

CITY OF ALBUQUERQUE



Richard J. Berry, Mayor

March 27, 2017

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

RE: Legacy 2 at Journal Center
Conceptual Grading and Drainage Plan
Stamp Date: 2/27/17
Hydrology File: D17D107

Dear Mr. Balaskovits:

PO Box 1293

Based upon the information provided in your submittal received 2/28/2017, the
Conceptual Grading and Drainage Plan is approved for Site Plan for Subdivision Permit.

Albuquerque

If you have any questions, please contact me at 924-3995 or rbrissette@cabq.gov.

New Mexico 87103

Sincerely,

Renee C. Brissette

www.cabq.gov

Reneé C. Brissette, P.E.
Senior Engineer, Hydrology
Planning Department

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

CLIENT/COURIER TRANSMITTAL

To: Shahab Biazar
City of Albuquerque
600 2nd St. NW
Albuquerque, NM 87102

Requested by: Mike Balaskovits

Date: February 28, 2017

Time Due: ☒ This A.M.
☐ This P.M.
☐ Rush _____
☐ By Tomorrow

Phone: 924-3999

Job No.: 20170362

Job Name: Legacy 2 @ Journal Center

DELIVERY VIA

☒ Courier ☐ Federal Express
☐ Mail ☐ UPS
☐ Other

PICK UP

Item: _____

<u>ITEM NO.</u>	<u>QUANTITY</u>	<u>DESCRIPTION</u>
1	1	Drainage Info Sheet
2	1	Conceptual Grading & Drainage Plan
3	1	Excerpts from the "Part 2 Drainage Report for the I-25 / Paseo del Norte Interchange Reconstruction Design Build Project"

COMMENTS / INSTRUCTIONS

Shahab,

Please find attached the Conceptual Grading & Drainage Plan for Legacy 2 @ Journal Center. We are requesting hydrology approval in support of Site Plan for Subdivision Approval. Let me know if you have any questions.

Thanks,
Mike

REC'D BY: _____ DATE: _____ TIME: _____



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

Project Title: LEGACY 2 @ JOURNAL CENTER **Building Permit #:** _____ **City Drainage #:** _____
DRB#: 1005283 **EPC#:** 16EPC-40043 & 16EPC-40044 **Work Order#:** _____
Legal Description: Lot(s) 2A-2A-2B-1-A Plat of Tract 2A-2A-2B-1-A, Journal Center
City Address: 7800 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:

☒ HYDROLOGY/ DRAINAGE
☐ TRAFFIC/ TRANSPORTATION
☐ MS4/ EROSION & SEDIMENT CONTROL

TYPE OF SUBMITTAL:

☐ ENGINEER/ ARCHITECT CERTIFICATION
☒ CONCEPTUAL G & D PLAN
☐ GRADING PLAN
☐ DRAINAGE MASTER PLAN
☐ DRAINAGE REPORT
☐ CLOMR/LOMR
☐ TRAFFIC CIRCULATION LAYOUT (TCL)
☐ TRAFFIC IMPACT STUDY (TIS)
☐ EROSION & SEDIMENT CONTROL PLAN (ESC)
☐ OTHER (SPECIFY) _____

