

# CITY OF ALBUQUERQUE



Richard J. Berry, Mayor

June 29, 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 Drainage Plan  
Stamp Date: 6/20/17  
Hydrology File: H14D108**

Dear Mr. Aube:

Based upon the information provided in your submittal received 6/22/17, the Conceptual Drainage Plan **is not** approved for Site Plan for Building Permit. The following comments need to be addressed for approval of the above referenced project:

1. On Sheet CD1, please provide existing site topography. Since the site is extremely flat, please provide spot elevations. Enough to verify the drainage areas and outfalls that you have indicated. Also the existing finish floor of the buildings.
2. On Sheet CD2, please add both the existing topography along with eh existing buildings finish floor. Please provide proposed spot elevations, so I can verify the proposed drainage areas and proposed outfalls that you have indicated.
3. On Sheets CD1 & CD2, please change the sheet title so that it reads, "Conceptual Grading and Drainage Plan".

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.  
Senior Engineer, Hydrology  
Planning Department

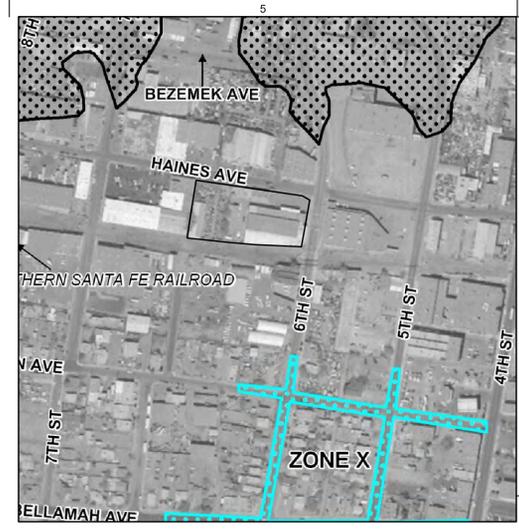
Existing summary

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
<b>Soil Treatment (acres)</b>						
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
<b>Excess Runoff (acre-feet)</b>						
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
<b>Peak Discharge (cfs)</b>						
100 yr.	0.27	1.34	2.48	1.46	2.06	0.28
10yr.	0.18	0.89	1.64	0.95	1.30	0.19
2yr.	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.



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

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SCHEMATIC DESIGN

PROJECT NAME

1803 6TH ST NW  
ALBUQUERQUE, NM 87102

FOX

REVISIONS

NO.	DATE	DESCRIPTION

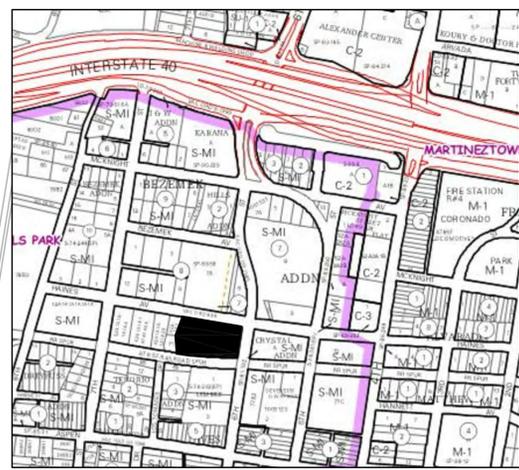
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Date: 06/29/2017  
Project number:

SHEET TITLE

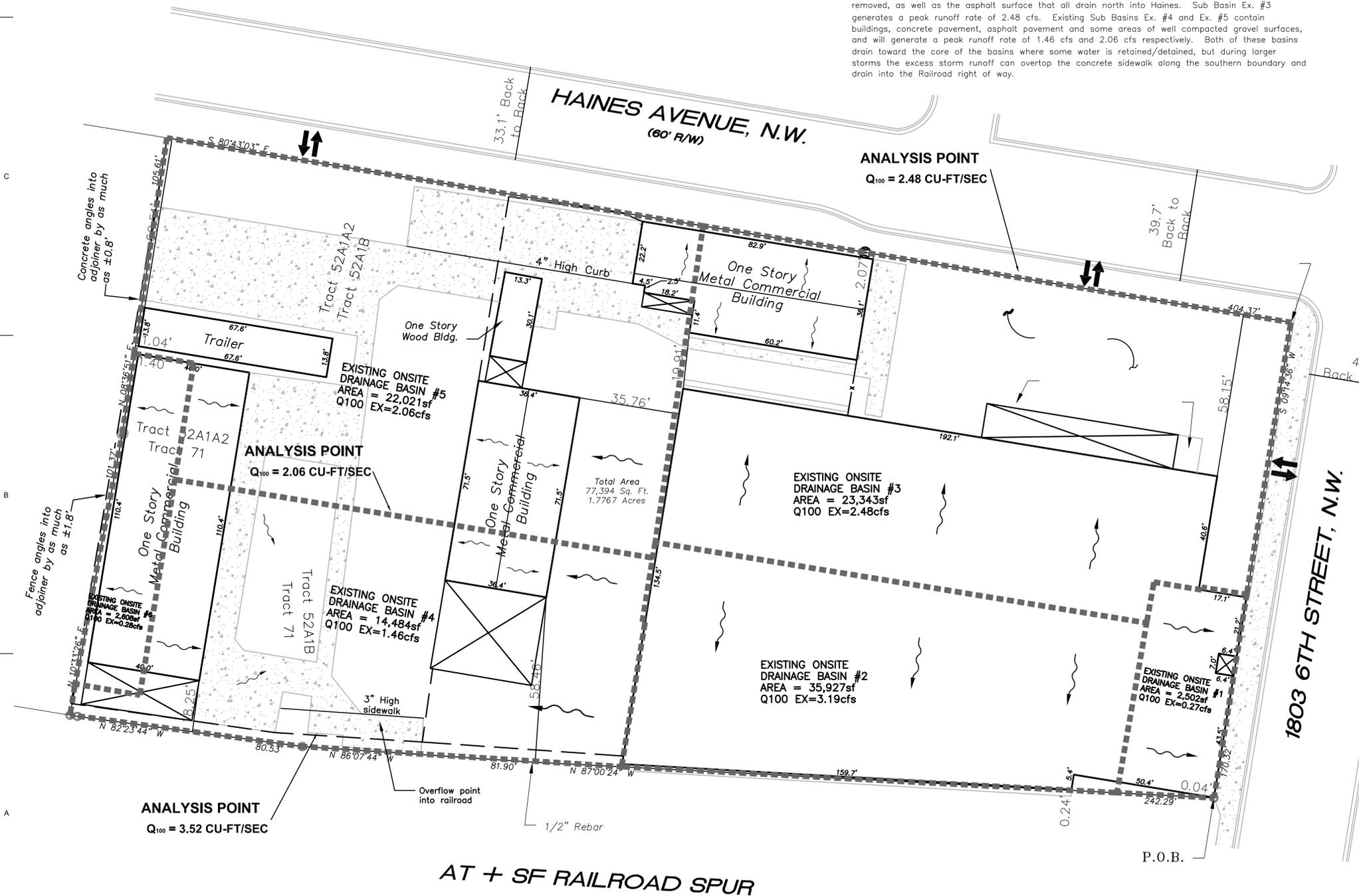
**CONCEPTUAL DRAINAGE PLAN EXISTING CONDITIONS**

SHEET NUMBER

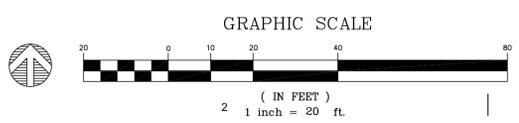


**A6 ZONE ATLAS PAGE**  
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# CD1



AT + SF RAILROAD SPUR



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

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**Proposed summary**

Basin Name	Pro 1	Pro 2	Pro 3	Pro 4	Pro 5	Pro 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	10	22	18	0
%C Land treatment	0	0	15	0	0	0
%D Land treatment	100	100	75	78	82	100
<b>Soil Treatment (acres)</b>						
Area "A"	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
Area "C"	0.00	0.00	0.08	0.00	0.00	0.00
Area "D"	0.06	0.28	0.40	0.26	0.41	0.06
<b>D Excess Runoff (acre-feet)</b>						
100yr. 6hr.	0.0101	0.0503	0.0821	0.0506	0.0791	0.01
10yr. 6hr.	0.0064	0.0318	0.0496	0.0307	0.0484	0.01
2yr. 6hr.	0.0038	0.0187	0.0276	0.0172	0.0274	0.00
100yr. 24hr.	0.0121	0.0598	0.0955	0.0592	0.0930	0.01
<b>Peak Discharge (cfs)</b>						
100 yr.	0.27	1.34	2.26	1.39	2.16	0.28
10yr.	0.18	0.89	1.45	0.88	1.39	0.19
2yr.	0.11	0.53	0.80	0.49	0.78	0.11
First Flush Ponding Volume (cf)	91.7	454.7	641.9	414.2	662.1	95.6
First Flush Acre Feet	0.0021	0.0104	0.0147	0.0095	0.0152	0.0022

