



Richard J. Berry, Mayor

September 25, 2017

David Aube, P.E.  
Hartman & Majewski Design Group  
120 Vassar Dr SE, Suite 100  
Albuquerque, NM, 87106

**RE: 6<sup>th</sup> and Haines Redevelopment  
Conceptual Grading and Drainage Plan  
Stamp Date: 9/22/17  
Hydrology File: H14D108**

Dear Mr. Aube:

PO Box 1293

Based upon the information provided in your resubmittal received 9/25/17, the Conceptual Grading and Drainage Plan is approved for action by the DRB on the Site Plan for Building Permit and Site Plan for Subdivision.

Albuquerque

Before submitting to the DRB, please make the following minor changes:

NM 87103

- On Sheets SDP-3.1 & SDP-3.2, please call the sheets "Conceptual Grading and Drainage Plan" and add a note stating "Not for Construction".
- On Sheets SDP-3.2, please call change the Basins to "Proposed" from "Existing".
- On Sheets SDP-3.2, please add the finished floor elevation to the main building.

www.cabq.gov

Before submitting for Building Permit, please make the following changes:

- Please review the Proposed 100 year discharge. I checked Pro 4 and came up with 1.38 cfs instead of your 1.49 cfs.
- Not all basins need a first flush pond. Only Basin Pro 5 needs one since the impervious area increased.
- Please add a curb cut or cuts to allow runoff to inter the first flush pond within the depressed landscape areas.
- Please show the weir calculations for the proposed curb cut or cuts.

# CITY OF ALBUQUERQUE



Richard J. Berry, Mayor

If you have any questions, please contact me at 924-3995 or [rbrissette@cabq.gov](mailto:rbrissette@cabq.gov).

Sincerely,

*Reneé C. Brissette*

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

PO Box 1293

Albuquerque

NM 87103

[www.cabq.gov](http://www.cabq.gov)

