CITY OF ALBUQUERQUE

Richard J. Berry, Mayor

March 16, 2017

Mike Balaskovits
Bohannan Huston, Inc.
7500 Jefferson St NE
Albuquerque, NM 87109

RE: **Headline Blvd (Legacy at Journal Center)**
Grading Plan
Engineer's Stamp Date 3/10/2017
Hydrology File: D17D106

Dear Mr. Balaskovits:

Based upon the information provided in the submittal received on 3/13/17 and additional information received on 3/15/17, the above-referenced Grading Plan is approved for Grading, SO-19, and Paving Permit.

If you have any questions, please contact me at 924-3695 or dpeterson@cabq.gov.

Sincerely,

Dana Peterson, P.E.
Senior Engineer, Planning Dept.
Development Review Services

PO Box 1293
Albuquerque
New Mexico 87103
www.cabq.gov

Orig: Drainage File

Albuquerque - Making History 1706-2006

This spreadsheet calculates various grate capacities

Median Drop Inlet, NMHTD Serial 623-05: 10X5
Clogging factor 15%
Open Area (for orifice calc in sq. ft.): 36.65
Length of Weir (feet): 27.71

Head (ft)	Head (in)	Weir Q	Orifice Q	Control Q
0.05	0.6	0.83	39.45	0.83
0.1	1.2	2.35	55.80	2.35
0.15	1.8	4.31	68.34	4.31
0.2	2.4	6.64	78.91	6.64
0.25	3	9.28	88.22	9.28
0.3	3.6	12.20	96.64	12.20
0.35	4.2	15.38	104.39	15.38
0.4	4.8	18.79	111.59	18.79
0.45	5.4	22.42	118.36	22.42
0.5	6	26.25	124.77	26.25
0.55	6.6	30.29	130.86	30.29
0.6	7.2	34.51	136.67	34.51
0.65	7.8	38.91	142.26	38.91
0.7	8.4	43.49	147.63	43.49
0.75	9	48.23	152.81	48.23
0.8	9.6	53.13	157.82	53.13
0.85	10.2	58.19	162.67	58.19
0.9	10.8	63.40	167.39	63.40
0.95	11.4	68.76	171.98	68.76
1	12	74.26	176.46	74.26
1.05	12.6	79.90	180.80	79.90
1.1	13.2	85.67	185.06	85.67
1.15	13.8	91.58	189.22	91.58
1.2	14.4	97.62	193.29	97.62
1.3	15.6	110.07	201.18	110.07
1.4	16.8	123.01	208.77	123.01
1.5	18	136.42	216.10	136.42

Calculation of open area:

	(in^2)	(ft^2)
Total Grate Area	7876.5	54.698
Cross Bar Area	-1639.5	-11.385
Supports (ends)	-272.875	-1.895
Areas Counted Twice	244	1.694
	6208.125	43.112

(Joints where crossing barsoverlap)

Calculation of Length of Weir (four sides open):

	(in)	(ft)
Total Perimeter of Grate	385	32.083
Short Cross Bars	-42	-3.500
End Supports	-1.5	-0.125
Bearing Bars	-9	-0.750
	332.5	27.708

Note

1. Two Grates are required, grate widths (29.5 inches) are multiplied by 2 when needed.
2. For dimensions See NMHTD Serial 623-05

Rec'd: 3/15/17

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

Project Title: HEADLINE BLVD (LEGACY @ JOURNAL CENTER) Building Permit #: _____ City Drainage #: D17/D106

DRB#: 1010228 EPC#: _____ Work Order#: _____

Legal Description: TRACT A-1 PLAT OF TRACT A-1, A-2, & A-3 LEGACY AT JOURNAL CENTER

City Address: HEADLINE BLVD NE ALBUQUERQUE, NM 87109

Engineering Firm: BOHANNAN HUSTON, INC. Contact: MIKE BALASKOVITS

Address: 7500 JEFFERSON ST NE ALBUQUERQUE, NM 87109

Phone#: 505-823-1000 Fax#: 505-798-7988 E-mail: MBALASKOVITS@BHINC.COM

Owner: TITAN DEVELOPMENT CENTER LAND, LLC Contact: BRIAN PATTERSON

Address: 6300 RIVERSIDE PLAZA LANE NW #200

Phone#: 505-998-0163 Fax#: _____ E-mail: BPATTERSON@TITAN-DEVELOPMENT COM

Architect: _____ Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

Other Contact: _____ Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

Check all that Apply:

DEPARTMENT:

x HYDROLOGY/ DRAINAGE
____ TRAFFIC/ TRANSPORTATION
____ MS4/ EROSION & SEDIMENT CONTROL

TYPE OF SUBMITTAL:

____ ENGINEER/ ARCHITECT CERTIFICATION

____ CONCEPTUAL G & D PLAN
X GRADING PLAN
____ DRAINAGE MASTER PLAN
____ DRAINAGE REPORT
____ CLOMR/LOMR

____ TRAFFIC CIRCULATION LAYOUT (TCL)
____ TRAFFIC IMPACT STUDY (TIS)
____ EROSION & SEDIMENT CONTROL PLAN (ESC)

____ OTHER (SPECIFY) _____

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LAND

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

____ BUILDING PERMIT APPROVAL
____ CERTIFICATE OF OCCUPANCY

____ PRELIMINARY PLAT APPROVAL
____ SITE PLAN FOR SUB'D APPROVAL
____ SITE PLAN FOR BLDG. PERMIT APPROVAL
____ FINAL PLAT APPROVAL
____ SIA/ RELEASE OF FINANCIAL GUARANTEE
____ FOUNDATION PERMIT APPROVAL
X GRADING PERMIT APPROVAL
X SO-19 APPROVAL
X PAVING PERMIT APPROVAL
____ GRADING/ PAD CERTIFICATION
____ WORK ORDER APPROVAL
____ CLOMR/LOMR

____ PRE-DESIGN MEETING
____ OTHER (SPECIFY) _____

IS THIS A RESUBMITTAL?: X Yes ____ No

DATE SUBMITTED: 03/13/2017 By: Mike Balaskovits

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: ___

Bohannan ▲ Huston

Courtyard I
7500 Jefferson St. NE
Albuquerque, NM
87109-4335

www.bhinc.com

voice: 505.823.1000
facsimile: 505.798.7988
toll free: 800.877.5332

March 13, 2017

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MAR 13 2017
LAND DEVELOPMENT SECTION

Mr. Dana Peterson, P.E.
City of Albuquerque
Planning Department
600 2nd Street NW
Albuquerque, NM 87103

Re: Headline Blvd (Legacy @ Journal Center) Grading Plan/Hydrology File D17D106

Dear Mr. Peterson:

Enclosed for your review and comment is a re-submittal of the Headline Blvd Construction Documents. Please see the responses to your comments dated 03/07/17 below:

1. Inlet structure and connection to the 42" storm drain.
    a. *Response: Please see storm drain keynote #1 on sheet 3.*
    b. *Response: A NMDOT Median Drop Inlet has been used instead of a type double-D inlet and has been rotated 90 degrees. Please see sheet 3.*
    c. *Response: Please see above response (b).*

2. Drainage along former Headline.
    a. *Response: A section cut of the new Headline Blvd parking area showing flow depth has been shown. It includes the parking bumpers as well as the existing berm on the western edge of the property line. We do not feel a valley gutter would be necessary to convey flow. Please see the Drainage Management Plan.*
    b. *Response: Existing spot elevations have been added along the western property line. We do not feel a waterblock would be necessary. Please see sheet 2.*

3. Pond.
    a. *Response: A 42" high fence has been provided. See sheet 3.*
    b. *Response: The first flush volume of basin B2-A is being retained within the pond at a volume of 3430 CF. At fully developed conditions, other means of capturing first flush volumes will be included such as landscape islands. See sheet 3.*
    c. *Response: The water surface elevation of the first flush has been shown. See sheet 3.*

Bohannan Huston

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4. General.
    a. *Response: The ramp has been removed and the trail will be extended to the proposed curb.*
    b. *Response: This is a future finished floor elevation and should not be considered in this plan set.*
    c. *Response: The areas for area of grading and area of new paving have been added. See sheet 3.*
    d. *Response: The work items to be performed under SO-19 have been indicated. Please see sheet 3.*

We are requesting Grading, SO-19, & Paving Permit approval. Please feel free to contact me at 823-1000 with questions or comments.