IS THIS A RESUBMITTAL?: ☐ Yes ☒ No

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

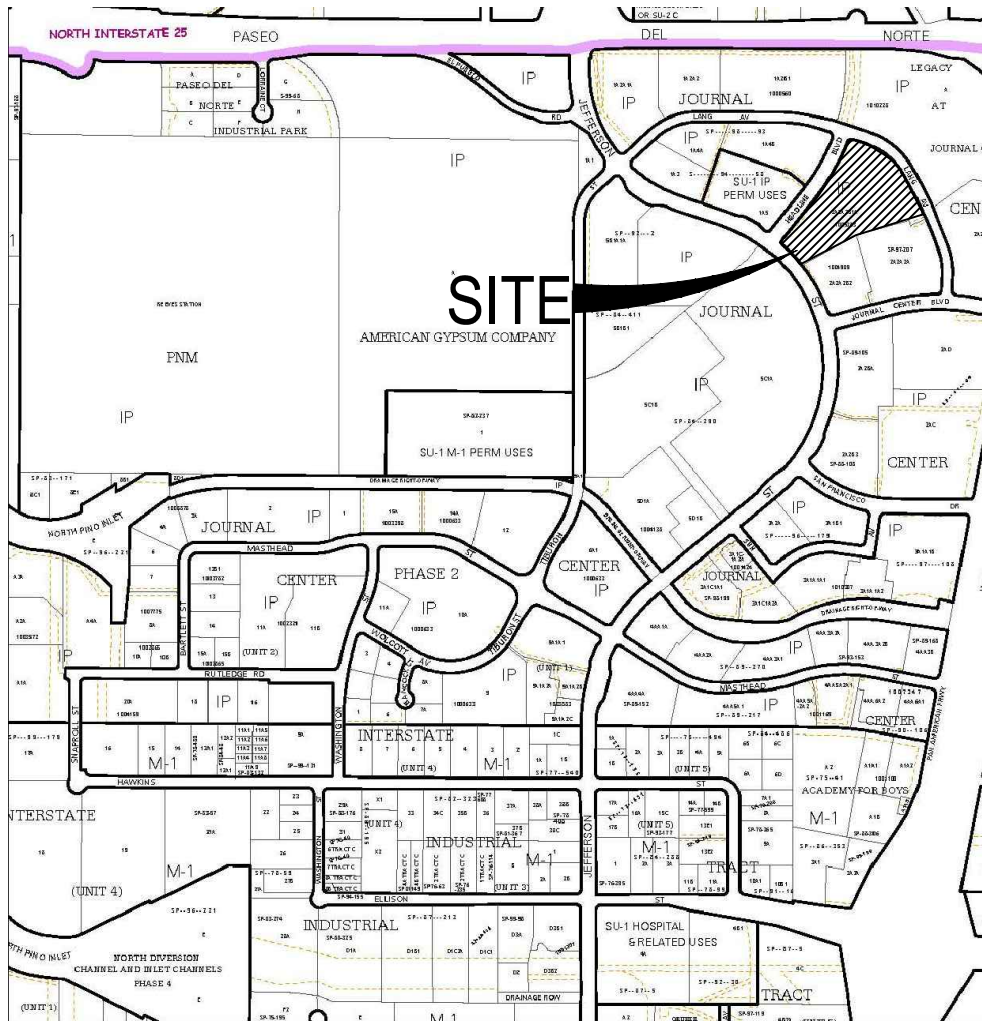
☐ BUILDING PERMIT APPROVAL
☐ CERTIFICATE OF OCCUPANCY
☐ PRELIMINARY PLAT APPROVAL
☒ SITE PLAN FOR SUB'D APPROVAL
☐ SITE PLAN FOR BLDG. PERMIT APPROVAL
☐ FINAL PLAT APPROVAL
☐ SIA/ RELEASE OF FINANCIAL GUARANTEE
☐ FOUNDATION PERMIT APPROVAL
☐ GRADING PERMIT APPROVAL
☐ SO-19 APPROVAL
☐ PAVING PERMIT APPROVAL
☐ GRADING/ PAD CERTIFICATION
☐ WORK ORDER APPROVAL
☐ CLOMR/LOMR
☐ PRE-DESIGN MEETING
☐ OTHER (SPECIFY) _____

DATE SUBMITTED: 02/27/2017 **By:** Mike Balaskovits

COA STAFF: _____ ELECTRONIC SUBMITTAL RECEIVED: _____



P:\20170362\CDP\Plans\General\20170392GP01.dwg, Layout1
February 27, 2017 - 4:32pm
Plotted by: ENEWMAN



VICINITY MAP
ZONE MAP D-17

DRAINAGE NARRATIVE:

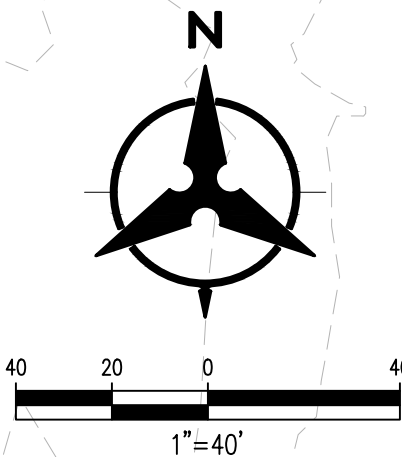
THE SITE IS LOCATED AT THE NORTHEAST CORNER OF JEFFERSON ST AND HEADLINE AVE. IT IS CURRENTLY UNDEVELOPED AND SLOPES GENERALLY FROM EAST TO WEST. FINISHED FLOOR ELEVATIONS HAVE BEEN SET TO GENERALLY ADHERE TO EXISTING ELEVATIONS AND PROMOTE POSITIVE DRAINAGE AWAY FROM BUILDINGS. THE SITE IS NOT LOCATED IN A DESIGNATED FEMA FLOOD ZONE (FEMA FIRM # 35001C0137H).

