

DS #

4518

DS INDEX:

APN:

139-34-201-023

PROJECT:

500 SOUTH MAIN STREET PARKING GARAGE

SUBMITTAL

2ND





CITY OF LAS VEGAS		DATE:
INTER-OFFICE MEMORANDUM		March 16, 2011
TO: Land Development Services Department of Public Works		FROM: Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
SUBJECT:	Drainage Study for:	COPIES TO:
	500 South Main Street Parking Garage	Kimley-Horn and Associates
Cross Streets:	SWC of Main Street & Clark Avenue	City of Las Vegas
File Number:	F:\Depot\DSMemos\DS4518B.doc	Bart Anderson, P.E., DevCo
Parcel Number:	139-34-201-023	
Zoning Action:	SDR-40772	
FEMA Flood Zone	YES NO X	
Proposed Storm Drain	YES X NO	

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Transaction #
1 st Submittal	2/3/2011	2/17/2011	Not Approved	\$400.00	162015: \$400
2 nd Submittal	3/2/2011	3/15/2011	See Comments Below	\$400.00	163736: \$400
			TOTAL FEES (LDDRS):	\$800.00	----

REMARKS:

The Drainage Study for the subject project has been reviewed and:

	is approved subject to conformance to all City standards and the following conditions:
X	must be resubmitted or supplemented including the following:
	is conditionally approved subject to Clark County Regional Flood Control District concurrence.
	is conditionally approved subject to Clark County Public Works Department concurrence.

- Second request:** Provide a copy of the zoning/planning conditions associated with this site (**SDR-40772**) with the next submittal to verify compliance with conditions. *Flood Control* will not issue conditional approval of the drainage study without the associated zoning/planning conditions (issued by the *City Council*). Any associated conditions of approval that revise the site drainage parameters will require that the drainage study be revised and resubmitted.
- Label an existing 18"-storm drain system in *Main Street* with *City of Las Vegas* recorded drawing number on the grading plan.
- Show the two proposed Jensen precast boxes on the grading plan and the plan & profile sheet accordingly.
- According to City of Las Vegas architectural staff, the proposed planters along the project perimeters shall be at a raised level instead of flush with the sidewalk as shown on the plans. With a raised planter, the drainage of the sidewalks needs to be modified. Review and revise accordingly.
- Revise the call-out of Type C-D modified drop inlet with the length in the multiples of 2.5'.
- Dimension the distance between the garage wall and the property walls in all detail sections.

NOTE: Please be advised that all land surface area disturbances over 1 acre or any area adjacent to a water way must submit to the *Nevada Division of Environmental Protection* a "Notice of Intent" to discharge that certifies a stormwater pollution prevention plan has been developed and is maintained on site; for inclusion in the Stormwater General Permit No. NVR100000. A phased construction unit in a contiguous subdivision is considered under construction until all stripped or disturbed surface areas have been covered by paving, building construction or planting. For more information, including forms and applications see <http://ndep.nv.gov/bwpc/storm01.htm> or call (775) 687-9429.

END OF REMARKS

ays

T/R/S: T20S/R61E/34

AREA M-34

■
**Addendum #1 to the
Drainage Technical
Memorandum**

Rec'd: 3/2/11

DS 4518

M-34

\$400

**500 South Main Street
Parking Garage**

Prepared for:
City of Las Vegas

Prepared by:
Kimley-Horn and Associates, Inc.
2080 East Flamingo Road
Suite 210
Las Vegas, NV 89119-5178

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March 2011
KHA Project #092708000



**Kimley-Horn
and Associates, Inc.**

HYDROLOGIC CRITERIA AND DRAINAGE MANUAL
DRAINAGE STUDY INFORMATION FORM

Name of Development: 500 South Main Street Parking Garage Date: 3/1/2011

Location of Development: a) Descriptive (Cross Streets) North/South: Main Street
East/West: Clark Avenue

b) Section: 34 Township: 20S Range: 61E

c) APN : 139-34-201-023

Name of Owner: City of Las Vegas

Telephone No.: _____ Fax No.: _____ E-Mail Address: _____

Address: _____

Contact Person-Name: Laurie Marin Telephone No.: 702-862-3663

* E-Mail Address: laurie.marin@kimley-horn.com Fax No.: 702-735-4949

Firm: Kimley-Horn and Associates, Inc.