Sincerely,

Mike Balaskovits, PE
Senior Project Manager
Community Development and Planning

MJB/egn
Enclosures

CITY OF ALBUQUERQUE

Richard J. Berry, Mayor

March 7, 2017

Mike Balaskovits
Bohannan Huston, Inc.
7500 Jefferson St NE
Albuquerque, NM 87109

RE: **Headline Blvd (Legacy at Journal Center)**
Grading Plan
Engineer's Stamp Date 2/21/2017
Hydrology File: D17D106

Dear Mr. Balaskovits:

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

Based upon the information provided in the submittal received on 2/21/2017 the above-referenced Grading Plan is not approved for Grading, SO-19, or Paving Permit. The below items must be addressed prior to approval.

1. Inlet structure and connection to the 42" storm drain.
   a. The existing 42" storm drain is HDPE, show how the connection will be made to the new 8.51' section of 42" RCP storm drain.
   b. The type double-D inlet will need to be rotated 90 degrees as the width is only 2' 1 ½" wide and won't connect to the 42" storm drain. A larger junction box is likely needed here as explained below.
   c. Determine the grate capacity, and head required to allow 46 cfs into the type double-D inlet structure with 15% clogging. The sump around the inlet will need to contain this plus freeboard. A larger junction is likely needed here to provide more capacity.

2. Drainage along former Headline.
   a. Provide a section cut of the new Headline Blvd parking area, showing flow depths through this area. The cross-slope pushing all flows to the west side does not appear adequate for conveying 46 cfs. An inverse crown with valley gutter (alley) may be more effective here; this would also keep flows from being obstructed by the parking islands.
   b. Provide elevations along the western edge of the property; a waterblock may be needed to keep flows from entering the property to the west.

CITY OF ALBUQUERQUE

Richard J. Berry, Mayor

3. Pond.
   a. The proposed pond includes 8.5' vertical walls all around. Provide a fence or barricade around the pond at least 42" high and provide emergency access into and out of the pond.
   b. The pond needs to be sized to retain the first flush volume for basin B2-A. If other storm water quality facilities are proposed for treating Basin B2-A water, include those in the Grading and Drainage Plan.
   c. Add water surface elevations for the first flush elevation and the 100-yr, 6hr elevation.

4. General.
   a. The curb access ramp for the bike path needs to be as wide as the bike path.
   b. The finished floor of the 9,000SF retail space is below the proposed grade. Should this be raised?
   c. Add areas (square-footage) for area of grading and area of new paving.
   d. Call out work items to be performed by SO-19.

PO Box 1293

If you have any questions, please contact me at 924-3695 or dpeterson@cabq.gov.

Sincerely,

Albuquerque

New Mexico 87103

Dana Peterson, P.E.
Senior Engineer, Planning Dept.
Development Review Services

www.cabq.gov

Orig: Drainage File

Albuquerque - Making History 1706-2006

Erica Newman

From: Erica Newman
Sent: Monday, March 13, 2017 9:48 AM
To: 'PLNDRS@cabq.gov'
Cc: Michael Balaskovits
Subject: Headline Blvd SO-19 Submittal

Good Morning—

Please find our digital SO-19 submittal in the link below:

Use the following link to download files.
http://sfspublic.bhinc.com/EmailAccess.aspx?tk=TKenewmanD133201794718

NOTE: These files will expire in 30 days(12-Apr-2017) from the time this email was generated.

Let us know if you have any questions.

Thanks!

Erica

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MAR 13 2017
LAND DEVELOPMENT SECTION

Erica G. Newman, EI
Engineer Intern
Community Development & Planning
Bohannan Huston
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7500 Jefferson St. NE
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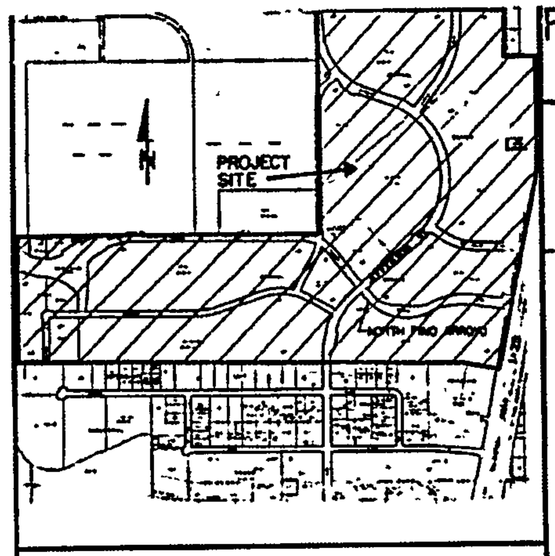
LAND DEVELOPMENT SECTION

REVISED DRAINAGE MANAGEMENT PLAN FOR: JOURNAL CENTER

REVISED: NOVEMBER, 1990
PREPARED BY: BOHANNAN-HUSTON, INC.



LOCATION MAP
ZONE ATLAS D-17-Z

The purpose of this revised drainage management plan is to update the plan to reflect the development of Journal Center since the plan was first approved in 1984. Since that time, Journal Center has been replatted, new streets constructed and new businesses have moved in. All new development has conformed to the 1984 plan and individual development plans have been approved by the City. The drainage concepts and basins remain substantially identical to the 1984 drainage management plan.

Additional functions of the updated plan will be to guide engineers in preparing future drainage plans and aiding City review of these future plans. Drainage basins which have been altered slightly have been re-analyzed and are shown in the table below to have no significant nor adverse impact on drainage facilities.

The criteria used for the minor re-analysis performed in this updated plan remained identical to that previously used and approved in the original 1984 plan.

1984 TEXT

The purpose of this plan is to outline drainage patterns, flow rates and facility capacities for the Journal Center Industrial/Commercial Park. The plan also serves to update recommendations made in an October 1983 report entitled *Journal Center Interim Drainage Report* based on current thinking outlines in the Drainage Ordinance and Development Process Manual (DPM).

It is proposed that runoff from site be allowed to discharge to street rights-of-way or facilities in a free discharge manner. This runoff will be directed to three primary outfalls: the North Pino Arroyo Channel, Jefferson Street storm drain and Los Angeles Blvd. The North Pino Arroyo is concrete lined with grass free board and discharges runoff into the North Diversion Channel. The Jefferson Street storm drain discharges into the Domingo Baca Arroyo, north of Los Angeles Blvd. Runoff collected in Los Angeles Blvd. discharges into the North Diversion Channel. The accompanying plan identifies flow directions and the location of the primary outfalls.

Runoff rates and facility capacities are contained in the tables below. Based on this information, three points should be highlighted:

1. Current runoff criteria yields flow rates less than those used in the 1980 report.
2. Approximately 112 cfs will be directed to Los Angeles Blvd. during the 100-year storm. 226 cfs is collected in the storm drain system and conveyed to the Domingo Baca Arroyo. The 112 cfs represents a figure less than the undeveloped flow rate from the site prior to its development
3. Section 8C of the Drainage Ordinance stipulates that the curb flow line depth shall not exceed 0.5 feet during the 10-year storm in arterial street sections. As the values indicate, this criteria is exceeded at several locations along Jefferson Street.