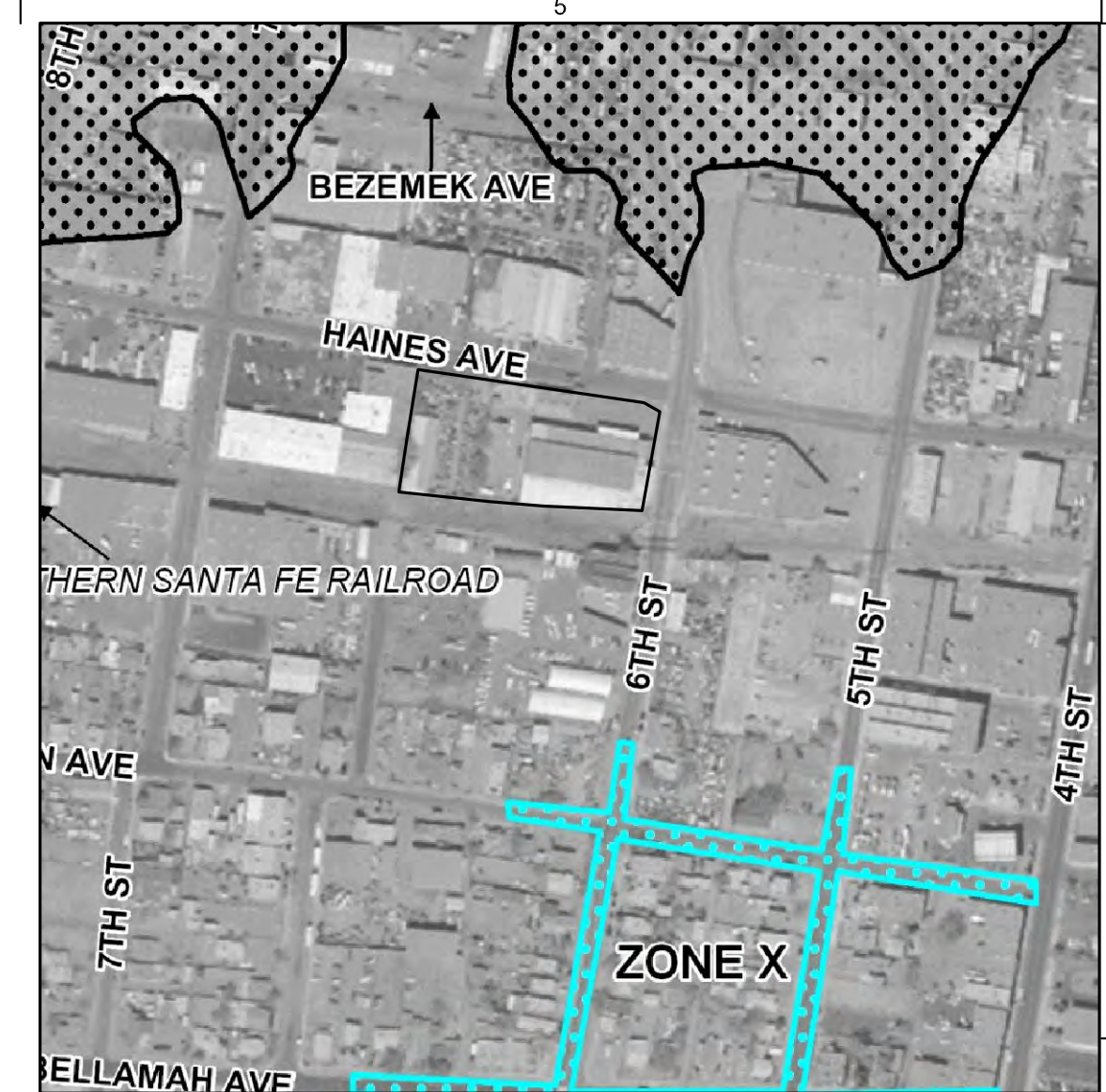
Existing summary

Basin Name	Ex 1	Ex 2	Ex 3	Ex 4	Ex 5	Ex 6
Area (sf)	2502	12402	23343	14484	22021	2608
Area (acres)	0.06	0.28	0.54	0.33	0.51	0.06
%A Land treatment	0	0	0	0	0	0
%B Land treatment	0	0	0	0	0	0
%C Land treatment	0	0	5	20	40	0
%D Land treatment	100	100	95	80	60	100
Soil Treatment (acres)						
Area "A"	0.00	0.00	0.00	0.00	0.00	0.00
Area "B"	0.00	0.00	0.00	0.00	0.00	0.00
Area "C"	0.00	0.00	0.03	0.07	0.20	0.00
Area "D"	0.06	0.28	0.51	0.27	0.30	0.06
Excess Runoff (acre-feet)						
100yr. 6hr.	0.0101	0.0503	0.0925	0.0533	0.0726	0.01
10yr. 6hr.	0.0064	0.0318	0.0580	0.0326	0.0426	0.0067
2yr. 6hr.	0.0038	0.0187	0.0338	0.0183	0.0225	0.0039
100yr. 24hr.	0.0121	0.0598	0.1094	0.0621	0.0827	0.01
Peak Discharge (cfs)						
100 yr.	0.27	1.34	2.48	1.46	2.06	0.28
10 yr.	0.18	0.89	1.64	0.95	1.30	0.19
2 yr.	0.11	0.53	0.96	0.53	0.69	0.11