SITE DRAINAGE ANALYSIS WAS CONDUCTED WITH THE CONSTRUCTION OF THE NEW I-25 / PASEO DEL NORTE INTERCHANGE. THE NMDOT PDN / I-25 DRAINAGE REPORT DELINEATED BASINS THROUGHOUT THE INTERCHANGE AREA, INCLUDING JOURNAL CENTER. OUR SITE IS LOCATED WHOLLY WITHIN 'SUBBASIN 1 - E JEFFERSON 1'. THIS BASIN HAS A TOTAL DISCHARGE OF APPROXIMATELY 128.5 CFS. CURRENTLY OUR SITE IS THE ONLY UNDEVELOPED PORTION OF THIS BASIN. ACCORDING TO THE DRAINAGE REPORT, THE LAND TREATMENT PERCENTAGES WERE 1.0% C AND 99.0% D. THE DOWNSTREAM INFRASTRUCTURE WAS DESIGNED TO ESSENTIALLY CONVEY THE ENTIRE BASIN AS IF IT WERE COMPLETELY IMPERVIOUS.

OUR SITE WILL BE ALLOWED TO DISCHARGE 100% OF THE FLOW INTO HEADLINE AVE AND JEFFERSON ST JUST AS THE DRAINAGE REPORT SHOWS. THE FLOW WILL THEN BE CAPTURED BY OFFSITE DRAINAGE INFRASTRUCTURE. FOR MORE INFORMATION REGARDING THE OFFSITE INFRASTRUCTURE AND THE BASIN CONTAINING OUR SITE, PLEASE SEE THE NMDOT PDN / I-25 DRAINAGE REPORT. LANDSCAPED AREAS THROUGHOUT THE SITE WILL BE DEPRESSED WHERE APPLICABLE TO CAPTURE DRAINAGE IN AN ATTEMPT TO MEET THE FIRST FLUSH REQUIREMENT.

GRADING LEGEND

	PROPERTY LINE		PROPOSED CURB & GUTTER
	PROJECT LIMITS OF GRADING		DIRECTION OF FLOW
	EXISTING INDEX CONTOUR		WATER BLOCK/GRADE BREAK
	EXISTING INTERMEDIATE CONTOUR		PROPOSED STORM DRAIN LINE
	EXISTING GROUND SPOT ELEVATION		PROPOSED STORM DRAIN MANHOLE
	PROPOSED INDEX CONTOUR		PROPOSED STORM DRAIN INLET
	PROPOSED INTERMEDIATE CONTOUR		PROPOSED RETAINING WALL
	PROPOSED FLOW LINE		EASEMENT
	PROPOSED FINISHED GRADE SPOT ELEVATION		
	TC=TOP OF CURB, FL=FLOW LINE, TS=TOP OF SIDEWALK TG=TOP OF GRATE, FGH=FINISH GROUND HIGH, FGL=FINISH GROUND LOW		



Bohannon & Huston
www.bhinc.com 800.877.5332

ARCHITECTURE / DESIGN / INSPIRATION

**DEKKER
PERICH
SABATINI**

7601 JEFFERSON NE, SUITE 100
ALBUQUERQUE, NM 87109

505.761.9700 / DPSDESIGN.ORG

ARCHITECT

ENGINEER

PROJECT

LEGACY 2 @ JOURNAL CENTER
7800 Headline Blvd NE
Albuquerque, New Mexico 87109

REVISIONS



DRAWN BY

REVIEWED BY

DATE 02/27/2017

PROJECT NO. 16-0068

DRAWING NAME

**CONCEPTUAL
GRADING
AND DRAINAGE
PLAN**

SHEET NO.