Address: 2080 E. Flamingo Rd., Suite 210, Las Vegas NV 89119

Type of Land Development/Land Disturbance Process:

☐	Rezoning	☐	Subdivision Map	☐	Clearing and Grading Only
☐	Parcel Map	☐	Planned Unit Development	☐	Other (Please specify below)
☐	Large Parcel Map	☒	Building Permit		

1. Total Owned Land Area: At Site: 1.9 ac Being Developed/Disturbed: 1.9 ac

2. Is a portion or all of the subject property located in a designated FEMA Flood Hazard Area? ☐ Yes** ☒ No

3. Is the property bordered or crossed by an existing or proposed Clark County Regional Flood Control District Master Planned Facility? ☐ Yes** ☒ No

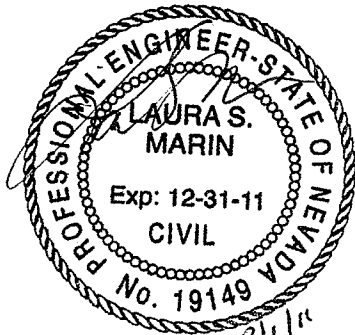
4. Proposed type of development (Residential, Commercial, Etc.): Parking garage, retail

5. Approximate upstream land area which drains to the subject site: 0 ac

6. Has the site drainage been evaluated in the past? ☐ YES ☒ NO If yes, please identify documentation: _____

7. If known, please briefly identify the proposed discharge point(s) of runoff from the site: _____
Site currently drains southeast onto Main Street. This will not change with proposed development.

8. Briefly describe your proposed schedule for the subject project: Grading to start in March, with construction to begin in April.



Engineer's Seal

Submit this form as part of the required drainage study to the local entity which has jurisdiction over the subject property. This form may provide sufficient information to serve as the Conceptual Drainage Study.

*New Required Field

**Review and concurrence of the Clark County Regional Flood Control District is required.

	Revision	Date
	TDS	2/3/2011

Local Entity File No. _____

REFERENCE:

STANDARD FORM 1



Kimley-Horn
and Associates, Inc.

Addendum #1 to the Drainage Technical Memorandum

500 South Main Street Parking Garage

Prepared for:
City of Las Vegas

Prepared by:
Kimley-Horn and Associates, Inc.
2080 East Flamingo Road
Suite 210
Las Vegas, NV 89119-5178

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March 2011
KHA Project #092708000

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



This report is intended to serve as the Addendum #1 to the Technical Drainage Study for the 500 South Main Street Parking Garage. The revisions in this addendum are intended to supersede the data contained in the Technical Drainage Study dated February 3, 2011.

The comments in a City of Las Vegas Inter-Office Memorandum dated February 17, 2011 (included as **Attachment A**) and the responses are included below. The responses are provided in italics.

City of Las Vegas Comments

- 1) Provide a copy of the zoning/planning conditions associated with this site (**SDR-40772**) with the next submittal to verify compliance with conditions. *Flood Control* will not issue conditional approval of the drainage study without the associated zoning/planning conditions (issued by the *City Council*). Any associated conditions of approval that revise the site drainage parameters will require that the drainage study be revised and resubmitted.

The new site review SDR -40772 is still processing through the City. It has not been heard by the Commissioners yet. Attachment B is a copy of the original site plan review for the new City Hall Parking Garage SDR-35417.

- 2) **Existing and Proposed Conditions Drainage Maps:** Provide hydrologic and hydraulic summary table on each of the maps.

Maps with the requested tables are included as Attachment C.

- 3) Identify an existing storm drain system in Main Street on the grading plan. Label the type and size information of any storm drain inlets, manholes and laterals.

The grading plan has been revised to identify the existing storm drain and inlet, see Attachment D.

- 4) Show the proposed storm drain system with drop inlets, manholes and laterals identified clearly with construction notes on the grading plan.

Construction notes have been added to the grading plan to indicate the limits of construction for the 18-inch RCP storm drain section and the location of the proposed Type C-D Modified Drop Inlet. See Attachment D.