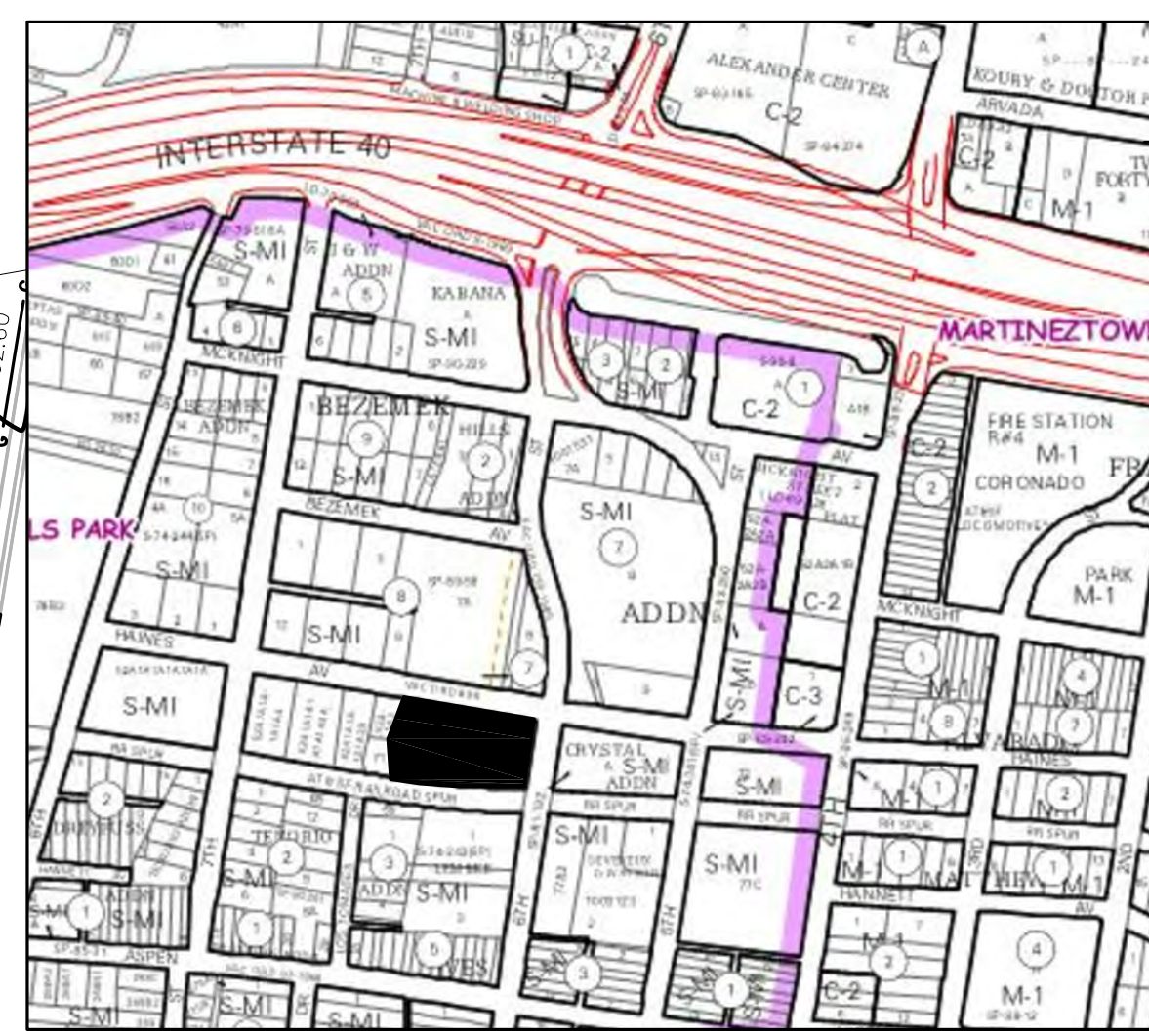