SPSB-2
OF

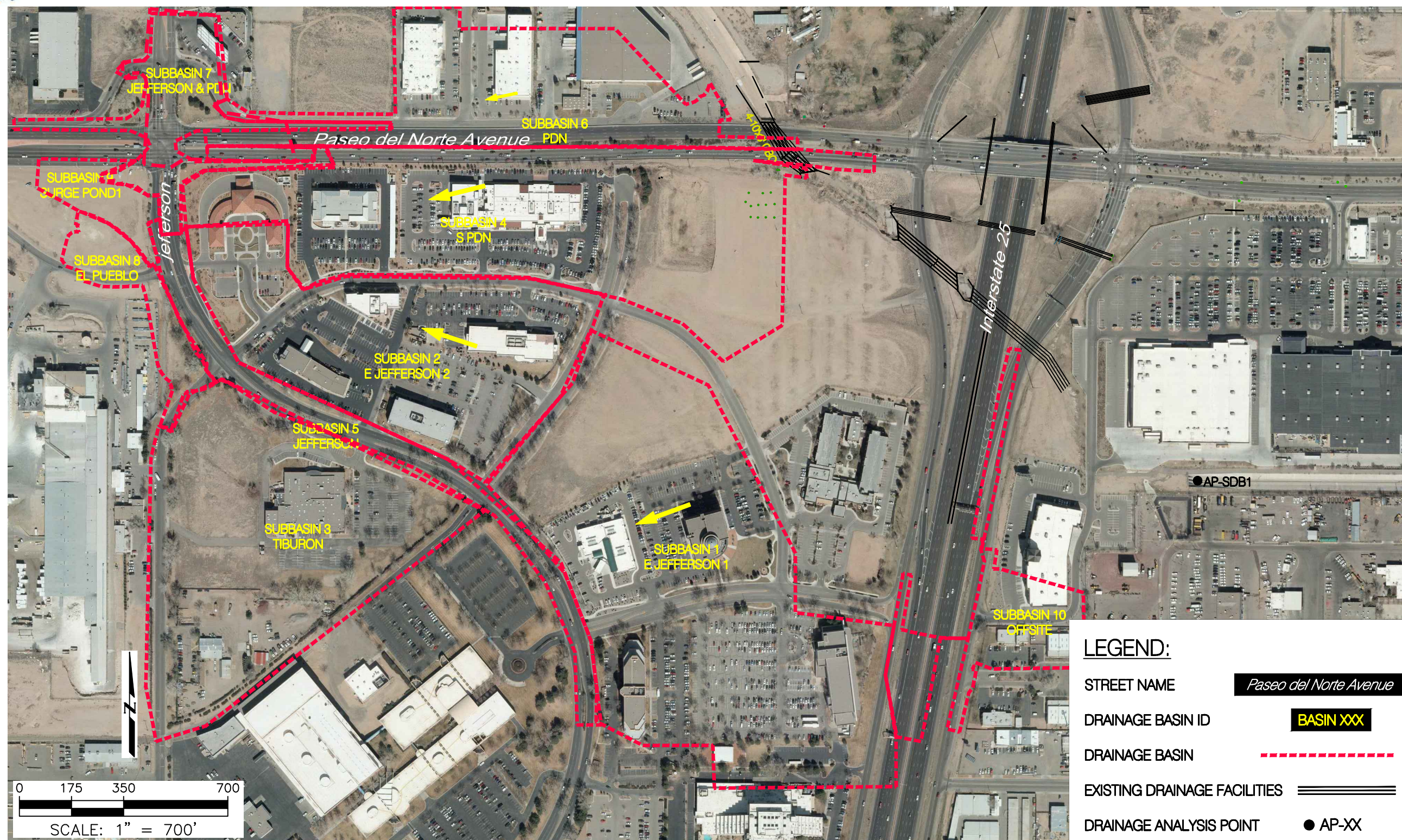


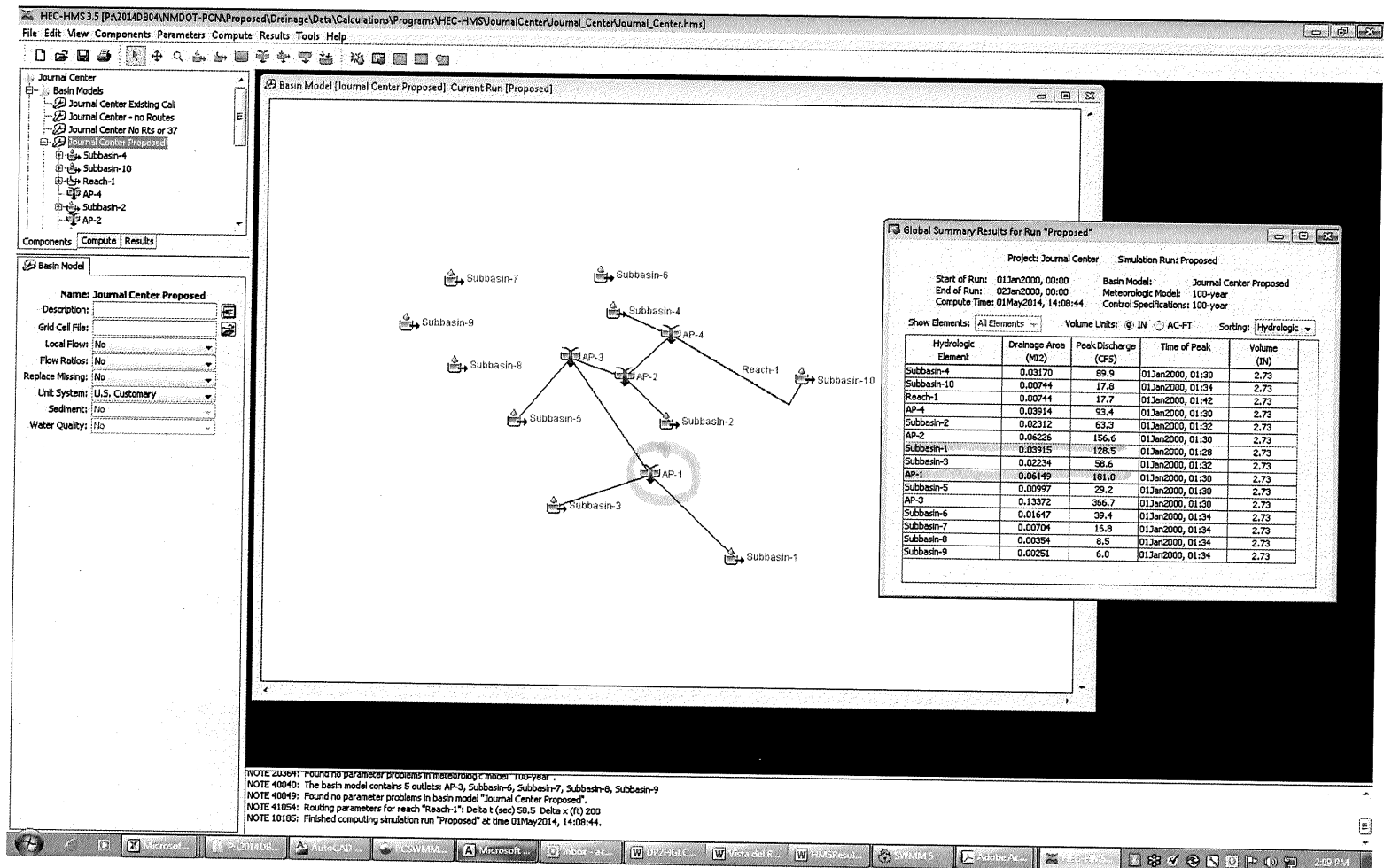