- 5) Type 3 riser inlet is not allowed in the *City of Las Vegas*. Use *Uniform Standard Drawings (Clark County Area)* Type C-D Modified Drop Inlet. Review and revise all pertinent plans accordingly.

The grading plan, profile, and all applicable notes and callouts have been revised to reflect the installation of a Type C-D Modified Drop Inlet. See Attachment D.

- 6) Along the north boundary of the development, it is not clear how a proposed concrete flume discharges at the east end. Address and resolve in the next submittal.

A standard sidewalk under drain has been added to discharge flow. The grading plan has been revised to reflect this design. See Attachment D.



- 7) The grading plan shows that the section of Main Street has plus or minus 3% cross slope. Provide survey data to verify as such.

Survey hard shots have been added to the grading plan. See Attachment D.

- 8) On all cross section details, show the structural section of the concrete section and the concrete flume. Dimension the width of all drainage facilities.

The concrete gutter has been removed. Drainage will follow the edge of the landscape planter until it outlets into the sidewalk under drain. See Attachment D.

- 9) On the profile sheet, provide detail how to connect the new concrete pipe to the existing CMP drain at the two ends.

A 24"x24" precast covered drop inlet will be used to connect the new pipe to the existing pipe. This design has been updated in the profile, and details have been added to the grading plan. See Attachment D.

List of Attachments

- Attachment A City of Las Vegas Inter-Office Memorandum
- Attachment B City Hall Parking Garage SDR-35417, Site Development Plan Review
- Attachment C Existing and Proposed Conditions Drainage Maps
- Attachment D Grading Plan and Detail Sheet



**Kimley-Horn
and Associates, Inc.**

500 South Main Street Garage
Addendum #1 to the Drainage Technical Memorandum

***Attachment A
City of Las Vegas Inter-Office
Memorandum***

CITY OF LAS VEGAS		DATE:
INTER-OFFICE MEMORANDUM		February 17, 2011
TO: Land Development Services Department of Public Works		FROM: Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
SUBJECT: Drainage Study for: 500 South Main Street Parking Garage		COPIES TO: Kimley-Horn and Associates
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2. **Existing and Proposed Conditions Drainage Maps:** Provide hydrologic and hydraulic summary table on each of the maps.
3. Identify an existing storm drain system in Main Street on the grading plan. Label the type and size information of any storm drain inlets, manholes and laterals.
4. Show the proposed storm drain system with drop inlets, manholes and laterals identified clearly with construction notes on the grading plan.
5. Type 3 riser inlet is not allowed in the *City of Las Vegas*. Use *Uniform Standard Drawings (Clark County Area)* Type C-D Modified Drop Inlet. Review and revise all pertinent plans accordingly.
6. Along the north boundary of the development, it is not clear how a proposed concrete flume discharges at the east end. Address and resolve in the next submittal.

7. The grading plan shows that the section of Main Street has plus or minus 3% cross slope. Provide survey data to verify as such.
8. On all cross section details, show the structural section of the concrete section and the concrete flume. Dimension the width of all drainage facilities.
9. On the profile sheet, provide detail how to connect the new concrete pipe to the existing CMP drain at the two ends.

NOTE: Please be advised that all land surface area disturbances over 1 acre or any area adjacent to a water way must submit to the *Nevada Division of Environmental Protection* a "Notice of Intent" to discharge that certifies a stormwater pollution prevention plan has been developed and is maintained on site; for inclusion in the Stormwater General Permit No. NVR100000. A phased construction unit in a contiguous subdivision is considered under construction until all stripped or disturbed surface areas have been covered by paving, building construction or planting. For more information, including forms and applications see <http://ndep.nv.gov/bwpc/storm01.htm> or call (775) 687-9429.