As provided in Section 8H of the Ordinance, a variance to the requirement outlined in No. 3 is requested for the following reasons:

1. Considerable expense has already been applied to the construction of drainage facilities in the area. The Pino Arroyo Channel and Jefferson Street storm sewer represent an investment of approximately 2 million dollars. Design was guided and approved based upon criteria in effect at the time assuming free discharge from all parcels.
2. The total length of street over which the criteria is exceeded is approximately 3000 feet. This represents a relatively short distance compared to the total length of Jefferson Street running through and south from the project.

BASED ON THE INFORMATION PRESENTED IN THIS PLAN, IT IS PROPOSED THAT A FREE DISCHARGE MANAGEMENT APPROACH BE APPROVED FOR ALL PARCELS WITHIN THE PARK, AND THAT A VARIANCE TO SECTION 8C BE GRANTED FOR THE 10-YEAR FLOW CRITERIA IN JEFFERSON STREET.

BASIN HYDROLOGY (Developed Conditions)

BASIN ID	AREA	DISCHARGES TO	LONGEST REACH (FT.)	SLOPE (AVERAGE)	TC (MIN.)	INTENSITY (IN/HR.)	Q 100	Q 100 1980 REPORT
A **	5.4	Headline	1200	0.02	10.0	4.7	61	95
B-1**	18.0	Jefferson	1650		10.0	4.7	68	N.A.
C	27.6	Diversion Berm	1200		10.0	4.7	112/112	116
D-1	14.3	Tiburon	1000		10.0	4.7	54	N.A.
E-1	13.1	Jefferson	1100		10.0	4.7	49	N.A.
F	19.6	Pino Arroyo	1250		10.4	4.6	72	73
G	22.5	Pino Arroyo	1250		10.4	4.6	83	84
GST	3.0	Jefferson	500		10.0	4.7	17	17
H-1	29.1	Tiburon	1600		10.0	4.7	109	N.A.
I	5.2	Pino Arroyo	450		10.0	4.7	20	21
J	4.6	Pino Arroyo	450		10.0	4.7	17	19
JST	0.8	Masthead	1000		10.0	4.7	3	2
K	13.6	Pino Arroyo	1200		10.0	4.7	59	63
KST	1.3	Masthead	1300		10.0	4.7	5	5
L	15.4	Pino Arroyo	1200		10.0	4.7	59	64
LST	1.4	Masthead	1200		10.0	4.7	5	6
M	25.5	Masthead	1200		10.0	4.7	96	87
N	13.0	Masthead	1200		10.0	4.7	49	51
NCH	3.4	Masthead	650		10.0	4.7	13	14
O	5.3	Snaproll	650	0.02	10.0	4.7	20	22
A-1**	19.6	Headline	N.A.	N.A.	N.A.	N.A.	85	N.A.

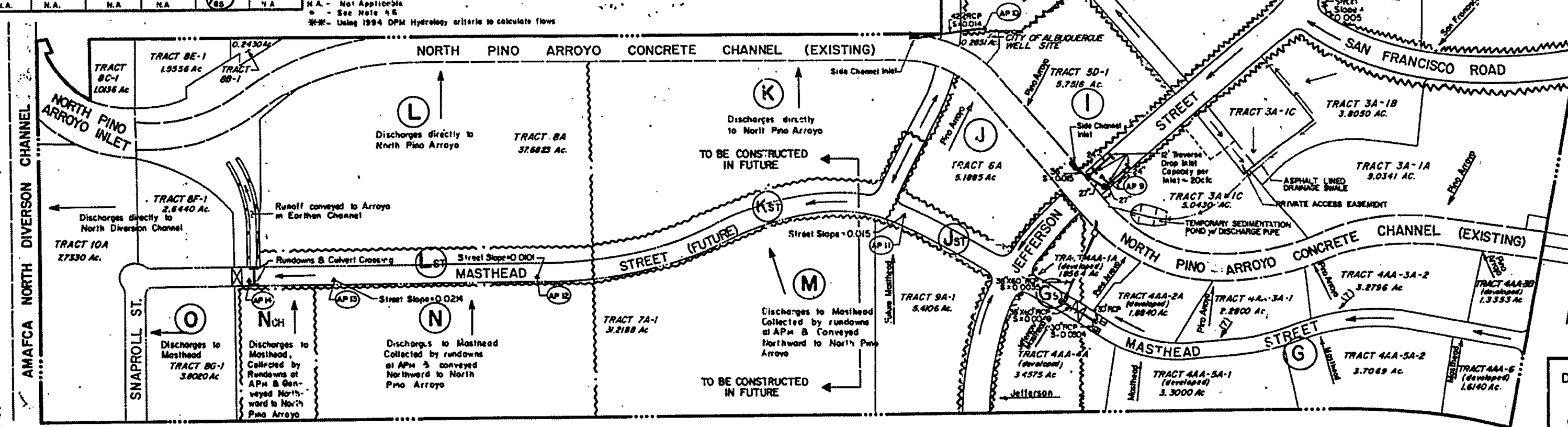
STREET & STORM SEWER HYDRAULICS

AP	CONTRIBUTING BASIN(S)	10-YEAR STORM (all values cfs) Q	STREET CAPACITY	STORM SEWER/CROSS CAPACITY	FLOW IN STREET	FLOW IN SS	100-YEAR STORM (all values cfs) Q	STREET CAPACITY	SS CAPACITY	FLOW IN STREET	FLOW IN SS	COMMENTS
1	A, OF-1	64	112	N.A.	54	N.A.	96	112	N.A.	96	N.A.	Street has adequate capacity
2	B-1	45	18-East half of street	N.A.	45	N.A.	68	200	N.A.	45	N.A.	10 year street capacity exceeded
3*	OF-1, A, B-1	109	36 For street section	59 (30"RCP)	69	40 *	166	200	59	126	40	" " "
4	OF-1, A,B-1,Street	113	30-Foot street section	59	73	40	176	170	59	136	40	" " "
5	D-1	35	100	107 (48" RCP)	0	35	54	100	107	0	54	Basin D-1 runoff collected in Triple "C" inlets
6	C	67	N.A.	120 (48" RCP)	N.A.	67	112/112	N.A.	120	N.A.	112/112	Basin "C" runoff collected in sag inlet
7	Street, OF-1 A,B-1,C,D-1	211	36	233 (72" RCP)	64	147	321	180	232	96	226	90 cfs discharged to Paseo del Norte
8	E-1	32	9 East half of street	N.A.	32	N.A.	49	104	N.A.	49	N.A.	10 year street capacity exceeded
9	E-1, Street	46	25-East half of street	83 (36" RCP)	0	46	69	200	83	0	69	74 cfs collected by inlets
10	H-1	72	N.A.	110 (42" RCP)	N.A.	72	109	N.A.	110	N.A.	109	Runoff conveyed to Pino Arroyo
11	GST, JST	10	160	N.A.	10	N.A.	15	160	N.A.	15	N.A.	" " "
12	APH, KST, M	76	N.A.	N.A.	76	N.A.	116	130	N.A.	116	N.A.	" " "
13	APH, N	108	N.A.	N.A.	108	N.A.	165	160	N.A.	165	N.A.	" " "
14	APH, NCH	117	N.A.	N.A.	N.A.	N.A.	178	N.A.	N.A.	N.A.	N.A.	Runoff collected in concrete rundowns
15	A, OFFSITE	N.A.	N.A.	N.A.	N.A.	N.A.	43.1	84.7	N.A.	43.1	N.A.	