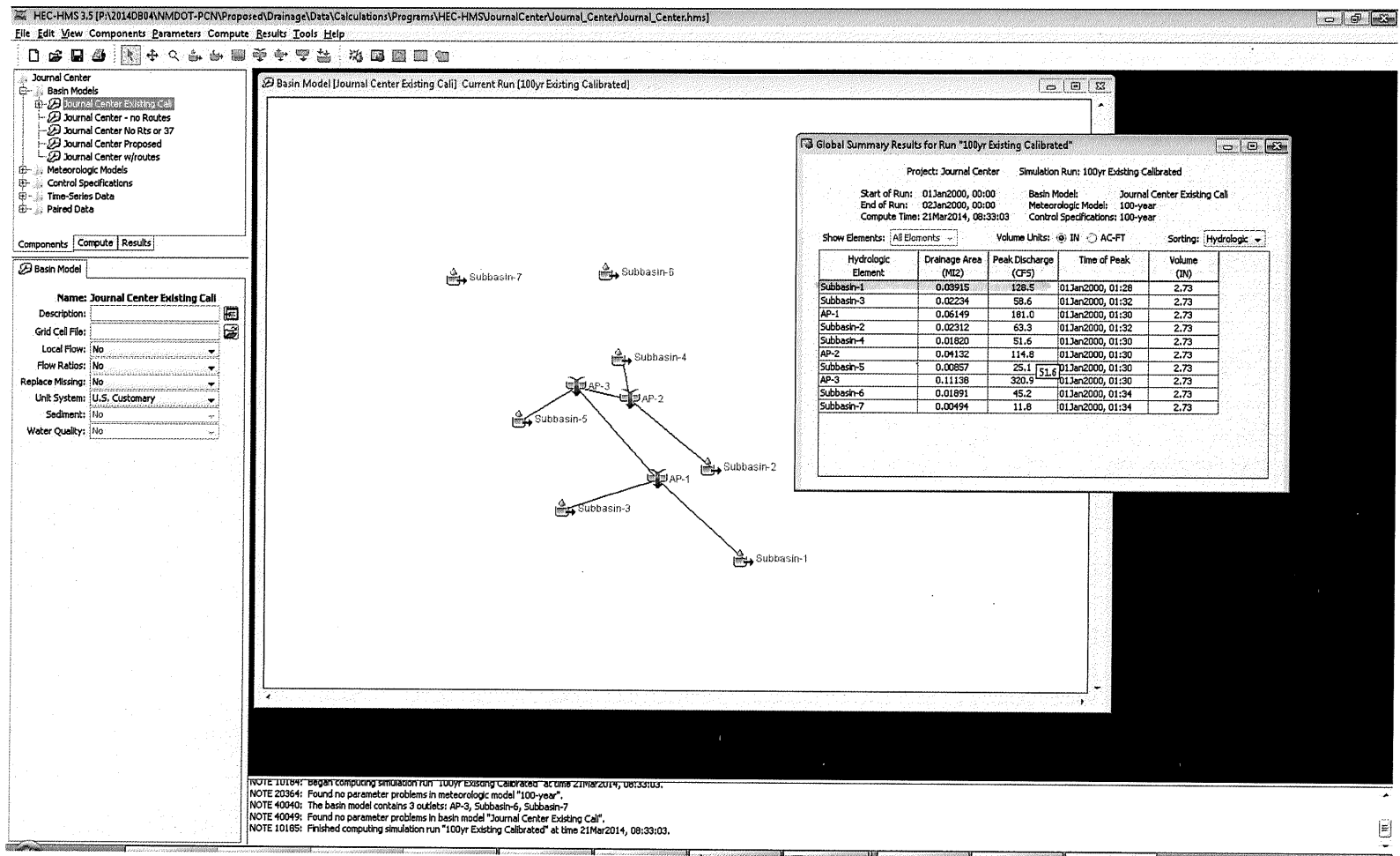
Figure DP2_3: Journal Center Offsite Proposed Drainage Basins

