0.72)^{3/2} = 15.6 \text{ cfs}$

Throat

$Q = 0.6(0.52 \times 2 \times 3.5)\sqrt{64.4(0.64)} = 14.0 \text{ cfs}$ (3.64)

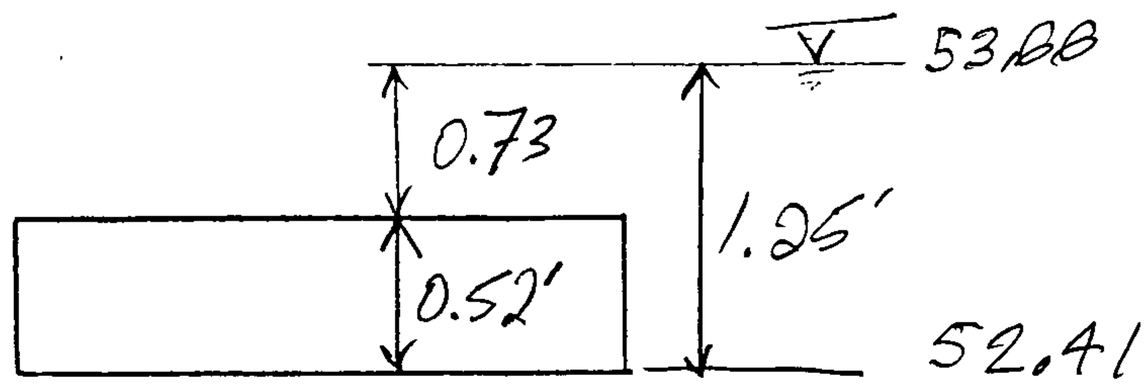
$\Sigma Q = 15.6 + 14.0 = 29.6 \text{ cfs} > 29.5 \text{ cfs}$ OK

Drop Inlet Capacity Calc. "For DI-A4" (DBL-A W/ Sweepers on each side.)

Creating a Ponding depth of 1.2

Throat

Effective Area @ Throat = 7.03 SF = 0.52' x 13.52'



$H = 0.52/2 + 0.73 = 0.99'$

$Q = CA\sqrt{2gH}$

$= 0.6(7.03)\sqrt{2 \times 32.2 \times 0.99}$

$= 33.68$ cfs

Grate

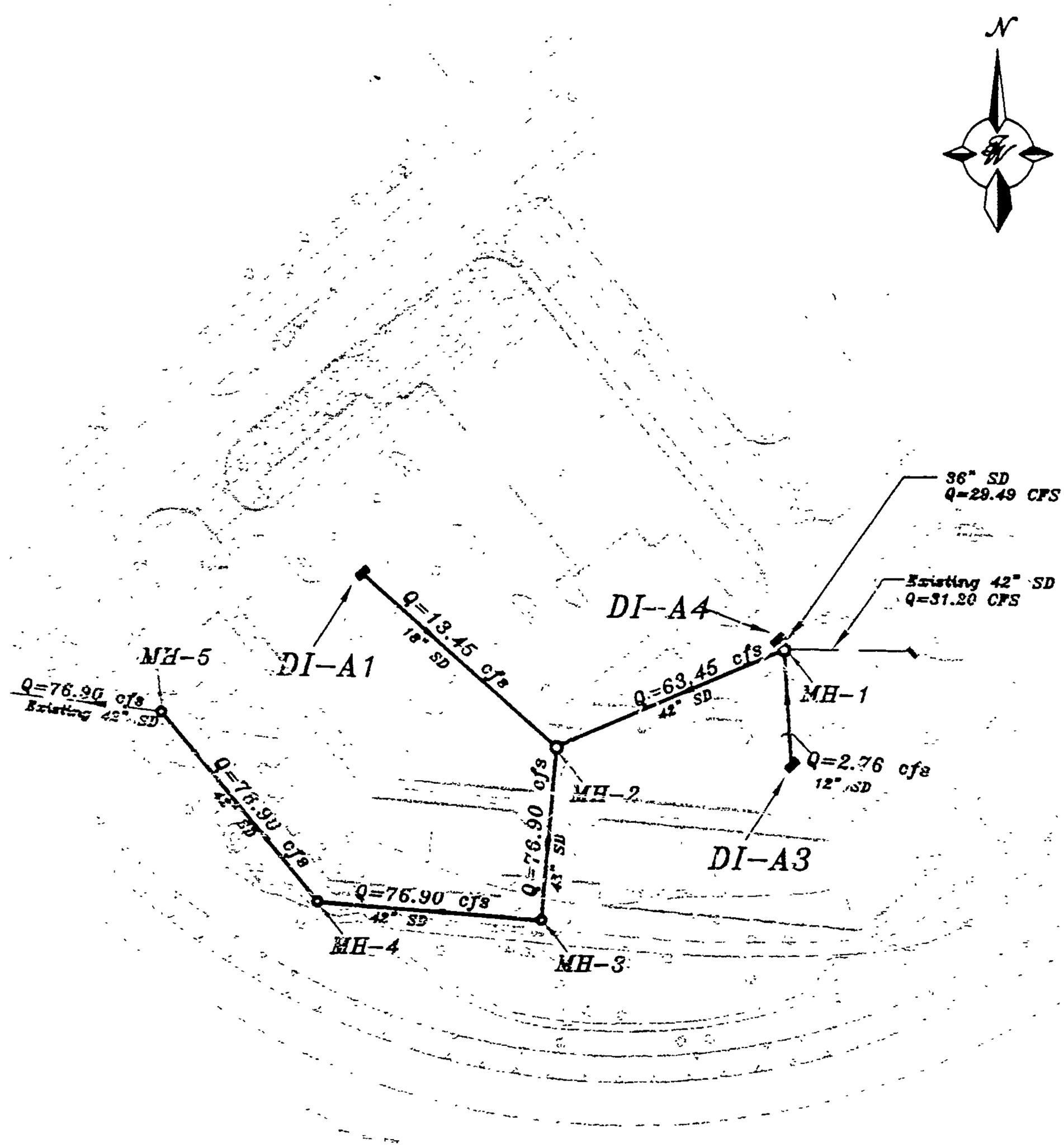
Effective Area @ Grate (Using 50% Clogging Factor) = 4.21 SF

$H = 0.36/2 + 0.89 = 1.07'$

$Q = 0.6(4.21)\sqrt{2 \times 32.2 \times 1.07'}$

$= 20.97$ cfs

$Q_T = 33.68 + 20.97 = 54.65 > 29.49$



DROP INLET & STORM SEWER MANHOLE LOCATIONS

STORM DRAIN PIPE

DI-A4 TO MH-1 (36" RCP)

$Q = CA\sqrt{(2gh)}$

$Q = 29.49$ cfs, $A = 7.07$ ft^2

$$h = \left(\frac{Q}{CA} \right)^2 \frac{1}{2g}$$

∴ h = 0.75' (From the center of the pipe)

∴ head form the invert of the pipe = 0.75 + 1.50 = 2.25'

The total head provided (H) = 5 (from grate to bottom of inlet) + 1.25 (maximum ponding depth)

H = 6.25' > 2.25'

MH-1 TO MH-2 (42" RCP)

$Q = 63.45$ cfs, $A = 9.62$ ft^2

∴ h = 3.63' (From the center of the pipe)

The total head provided (H) = 5' (From the center of the pipe)

DI-A1 TO MH-2 (18" RCP)

$Q = 13.45$ cfs, $A = 1.77$ ft^2

∴ h = 2.50' (From the center of the pipe)

The total head provided (H) = 5.65' (From the center of the pipe)

DI-A3 TO MH-1 (12" PVC)

$Q = 2.79$ cfs, $A = 0.79$ ft^2

∴ h = 1.03' (From the center of the pipe)

The total head provided (H) = 3.27' (From the center of the pipe)

MH-2 TO MH-3 TO MH-4 TO MH-5 TO CHANNEL (42" RCP)

Q = 76.90 cfs, A = 9.62 ft^2

∴ h = 2.76' (From the center of the pipe)

The total head provided (H) = 5' min. (From the center of the pipe)

EMERGENCY SPILLWAY CALCULATIONS

Width required for the emergency spillways:

$Q = CLH^{3/2}$
$Q = (29.49+2.67+13.45) = 45.61$ cfs
$H = \cancel{0.60'}$ 0.5'
$C = 3.10$
$L = ?$ (Width of the spillway/opening)

$L = Q/CH^{3/2}$
$= 45.61/(3.10*0.5^{3/2})$
$= \cancel{32.00'}$ 41.6'

AHYMO SUMMARY TABLE (AHYMO194) - AMAFCA Hydrologic Model - January, 1994 RUN DATE (MON/DAY/YR) =07/23/1996

INPUT FILE = 9639 USER NO.= R_BOHANN.I01

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE = 1 NOTATION	
START										TIME=	.00
RAINFALL TYPE= 1	Proposed 100yr.									RAIN6=	2.350
COMPUTE NM HYD	101.10	-	1	.00471	13.45	.498	1.98165	1.500	4.463	PER IMP=	90.00
COMPUTE NM HYD	101.20	-	1	.00122	2.36	.077	1.17935	1.500	3.025	PER IMP=	30.00
COMPUTE NM HYD	101.30	-	1	.00096	2.76	.101	1.98165	1.500	4.486	PER IMP=	90.00
COMPUTE NM HYD	101.40	-	1	.00041	1.19	.043	1.98165	1.500	4.526	PER IMP=	90.00
START										TIME=	.00
RAINFALL TYPE= 1	Proposed 10yr.									RAIN6=	1.570
COMPUTE NM HYD	111.10	-	1	.00471	8.71	.309	1.23172	1.500	2.889	PER IMP=	90.00
COMPUTE NM HYD	111.20	-	1	.00122	1.23	.039	.59609	1.500	1.578	PER IMP=	30.00
COMPUTE NM HYD	111.30	-	1	.00096	1.78	.063	1.23172	1.500	2.902	PER IMP=	90.00
COMPUTE NM HYD	111.40	-	1	.00041	.77	.027	1.23172	1.500	2.923	PER IMP=	90.00
START										TIME=	.00
RAINFALL TYPE= 1	Existing 100yr.									RAIN6=	2.350
COMPUTE NM HYD	102.10	-	1	.00471	6.87	.195	.77821	1.533	2.280	PER IMP=	.00
COMPUTE NM HYD	102.20	-	1	.00122	1.98	.059	.91192	1.500	2.540	PER IMP=	10.00
COMPUTE NM HYD	102.30	-	1	.00096	1.41	.040	.77821	1.533	2.291	PER IMP=	.00
COMPUTE NM HYD	102.40	-	1	.00041	.61	.017	.77821	1.533	2.308	PER IMP=	.00
START										TIME=	.00
RAINFALL TYPE= 1	Existing 10yr.									RAIN6=	1.570
COMPUTE NM HYD	112.10	-	1	.00471	2.82	.070	.27828	1.533	.936	PER IMP=	.00
COMPUTE NM HYD	112.20	-	1	.00122	.90	.025	.38422	1.533	1.148	PER IMP=	10.00
COMPUTE NM HYD	112.30	-	1	.00096	1.21	.040	.78009	1.500	1.963	PER IMP=	47.37
COMPUTE NM HYD	112.40	-	1	.00041	.52	.017	.78009	1.500	1.985	PER IMP=	47.37
FINISH											

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

June 19, 2002

Ronald R. Bohannan, P.E.
Tierra West, LLC.
8509 Jefferson NE
Albuquerque, New Mexico 87113

RE: MARKET PLACE AT THE JOURNAL CENTER PH. 3 (D-17/D3B1)
(7620 Jefferson NE) (Tr. 3A-1C-1A1 of Journal Center)
ENGINEERS CERTIFICATION FOR CERTIFICATE OF OCCUPANCY
ENGINEERS STAMP DATED 8/21/2001
ENGINEERS CERTIFICATION DATED 6/18/2002

Dear Mr. Bohannan:

Based upon the information provided in your Engineers Certification submittal dated 6/18/2002, the above referenced site is approved for Permanent Certificate of Occupancy.

If I can be of further assistance, please contact me at 924-3981.