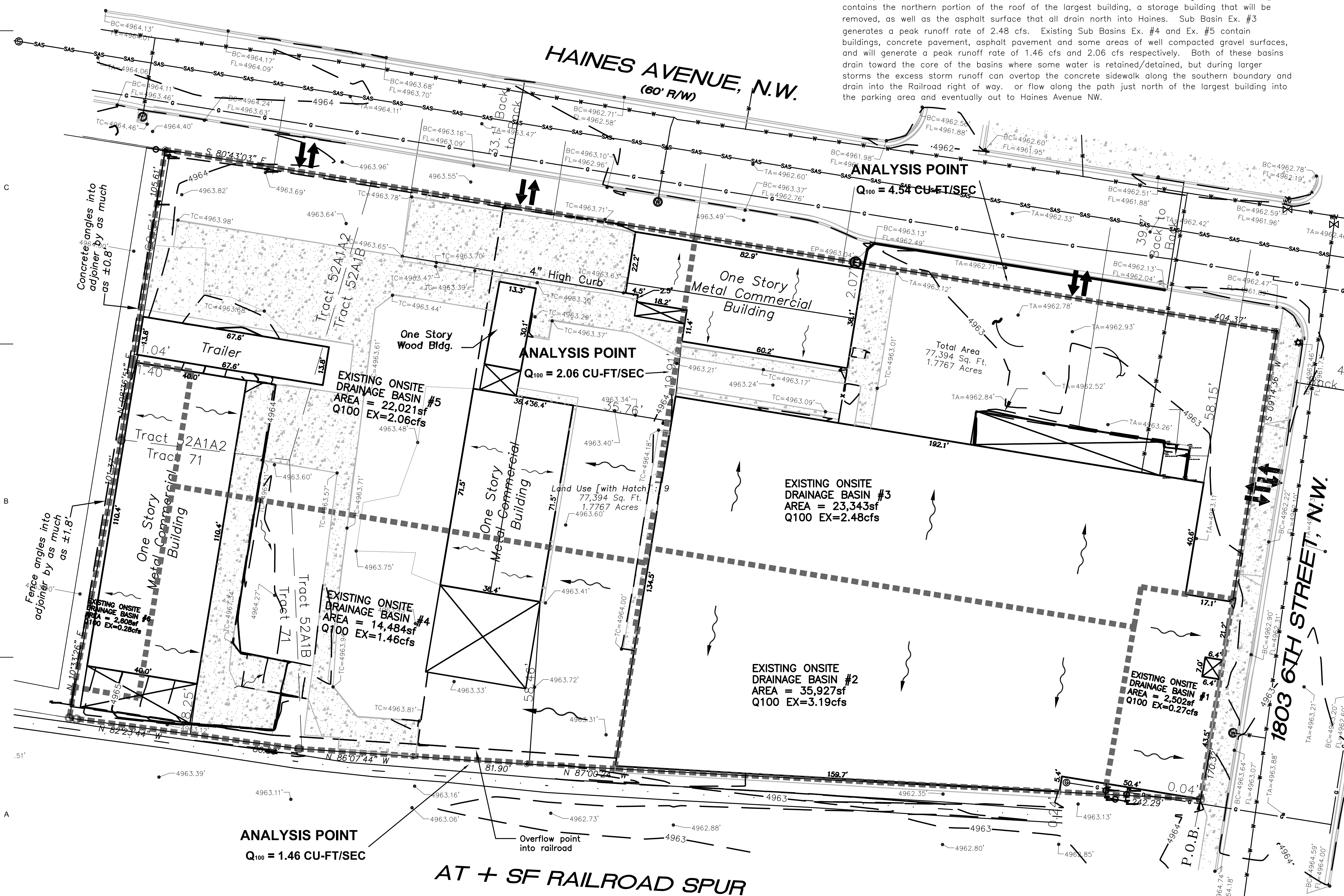
# 6th and Haines Redevelopment