Land Treatments - for HEC-HMS Basin Models - Journal Center-Existing Calibrated

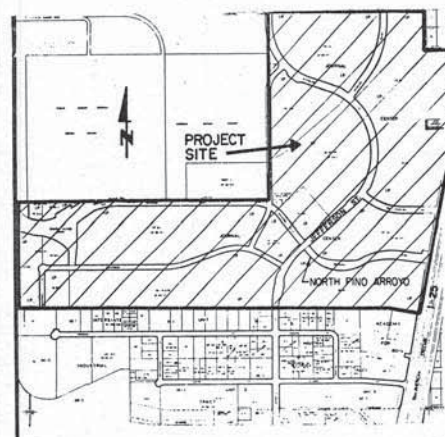
Basin ID	Basin Name	Existing Conditions		Proposed Conditions		Land Treatment Description	%A	%B	Land Treatment	%C	%D % Imperv.	IA Initial Loss (in)	INF Constant Rate (in/hr)	R (hours) Storage Coeff.
		Area (acres)	Area (sq.mi)	Area (acres)	Area (sq.mi)									
Subbasin-1	E Jefferson 1	25.05	0.03915			100% - commercial/industrial	0	0		1	99	0.35	0.83	0.079103754
Subbasin-2	E Jefferson 2	14.80	0.02312			100% - commercial/industrial	0	0		1	99	0.35	0.83	0.120666743
Subbasin-3	Tiburon	14.30	0.02234			100% - commercial/industrial	0	0		1	99	0.35	0.83	0.134074159
Subbasin-4	S PDN	11.65	0.01820	21.23	0.03317	100% - commercial/industrial	0	0		1	99	0.35	0.83	0.113963035
Subbasin-5	Jefferson Street	5.48	0.00857	6.38	0.00997	100% - major roads	0	0		1	99	0.35	0.83	0.107259327
Subbasin-6	PDN	12.10	0.01891	10.54	0.01647	100% - major roads	0	0		1	99	0.35	0.83	0.160888991
Subbasin-7	PDN & Jefferson	3.16	0.00494	4.51	0.00704	100% - major roads	0	0		1	99	0.35	0.83	0.160888991
Subbasin-8	El Pueblo			2.26	0.00354	100% - major roads	0	0		1	99	0.35	0.83	0.160888991
Subbasin-9	Surge Pond			1.61	0.00251	100% - major roads	0	0		1	99	0.35	0.83	0.160888991
Subbasin-10				4.76	0.00744	100% - major roads	0	0		1	99	0.35	0.83	0.160888991