Sincerely,

Teresa A. Martin
Hydrology Plan Checker
Public Works Department

C: Vickie Chavez, COA
approval file
drainage file

THE CITY OF ALBUQUERQUE IS AN EQUAL OPPORTUNITY/REASONABLE ACCOMMODATION EMPLOYER

DRAINAGE REPORT

for

Market Place at Journal Center
Phase ~~II~~ 3
Albuquerque, New Mexico

Prepared by

Tierra West, LLC
8509 Jefferson Boulevard NE
Albuquerque, New Mexico 87113

Prepared for
Maestas, Ward & Associates
6121 Indian School Road NE, Suite 200
Albuquerque, New Mexico 87110

August 2001

RONALD RAY BOHANNAN
NEW MEXICO
8641
REGISTERED PROFESSIONAL ENGINEER

RECEIVED
AUG 22 2001
HYDROLOGY SECTION

PURPOSE

The purpose of this report is to prove the development of the subject 0.944-acre property, for the use as an Office building, is in accordance with the DPM, Chapter 22. This report demonstrates that the proposed improvements are consistent with the Market Place at Journal Center Master Drainage Plan and do not adversely effect the surrounding properties nor the upstream or downstream facilities.

INTRODUCTION

The subject of this report, as shown on the Exhibit A Vicinity Map, is a 0.944-acre parcel of land located on the southeast corner of Jefferson Boulevard and Sun Avenue. The site is located on Zone Atlas page D-17. The site currently exists as a rough graded pad within the Market Place at Journal Center. The current legal description of the property is Tract 3A-1C-1A1 of Journal Center. As shown on FIRM map 35002C0137D, the site lies within Flood Zone X.

This site was analyzed within the Drainage Report and Grading Plan for the Market Place at Journal Center (D17-D3B1) previously submitted by Tierra West, LLC, with the stamp date of 12/17/96. The City of Albuquerque Hydrology Section approved the overall Drainage Management Plan on 1/13/97. Based upon the approved Drainage Management Plan, this site is located entirely within Basin A-1 of the Market Place at Journal Center. The overall Drainage Basin Map for the Market Place at Journal Center is shown on Exhibit B. The approved Master Plan indicates this parcel is allowed free discharge if the land treatments are equal to or less than 90% D, and 10% B. Since our improvements are consistent with developed condition assumptions within the Market Place at Journal Center Overall Drainage Plan, the site should be allowed free discharge.

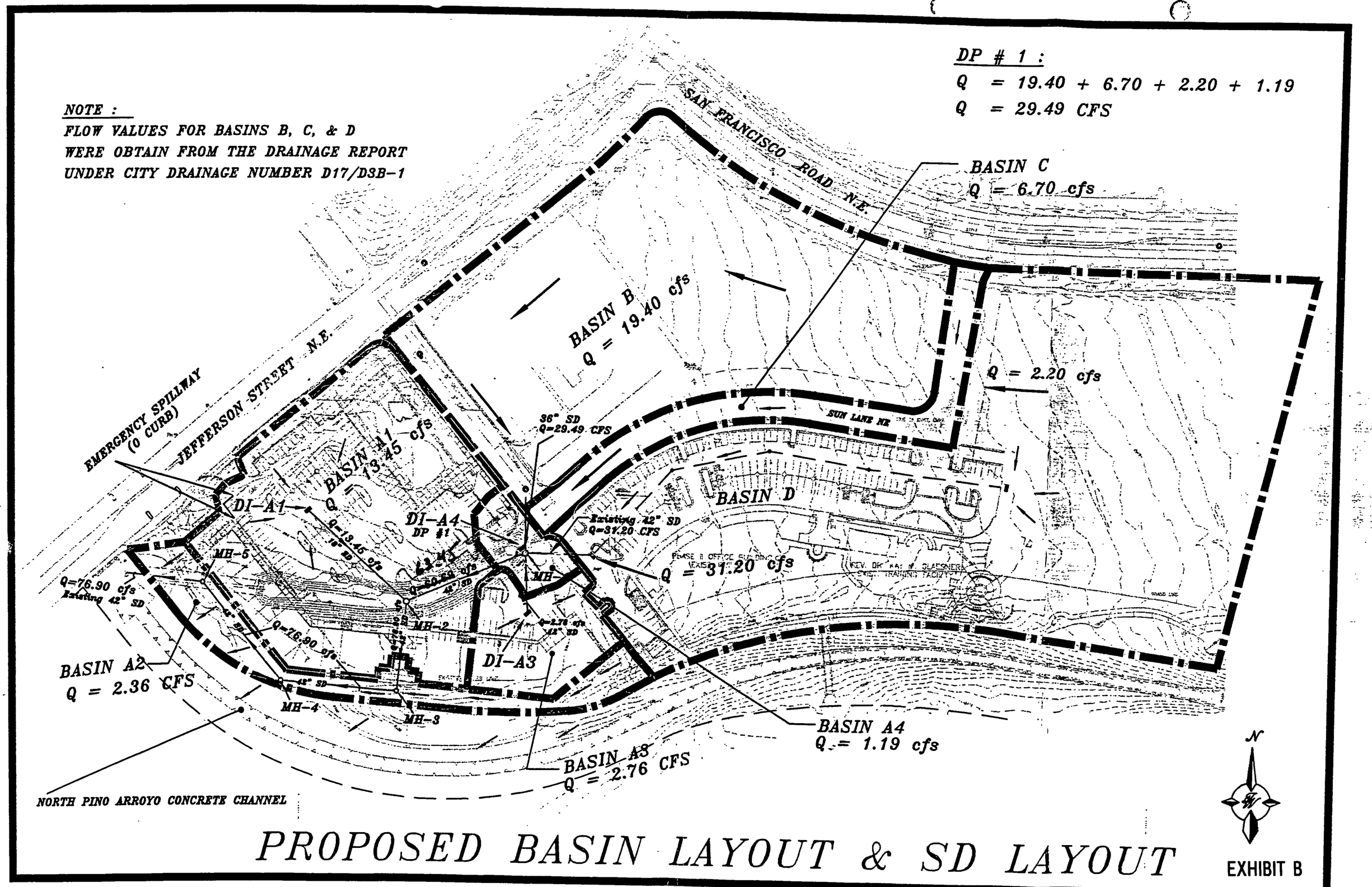
EXISTING CONDITIONS

The site slopes from north to south with general grades between 2-3%. The site was rough graded with the construction of the Market Place at Journal Center. As discussed within the Market Place overall drainage report, all offsite flows pass through the site via an underground conduit. All onsite flows are captured by a series of drop inlets located within the parking fields. This developed flow is conveyed within an underground storm drain to the North Pino Arroyo, which runs adjacent to the site. As shown in the Market Place at Journal Center Overall Drainage Report, the onsite storm drainage system was designed for the entire build out of the center, including this third and final phase.

PROPOSED CONDITIONS

The proposed improvements consist of the construction of a single story office building and its associated parking field. As shown in Exhibit B, the entire site lies within Basin A1 as described within the Market Place at Journal Center drainage plan. As shown in Appendix A, the proposed land treatments are consistent with the developed condition assumptions for this site within the Market Place at Journal Center's Drainage Management Plan. The proposed building location and grading scheme for this site are consistent with the assumed grades as shown on the grading plan for the entire center.

As shown on in Exhibit C, the site is divided into three drainage sub-basins. Sub-basin A1A consists of the entire roof drainage and the north potion of the lot between the building and Sun Boulevard. Sub-basin A-1A discharges 1.05 cfs during the 100-year, 6-hour storm event, within a 2' channel. As show in Appendix B, the channel and sidewalk culvert are sized to convey the entire peak discharge rate. Sub basin A-1B consists of the outdoor patio and landscape area along the west portion of the site. Sub-basin A-1B drains .24 cfs during the 100-year, 6-hour storm event within the landscape area through a 12" sidewalk culvert, discharging



PROPOSED BASIN LAYOUT & SD LAYOUT

EXHIBIT B

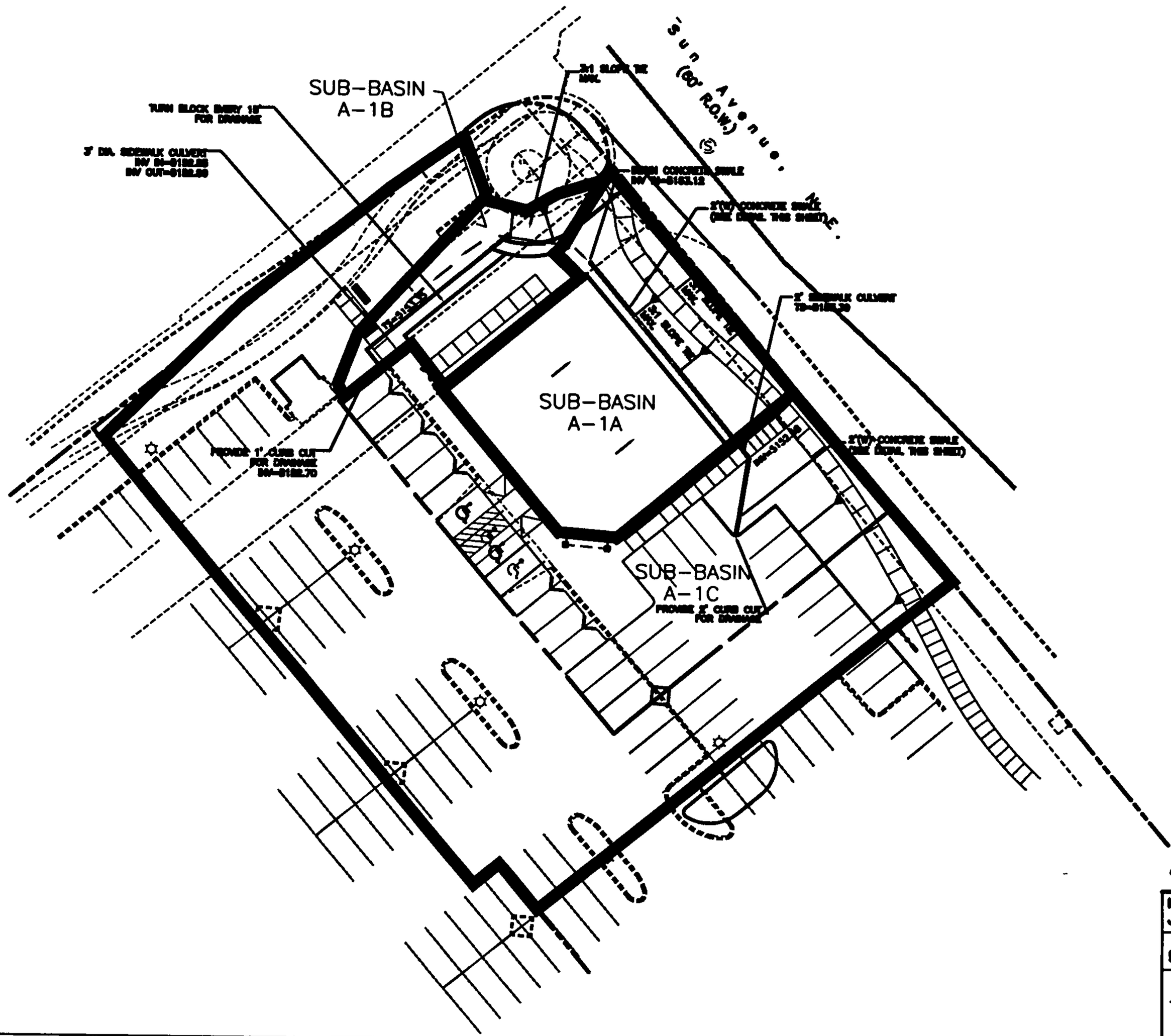


EXHIBIT C

MARKET PLACE AT THE JOURNAL CENTER PHASE 3	DRAWN BY RPG
	DATE 8-13-01
DRAINAGE BASINS	SCALE 1"=40'
TIERRA WEST, LLC 8500 JEFFERSON NE ALBUQUERQUE, NEW MEXICO 87113 (505)858-3100	SHEET 1
	JOB # 240031

to the parking lot through a 1' curb cut. Sub-basin A-1C consists of the remaining portion the site. Sub-basin A-1C discharges 2.52 cfs, which combined with the discharge from Sub-basins A-1A and A-1B sheet flow to the existing Drop inlet located within the parking field directly south of this site.

The total predicted 100-year peak runoff generated from this site will be 3.81 CFS. An existing drop inlet located within the Market Place parking field captures the entire flow. This inlet is connected to the local storm drainage system, which conveys the developed flow for the area to the North Pino Arroyo. If this inlet clogs or if the flow exceeds the predicted 100-year peak rate, the flow will discharge through the existing driveway located at Jefferson Boulevard, within phase on of he overall center.