- I. PURPOSE AND SCOPE  
The purpose of this drainage plan is to present the existing and proposed drainage management plans for the proposed 6th Street and Haines Redevelopment located at the SW Corner of 6th Street NW and Haines Avenue NW. The site is located in Zone Atlas Page H-14-Z. The site is currently fully developed. The proposed modifications include removing several buildings and creating new parking and pedestrian circulation.
- II. SITE DESCRIPTION AND HISTORY  
The site is currently fully developed. Several building will be removed to allow for the proposed redevelopment.
- III. COMPUTATIONAL PROCEDURES  
Hydrologic analysis was performed utilizing the design criteria found in the COA-DPM Section 22.2 released in June 1997.
- IV. PRECIPITATION  
The 100-yr. 6-hr duration storm was used as the design storm for this analysis. This site is within Zone 2 as identified in the DPM Section 22.2. Tables within the section were used to establish the 6-hr precipitation, excess precipitation and peak discharge.

- V. EXISTING DRAINAGE CONDITIONS OVERVIEW  
The existing project site is located on the south west corner of 6th and Haines Ave. just north of the railroad tracks before I-40 in downtown Albuquerque, barricaded by an existing fence to the west. The existing site accommodates four, one-story metal buildings, a one-story wood building, and a trailer. The largest of the buildings occupies the entirety of the lower SE quadrant of the lot. The second largest metal building lies in the SW corner, running vertically along the western fence. A trailer sits perpendicular at the northern end of the building. The third metal building is accessed from Haines Ave., and sits horizontally, half-way between 6th Street and the fence. The 4th metal building runs vertically and is positioned between the largest and second largest metal buildings directly in the middle of the lot, and to the north, a covered area connects it to the small, wood building. The previous identified buildings have ample, concrete space encompassing all four sides. The rest of the lot (approx. 40%) consists of concrete or asphalt in various states of aging and degradation.  
The site is approximately 1.78 acres with most of the runoff directed either towards Haines Ave. to the north or the railroad tracks to the south, small amounts of roof drains directly towards the east and west from the two buildings that will remain throughout the redevelopment.  
For the purpose of this conceptual drainage plan, the projected site has been broken up into 6 sub-basins. Sub-basin Ex. #1 is a small roof area that creates a peak runoff rate of .27 cfs that will flow directly onto 6th Street NW. Sub-basin Ex. #2 is a south side of the largest existing building to remain and creates a peak runoff rate of 1.34 cfs that will drain directly into the railroad right of way. Sub-basin Ex. #6 is the western side of the SW corner metal building and has a peak runoff rate of .28 cfs that will drain west over the fence. Existing Sub Basin Ex. #3 contains the northern portion of the roof of the largest building, a storage building that will be removed, as well as the asphalt surface that all drain north into Haines. Sub Basin Ex. #3 generates a peak runoff rate of 2.48 cfs. Existing Sub Basins Ex. #4 and Ex. #5 contain buildings, concrete pavement, asphalt pavement and some areas of well compacted gravel surfaces, and will generate a peak runoff rate of 1.46 cfs and 2.06 cfs respectively. Both of these basins drain toward the core of the basins where some water is retained/detained, but during larger storms the excess storm runoff can overtop the concrete sidewalk along the southern boundary and drain into the Railroad right of way. or flow along the path just north of the largest building into the parking area and eventually out to Haines Avenue NW.



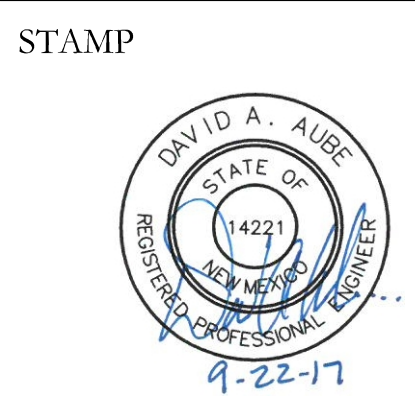
**C6 FLOOD ZONE MAP**  
SCALE: NOT TO SCALE



**A6 ZONE ATLAS PAGE**  
SCALE: NOT TO SCALE



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SITE DEVELOPMENT  
PLAN FOR BUILDING  
PERMIT

PROJECT NAME  
**6TH & HAINES  
IMPROVEMENTS**

1803 6TH ST NW  
ALBUQUERQUE, NM 87102

NEW MEXICO CAPITAL  
PARTNERS

REVISIONS

NO.	DATE	DESCRIPTION

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Date: 06/29/2017  
Project number:

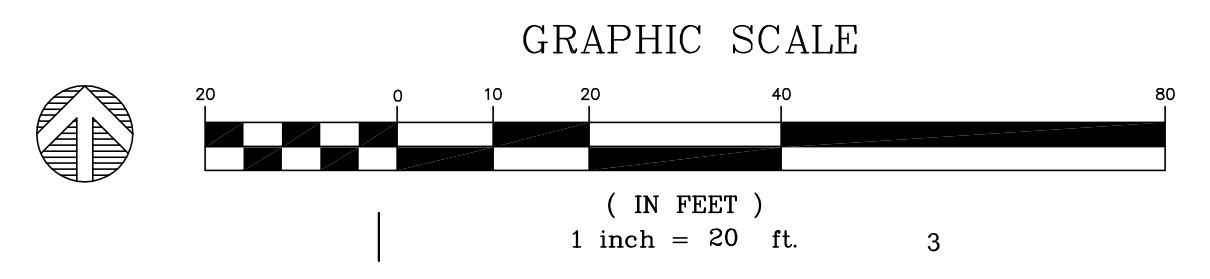
SHEET TITLE  
**CONCEPTUAL  
DRAINAGE PLAN  
EXISTING CONDITIONS**

SHEET NUMBER

**SDP-3.1**  
SHEET 3 OF 10

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**A1 CONCEPTUAL EXISTING DRAINAGE PLAN**  
SCALE: 1" = 20'-0"



**Proposed summary**

Basin Name	Area (sf)	Pro 1	Pro 2	Pro 3	Pro 4	Pro 5	Pro 6
Area (acres)	2502	12402	23343	14484	22021	2608	2608
%A Land treatment	0.06	0.28	0.54	0.33	0.51	0.06	0.06
%B Land treatment	0	0	0	0	0	0	0
%C Land treatment	0	0	15	0	0	0	0
%D Land treatment	100	100	75	78	82	100	100
<b>Soil Treatment (acres)</b>							
Area "A"	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area "B"	0.00	0.00	0.05	0.07	0.09	0.00	0.00
Area "C"	0.00	0.00	0.08	0.00	0.00	0.00	0.00
Area "D"	0.06	0.28	0.40	0.26	0.41	0.06	0.06
<b>D Excess Runoff (acre-feet)</b>							
100yr. 6hr.	0.0101	0.0503	0.0821	0.0506	0.0791	0.01	0.01
10yr. 6hr.	0.0064	0.0318	0.0496	0.0307	0.0484	0.01	0.01
2yr. 6hr.	0.0038	0.0187	0.0276	0.0172	0.0274	0.00	0.00
100yr. 24hr.	0.0121	0.0598	0.0955	0.0592	0.0930	0.01	0.01
<b>Peak Discharge (cfs)</b>							
100 yr.	0.27	1.34	2.26	1.39	2.16	0.28	0.28
10yr.	0.18	0.89	1.45	0.88	1.39	0.19	0.19
2yr.	0.11	0.53	0.80	0.49	0.78	0.11	0.11
<b>First Flush Ponding Volume (cf)</b>	91.7	454.7	641.9	414.2	662.1	95.6	95.6
<b>First Flush Acre Feet</b>	0.0021	0.0104	0.0147	0.0095	0.0152	0.0022	0.0022

**VI. DRAINAGE MANAGEMENT PLAN**

The site will have several of the existing buildings removed in preparation for the new site configuration.

Proposed Sub-basins Pro #1, #2, #3 and #6 will be the locations of the two existing buildings to remain on the property. These are the existing largest and second largest buildings occupying the SE and SW corners, respectively. Both buildings sit on top of 3-4 feet of concrete base, eliminating any concern for flooding. The site is not located within a defined FEMA Flood zone.