- Notes:
- Land Treatments are based on the SSCAFCA DPM chapter 22 Table F-3. - http://sscafca.org/development/documents/DPM/DPM_4_2010/DPM_4-2010.pdf. Land treatments were edited to match HEC-HMS results with Journal Center Drainage management Plan results.
 - Basins and areas for subbasins 1 through 5 are from "Revised Drainage Management Plan for Journal Center", Dec, 1992. Location: : P:\2013DB05\02 - Preliminary Design\Archive\Received\JournalCenterDMPBasinMap.pdf.
 - Subbasin-1 area = JC Basin B1 + A + Headline roadway (100' x 720')
 - Subbasin-2 area = portion of JC Basin C - south of Lang Ave, Lang Ave and small portion north of Land, adjacent to Jefferson (area estimated in JCDrainageBasins.dwg) . Lang Ave, area in basin = 60' x 1240' = 1.7 acres.
 - Subbasin-3 area - JC Basin D-1
 - Subbasin-4 area = Area defined in P:\2014DB04\Archive\Received\CDP-Journal Center\North Journal Center SD-from CDP.pdf - Area = sum of basins A-H = 11.65 ac; Sum of 100yr Peak Q (cfs) =53.3 cfs
 - Subbasin-5 area - Jefferson Street from PDN at north to high point just south of Journal Center Blvd. = 100 ft x 2380 ft = 5.48 acres. Land use to match Anna's PSQF - just roadway - 1% C and 99% D
 - Tc - from JC hydrology - Tc = 10 min. Tc were edited to match HEC-HMS results with Journal Center Drainage management Plan results.
 - R= clark unit hydrograph stroage coefficient
 - See Anna Caffrey's e-mail dated 12/2/13 - she added Subbasins 6 & 7 and also completed technical review of HEC-HMS model and supporting data. Sarah checked subbasins 6 & 7.
 - Subbasin 8 - flow reaching south surge pond (including El Pueblo)
 - Subbasin 9- flow reaching north surge pond (including EB off ramp)
 - Offsite flow from east of I-25 (the "37 cfs"), updated based on the DP5 drainage basins

Proposed conditions, subbasin 4 includes a portion of the Titan development



AP-1 doesn't relate to the DMP.
AP-2= DMP AP-6
AP3= DMP AP-7
See flow splits between SD and street on proposed basin figure.



LOCATION MAP
ZONE ATLAS D-17-Z

REVISED DRAINAGE MANAGEMENT PLAN FOR: JOURNAL CENTER

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

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.

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 Channel is a concrete lined with grass free board and discharges runoff into the North Diversion Channel. The Jefferson Street storm drain discharges into the Dominga 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 Dominga Baca Arroyo. The 112 cfs represents a figure less than the undeveloped flow rate from the site prior to its development.

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.

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 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	102	112
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	12	12
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	0.6	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	16.4	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	42	51
Nch	3.4	Masthead	650		10.0	4.7	13	14
O	5.3	Snayroll	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.