END OF REMARKS
ays

T/R/S: T20S/R61E/34
AREA M-34

Post-It® Fax Note	7671	Date	2/17/11	# of pages	2
To	Laura Marin	From	Albert Sung		
Co./Dept.	Kimley Horn	Co.	CLV		
Phone #		Phone #	229-2001		
Fax #	735-4949	Fax #			



**Kimley-Horn
and Associates, Inc.**

500 South Main Street Garage
Addendum #1 to the Drainage Technical Memorandum

***Attachment B
City Hall Parking Garage SDR-35417
Site Development Review***



LAS VEGAS CITY COUNCIL

OSCAR B. GOODMAN
MAYOR

GARY REESE
MAYOR PRO TEM

STEVE WOLFSON

LOIS TARKANIAN

STEVEN D. ROSS

RICKI Y. BARLOW

STAVROS S. ANTHONY

ELIZABETH N. FRETWELL
CITY MANAGER



CITY OF LAS VEGAS
400 STEWART AVENUE
LAS VEGAS, NEVADA 89101

VOICE 702.229.6011
TTY 702.386.9108
www.lasvegasnevada.gov

October 12, 2009

Mr. Jacob L. Snow
Regional Transportation Com.
600 Grand Central Parkway, Ste 350
Las Vegas, Nevada 89106

RE: SDR-35417 - SITE DEVELOPMENT PLAN REVIEW
CITY COUNCIL MEETING OF OCTOBER 7, 2009
RELATED TO ZON-35382 AND ZON-35383

Dear Mr. Snow:

The City Council at a regular meeting held October 7, 2009, APPROVED the request for a Site Development Plan Review FOR A PROPOSED 310,000 SQUARE-FOOT PARKING GARAGE WITH 675 SPACES AND 4,430 SQUARE FEET OF RETAIL WITH A WAIVER OF THE DOWNTOWN CENTENNIAL PLAN DEVELOPMENT STANDARDS REGARDING NON-COMPATIBLE EXTERIOR WALLS on 1.95 acres at 400 and 500 South Main Street (APNs 139-34-201-009 and 019), M (INDUSTRIAL) Zone and C-M (COMMERCIAL/INDUSTRIAL) Zone [Proposed: C-2 (GENERAL COMMERCIAL) Zone]. The Notice of Final Action was filed with the Las Vegas City Clerk on October 8, 2009. This approval is subject to:

Planning and Development

1. This approval shall be void two years from the date of final approval, unless a building permit has been issued for the principal building on the site. An Extension of Time may be filed for consideration by the City of Las Vegas.
2. All development shall be in conformance with the site plan, landscape plan, and building elevations, date stamped 07/31/09, except as amended by conditions herein, with a minimum 3,500 square feet of retail.
3. A Waiver from the Downtown Centennial Plan Development Standards is hereby approved to allow the Parking Structure to contain no architectural compatibility with adjacent buildings where parking structures shall be designed as a part of the architectural form of the primary and/or surrounding buildings.
4. The applicant shall work with City staff to determine the most appropriate mapping action necessary to consolidate all existing parcels. The mapping action shall be completed and recorded prior to issuance of any building permits.

5. A technical landscape plan, signed and sealed by a Registered Architect, Landscape Architect, Residential Designer or Civil Engineer, must be submitted prior to or at the same time application is made for a building permit. A permanent underground sprinkler system is required, and shall be permanently maintained in a satisfactory manner; the landscape plan shall include irrigation specifications.
6. Pre-planting and post-planting landscape inspections are required to ensure the appropriate plant material, location, size of planters, and landscape plans are being utilized. The Planning and Development Department must be contacted to schedule an inspection prior to the start of the landscape installation and after the landscape installation is completed. A certificate of occupancy will not be issued or the final inspection will not be approved until the landscape inspections have been completed.
7. Revised elevations shall be submitted and approved through a Minor Site Development Plan Review.
8. Reflective glazing at the pedestrian level is prohibited. Glazing above the pedestrian level shall be limited to a maximum reflectance rating of 22% (as defined by the National Institute of Standards and Technology).
9. All mechanical equipment, air conditioners and trash areas shall be fully screened in views from the abutting streets.
10. All utility boxes exceeding 27 cubic feet in size shall meet the standards of LVMC Title 19.12.040.
11. Parking lot lighting standards shall be no more than 30 feet in height and shall utilize downward-directed lights with full cut-off luminaires. Lighting on the exterior of buildings shall be shielded and shall be downward-directed. Non-residential property lighting shall be directed away from residential property or screened, and shall not create fugitive lighting on adjacent properties.
12. A fully operational fire protection system, including fire apparatus roads, fire hydrants and water supply, shall be installed and shall be functioning prior to construction of any combustible structures.
13. A Comprehensive Construction Staging Plan shall be submitted to the Planning and Development Department for review and approval prior to the issuance of any building permits. The Construction Staging Plan shall include the following information: Design and location of construction trailer(s); design and location of construction fencing; all proposed temporary construction signage; location of materials staging area; and the location and design of parking for all construction workers.