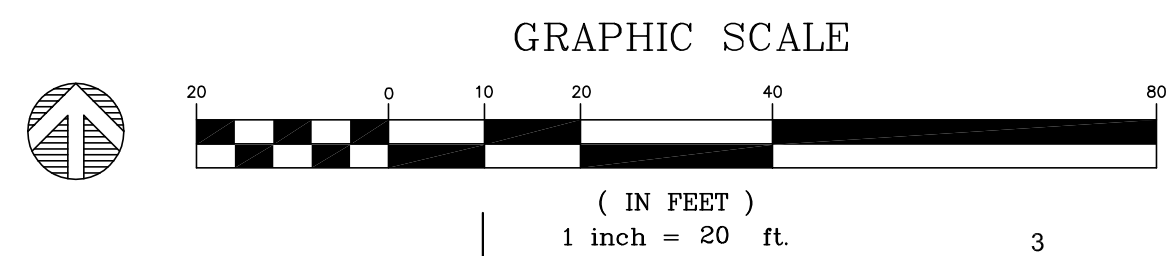
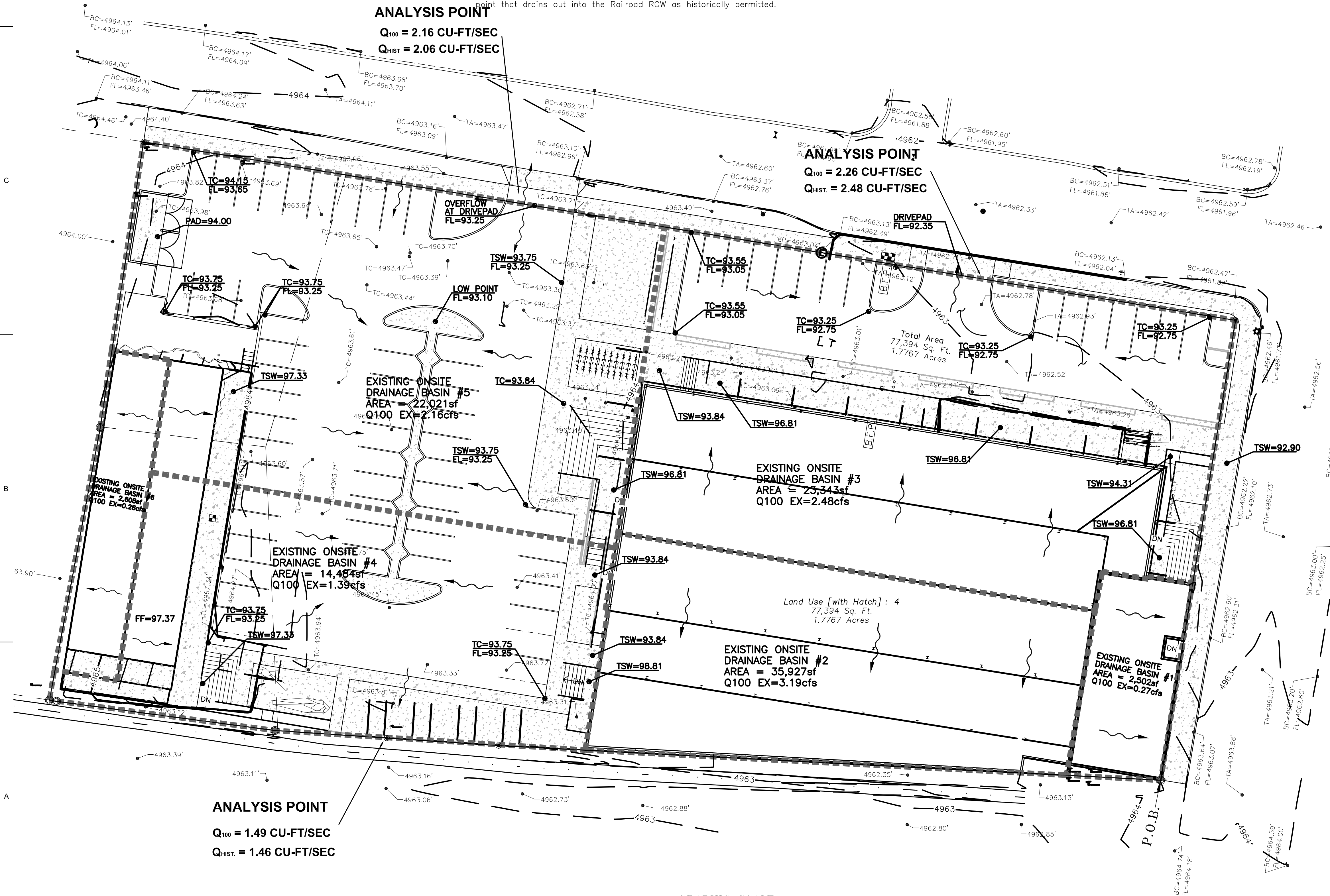
Proposed Sub-basins Pro. #3 will have a reduced peak runoff rate from that of the existing site since water runoff will be tempered by additional landscape throughout. Sub-basin Pro. #3 will have a north-bound peak runoff rate of 2.26 cfs and will drain through the driveway into Haines. Some of the storm runoff water draining from the pitched roof will be harvested by landscape directly underneath the path of the runoff. Much of the remaining runoff will be abated from draining onto Haines Ave. by the additional landscape book-ending the parking lot exit. First Flush will be accounted for by landscaping buffers distributed around the parking areas, tree islands at each end of the center lot, and end isles near the driveway to the parking lot at the northern end. There is also a landscaping buffer running along Haines Ave between the Sidewalk and curb that will be used to harvest storm runoff and to contain the first flush.