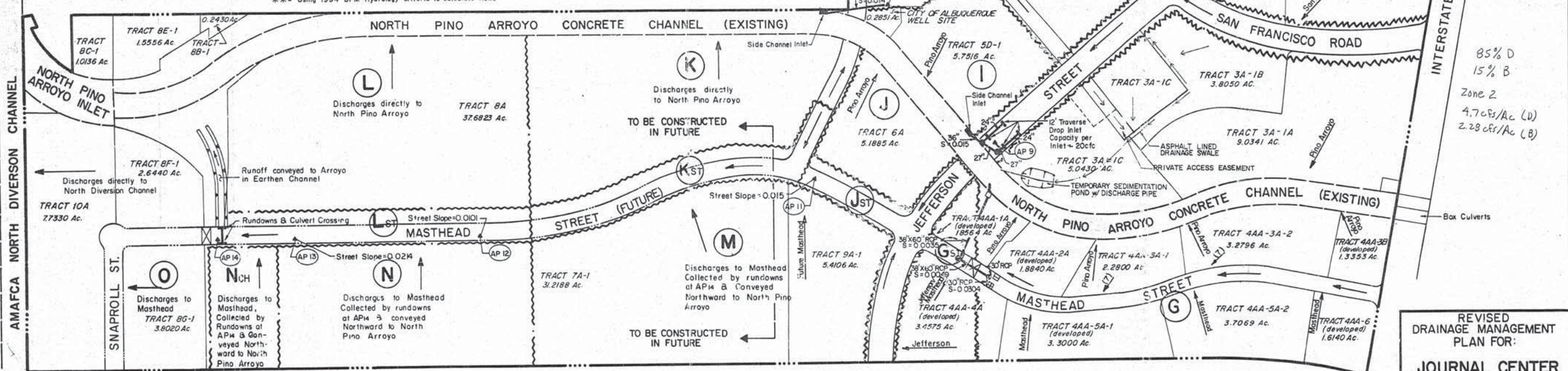
STREET & STORM SEWER HYDRAULICS

BASIN ID	CONTRIBUTING BASIN(S)	10-YEAR STORM (all values cfs)				100-YEAR STORM (all values cfs)				COMMENTS
		Q	STREET CAPACITY	SEWER/SS CAPACITY	FLOW IN STREET	Q	STREET CAPACITY	SS CAPACITY	FLOW IN STREET	
1	A, OF-1	64	112	N.A.	64	98	112	N.A.	98	Street has adequate capacity
2	B-1	45	18-East half of street	N.A.	45	68	200	N.A.	45	10 year street capacity exceeded
3	OF-1, A, B-1	109	36-Full street section (30" RCP)	59	69	166	200	59	126	" " "
4	A, B-1, Street	115	30-Full street section	59	73	176	170	59	136	" " "
5	D-1	35	107 (48" RCP)	0	35	54	100	107	0	Basin D-1 runoff collected in Triple 'C' inlets
6	C	67	N.A.	N.A.	67	102	N.A.	120	N.A.	100% runoff collected in 48" RCP inlet
7	Street OF-1	211	36 (72" RCP)	64	147	321	180	232	96	90 cfs discharged to Paseo del Norte
8	E-1	32	9-East half of street	N.A.	32	49	104	N.A.	49	10 year street capacity exceeded
9	E-1, Street	46	25-East half of street	85 (36" RCP)	0	69	200	83	0	7 cfs collected by inlets
10	H-1	72	N.A.	(42" RCP)	N.A.	109	N.A.	1.0	N.A.	Runoff conveyed to Pino Arroyo
11	Gst, Jst	10	160	N.A.	10	15	160	N.A.	1.5	" " "
12	API, Kst, M	76	N.A.	N.A.	76	116	130	N.A.	116	" " "
13	AP2, N	108	N.A.	N.A.	108	165	160	N.A.	165	" " "
14	API, Nch	117	N.A.	N.A.	N.A.	178	N.A.	N.A.	N.A.	Runoff collected in concrete runways
15	A, OFFSITE	N.A.	N.A.	N.A.	N.A.	43.1	64.7	N.A.	43.1	" " "

N.A. - Not Applicable
See Note 4.5
*- Using 1994 DPM Hydrology criteria to calculate flows

NOTES

1. Basin Hydrology based on DPM Criteria, Chapter 22 (DPM Edition, 1984).
 - a. To-Plate 22.2 13-1 (10 minute minimum)
 - b. Intensity - Plate 22.2 D-2
 - c. 'C' for 85% Impervious = 0.80
 - d. Plate 22.2 C-1
 - e. 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 Dominga 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.

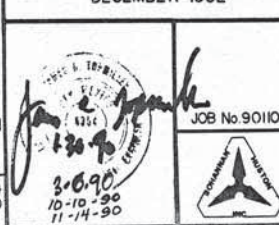


LEGEND

- 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

REVISED DRAINAGE MANAGEMENT PLAN FOR: JOURNAL CENTER

DECEMBER 1992



JOB No. 901001