SUMMARY AND RECOMMENDATIONS

This site is an existing lot within the Market Place at Journal Center, which is an existing commercial center. The City of Albuquerque Hydrology Section approved the drainage management plan for the entire center. This Market Place at Journal Center Master Drainage Plan assumed fully developed conditions for this site. The proposed improvements are consistent with the land treatment types used for the developed condition for this site within the Market Place at Journal Center's drainage plan. The predicted 100-year, 6-hour peak discharge rate for the site is 3.81 cfs, which is less than the allowable rate of 4.21 cfs prescribed within the Market Place at Journal Center Overall Drainage Plan. The development of this site is also consistent with the DPM Chapter 22 Hydrology section. Since this site encompasses less than 5 acres, a NPDES permit is not required prior to any construction activity. No improvements are to occur within the City Right-of-Way, therefore an infrastructure list is not required. It is recommended this development be approved for rough grading, Site Plan for Subdivision and Site Plan for Building Permit.

RUNOFF RATE COMPARISON

Use Equation A-10: $Q_P = Q_{PA} A_A + Q_{PB} A_B + Q_{PC} A_C + Q_{PD} A_D$
Values of Q_{pi} are from Table A-9, and are in CFS/acre. Area values are in acres.

DEVELOPED RATE OF RUNOFF (CFS)									
BASIN	Q_{PA}	A_A	Q_{PB}	A_B	Q_{PC}	A_C	Q_{PD}	A_D	**Total CFS**
Sub-basin A-1B	1.56	0.020	2.28	0.049	3.14	0.019	4.70	0.009	0.24
Sub-basin A-1A	1.56	0.000	2.28	0.052	3.14	0.026	4.70	0.181	1.05
Sub-basin A-1C	1.56	0.00	2.28	0.059	3.14	0.058	4.70	0.470	2.52
Total site as proposed in this report									3.81
Site as proposed in the Market Place at Journal Center*	1.56	0.00	2.28	0094	3.14	0.00	4.70	0.850	4.21

* based upon treatment percentages used for basin A-1

Channel Capacity

	Top Width	Bottom Width	Depth	Area	WP	R	Slope	Q Provided	Q Required	Velocity
	(ft)	(ft)	(ft)	(ft^2)	(ft)		(%)	(cfs)	(cfs)	(ft/s)
north channel	2	2	0.33	0.66	2.66	0.2481203	0.5	1.62	1.05	1.59

<u>Manning's Equation:</u>

Q = 1.49/n * A * R^(2/3) * S^(1/2)

A = Area

R = D/4

S = Slope

n = 0.017

WEST CURB OPENING AND SIDEWALK CULVERT CAPACITY

Weir Equation:

$$Q = CLH^{3/2}$$

Q= flow (cfs)
C = 2.75
H = Curb Height (ft)
L = width of opening

$$Q_{max} = 2.75(1)(.5)^{3/2} = 0.97 \text{ cfs}$$

$$Q_{req} = .24 \text{ cfs}$$

NOTE: NORTHERN SIDEWALK CULVERT AND CURB OPENING CONNECTED TO CHANNEL, THEREFORE CAPACITY IS GOVERNED BY CHANNEL CAPACITY/ MANNINGS EQUATION. THIS CAPACITY IS DEMONSTRATED ON OTHER SHEET WITHIN THEI REPORT

Swale Capacity

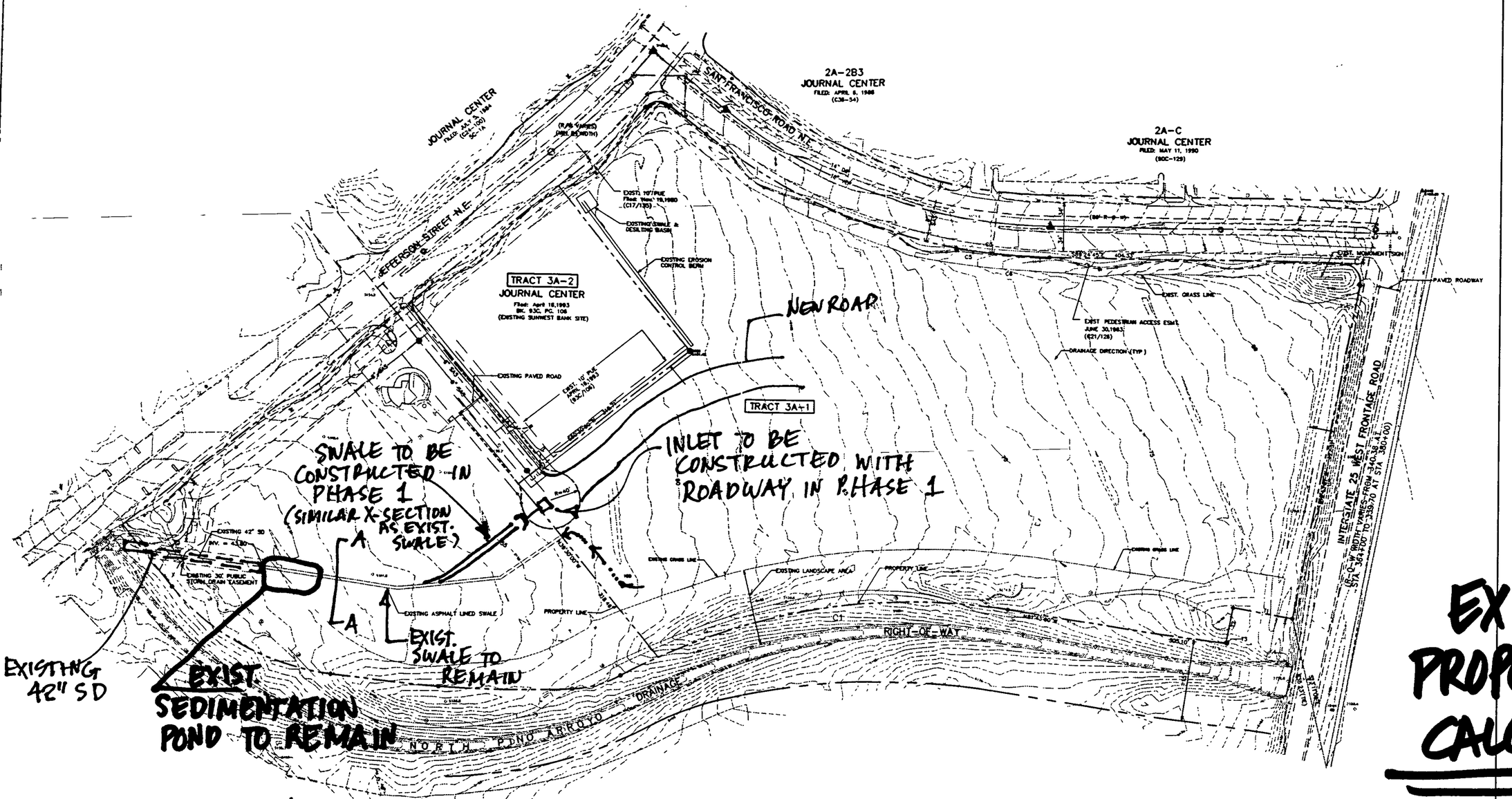
	Top Width (ft)	Bottom Width (ft)	Depth (ft)	Area (ft^2)	WP (ft)	R	Slope (%)	Q Provided (cfs)	Q Required (cfs)	Velocity (ft/s)
Beginning	6	0	0.5	1.50	6.08	0.2465985	0.6	4.00	1.05	0.70

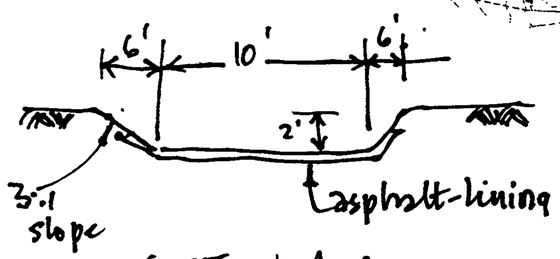
- **Manning's Equation:**

Q = 1.49/n * A * R^(2/3) * S^(1/2)

A = Area
R = D/4
S = Slope
n = 0.017

EXISTING & PROPOSED SWALE CALCULATIONS





SECTION A-A

S=0.012

by Mannings....

capacity of Swale = 122 cfs @ 16" depth of flow
= 260 cfs @ 24" depth of flow

Exist. Swale is satisfactory for undeveloped and developed flows.

JOURNAL CENTER, TRACT 3A-1		
PROJECT NO.	EXISTING SITE SURVEY/ EXISTING CONDITIONS	
SCALE		
JOB NO. 94165-4	SHEET OF	
DRAWN BY M.E.S.	DATE 8/17/94	
CHECKED BY J.R.T.	SCALE 1" = 50'	

LOCATION MAP
ZONE ATLAS MAP NO
NOT TO SCALE

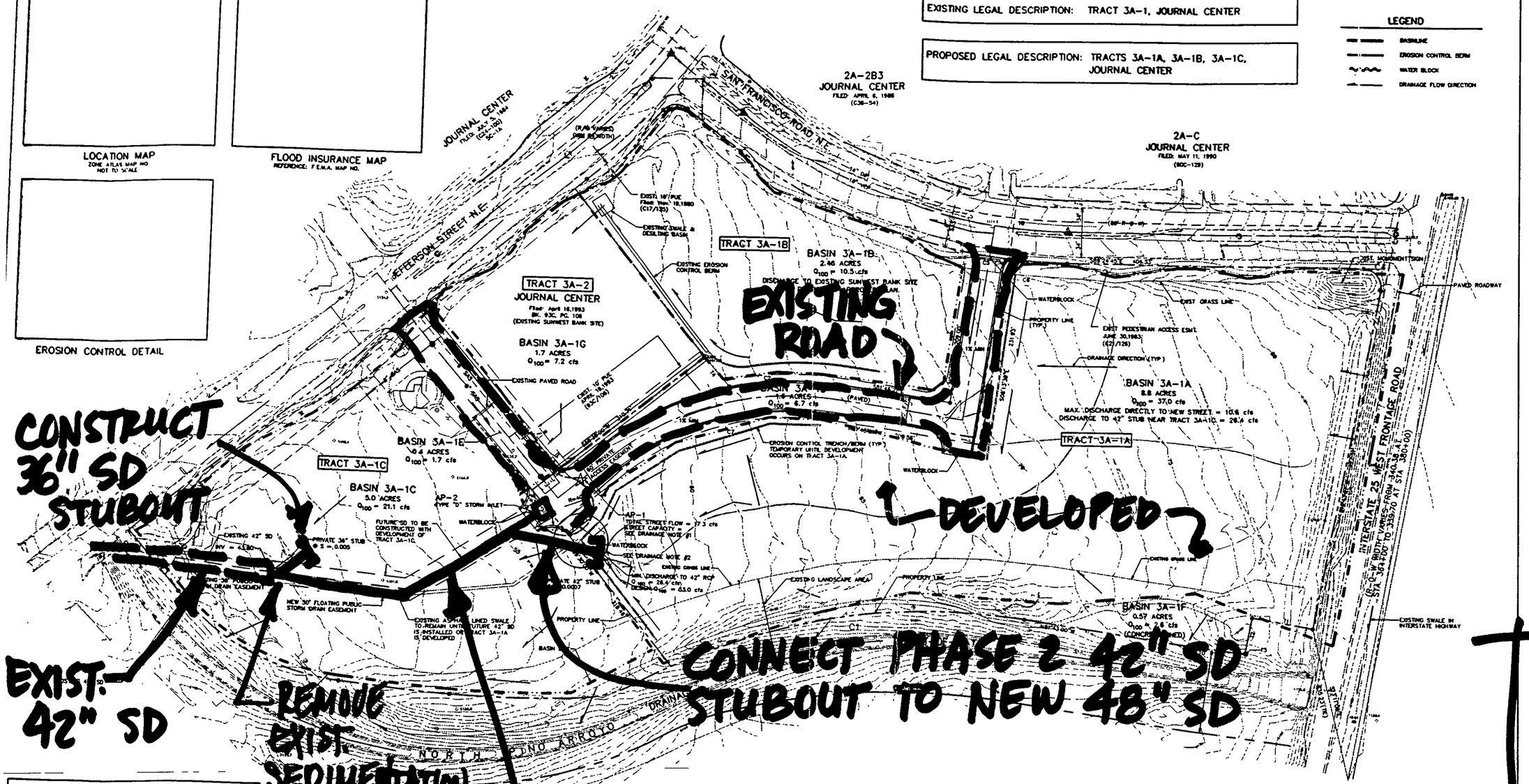
FLOOD INSURANCE MAP
REFERENCE: F.E.M.A. MAP NO.