N.A. - Not Applicable
* - See Note 4.6
** - Using 1994 DPM Hydrology criteria to calculate flows

NOTES

1. Basin Hydrology based on DPM Criteria, Chapter 22 (DPM Edition, 1984).
   a. Tc- Plate 22.2 13-1 (10 minute minimum)
   b. Intensity - Plate 22.2 D-2
   c. 'C' for 85% impervious = 0.80 - Plate 22.2 C-1
   d. 100 year rainfall- 2.2 in. - Plate 22.2 D-1
2. Street capacities determined using DPM Criteria, Chapter 22, Plates 22.3 D-1 thru 22.3 D-4 (DPM Edition, 1984).
3. Storm sewer sized to operate under-pressure flow - Plate 22.3 B-5.
4. $Q_{10} = 0.657(Q_{100})$ - Plate 22.2 D-1 (DPM Edition, 1984).
5. Jefferson Street classified as min. arterial- 10 year street capacities based on 0.5' at curb flowline.
6. Double 'B' and 'C' inlets assumed to collect an average of 10cfs during 100-year flow.
7. The south half (max.) of these lots may drain to Masthead Street as necessary.
8. The drainage basin for this 37 cfs (100-year storm) discharge is located east of and within the right-of-way of I-25. Calculations for this discharge can be found under City Drainage file D-17/D30. Handling of this 37 cfs discharge will occur as follows:
   a. Interim (undeveloped Basin A and B-1) Plan - As shown, flow is discharged to the surface and will drain by overland flow to Headline Road.
   b. Ultimate Plan - With the development of Basins A and B-1, the flow will be carried by surface facilities or underground storm drains to the Domingo Baca Arroyo or to Headline Road. This extension of drainage facilities may be performed in phases, i.e., each development will construct only its required portion of the facility, in accordance with the Drainage Ordinance and approved site-specific drainage plans.
9. The 37 cfs (100-year) offsite flow is labeled OF-1. The 10-year storm value is 24 cfs.
10. The high point in Headline Blvd. is located at the Lang Ave. intersection. This condition will cause a flow split. Approximately 37 cfs is assumed to flow north on Headline Blvd.



LEGEND

- PROPERTY LINE
- BASIN DIVIDE
- WATER BLOCK
- DOUBLE 'B' INLET
- DOUBLE 'C' INLET
- DOUBLE 'D' INLET
- TRIPLE 'C' INLET
- STORM SEWER & MANHOLE
- MAJOR FLOW DIRECTION & DISCHARGE LOCATION
- ANALYSIS POINT

DEVELOPED TRACTS ARE NOTED AS SUCH

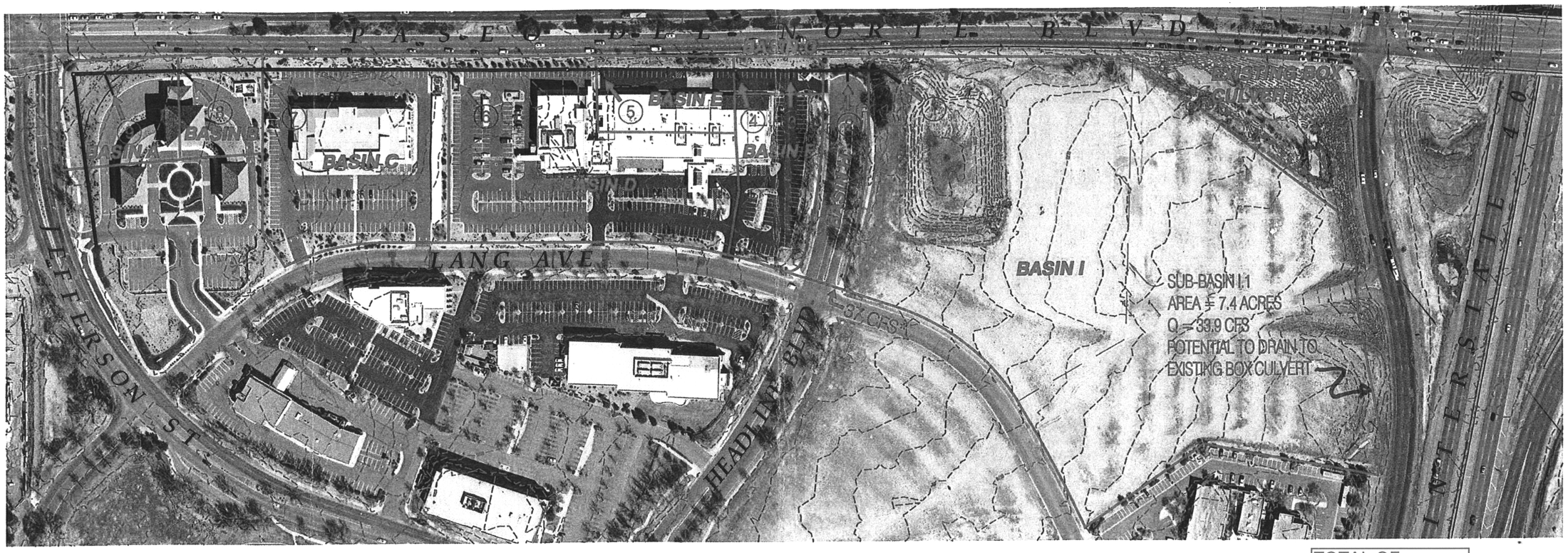
FOR REFERENCE ONLY

ORIGINAL PLAN JULY 1984
REVISION NO. 4 NOVEMBER 1990
REVISION NO. 5 DECEMBER 1992

REVISED DRAINAGE MANAGEMENT PLAN FOR:
JOURNAL CENTER
DECEMBER 1992

JOB No 90100.01

85% D
15% B
Zone 2
4.7 cfs/Ac (D)
2.28 cfs/Ac (B)

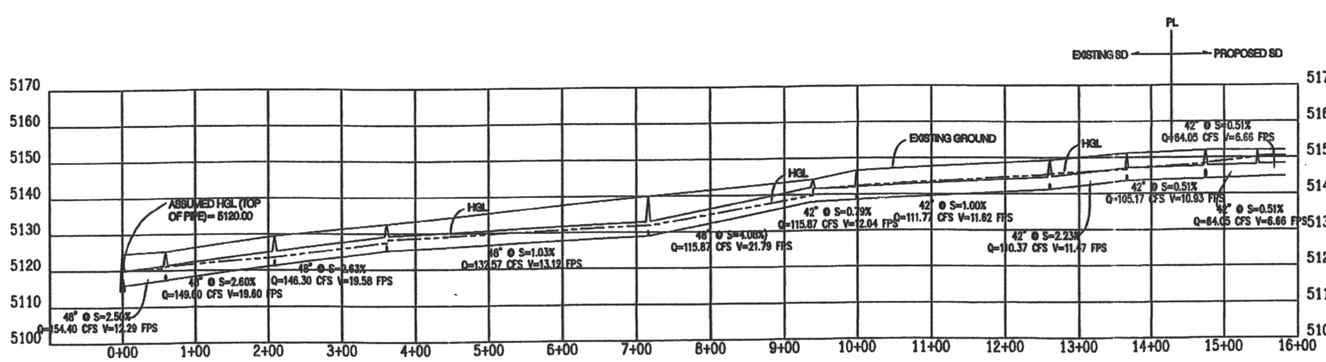


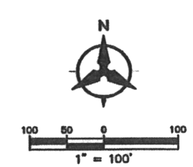
TOTAL OF BASINS A-G=49.2 cfs

BASIN	AREA (AC)	Q (CFS)
Basin A	1.05	4.80
Basin B	0.71	3.25
Basin C	3.00	13.73
Basin D	3.65	16.70
Basin E	0.89	4.07
Basin F	1.18	5.40
Basin G	0.28	1.28
Basin H	0.89	4.07
Basin I	13.96	63.87
Lang Ave.		37.00*
TOTAL	25.61	154.17

** FLOW FROM 'DRAINAGE MASTER PLAN' DATED 10-31-94 BY BHI.*

#	Q ENTER (CFS)	FLOWS FROM:
1	64.05	BASIN I
2	41.12	BASIN H & LANG AVE
3	5.20	BASIN F
4	1.40	BASIN G
5	4.10	BASIN E
6	16.70	BASIN D
7	13.73	BASIN C
8	3.30	BASIN B
9	4.80	BASIN A





JOURNAL CENTER EXHIBIT

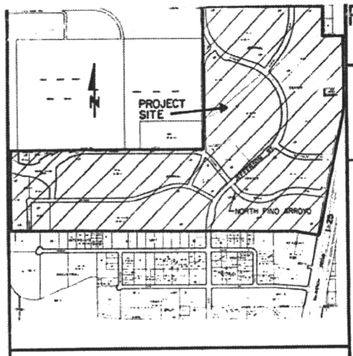
AUGUST 30, 2013

FOR REFERENCE ONLY

Bohannan Huston

REVISED DRAINAGE MANAGEMENT PLAN FOR: JOURNAL CENTER

REVISED: NOVEMBER, 1990
PREPARED BY: BOHANNAN-HUSTON, INC.