Mr. Jacob L. Snow
SDR-35417 – Page Three
October 12, 2009

14. Prior to the submittal of a building permit application, the applicant shall meet with Planning and Development Department staff to develop a comprehensive address plan for the subject site. A copy of the approved address plan shall be submitted with any future building permit applications related to the site.
15. All City Code requirements and design standards of all City Departments must be satisfied, except as modified herein.

Public Works

16. Submit a Reversionary Map for this site or coordinate with the City Surveyor to determine an acceptable mapping method; comply with the recommendations of the City Surveyor.
17. Dedicate an additional 5 feet of right-of-way for a total half-street width of 45 feet on Main Street adjacent to Assessor Parcel Number #139-34-201-009 and dedicate a taper in accordance with standard drawing #201.1 to connect the existing right turn lane to the proposed dedication prior to the issuance of any permits.
18. Construct all incomplete half-street improvements on Main Street to meet Downtown Centennial standards adjacent to this site concurrent with development of this site.
19. Remove all substandard public street improvements and unused driveway cuts on Main Street adjacent to this site concurrent with development, if any, and replace with new improvements meeting current City Standards.
20. Extend public sewer in Main Street to the north edge of this site concurrent with development of this site, unless otherwise allowed by the City Engineer. Contact the Collection System Planning section of the Department of Public Works to discuss sewer lateral relocation requirements.
21. Meet with the Fire Protection Engineering Section of the Department of Fire Services to discuss fire requirements for the proposed use of this facility.
22. Landscape and maintain all unimproved right-of-way, if any, on Main Street adjacent to this site. All private improvements and landscaping installed with this project shall be situated and maintained so as to not create sight visibility obstructions for vehicular traffic at all development access drives and abutting street intersections.
23. Meet with the Flood Control Section of the Department of Public Works for assistance with establishing finished floor elevations and drainage paths for this site prior to submittal of construction plans or the issuance of any building or grading permits, whichever may occur first. Provide and improve all drainage ways as recommended.

Mr. Jacob L. Snow
SDR-35417 – Page Four
October 12, 2009

24. Site development to comply with all applicable conditions of approval for Zoning Reclassification ZON-35282, ZON-35283 and all other applicable site-related actions.

Sincerely,



Gabriela Portillo-Brenner
Deputy City Clerk II for
Beverly K. Bridges, MMC, City Clerk

cc: Mr. Michael Vlaovich
City of Las Vegas
400 Stewart Avenue
Las Vegas, Nevada 89101



Kimley-Horn
and Associates, Inc.

500 South Main Street Garage
Addendum #1 to the Drainage Technical Memorandum

***Attachment C
Existing and Proposed Conditions
Drainage Maps***



**** Duplicate Receipt ****

City of Las Vegas
Development Services Center
731 South Fourth Street
Las Vegas, NV 89101