EROSION CONTROL DETAIL

EXISTING LEGAL DESCRIPTION: TRACT 3A-1, JOURNAL CENTER

PROPOSED LEGAL DESCRIPTION: TRACTS 3A-1A, 3A-1B, 3A-1C, JOURNAL CENTER

LEGEND
- BASINLINE
- EROSION CONTROL BERM
- WATER BLOCK
- DRAINAGE FLOW DIRECTION



PHASE 3

GRADING NOTES

1. EXCEPT AS PROVIDED HEREIN, GRADING SHALL BE PREFORMED AT THE ELEVATIONS AND IN ACCORDANCE WITH THE TYPICAL SECTIONS SHOWN ON THIS PLAN.
2. CONTRACTOR SHALL OBTAIN AND ABIDE BY A TOPSOIL DISTURBANCE PERMIT FROM THE CITY OF ALBUQUERQUE. THE COST FOR REQUIRED CONSTRUCTION DUST AND EROSION CONTROL MEASURES SHALL BE INCIDENTAL TO THE PROJECT COST.
3. ALL WORK RELATIVE TO FOUNDATION CONSTRUCTION, SITE PREPARATION, AND PAVEMENT INSTALLATION, AS SHOWN ON THIS PLAN, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE "GEOTECHNICAL INVESTIGATION," AS PROVIDED BY THE ARCHITECT OR OWNER. AS AS OTHER WORK SHALL, UNLESS OTHERWISE STATED OR PROVIDED FOR HEREON, BE CONSTRUCTED IN ACCORDANCE WITH CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION.
4. TWO WORKING DAYS PRIOR TO EXCAVATION CONTRACTOR MUST CONTACT LINE LOCATING SERVICE (785-1284) FOR LOCATION OF EXISTING UTILITIES.
5. PRIOR TO GRADING, ALL VEGETATION, DEBRIS, AND NEAR SURFACE ORGANICALLY CONTAMINATED SOIL SHALL BE STRIPPED FROM ALL AREAS TO BE GRADED. VEGETATION AND DEBRIS SHALL BE DISPOSED OF OFF-SITE. TOPSOIL STRIPPINGS SHALL BE DISPOSED OF OFF-SITE OR STOCKPILED FOR USE IN PLANTERS AND NON-STRUCTURAL FILLS.
6. EARTH SLOPES SHALL NOT EXCEED 3 HORIZONTAL TO 1 VERTICAL UNLESS SHOWN OTHERWISE.
7. IT IS THE INTENT OF THESE PLANS THAT THIS CONTRACTOR SHALL NOT PERFORM ANY WORK OUTSIDE OF THE PROPERTY BOUNDARIES.
8. CONTRACTOR SHALL NOT DISTURB EXISTING LANDSCAPING

DRAINAGE CERTIFICATION

AS-BUILT ELEVATIONS ARE SHOWN ON THE PLAN IN LOCATIONS WHERE THE ORIGINAL DESIGN ELEVATION HAS BEEN CROSSED OUT AND THE NEW ELEVATION IS LISTED.

NOTES.

I, JAMES R. TOPMILLER, OF BOHANNAN-HUSTON INC., A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF NEW MEXICO, DO HEREBY CERTIFY THAT THE DRAINAGE IMPROVEMENTS HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED DRAINAGE PLAN, TO THE BEST OF KNOWLEDGE AND BELIEF.

JAMES R. TOPMILLER, P.E.
N.M.P.E. NO. 8354

DATE. _____

DRAINAGE NOTES

1. AP-1 FLOWS COMPRISE BASINS 3A-1A, 3A-1D AND HALF OF 3A-1B. (TOTAL = 50.6 cfs)
2. UNDEVELOPED FLOWS FROM BASIN 3A-1A SHALL DISCHARGE TO EXISTING ASPHALT-LINED SWALE. DEVELOPED FLOWS FROM BASIN 3A-1A SHALL DISCHARGE TO THE [illegible] AND INLET.

JOURNAL CENTER, TRACT 3A-1

PROJECT NO.	DRAINAGE PLAN
SCALE	
JOB NO. 94166.44	SHEET OF
DRAWN BY W.E.S.	DATE 8/4/94
CHECKED BY J.R.T.	SCALE 1" = 50'

EXISTING LEGAL DESCRIPTION: TRACT 3A-1, JOURNAL CENTER

PROPOSED LEGAL DESCRIPTION: TRACTS 3A-1A, 3A-1B, 3A-1C, JOURNAL CENTER

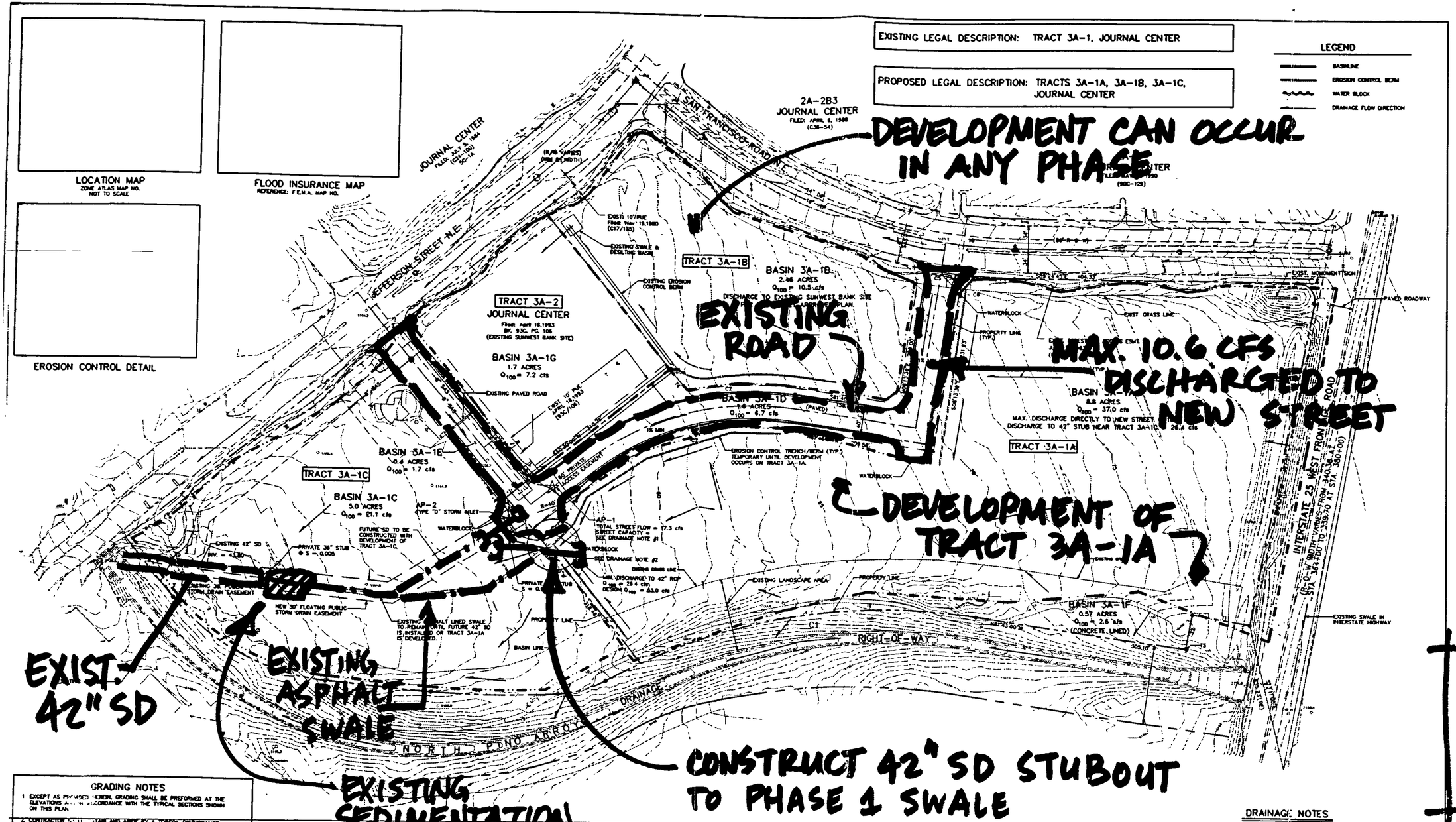
LEGEND

- BASINLINE
- EROSION CONTROL BERM
- WATER BLOCK
- DRAINAGE FLOW DIRECTION

LOCATION MAP
ZONE ATLAS MAP NO.
NOT TO SCALE

FLOOD INSURANCE MAP
REFERENCE: F.E.M.A. MAP NO.

EROSION CONTROL DETAIL



PHASE 2

GRADING NOTES

1. EXCEPT AS PROVIDED HEREIN, GRADING SHALL BE PREFORMED AT THE ELEVATIONS AND IN ACCORDANCE WITH THE TYPICAL SECTIONS SHOWN ON THIS PLAN.
2. CONTRACTOR SHALL OBTAIN AND ABIDE BY A TOPSOIL DISTURBANCE PERMIT FROM THE CITY OF ALBUQUERQUE. THE COST FOR REQUIRED CONSTRUCTION EROSION CONTROL MEASURES SHALL BE INCIDENTAL TO THE PROJECT COST.
3. ALL WORK RELATING TO FOUNDATION CONSTRUCTION, SITE PREPARATION, AND EQUIPMENT INSTALLATION, AS SHOWN ON THIS PLAN, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE "GEOTECHNICAL INVESTIGATION," AS PROVIDED BY THE ARCHITECT OR OWNER. AS OTHER WORK SHALL, UNLESS OTHERWISE STATED OR PROVIDED FOR HEREON, BE CONSTRUCTED IN ACCORDANCE WITH CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION.
4. TWO WORKING DAYS PRIOR TO EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE (765-1234) FOR LOCATION OF EXISTING UTILITIES.
5. PRIOR TO GRADING, ALL VEGETATION, DEBRIS, AND NEAR SURFACE ORGANICALLY CONTAMINATED SOIL SHALL BE STRIPPED FROM ALL AREAS TO BE GRADED. VEGETATION AND DEBRIS SHALL BE DISPOSED OF OFF-SITE. TOPSOIL STRIPPINGS SHALL BE DISPOSED OF OFF-SITE OR STOCKPILED FOR USE IN PLANTERS AND NON-STRUCTURAL FILLS.
6. EARTH SLOPES SHALL NOT EXCEED 3 HORIZONTAL TO 1 VERTICAL UNLESS SHOWN OTHERWISE.
7. IT IS THE INTENT OF THESE PLANS THAT THIS CONTRACTOR SHALL NOT PERFORM ANY WORK OUTSIDE OF THE PROPERTY BOUNDARIES.
8. CONTRACTOR SHALL NOT DISTURB EXISTING LANDSCAPING.

DRAINAGE CERTIFICATION

AS-BUILT ELEVATIONS ARE SHOWN ON THE PLAN IN LOCATIONS WHERE THE ORIGINAL DESIGN ELEVATION HAS BEEN CROSSED OUT AND THE NEW ELEVATION IS LISTED.

NOTES:

I, JAMES R. TOPMILLER, OF BOHANNAN-HUSTON INC., A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF NEW MEXICO, DO HEREBY CERTIFY THAT THE DRAINAGE IMPROVEMENTS HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED DRAINAGE PLAN, TO THE BEST OF KNOWLEDGE AND BELIEF.

JAMES R. TOPMILLER, P.E.
N.M.P.E. NO. 9304

DATE. _____

DRAINAGE NOTES

1. AP-1 FLOWS COMPRISE BASINS 3A-1A, 3A-1D AND HALF OF 3A-1B. (TOTAL = 50.6 cfs)
2. UNDEVELOPED FLOWS FROM BASIN 3A-1A SHALL DISCHARGE TO EXISTING ASPHALT-LINED SWALE. DEVELOPED FLOWS FROM BASIN 3A-1A SHALL DISCHARGE TO THE NEW STREET AND INLET.