LOCATION MAP
ZONE ATLAS D-17-Z

The purpose of this revised drainage management plan is to update the plan to reflect the development of Journal Center since the plan was first approved in 1984. Since that time, Journal Center has been replatted, new streets constructed and new businesses have moved in. All new development has conformed to the 1984 plan and individual development plans have been approved by the City. The drainage concepts and basins remain substantially identical to the 1984 drainage management plan.

Additional functions of the updated plan will be to guide engineers in preparing future drainage plans and aiding City review of these future plans. Drainage basins which have been altered slightly have been re-analyzed and are shown in the table below to have no significant nor adverse impact on drainage facilities.

The criteria used for the minor re-analysis performed in this updated plan remained identical to that previously used and approved in the original 1984 plan.

The purpose of this plan is to outline drainage patterns, flow rates and facility capacities for the Journal Center Industrial/Commercial Park. The plan also serves to update recommendations made in an October 1980 report entitled *Journal Center Interim Drainage Report* based on current thinking outlined in the Drainage Ordinance and Development Process Manual (DPM).

It is proposed that runoff from sites be allowed to discharge to street rights-of-way or facilities in a free discharge manner. This runoff will be directed to three primary outfalls: the North Pino Arroyo Channel, Jefferson Street storm drain and Los Angeles Blvd. The North Pino Arroyo is concrete lined with grass free board and discharges runoff into the North Diversion Channel. The Jefferson Street storm drain discharges into the Domingo Baca Arroyo, north of Los Angeles Blvd. Runoff collected in Los Angeles Blvd. discharges into the North Diversion Channel. The accompanying plan identifies flow directions and the location of the primary outfalls.

Runoff rates and facility capacities are contained in the tables below. Based on this information, three points should be highlighted:

1. Current runoff criteria yields flow rates less than those used in the 1980 report.
2. Approximately 112 cfs will be directed to Los Angeles Blvd. during the 100-year storm. 226 cfs is collected in the storm drain system and conveyed to the Domingo Baca Arroyo. The 112 cfs represents a figure less than the undeveloped flow rate from the site prior to its development.

1984 TEXT

3. Section 8C of the Drainage Ordinance stipulates that the curb flow line depth shall not exceed 0.5 feet during the 10-year storm in arterial street sections. As the values indicate, this criteria is exceeded at several locations along Jefferson Street.

As provided in Section 6H of the Ordinance, a variance to the requirement outlined in No. 3 is requested for the following reasons:

1. Considerable expense has already been applied to the construction of drainage facilities in the area. The Pino Arroyo Channel and Jefferson Street storm sewer represent an investment of approximately 2 million dollars. Design was guided and approved based upon criteria in effect at the time assuming free discharge from all parcels.
2. The total length of street over which the criteria is exceeded is approximately 3000 feet. This represents a relatively short distance compared to the total length of Jefferson Street running through and south from the project.

BASED ON THE INFORMATION PRESENTED IN THIS PLAN, IT IS PROPOSED THAT A FREE DISCHARGE MANAGEMENT APPROACH BE APPROVED FOR ALL PARCELS WITHIN THE PARK, AND THAT A VARIANCE TO SECTION 6C BE GRANTED FOR THE 10-YEAR FLOW CRITERIA IN JEFFERSON STREET.

BASIN HYDROLOGY (Developed Conditions)

BASIN ID	AREA	DISCHARGES TO	LONGEST REACH (FT.)	SLOPE (AVERAGE)	TC (MIN.)	INTENSITY (IN/HR.)	Q_{100}	Q_{100} 1980 REPORT
A **	5.4	Headline	1200	0.02	10.0	4.7	81	95
B-1 **	18.0	Jefferson	1650		10.0	4.7	68	N.A.
C	27.6	Diversion Berm	1200		10.0	4.7	102/112	116
D-1	14.3	Tiburon	1000		10.0	4.7	54	N.A.
E-1	13.1	Jefferson	1100		10.0	4.7	49	N.A.
F	19.6	Pino Arroyo	1250		10.4	4.6	72	73
G	22.5	Pino Arroyo	1250		10.4	4.6	83	84
GST	3.0	Jefferson	500		10.0	4.7	17	17
H-1	29.1	Tiburon	1600		10.0	4.7	109	N.A.
I	5.2	Pino Arroyo	450		10.0	4.7	20	2[illegible]
J	4.6	Pino Arroyo	450		10.0	4.7	17	19
JST	0.6	Masthead	1000		10.0	4.7	3	2
K	15.6	Pino Arroyo	1200		10.0	4.7	59	63
KST	1.3	Masthead	1300		10.0	4.7	5	5
L	15.4	Pino Arroyo	1200		10.0	4.7	58	64
LST	1.4	Masthead	1200		10.0	4.7	5	6
M	25.5	Masthead	1200		10.0	4.7	96	87
N	13.0	Masthead	1200		10.0	4.7	49	51
NCH	3.4	Masthead	650		10.0	4.7	13	14
O	5.3	Snaproll	650	0.02	10.0	4.7	20	22
A-1 **	19.6	Headline	N.A.	N.A.	N.A.	N.A.	85	N.A.