**VI. DRAINAGE MANAGEMENT PLAN**

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

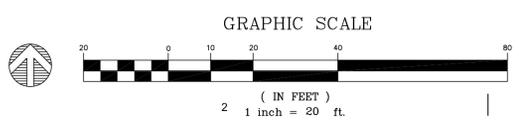
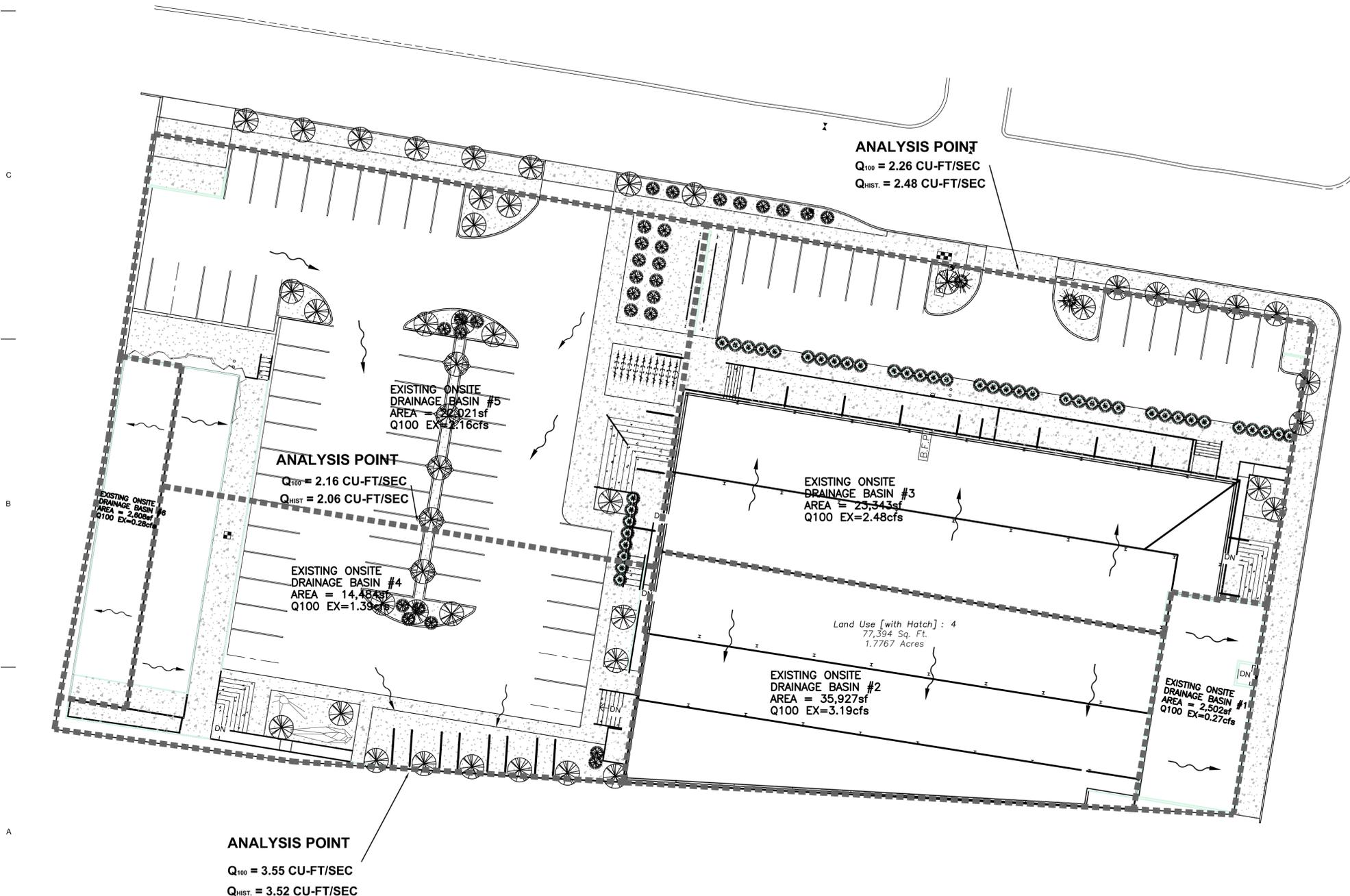
Proposed Sub-basins Pro #1, #2, #3 and #6 will be the locations of the two existing buildings to remain on the property. These are the existing largest and second largest buildings occupying the SE and SW corners, respectively. Both buildings sit on top of 3-4 feet of concrete base, eliminating any concern 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 respective 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.

**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.



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

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Date: 06/29/2017  
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SHEET TITLE  
**A CONCEPTUAL DRAINAGE PLAN PROPOSED CONDITIONS**

SHEET NUMBER

**CD2**