03/02/2011 14:05 Trn 163736
Cashier 970040

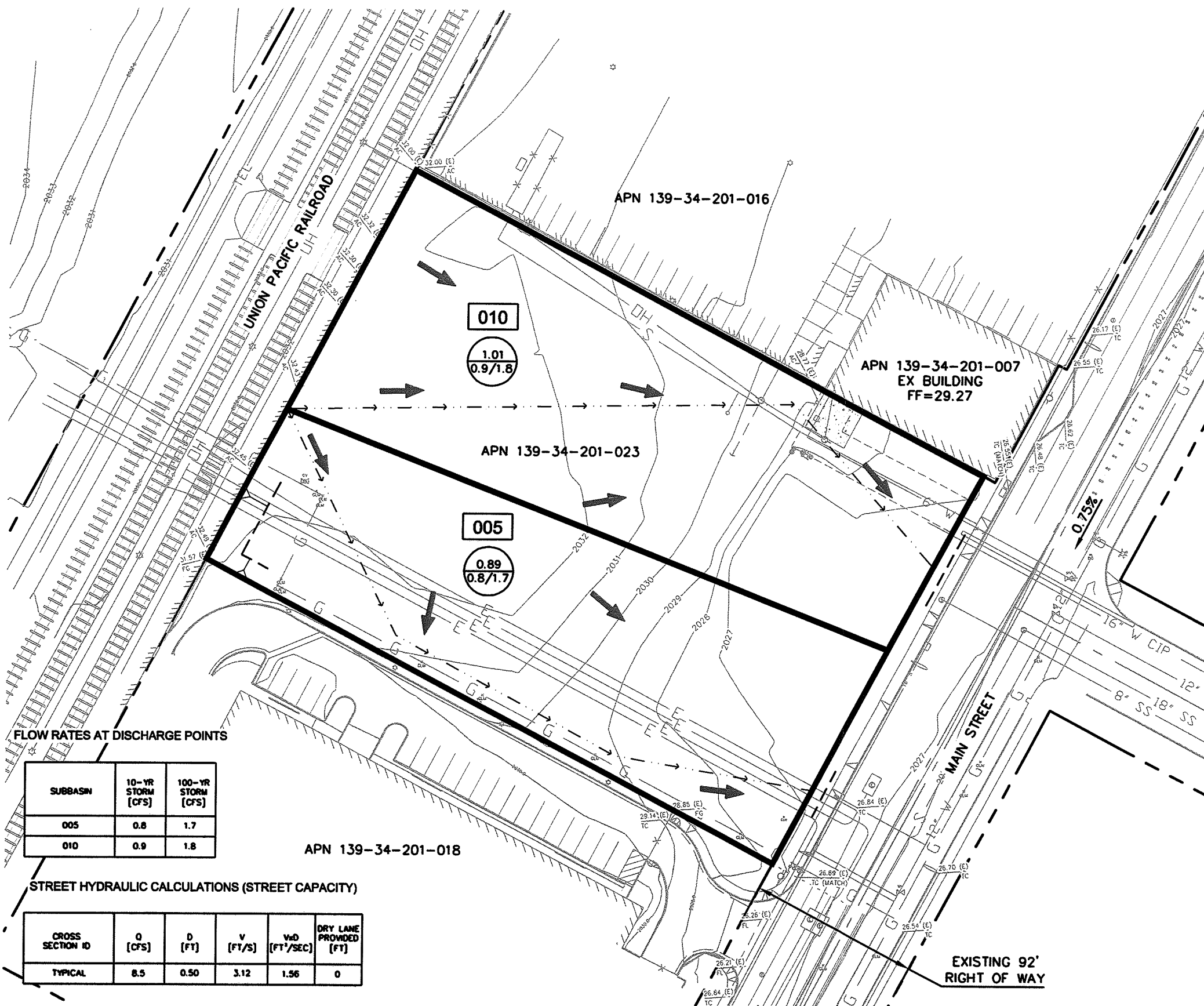
PRJ Permit # DS4518	\$400.00
Subtotal	\$400.00
Tax	\$0.00
Total	\$400.00