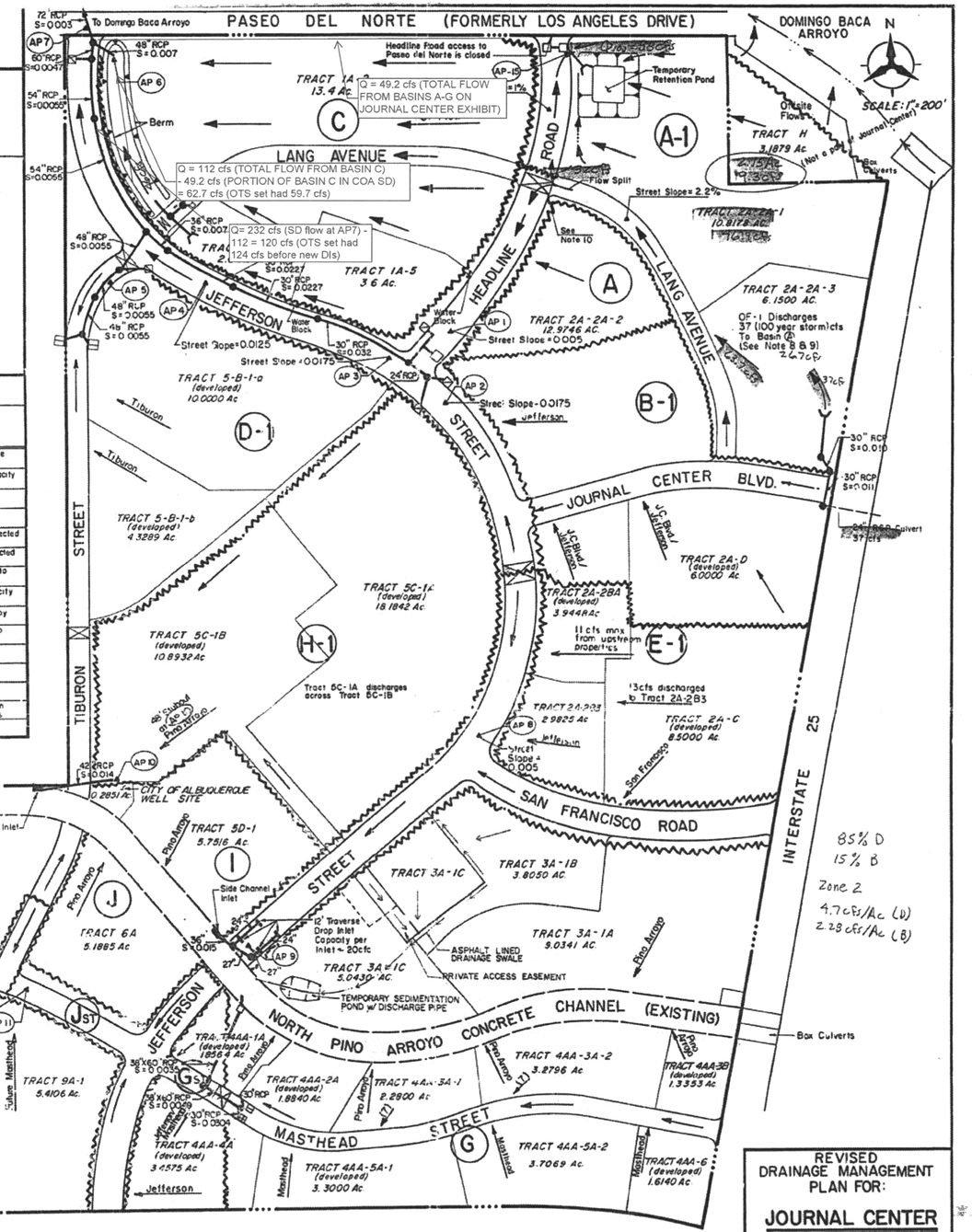
STREET & STORM SEWER HYDRAULICS

AP	CONTRIBUTING BASIN(S)	10-YEAR STORM (all values cfs) Q	STREET CAPACITY	STORM SEWER(SS) CAPACITY	FLOW IN STREET	FLOW IN SS	100-YEAR STORM (all values cfs) Q	STREET CAPACITY	SS CAPACITY	FLOW IN STREET	FLOW IN SS	COMMENTS
1	A, OF-1	64	112	N.A.	64	N.A.	98	112	N.A.	98	N.A.	Street has adequate capacity
2	B-1	45	18-East half of street	N.A.	45	N.A.	68	200	N.A.	45	N.A.	10 year street capacity exceeded
3	OF-1, A, B-1	109	36-Full street section	59 (30"RCP)	69	40 *	166	200	59	126	40	" " "
4	OF-1, A, B-1, Street	113	30-Full street section	59	73	40	176	170	59	136	40	" " "
5	D-1	35	100	107 (48"RCP)	0	35	54	100	107	0	54	Basin D-1 runoff collected in Triple 'C' inlets
6	C	67	N.A.	120 (48"RCP)	N.A.	67	102/112	N.A.	120	N.A.	102/112	Basin C runoff collected in [illegible] inlet
7	Street, OF-1, A, B-1, C, D-1	211	36	232 (72"RCP)	64	147	321	180	232	96	226	90 cfs discharged to Paseo del Norte
8	E-1	32	9-East half of street	N.A.	32	N.A.	49	104	N.A.	49	N.A.	10 year street capacity exceeded
9	E-1, Street	46	25-East half of street	83 (36"RCP)	0	46	69	200	83	0	69	74cfs collected by inlets
10	H-1	72	N.A.	110 (42" RCP)	N.A.	72	109	N.A.	110	N.A.	109	Runoff conveyed to Pino Arroyo
11	GST, JST	10	160	N.A.	10	N.A.	15	160	N.A.	15	N.A.	" " "
12	APH, KST, M	76	N.A.	N.A.	76	N.A.	116	130	N.A.	116	N.A.	" " "
13	APH2, N	108	N.A.	N.A.	108	N.A.	165	150	N.A.	165	N.A.	" " "
14	APH3, NCH	117	N.A.	N.A.	N.A.	N.A.	178	N.A.	N.A.	N.A.	N.A.	Runoff collected in concrete rundowns
15	A, OFFSITE	N.A.	N.A.	N.A.	N.A.	N.A.	43.1	84.7	N.A.	43.1	N.A.	

N.A. - Not Applicable
* - See Note 4.6
** - Using 1994 DPM Hydrology criteria to calculate flows

NOTES

1. Basin Hydrology based on DPM Criteria, Chapter 22 (DPM Edition, 1984).
   a. Tc- Plate 22.2 13-1 (10 minute minimum)
   b. Intensity - Plate 22.2 D-2
   c. 'C' for 85% Impervious = 0.80 - Plate 22.2 C-1
   d. 100 year rainfall= 2.2 in. - Plate 22.2 D-1
2. Street capacities determined using DPM Criteria, Chapter 22, Plates 22.3 D-1 thru 22.3 D-4 (DPM Edition, 1984).
3. Storm sewer sized to operate under pressure flow - Plate 22.3 B-5.
4. $Q_{10} = 0.657(Q_{100})$ - Plate 22.2 D-1 (DPM Edition, 1984).
5. Jefferson Street classified as min. arterial- 10 year street capacities based on 0.5' at curb flowline.
6. Double 'B' and 'C' inlets assumed to collect an average of 10cfs during 100-year flow.
7. The south half (max.) of these lots may drain to Masthead Street as necessary.
8. The drainage basin for this 37 cfs (100-year storm) discharge is located east of and within the right-of-way of I-25. Calculations for this discharge can be found under City Drainage file D-17/D3Q. Handling of this 37 cfs discharge will occur as follows:
   a. Interim (undeveloped Basin A and B-1) Plan - As shown, flow is discharged to the surface and will drain by overland flow to Headline Road.
   b. Ultimate Plan - With the development of Basins A and B-1, the flow will be carried by surface facilities or underground storm drains to the Domingo Baca Arroyo or to Headline Road. This extension of drainage facilities may be performed in phases, i.e., each development will construct only its required portion of the facility, in accordance with the Drainage Ordinance and approved site-specific drainage plans.
9. The 37 cfs (100-year) offsite flow is labeled OF-1. The 10-year storm value is 24 cfs.
10. The high point in Headline Blvd. is located at the Lang Ave. intersection. This condition will cause a flow split. Approximately 37 cfs is assumed to flow north on Headline Blvd.