JOURNAL CENTER, TRACT 3A-1

DRAINAGE PLAN

JOB NO. 94 66 44	SHEET OF
DRAWN BY NES	DATE 8/4/94
CHECKED BY JRT	SCALE 1" = 50'

LOCATION MAP
ZONE ATLAS MAP NO
NOT TO SCALE

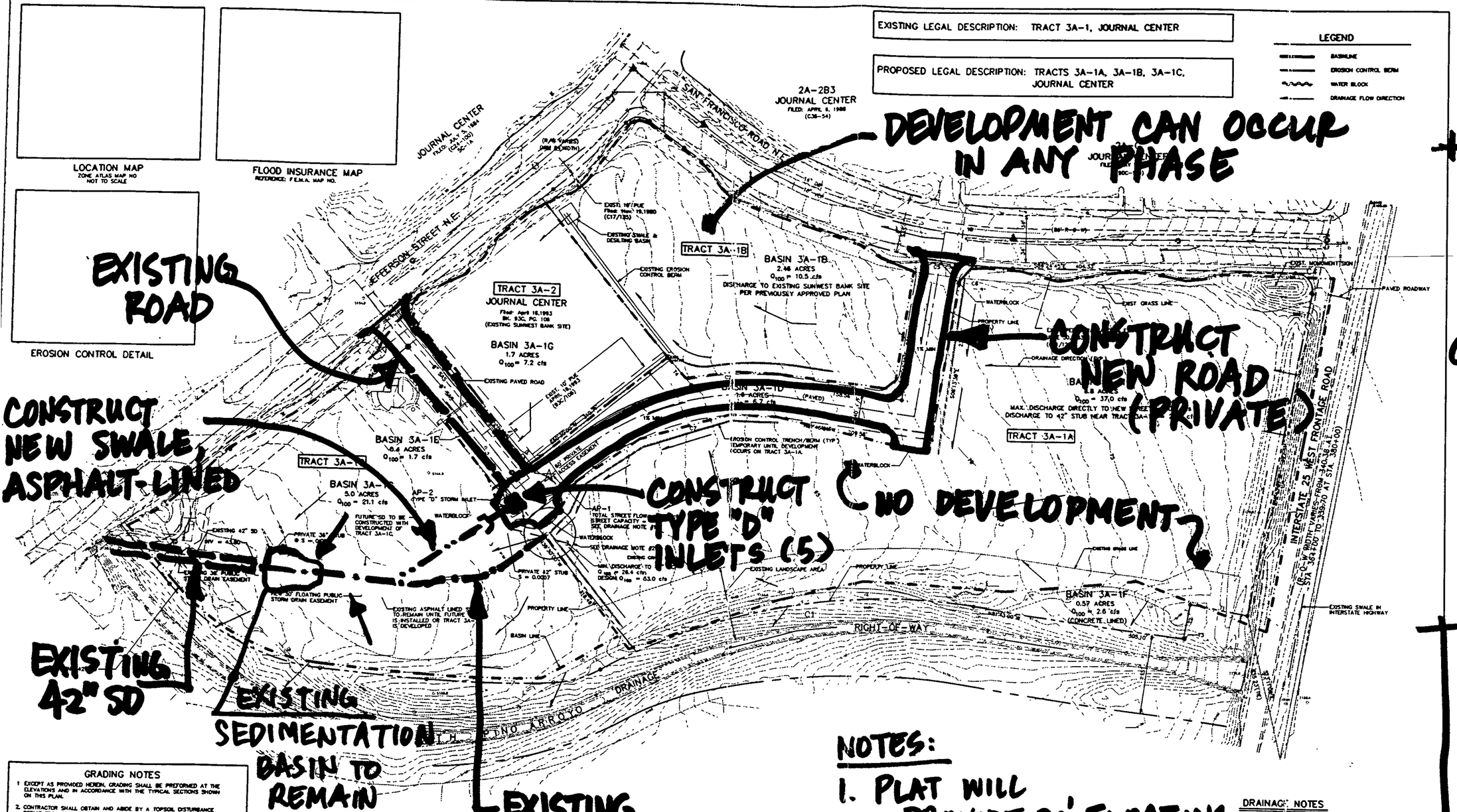
FLOOD INSURANCE MAP
REFERENCE: F.E.M.A. MAP NO.

EROSION CONTROL DETAIL

EXISTING LEGAL DESCRIPTION: TRACT 3A-1, JOURNAL CENTER

PROPOSED LEGAL DESCRIPTION: TRACTS 3A-1A, 3A-1B, 3A-1C, JOURNAL CENTER

LEGEND
- BASINLINE
- EROSION CONTROL BERM
- WATER BLOCK
- DRAINAGE FLOW DIRECTION



GRADING NOTES

1. EXCEPT AS PROVIDED HEREIN, GRADING SHALL BE PREFORMED AT THE ELEVATIONS AND IN ACCORDANCE WITH THE TYPICAL SECTIONS SHOWN ON THIS PLAN.
2. CONTRACTOR SHALL OBTAIN AND ABIDE BY A TOPSOIL DISTURBANCE PERMIT FROM THE CITY OF ALBUQUERQUE. THE COST FOR REQUIRED CONSTRUCTION DUST AND EROSION CONTROL MEASURES SHALL BE INCIDENTAL TO THE PROJECT COST
3. ALL WORK RELATIVE TO FOUNDATION CONSTRUCTION, SITE PREPARATION, AND PAVEMENT INSTALLATION, AS SHOWN ON THIS PLAN, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE "GEOTECHNICAL INVESTIGATION," AS PROVIDED BY THE ARCHITECT OR OWNER. AS AS OTHER WORK SHALL, UNLESS OTHERWISE STATED OR PROVIDED FOR HEREON, BE CONSTRUCTED IN ACCORDANCE WITH CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION.
4. TWO WORKING DAYS PRIOR TO EXCAVATION, CONTRACTOR MUST CONTRACT LINE LOCATING SERVICE (765-1284) FOR LOCATION OF EXISTING UTILITIES.
5. PRIOR TO GRADING, ALL VEGETATION, DEBRIS, AND NEAR SURFACE ORGANICALLY CONTAMINATED SOIL SHALL BE STRIPPED FROM ALL AREAS TO BE GRADED. VEGETATION AND DEBRIS SHALL BE DISPOSED OF OFF-SITE. TOPSOIL STRIPPINGS SHALL BE DISPOSED OF OFF-SITE OR STOCKPILED FOR USE IN PLANTERS AND NON-STRUCTURAL FILLS.
6. EARTH SLOPES SHALL NOT EXCEED 3 HORIZONTAL TO 1 VERTICAL UNLESS SHOWN OTHERWISE.
7. IT IS THE INTENT OF THESE PLANS THAT THIS CONTRACTOR SHALL NOT PERFORM ANY WORK OUTSIDE OF THE PROPERTY BOUNDARIES.
8. CONTRACTOR SHALL NOT DISTURB EXISTING LANDSCAPING

DRAINAGE CERTIFICATION

AS-BUILT ELEVATIONS ARE SHOWN ON THE PLAN IN LOCATIONS WHERE THE ORIGINAL DESIGN ELEVATION HAS BEEN CROSSED OUT AND THE NEW ELEVATION IS LISTED.

NOTES:

I, JAMES R. TOPMILLER, OF BOHANNAN-HUSTON INC., A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF NEW MEXICO, DO HEREBY CERTIFY THAT THE DRAINAGE IMPROVEMENTS HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED DRAINAGE PLAN, TO THE BEST OF KNOWLEDGE AND BELIEF.

JAMES R. TOPMILLER, P.E.
N.M.P.E. NO. 9354

DATE _____

NOTES:

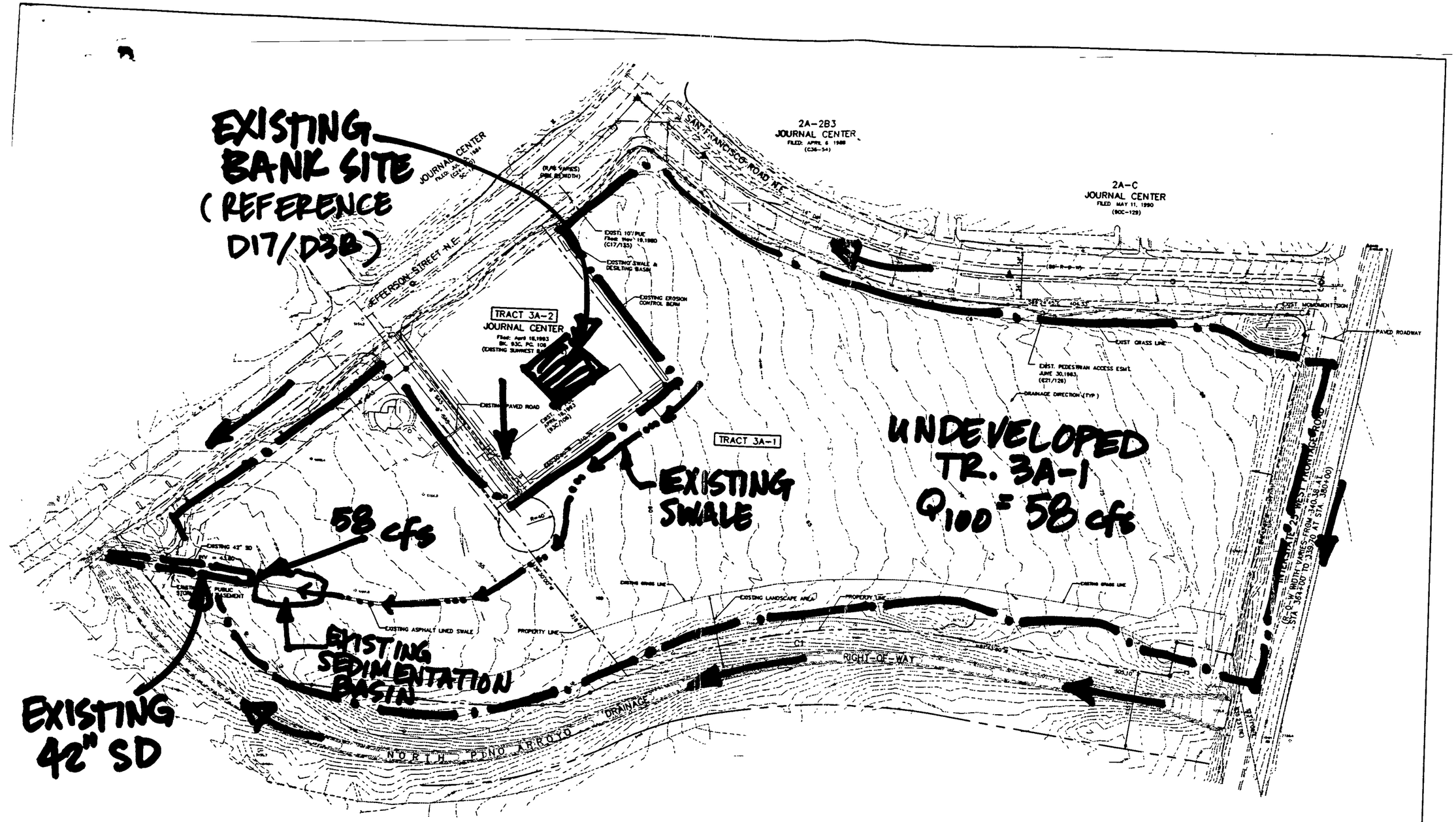
1. PLAT WILL PROVIDE 20' FLOATING PUBLIC DRAINAGE EASEMENT ACROSS TRACT 3A-1C IN PHASE 1 OR PHASE 3.

DRAINAGE NOTES

1. FLOWS COMPRISE BASINS 3A-1A, 3A-1D AND HALF OF 3A-1B (TOTAL = 50.8 cfs)
2. UNDEVELOPED FLOWS FROM BASIN 3A-1A SHALL DISCHARGE TO EXISTING ASPHALT-LINED SWALE. DEVELOPED FLOWS FROM BASIN 3A-1A SHALL DISCHARGE TO THE NEW STREET AND INLET.