Received CREDIT	\$400.00
Change	\$0.00

For questions related to this receipt call
702-229-6251

Attachment D
Grading Plan and Detail Sheet

K:\AVI\City\002700\Working\Drawings\Technical\Drainage\Study\Drawings\Drainage\Exhibits_Med.dwg Mar 01, 2011 mlania, lfe
XREFS: 002700B01 002700B02 002700B03 002700B04 002700B05 002700B06 002700B07 002700B08 002700B09 002700B10 002700B11 002700B12 002700B13 002700B14 002700B15 002700B16 002700B17 002700B18 002700B19 002700B20 002700B21 002700B22 002700B23 002700B24 002700B25 002700B26 002700B27 002700B28 002700B29 002700B30 002700B31 002700B32 002700B33 002700B34 002700B35 002700B36 002700B37 002700B38 002700B39 002700B40 002700B41 002700B42 002700B43 002700B44 002700B45 002700B46 002700B47 002700B48 002700B49 002700B50 002700B51 002700B52 002700B53 002700B54 002700B55 002700B56 002700B57 002700B58 002700B59 002700B60 002700B61 002700B62 002700B63 002700B64 002700B65 002700B66 002700B67 002700B68 002700B69 002700B70 002700B71 002700B72 002700B73 002700B74 002700B75 002700B76 002700B77 002700B78 002700B79 002700B80 002700B81 002700B82 002700B83 002700B84 002700B85 002700B86 002700B87 002700B88 002700B89 002700B90 002700B91 002700B92 002700B93 002700B94 002700B95 002700B96 002700B97 002700B98 002700B99 002700B00 002700B01 002700B02 002700B03 002700B04 002700B05 002700B06 002700B07 002700B08 002700B09 002700B10 002700B11 002700B12 002700B13 002700B14 002700B15 002700B16 002700B17 002700B18 002700B19 002700B20 002700B21 002700B22 002700B23 002700B24 002700B25 002700B26 002700B27 002700B28 002700B29 002700B30 002700B31 002700B32 002700B33 002700B34 002700B35 002700B36 002700B37 002700B38 002700B39 002700B40 002700B41 002700B42 002700B43 002700B44 002700B45 002700B46 002700B47 002700B48 002700B49 002700B50 002700B51 002700B52 002700B53 002700B54 002700B55 002700B56 002700B57 002700B58 002700B59 002700B60 002700B61 002700B62 002700B63 002700B64 002700B65 002700B66 002700B67 002700B68 002700B69 002700B70 002700B71 002700B72 002700B73 002700B74 002700B75 002700B76 002700B77 002700B78 002700B79 002700B80 002700B81 002700B82 002700B83 002700B84 002700B85 002700B86 002700B87 002700B88 002700B89 002700B90 002700B91 002700B92 002700B93 002700B94 002700B95 002700B96 002700B97 002700B98 002700B99 002700B00

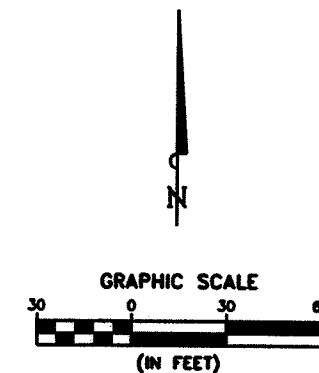


FLOW RATES AT DISCHARGE POINTS

SUBBASIN	10-YR STORM [CFS]	100-YR STORM [CFS]
005	0.8	1.7
010	0.9	1.8

STREET HYDRAULIC CALCULATIONS (STREET CAPACITY)