FOR REFERENCE ONLY

LEGEND

- PROPERTY LINE
- BASIN DIVIDE
- WATER BLOCK
- DOUBLE 'B' INLET
- DOUBLE 'C' INLET
- DOUBLE 'D' INLET
- TRIPLE 'C' INLET
- STORM SEWER & MANHOLE
- MAJOR FLOW DIRECTION & DISCHARGE LOCATION
- ANALYSIS POINT

DEVELOPED TRACTS ARE NOTED AS SUCH

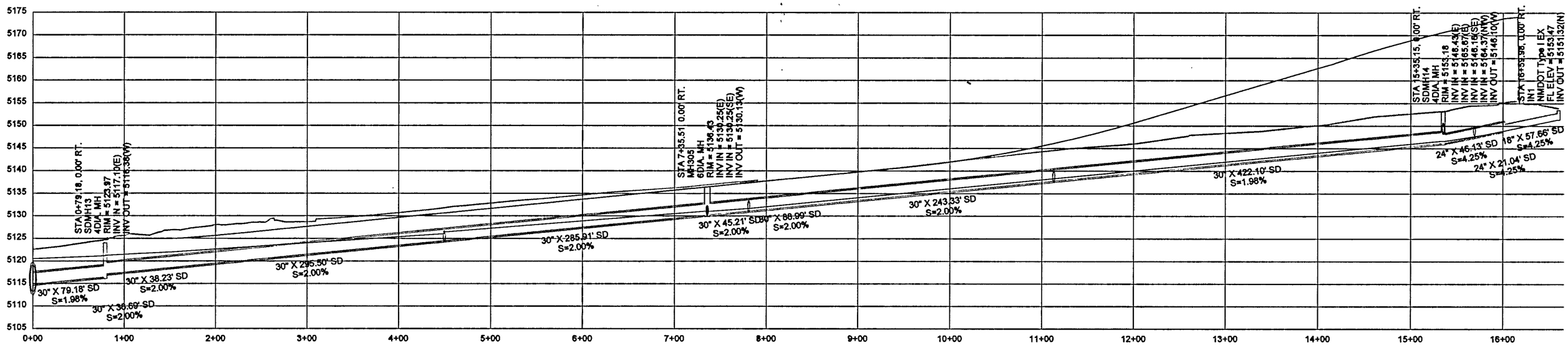
ORIGINAL PLAN JULY 1984
REVISION NO 4 NOVEMBER 1990
REVISION NO. 5 DECEMBER 1992

REVISED DRAINAGE MANAGEMENT PLAN FOR:
JOURNAL CENTER
DECEMBER 1992

JOB No. 90110.01

3-6-90
10-10-90
11-14-90
12-11-92
10-3-94

SD NORTH OF PDN



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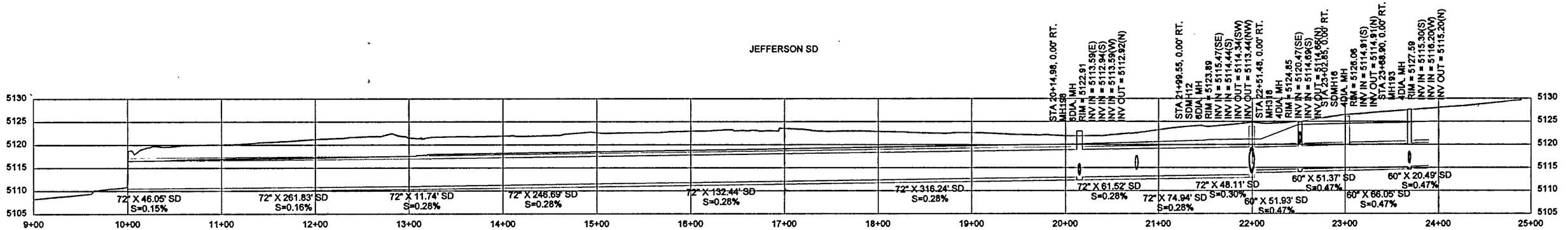

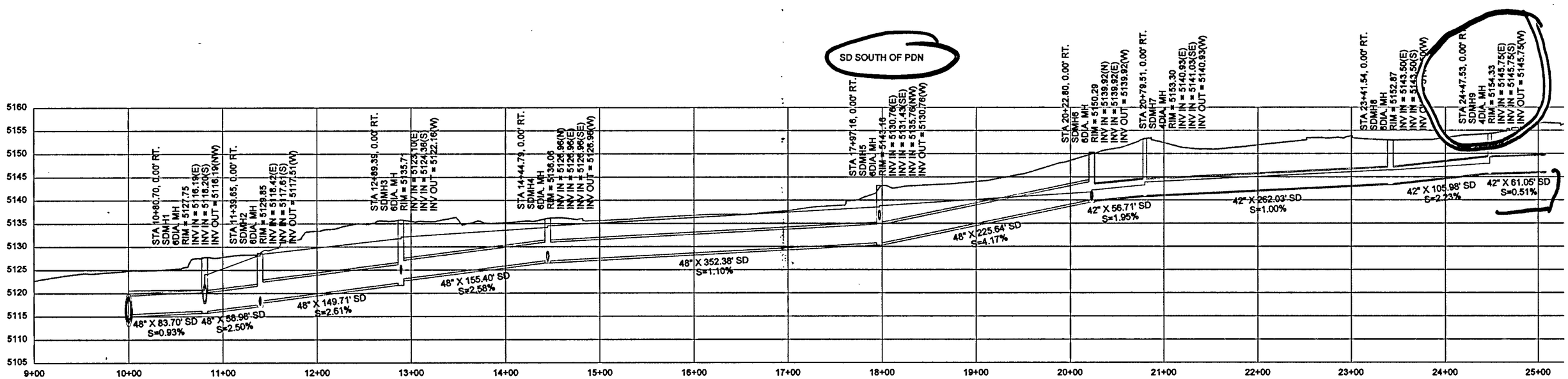

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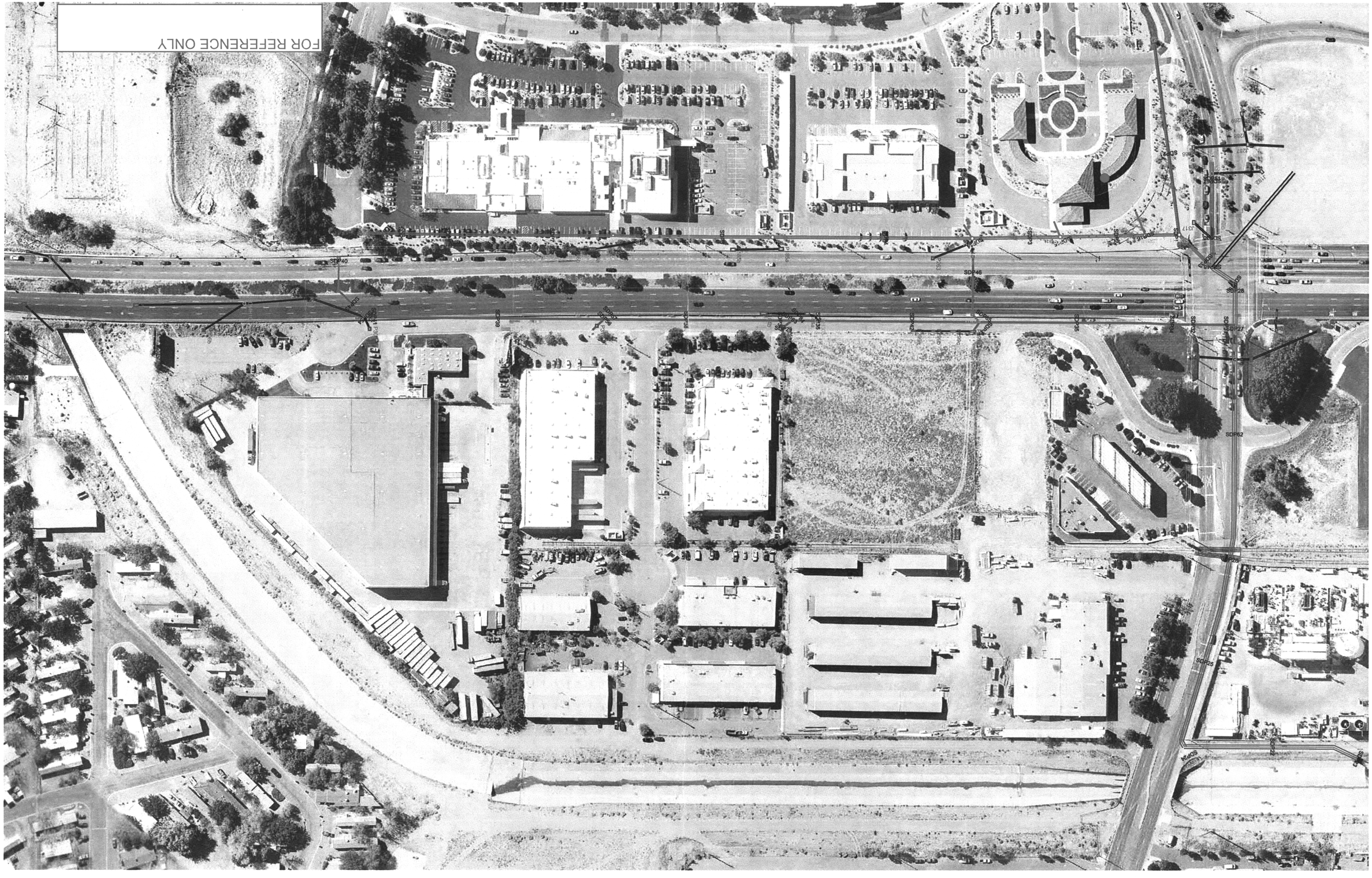
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APPENDIX DP2-C STORM DRAIN
HYDRAULIC CALCULATIONS