JOURNAL CENTER, TRACT 3A-1
GRADING & DRAINAGE PLAN

PROJECT NO.			
SEAL			
JOB NO.	94.66.44	SHEET	OF
DRAWN BY	NES	DATE	8/4/94
CHECKED BY	JRT	SCALE	1" = 50'

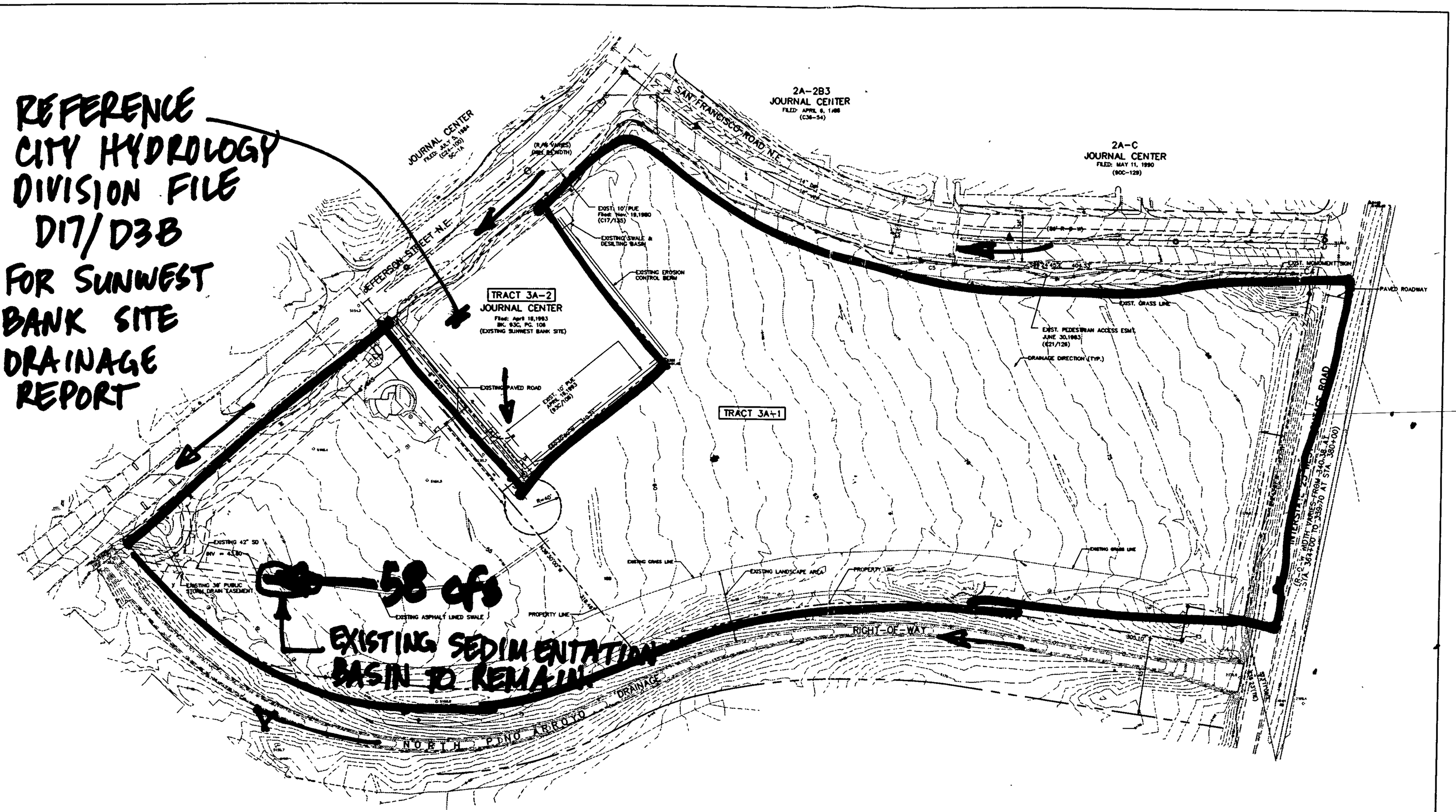


EXISTING CONDITIONS

JOURNAL CENTER, TRACT 3A-1	
PROJECT NO.	EXISTING SITE SURVEY/ EXISTING CONDITIONS
SCALE	
JOB NO. 94166'44	SHEET OF
DRAWN BY M.E.S.	DATE 8/17/94
DESIGNED BY J.P.T.	SCALE 1" = 50'

submitted 9/21/94

REFERENCE
CITY HYDROLOGY
DIVISION FILE
D17/D3B
FOR SUNWEST
BANK SITE
DRAINAGE
REPORT



EXISTING FLOWS

JOURNAL CENTER, TRACT 3A-1		
PROJECT NO.	EXISTING SITE SURVEY/ EXISTING CONDITIONS	
SEAL		
	JOB NO. 94166 44	SHEET OF
	DRAWN BY M.E.S.	DATE 8/17/94
	CHECKED BY J.R.T	SCALE 1" = 50'

AE

DRAINAGE REPORT
FOR
TRACTS 3A-1A, 3A-1B, & 3A-1C
JOURNAL CENTER BUSINESS PARK

AUGUST 1994

Prepared for:

JOURNAL CENTER CORPORATION
7777 JEFFERSON NE
ALBUQUERQUE, NM 87109

Prepared by:

Bohannan-Huston Inc.
Courtyard I
7500 Jefferson NE
Albuquerque, NM 87109

JAMES R. TOPMILLER
NEW MEXICO
9354
REGISTERED PROFESSIONAL ENGINEER

8/18/94

James R. Topmiller, P.E. Date

I.\CDP\9416644\DRAINAGE RPT-8/17/94

BOHANNAN-HUSTON INC.
ENGINEERS ARCHITECTS PHOTOGRAMMETRISTS SURVEYORS

I. PURPOSE

The purpose of this drainage report is to present a historic and proposed drainage conditions for Tract 3A-1, Journal Center Business Park and incidentally, Tract 3A-2, which is an existing developed bank site adjacent to Tract 3A-1. This report is intended to support Site Plan for Subdivision and preliminary plat review by the Development Review Board at their August 23, 1994 hearing. Additionally, this report supplies the guidance and direction for preparation of public street and drainage construction for Pepperday Lane, a private street proposed across Tract 3A-1.

In summary, we are seeking the following approvals based on this drainage report submittal:

- Site Plan for Subdivision approval
- Preliminary plat approval
- Work order approval for the proposed street (Pepperday Lane)

II. METHODOLOGY

Undeveloped and developed site conditions will be analyzed for the 100-year, 6-hour storm event in accordance with the City of Albuquerque's revised Section 22.2, Hydrology of the Development Process Manual, January 1993 (DPM).

Due to the proposed sump condition in the new street, with no surface outfall to public right-of-way, the outfall for drainage for the areas under this drainage study will be designed for twice the 100-year storm event. Although the new street will be private initially, which may eliminate the requirements for twice a 100-year storm design, the proposed street is anticipated to be converted to a public street in the future, necessitating design for twice the 100-year storm event.

III. SITE DESCRIPTION AND CHARACTERISTICS

Tract 3A-1 is currently an undeveloped, vacant parcel of land located within the Journal Center Business Park. It is surrounded on the south by the North Pino Arroyo concrete drainage channel (a map enclosed), I-25 on the east, San Francisco Road on the north, and Jefferson Street on the west. All three mentioned streets are fully paved, developed public streets. Tract 3A-1 in its current platting is approximately 18 acres.

Tract 3A-2, is the existing Sunwest Bank, only constructed recently and completed in 1994. With that construction, a 40' face to face private street was constructed on its south boundary. Additionally, an existing building, currently housing an insurance agency, is located on proposed Tract 3A-1C opposite the Sunwest Bank building.

The site is not located within a FEMA floodplain. The nearest FEMA floodplain is identified on FEMA maps as being confined to the existing north Pino Arroyo concrete channel.

IV. EXISTING HYDROLOGIC AND SITE DRAINAGE CONDITIONS

In its undeveloped condition, Tract 3A-1 largely drains southwesterly to the north Pino Arroyo concrete channel. Most of this drainage is currently collected in a public 42" RCP storm drain located in the southwestern-most area of Tract 3A-1. The 42" pipe discharges to the North Pino Arroyo channel. A portion of Tract 3A-1, located in the northwestern portion of the tract, drains to an existing swale and desilting pond and then across Tract 3A-2. After crossing Tract 3A-2, flows re-enter the existing private street and are discharged southerly to the 42" pipe.

In its undeveloped condition, Tract 3A-1 is anticipated to generate approximately 58 CFS in the 100-year storm event.

Off site basins to Tract 3A-1 are minimal. Jefferson Street, San Francisco Road and the North Pino Arroyo channel all form effective barriers to offsite flows. A minor

portion of the westerly side of the I-25 west frontage road drains onto the site. This area has been included in the flow provided above for the undeveloped Tract 3A-1.

V. PROPOSED (DEVELOPED) HYDROLOGIC AND HYDRAULIC CONDITIONS

Please refer to the proposed "Drainage Plan" and "Street and Storm Drain Profile" sheet, enclosed in the rear pockets of this report.

SITE DRAINAGE

The proposed Drainage Management Plan for the developed site will continue to use existing discharge points and follow drainage patterns very similar to the existing site condition. The minor offsite flows from I-25 west frontage road, as described in the undeveloped conditions section of the report, will continue to be accepted.

Developed flows for the 100-year storm event are shown on the Drainage Plan and calculations are in the rear of this report.

PHASING

It is mentioned in the Purpose Section of this report that no development of the tracts is proposed immediately. Only the roadway will be constructed immediately in the first phases. Accordingly, the following sections discuss the drainage of this plan in a phased manner. Phase I will be the platting of Tract 3A-1 into three parcels and construction of the roadway. Phase II will be the future development of Tract 3A-1A. Phase III will be the future development of Tract 3A-1C.

PHASE I

In Phase I, the construction of the roadway and the platting of Tract 3A into three parcels, the drainage from Tract 3A-1A will be collected both by the proposed new street and by the existing asphalt-lined swale in Tract 3A-1C. At the intersection near AP-1, near the southeast corner of Tract 3A-2, a drainage inlet will be constructed to collect all actual street flows of approximately 36.7 cfs. This comprises the flows from

3A2

Basin 3A-1B (10.5 cfs), Basin 3A-1G (7.2 cfs), Basin 3A-1E (1.7 cfs) and Basin 3A-1D (6.7 cfs) and a portion of the Basin 3A-1A drainage (approximately 10.6 cfs). The flow is approximately 35.7 cfs and when multiplied times two to reflect twice the 100-year storm event design, results in the inlet being designed to collect 73.4 cfs.

The storm drainage inlet is to be constructed only to extend beyond the proposed street paving. Thereafter, the pipe will stop and discharge a temporary swale extended to the existing swale in Tract 3A-1C.

PHASE II

The Phase II effort, which comprises the development of Tract 3A-1A and assumes that no construction or development has occurred in Tract 3A-1C, has no additional infrastructure to provide other than that provided by Phase I. Discharge of Basin 3A-1A developed flows will be made directly to the new street (in amount no greater than 10.6 cfs) and to the proposed 42" RCP stubout in the southwest corner of Tract 3A-1A.

Street flows will be collected by the storm drain inlet built with the street in the downstream intersection discharged to the temporary asphalt line swale provided in Tract 3A-1C.

PHASE III

Phase III is the development of Tract 3A-1C, and assumes that Tract 3A-1A has been constructed and that the road has been constructed, and will identify the final alignment of the 48" storm drain extended from the proposed street to the existing 42" storm drain on the southern boundary of Tract 3A-1C. Construction of this 48" extension will provide for connection to the 42" stubout required for Tract 3A-1A and will make an additional 36" stubout for Tract 3A-1C developed flows. The 42" stubout to Tract 3A-1A will have an actual 100-year storm flow rate of 26.4 cfs and a design flow rate of 53 cfs. The proposed 36" stubout for Tract 3A-1C has an actual 100-year storm flow rate of 21.7 cfs but will be designed for a 43.4 cfs flow. The total flow in the 48" storm drain will be approximately 109 cfs (design flow). A slope of 0.8%, the capacity

of that 48" line will be 128 cfs. Downstream, the existing 42" pipe at its slope of 2.42% has a capacity of 156 cfs while its design flow rate is 151.6 cfs. With the proposed pipe sizes and slopes, all flows will be contained within the pipe with flows running very near the top of the pipe.

REASON FOR DEFERRAL OF 48" SD EXTENSION ACROSS TRACT 3A-1C

The purpose of this section is to emphasize the reason for delaying the construction for the proposed 48" outfall storm drain to Phase III. Without a Site Plan identifying building location and driveway alignments for a specific use of Tract 3A-1C, it is not prudent try to establish an alignment at this time and construct the storm drain. Construction now in the wrong alignment may require costly relocation later when a development is proposed.

In leiu of this construction, temporary asphalt lined swales will be used to correct upstream undeveloped and developed flow rates and discharge these to the existing 42" RCP storm drain.

A floating 20' wide public drainage easement is proposed across Tract 3A-1C to permit later definition of the SD alignment and its construction.

VI. CONCLUSION

This report has presented a drainage management plan for the proposed replatting of Tract 3A-1 into three separate parcels. The plan as presented provides safe and adequate drainage projected for the proposed development and downstream infrastructure. It is requested this plan be approved and the additional documents referred to in the Purpose Section be approved.