Sub-basin Pro. #4 and #5 lay flat and will collect water until it overtops and flows out towards the south following the same pattern as the existing conditions. The sub-basins have a combined 1.39 cfs and 2.16 cfs peak runoff rate. There will be many local depressions for the containment of the M54 First Flush volumes scattered throughout the basins. These additional landscapes trenched to specifically collect drainage, will allow for a larger amount of absorption to occur, before any resulting overflow. Ponding of water within the parking lot will be minimized once the landscaping is better defined in a latter phase of the design efforts. The design will account for the necessary first flush volumes within landscaping. Any remaining runoff that is not contained within the first flush areas will be allowed to overflow the driveway or the high point that drains into the Railroad ROW as historically permitted.

**VI. CONCLUSIONS**

In summary, the considerable addition of landscaping throughout the property and along the street, as well as, the preexisting condition of the buildings three and four-foot concrete platform eliminates any concern for extensive runoff causing flooding to the on-site buildings. Downstream users will not be affected as the current conditions and the proposed conditions generate very similar peak runoff rates. The addition of on site retention for first flush volumes will actually reduce the excess runoff from current rates and volumes. This will be further developed in the Building Permit phase of the design efforts.

TREE ISLANDS TO HAVE OPENINGS TO ALLOW FOR STORM RUNOFF FROM PARKING AREAS TO ENTER LANDSCAPING AREAS. TYPICAL



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**A1 CONCEPTUAL PROPOSED DRAINAGE PLAN**  
SCALE: 1" = 20'-0"

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STAMP

**SITE DEVELOPMENT PLAN FOR BUILDING PERMIT**  
PROJECT NAME  
**6TH & HAINES IMPROVEMENTS**

1803 6TH ST NW  
ALBUQUERQUE, NM 87102

**NEW MEXICO CAPITAL PARTNERS**

REVISIONS

NO.	DATE	DESCRIPTION

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Checked by: DAA  
Date: 06/29/2017  
Project number:

SHEET TITLE  
**A CONCEPTUAL DRAINAGE PLAN PROPOSED CONDITIONS**

SHEET NUMBER  
**SDP-3.2**  
SHEET 4 OF 10