RECEIVED
FEB 21 2017
LAND DEVELOPMENT DIVISION

CITY OF ALBUQUERQUE

Richard J. Berry, Mayor

March 7, 2017

Mike Balaskovits
Bohannan Huston, Inc.
7500 Jefferson St NE
Albuquerque, NM 87109

RE: **Headline Blvd (Legacy at Journal Center)**
Grading Plan
Engineer's Stamp Date 2/21/2017
Hydrology File: D17D106

Dear Mr. Balaskovits:

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

Based upon the information provided in the submittal received on 2/21/2017 the above-referenced Grading Plan is not approved for Grading, SO-19, or Paving Permit. The below items must be addressed prior to approval.

1. Inlet structure and connection to the 42" storm drain.
   a. The existing 42" storm drain is HDPE, show how the connection will be made to the new 8.51' section of 42" RCP storm drain.
   b. The type double-D inlet will need to be rotated 90 degrees as the width is only 2' 1 ½" wide and won't connect to the 42" storm drain. A larger junction box is likely needed here as explained below.
   c. Determine the grate capacity, and head required to allow 46 cfs into the type double-D inlet structure with 15% clogging. The sump around the inlet will need to contain this plus freeboard. A larger junction is likely needed here to provide more capacity.

2. Drainage along former Headline.
   a. Provide a section cut of the new Headline Blvd parking area, showing flow depths through this area. The cross-slope pushing all flows to the west side does not appear adequate for conveying 46 cfs. An inverse crown with valley gutter (alley) may be more effective here; this would also keep flows from being obstructed by the parking islands.
   b. Provide elevations along the western edge of the property; a waterblock may be needed to keep flows from entering the property to the west.

Orig: Drainage File

Albuquerque - Making History 1706-2006

3. Pond.
   a. The proposed pond includes 8.5' vertical walls all around. Provide a fence or barricade around the pond at least 42" high and provide emergency access into and out of the pond.
   b. The pond needs to be sized to retain the first flush volume for basin B2-A. If other storm water quality facilities are proposed for treating Basin B2-A water, include those in the Grading and Drainage Plan.
   c. Add water surface elevations for the first flush elevation and the 100-yr, 6hr elevation.

4. General.
   a. The curb access ramp for the bike path needs to be as wide as the bike path.
   b. The finished floor of the 9,000SF retail space is below the proposed grade. Should this be raised?
   c. Add areas (square-footage) for area of grading and area of new paving.
   d. Call out work items to be performed by SO-19.

If you have any questions, please contact me at 924-3695 or dpeterson@cabq.gov.

Sincerely,

Dana Peterson, P.E.
Senior Engineer, Planning Dept.
Development Review Services

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

Orig: Drainage File

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

Project Title: HEADLINE BLVD (LEGACY @ JOURNAL CENTER) Building Permit #: _____ City Drainage #: D17/D106

DRB#: 1010228 EPC#: _____ Work Order#: _____

Legal Description: TRACT A-1 PLAT OF TRACT A-1, A-2, & A-3 LEGACY AT JOURNAL CENTER

City Address: HEADLINE BLVD NE ALBUQUERQUE, NM 87109

Engineering Firm: BOHANNAN HUSTON, INC. Contact: MIKE BALASKOVITS

Address: 7500 JEFFERSON ST NE ALBUQUERQUE, NM 87109

Phone#: 505-823-1000 Fax#: 505-798-7988 E-mail: MBALASKOVITS@BHINC.COM

Owner: TITAN DEVELOPMENT CENTER LAND, LLC Contact: BRIAN PATTERSON

Address: 6300 RIVERSIDE PLAZA LANE NW #200

Phone#: 505-998-0163 Fax#: _____ E-mail: BPATTERSON@TITAN-DEVELOPMENT.COM

Architect: _____ Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

Other Contact: _____ Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

Check all that Apply:

DEPARTMENT:

x HYDROLOGY/ DRAINAGE
____ TRAFFIC/ TRANSPORTATION
____ MS4/ EROSION & SEDIMENT CONTROL

TYPE OF SUBMITTAL:

____ ENGINEER/ ARCHITECT CERTIFICATION

____ CONCEPTUAL G & D PLAN
X GRADING PLAN
____ DRAINAGE MASTER PLAN
____ DRAINAGE REPORT
____ CLOMR/LOMR

____ TRAFFIC CIRCULATION LAYOUT (TCL)
____ TRAFFIC IMPACT STUDY (TIS)
____ EROSION & SEDIMENT CONTROL PLAN (ESC)

____ OTHER (SPECIFY) _____

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

____ BUILDING PERMIT APPROVAL
____ CERTIFICATE OF OCCUPANCY

____ PRELIMINARY PLAT APPROVAL
____ SITE PLAN FOR SUB'D APPROVAL
____ SITE PLAN FOR BLDG. PERMIT APPROVAL
____ FINAL PLAT APPROVAL
____ SIA/ RELEASE OF FINANCIAL GUARANTEE
____ FOUNDATION PERMIT APPROVAL
X GRADING PERMIT APPROVAL
X SO-19 APPROVAL
X PAVING PERMIT APPROVAL
____ GRADING/ PAD CERTIFICATION
____ WORK ORDER APPROVAL
____ CLOMR/LOMR

____ PRE-DESIGN MEETING
____ OTHER (SPECIFY) _____

RECEIVED
FEB 21 2017
LAND DEVELOPMENT SECTION

IS THIS A RESUBMITTAL?: ____ Yes X No

DATE SUBMITTED: 02/21/2017 By: Mike Balaskovits

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: ___

Q100 MWSEL

Fence

Erica Newman

From: Erica Newman
Sent: Tuesday, February 21, 2017 3:04 PM
To: 'PLNDRS@cabq.gov'
Cc: Michael Balaskovits; Matthew Satches
Subject: Headline Blvd G&D Submittal

Good Afternoon—

Please see the below link to access our Grading/Drainage digital submittal. Let us know if you have any questions.

Use the following link to download files.
http://sfspublic.bhinc.com/EmailAccess.aspx?tk=TKenewmanD212201715248

NOTE: These files will expire in 30 days(23-Mar-2017) from the time this email was generated.

Thanks!

Erica

Erica G. Newman, EI
Engineer Intern
Community Development & Planning
Bohannan Huston
Courtyard I
7500 Jefferson St. NE
Albuquerque, NM 87109-4335
www.bhinc.com
voice: 505.923.3335 **facsimile:** 505.798.7988 **toll free:** 800.877.5332

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FEB 21 2017
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