CALCULATIONS

BASINS 3A - 1A (includes some area of W. Frontage Rd. of I-25)

Total Area, 8.8 acres in Zone 2, DPM
Assume 80% Impervious Area, 0.80 X 8.8 ac. = 7.0 acres
20% Landscaped, 8.8 - 7.0 = 1.8 acres
Flowrates, Land treatment D = 7.0 acres X 4.7 cfs/ac. = 32.9 cfs
Land treatment B = 1.8 (2.28 cfs/ac.) = 4.1 cfs
(from Table 9, DPM)
37.0 cfs total

BASIN 3A - 1B

Total Area, 2.5 ac.
@ 80% impervious, Flowrate $(Q_D)_{100}$ = 0.80(2.5)4.7 = 9.4 cfs (Land treatment "D")
Flowrate $(Q_B)_{100}$ = 0.20(2.5)2.28 = 1.1 cfs (Land treatment "B")
10.5 cfs total

BASIN 3A-1C

Total Area, 5.0 acres
@ 80% impervious, Flowrate $(Q_D)_{100}$ = 0.80(5.0)4.7 = 18.8 cfs (Land Treat. "D")
@ 20% treatment B, Flowrate $(Q_B)_{100}$ = 0.20(5.0)2.28 = 2.3 cfs
21.1 cfs

BASIN 3A-1D (new road)

Total Area, 1.6 acres
@ 0.80(1.6)4.7 = 6.0 cfs (Land treatment "D")
@ 0.20(1.6)2.28 = 0.7 cfs (Land treatment "B")
6.7 cfs

BASIN 3A-1E (exist. private road)

Total Area, 0.4 acres
@ 0.85(0.4) 4.7 = 1.6 cfs (land treatment "D")
@ 0.15(0.4) 2.28 = 0.1 cfs (land treatment "B")
1.7 cfs total

BASIN 3A-1F (south side of 3A-1A which discharges to AMAFCA channel directly)

Total Area, 0.6 acres
@ 10%, 0.10 (0.6) 4.7 = 0.3 cfs (Treatment D)
@ 90%, 0.90 (0.6) 2.28 = 1.2 cfs (Treatment B)
1.5 cfs total

impervious percentage

BASIN 3A-1G (existing Sunwest Bank)

total Area, 1.7 acres
@ 0.80%, 0.80 (1.7) 4.7 = 6.4 cfs (Treatment D)
@ 0.20%, 0.20 (1.7) 2.28 = 0.8 cfs (Treatment B)
7.2 cfs total

TR. 3A-1C SWALE

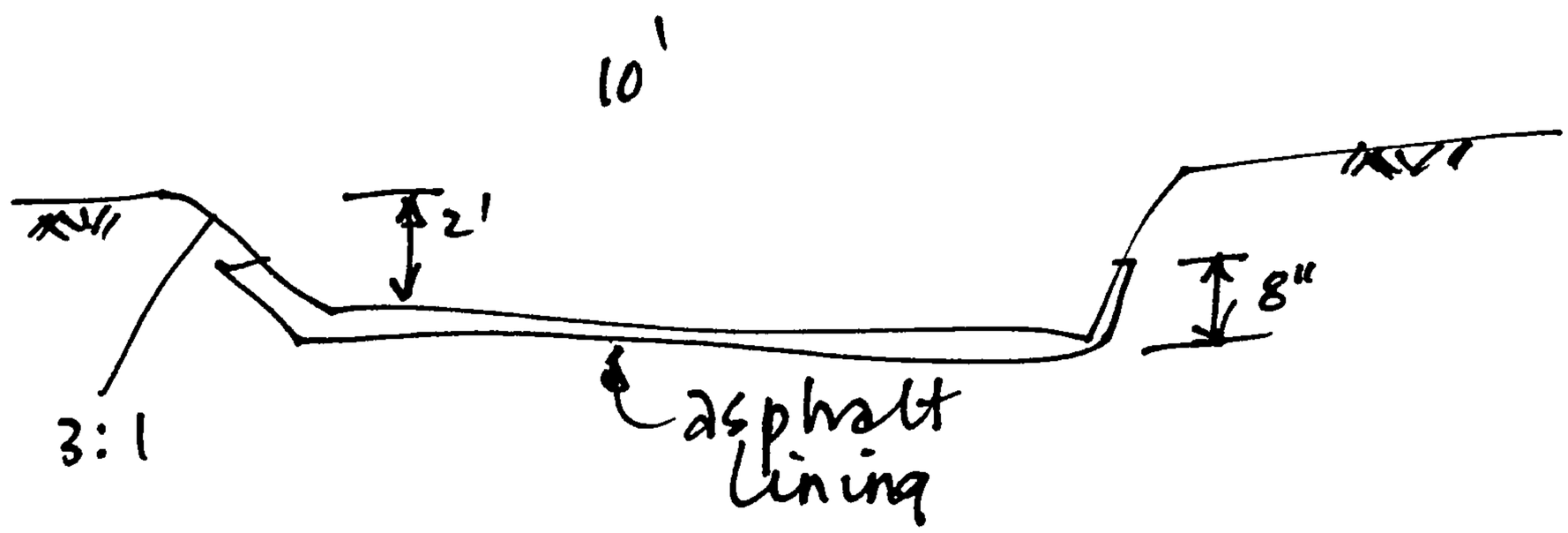
MANNING'S N = .0250 SLOPE = .0120

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1	0.00	4.00	3	22.00	0.00			
2	12.00	0.00	4	34.00	4.00			

WSEL (FT)	DEPTH INC	FLOW AREA (SQ FT)	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOP WID
0.33	0.33	3.7	10.7	12.1	2.9	12.00
0.67	0.67	8.0	35.4	14.2	4.4	14.00
1.00	1.00	13.0	72.6	16.3	5.6	15.99
1.33	1.33	18.6	122.3	18.4	6.6	17.99
1.67	1.67	25.0	185.2	20.5	7.4	19.99
2.00	2.00	32.0	261.8	22.6	8.2	21.99
2.33	2.33	39.6	353.0	24.7	8.9	23.99
2.66	2.66	47.9	459.3	26.8	9.6	25.98
3.00	3.00	56.9	581.5	29.0	10.2	27.98
3.33	3.33	66.6	720.5	31.1	10.8	29.98
3.66	3.66	76.9	876.8	33.2	11.4	31.98
4.00	4.00	87.9	1051.3	35.3	12.0	33.98
4.00	4.00	88.0	1053.5	35.3	12.0	34.00

Depth of Flow

Flow rate capacity



Existing Swale Across Tr. 3A-1C

NOTE TO READER

MOST HYDRAULIC CALCULATIONS ARE PROVIDED ON THE "STORM DRAIN AND STREET P & P" AND SOME OTHER SHEETS IN REPORT.

BOHANNAN-HUSTON INC.

PROJECT NAME _____ SHEET _____ OF _____

PROJECT NO. _____ BY _____ DATE _____

SUBJECT _____ CH'D _____ DATE _____

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

August 31, 2001

Ronald R. Bohannan, P.E.
Tierra West, LLC
4421 McLeod NE
Suite D
Albuquerque, New Mexico 87109

RE: Market Place At Journal Center Phase II (D17-D3B1)
Engineers Certification For Certificate Of Occupancy
Engineers Stamp Date 9-8-98
Engineers Certification Date 8-23-99

Dear Mr. Bohannan:

Based upon the information provided in your Engineers Certification submittal dated August 25, 2001, the above referenced phase is approved for Permanent Certificate of Occupancy.

If you have any questions please call me at 924-3982.

Sincerely,

Carlos A. Montoya
City Floodplain Administrator

C: Vickie Chavez, COA
Approval file
Drainage file

THE CITY OF ALBUQUERQUE IS AN EQUAL OPPORTUNITY/REASONABLE ACCOMMODATION EMPLOYER

CITY OF
Albuquerque

P.O. Box 1293 Albuquerque, NM 87103

November 7, 1996

Martin J. Chávez, Mayor

Ronald R. Bohannan, PE
Tierra West Dev Mgt Ser
4421 Mcleod Rd NE Suite D
Albuquerque, NM 87109

RE: DRAINAGE REPORT FOR MARKET PLACE @ J.C. (D-17/D3B1)
RECEIVED OCTOBER 24, 1996 FOR SITE DEV PLAN, FINAL PLAT, GRADING & BUILDING PERMIT
ENGINEER'S STAMP DATED 10-21-96

Dear Mr. Bohannan:

Based on the information included in the submittal referenced above, City Hydrology accepts the drainage report for site development plan and the grading plan for rough grading. The following comments must be addressed before Final Plat & Building Permit:

A public drainage easement is not required within the AMAFCA Right of Way. If it is granted as indicated, it must be approved by the AMAFCA Board. Add the access ramp that AMAFCA requires to the infrastructure list.

All of the sections except D-D appear to be cut backwards. Section F-F is particularly confusing. The emergency spillway must be 42' long instead of 32'. What is the purpose of the swale on the south side of the main buildings? What happens to the asphalt path when it overlaps the swale slope? Verify that the water block at the entrance on Jefferson is adequate.

If you have any questions about this project, You may contact me at 768-2727.

Sincerely,

John P. Curtin, P.E.
Civil Engineer/Hydrology

c: Andrew Garcia
Fred Aguirre, DRB 96-394
Larry Caudill, Environmental Health
Kurt Browning, AMAFCA

GENEIVA MEEKER, CHAIR
DANIEL W COOK, VICE-CHAIR
RONALD D. BROWN, SECRETARY-TREASURER
MICHAEL MURPHY, ASST. SECRETARY-TREASURER
TIM EICHENBERG, DIRECTOR

LARRY A. BLAIR
EXECUTIVE ENGINEER

Albuquerque
Metropolitan
Arroyo
Flood
Control
Authority

2600 PROSPECT N E · ALBUQUERQUE N M 87107
TELEPHONE (505) 884-2215

November 4, 1996

Mr. Shahab Biazar
Tierra West Development Management Services
4421 McLeod Rd. NE
Albuquerque, NM 87109

RE: Market Place at Journal Center on North Pino Arroyo

Dear Shahab:

I have received your letter dated October 22, 1996. We cannot approve your plat until the access issue to the channel is resolved.

As discussed at our previous meeting, the two alternatives were going to be researched and the necessary descriptions and documents prepared.

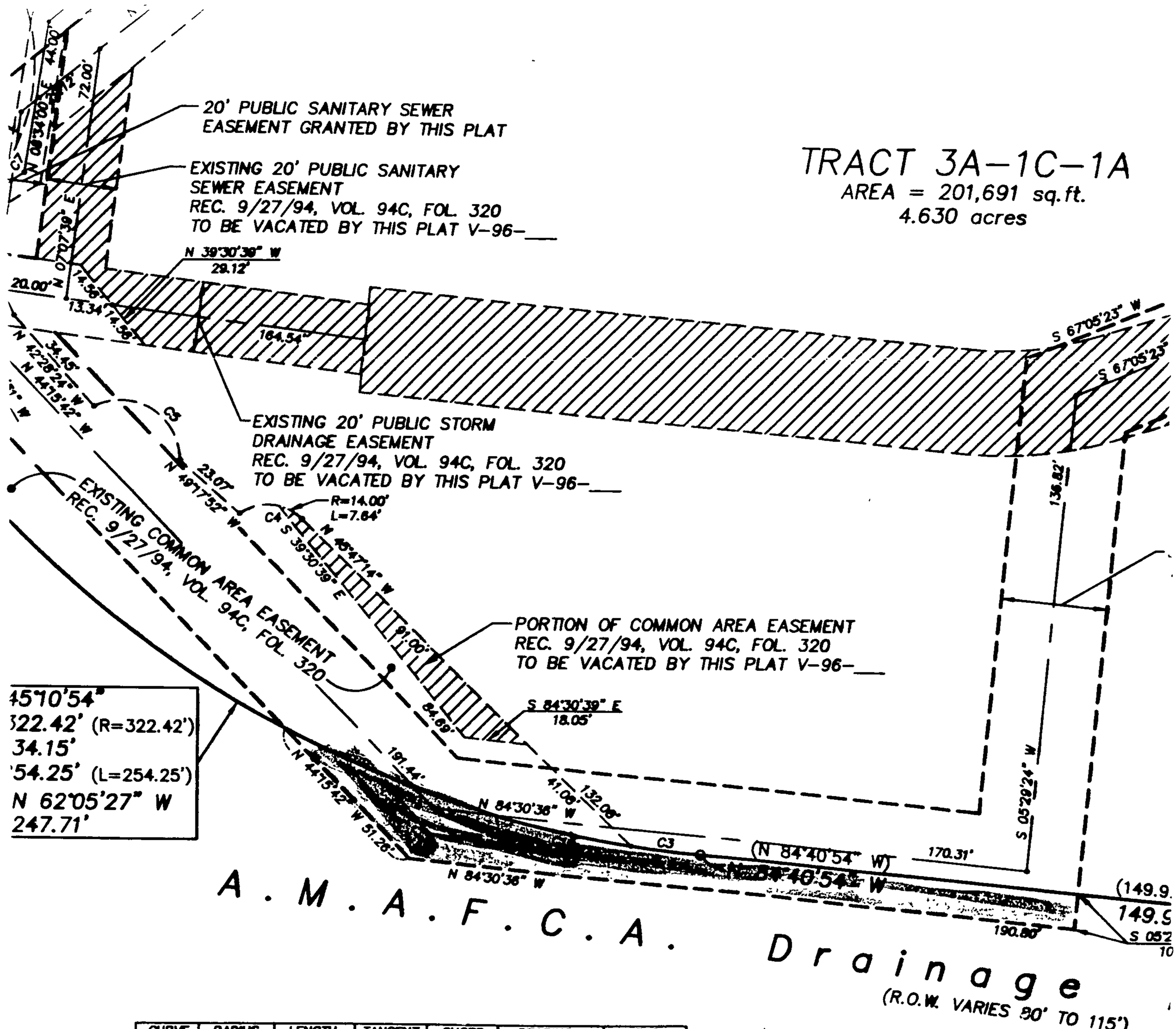
Should you have any questions, please call me.