CROSS SECTION ID	Q [CFS]	D [FT]	V [FT/S]	VxQ [FT ³ /SEC]	DRY LANE PROVIDED [FT]
TYPICAL	8.5	0.50	3.12	1.56	0



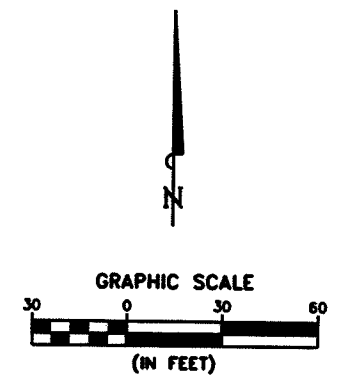
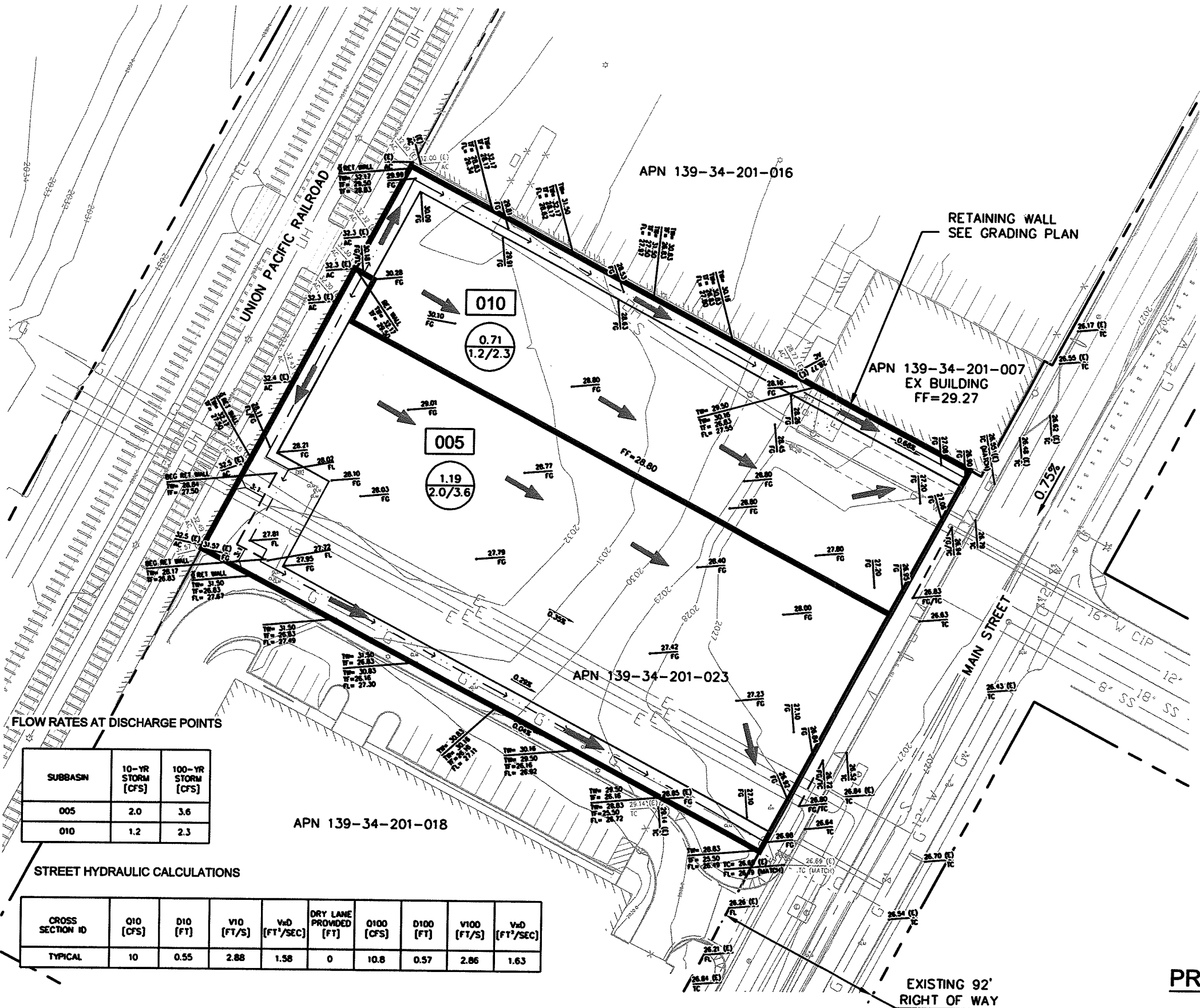
LEGEND

- SUBBASIN BOUNDARY
- SUBBASIN FLOW PATH
- DIRECTION OF RUNOFF
- 005 SUBBASIN NAME
- SUBBASIN AREA [ACRES]
- SUBBASIN RUNOFF [CFS] FOR 10-YR & 100-YR STORM

BENCHMARK

CITY OF LAS VEGAS BENCHMARK No. 8LV01 34W4
A RIVET AND PLATE IN THE BASE OF A STREET LIGHT AT THE NORTHEAST CORNER OF MAIN AND BONNEVILLE.
ELEVATION = 617.801 METERS (NAVD 88)
ELEVATION = 2026.90 US SURVEY FEET (NAVD 88)

EXISTING CONDITIONS DRAINAGE MAP



LEGEND

- | | |
|---|--|
|  | PROPOSED BUILDING
OUTLINE |
|  | SUBBASIN BOUNDARY |
|  | SUBBASIN FLOW PATH |
|  | DIRECTION OF RUNOFF |
|  | SUBBASIN NAME |
|  | SUBBASIN AREA [ACRES]
SUBBASIN RUNOFF [CFS] FOR
10-YR & 100-YR STORM |

BENCHMARK

CITY OF LAS VEGAS BENCHMARK No. 8LV01 34W4

A RIVET AND PLATE IN THE BASE OF A STREET LIGHT AT THE
NORTHEAST CORNER OF MAIN AND BONNEVILLE.

ELEVATION = 617.801 METERS (NAVD 88)

ELEVATION = 2026.90 US SURVEY FEET (NAVD 88)

PROPOSED CONDITIONS DRAINAGE MAP