Sincerely,
AMAFCA

Kurt Browning, P.E.
Drainage Engineer

xc: Fred Aguirre, AMAFCA Designee, COA PWD Hyd
John Curtin, COA PWD Hyd
James Topmiller, BHI

RECEIVED



CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C1	1760.00'	133.56'	66.81'	133.53'	N 61°25'41" E	04°20'53"
C2	1063.90'	25.03'	12.52'	25.03'	N 86°16'41" E	01°20'54"
C3	322.42'	19.80'	9.90'	19.80'	N 82°55'20" W	03°31'09"
C4	14.00'	19.35'	11.58'	17.85'	N 85°23'14" W	79°12'41"
C5	17.00'	34.62'	27.57'	28.94'	N 58°41'20" W	116°40'47"
C6	20.00'	41.79'	34.44'	34.59'	S 19°16'30" E	119°42'30"
C7	57.01'	126.69'	115.15'	102.18'	N 38°13'10" E	127°19'18"
C8	11.50'	21.48'	15.54'	18.49'	S 08°16'44" W	107°00'39"
C9	47.01'	130.22'	250.19'	92.40'	S 42°29'41" W	158°42'59"
C10	354.41'	31.80'	15.91'	31.79'	N 62°37'29" E	05°08'28"
C11	274.87'	36.36'	18.20'	36.33'	N 45°59'01" E	07°34'42"
C12	188.10'	35.64'	17.89'	35.57'	S 40°59'20" W	12°08'48"
C13	406.42'	69.74'	34.95'	69.65'	N 60°13'07" E	09°49'52"
C14	172.87'	90.49'	46.31'	89.46'	N 46°18'05" E	29°59'30"
C15	250.23'	35.79'	17.93'	35.76'	S 43°30'17" W	08°11'42"
C16	30.00'	3.90'	1.95'	3.89'	S 77°35'21" E	07°26'32"
C17	30.00'	7.80'	3.92'	7.78'	S 66°25'11" E	14°53'49"
C18	30.00'	10.20'	5.15'	10.15'	S 49°14'08" E	19°28'16"
C19	322.42'	37.78'	18.91'	37.76'	N 77°48'21" W	06°42'49"

take easement off - for portion inside MAFCA ROW - not needed! (Its Drainage ROW)

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

Public Works Department
Transportation Development Services Section

March 18, 2002

Steven Perich, Registered Architect
Dekker Perich Sabatini
6801 Jefferson NE
Suite 100
Albuquerque, NM 87109

Re: Certification Submittal for Final Building Certificate of Occupancy for
Market Place @ Journal Center, [D17/ D3B1]
7620 Jefferson NE
Engineer's Stamp Dated 3/15/02

Dear Mr. Perich:

The TCL / Letter of Certification submitted on 3/15/02 is sufficient for acceptance by this office for final Certificate of Occupancy (C.O.). Notification has been made to Building and Safety and final C.O. has been logged in by Vicki Chavez in the Building Safety Section downstairs.

Sincerely,

Leslie Romero
Engineering Associate
Development and Building Services
Public Works Department

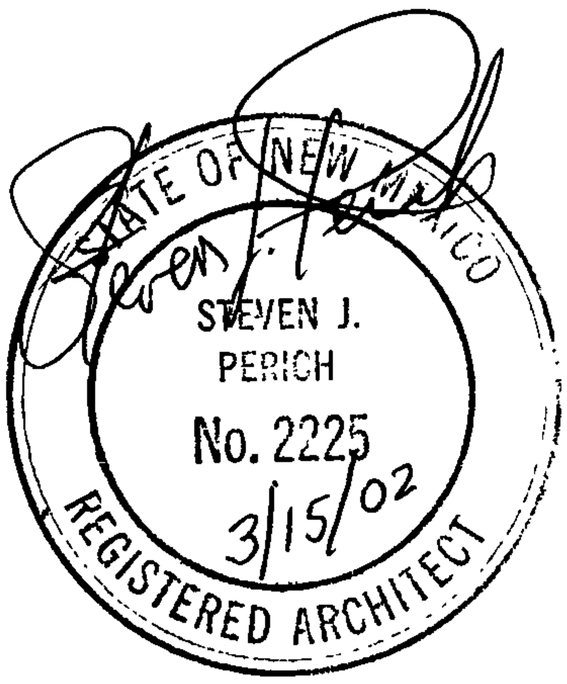
c: Engineer
~~Terri Martin, Hydrology~~
Office file

ARCHITECTS CERTIFICATION

I, Steven J Perich, licensed under the laws of the State of New Mexico, do hereby certify that this project was constructed in substantial compliance with the improvements shown on the approved Traffic Circulation Layout for the Maestas & Ward Office Building located at 7620 Jefferson NE. No adjustments were made to the approved TCL.

Steven J Perich

Date 3/15/02



93060551

4656

1376

DRAINAGE COVENANT

This Drainage Covenant, between Journal Center Corporation ("Owner"), whose address is 7777 Jefferson NE Albuquerque, New Mexico, and the City of Albuquerque, New Mexico municipal corporation ("City"), whose address is P.O. Box 1293, Albuquerque, New Mexico 87103, is made in Albuquerque, Bernalillo County, New Mexico and is entered into as of the date Owner signs this Covenant.

1. Recital. Owner is the owner of certain real property described as: Tract 3A-1, Journal Center in Bernalillo County, New Mexico (the "Property").

Pursuant to City ordinances, regulations and other applicable laws, the Owner is required to construct and maintain certain Drainage Facilities on the Property, and the parties wish to enter into this Agreement to establish the obligations and responsibilities of the parties.

2. Description and Construction of Drainage Facilities. Owner shall construct the following "Drainage Facility" within the Property at Owner's sole expense in accordance with the standards, plans and specifications approved by the City pursuant to Drainage File No. D-17/D3B: Sedimentation Pond

The Drainage Facility is more particularly described in the attached Exhibit A. The Owner will not permit the Drainage Facility to constitute a hazard to the health or safety of the general public.

3. Maintenance of Drainage Facility. The Owner will maintain the Drainage Facility at Owner's cost in accordance with the approved Drainage Report and plans.

4. City's Right of Entry. The City has the right to enter upon the Property at any time and perform whatever inspection, maintenance or repair of the Drainage Facility it deems appropriate, without liability to the Owner.

5. Demand for Construction or Repair. The City may send written notice ("Notice") to the Owner requiring the Owner to construct or repair the Drainage Facility within 14 days ("Deadline") of receipt of the Notice, as provided in Section 11, and the Owner will comply promptly with the requirements of the Notice. The Owner will perform all required work by the Deadline, at Owner's sole expense.

6. Failure to Perform by Owner and Emergency Work by City. If the Owner fails to comply with the terms of the Notice by the Deadline, or if the City determines that an emergency condition exists, the City may perform the work itself. The City may assess the Owner for the cost of the work and for any other expenses or damages which result from Owner's failure to perform. The Owner agrees promptly to pay the City the amount assessed. If the Owner fails to pay the City within thirty (30) days after the City gives the Owner written notice of the amount due, the City may impose a lien against Owner's Property for the total resulting amount.

(Approved by Legal Dept.
as to form only 06/90)

7. Liability of City for Repair after Notice or as a Result of Emergency. The City shall not be liable to the Owner for any damages resulting from the City's repair or maintenance following notice to the Owner as required in this agreement or in an emergency unless the damages are the result of the reckless conduct or gross negligence of the City.

8. Indemnification. Owner agrees to indemnify and save the City, its officials, agents and employees harmless from all claims, actions, suits and proceedings arising out of or resulting from the Owner's negligent maintenance, construction, repair or use of the Drainage Facility. To the extent, if at all, Section 56-7-1 NMSA 1978 is applicable to this Agreement, this Agreement to indemnify will not extend to liability, claims, damages, losses or expenses, including attorney's fees, arising out of (1) the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs or specifications by the indemnitee, or the agents or employees of the indemnitee; or (2) the giving of or the failure to give direction or instructions by the indemnitee, where such giving or failure to give directions or instructions is the primary cause of bodily injury to persons or damage to property.

9. Cancellation of Agreement and Release of Covenant. This Agreement may be released if the Drainage Facility is no longer required for the protection of the public health, safety and welfare by the City filing a "Notice of Release" with the Bernalillo County Clerk. The Notice of Release must be signed by the City's Chief Administrative Officer, or his designee, and the approval of the City Hydrologist must be endorsed thereon.

10. Assessment. Nothing in this agreement shall be construed to relieve the Owner, his heirs, assigns, and successors from an assessment against Owner's Property for improvements to the property under a duly authorized and approved Special Assessment District. The parties specifically agree that the value of the Drainage Facility will not reduce the amount assessed by the City.

11. Notice. For purposes of given formal written notice to the Owner, Owner's address is:

Journal Center Corporation
7777 Jefferson NE
Albuquerque, New Mexico 87109

Notice may be given to the Owner either in person or by mailing the notice by regular U.S. mail, postage paid. Notice will be considered to have been received by the Owner within three days after the notice is mailed if there is no actual evidence of receipt. The Owner may change Owner's address by given written notice of the change by Certified Mail, return receipt requested, to the City Public Works Department, P.O. Box 1293, Albuquerque, New Mexico, 87103.

12. Term. This Agreement shall continue until terminated by the City pursuant to Section 9 above.

STATE OF NEW MEXICO
COUNTY OF BERNALILLO
FILED FOR RECORD

93 JUN -9 PM 3:59

93/5 BK PG 1376-1379
JUDY D. WOODWARD
CO. CLERK & RECORDER
DEPUTY

(Approved by Legal Dept.
as to form only 06/90)

13. Binding on Owner's Property. The covenants and obligations of the Owner said forth herein shall be binding on Owner, its heirs, personal representatives, assigns and successors and on Owner's Property and shall constitute covenants running the Owner's Property until released by the City.

14. Entire Agreement. This Agreement contains the entire agreement of the parties and supercedes any and all other agreements or understanding, oral or written, whether previous to the execution hereof or contemporaneous herewith regarding this subject matter.

15. Changes to Agreement. Changes to this Agreement are not binding unless made in writing, signed by both parties.

16. Construction and Severability. If any part of this Agreement is held to be invalid or unenforceable, the remainder of the Agreement will remain valid and enforceable if the remainder is reasonably capable of completion.

17. Captions. The captions to the sections or paragraphs of this Agreement are not part of this Agreement and will not affect the meaning or construction of any of its provisions.

OWNER:

By: [signature]
Its: Michael N. Callahan - Vice President
Dated: 5-7-93

STATE OF New Mexico)
) ss
COUNTY OF Bernalillo)

The foregoing instrument was acknowledged before me this _____ day of _____, 199___, [by name of person:] Michael N. Callahan, [title or capacity, for instance "president" or "owner":] Vice President of [Subdivider:] Journal Center Corporation.

[signature]
Notary Public

My Commission Expires: 4-12-95

OFFICIAL SEAL
KATHY M. BERRY
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires 4-12-95

CITY OF ALBUQUERQUE:

Approved:

By: [signature]
Title: For the City Engineer
Dated: 5/27/93

(EXHIBIT A ATTACHED)

(Approved by Legal Dept.
as to form only 06/90)

(WP+124529)

1379

JEFFERSON STREET (PAVED)

DESILTATION POND

SEDIMENTATION POND

DRAINAGE SWALE

NORTH PINO ARROYO TRAPEZOIDAL CONCRETE LINED CHANNEL

BUILDING

NOTE: Private paved street to be constructed by separate plant.

Existing Bank building to be abandoned

Limits of Landscaping

SECTION G-G

SECTION F-F

CURB & GUTTER DETAIL

SECTION A-A

SECTION B-B

SECTION C-C

SECTION D-D

SECTION E-E

AS-BUILT INFORMATION

BENCH MARKS

SURVEY INFORMATION

FIELD NOTES

ENGINEER'S SEAL

REMARKS

REVISIONS

DESIGN

MICRO-FILM INFORMATION

CITY OF ALBUQUERQUE

TITLE

EXHIBIT 'A'

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
CIVIL CHAIRMAN			WATER		
TRANSPORTATION			WASTE WATER		
HYDROLOGY					

DRAWING NO | MAP NO | SHEET OF