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May 25, 2021

Town of Parker, CO – Stormwater Utility
20120 E. Main Street
Parker, CO 80138

Re: Quick N Clean Car Wash (Parker Road & Pine Lane Avenue) – Drainage Letter

To Whom It May Concern,

Along with the construction documents for the referenced project, please accept this written statement regarding stormwater requirements for the proposed development. The proposed development consists of a proposed Quick N Clean Car Wash, paving, parking, utilities, and landscaping within an overall development. Drainage calculations were performed using the Town of Parker Storm Drainage and Environmental Criteria Manual.

Per the findings in the Final Drainage Report for Parker Auto Plaza Filing No. 1 Lot 1, Block 3 Parker & Pine Retail prepared by Kimley Horn & Associates Inc. dated November 2019 (Kimley Horn Report) stormwater detention mitigation and water quality was evaluated and provided within the overall development. Per section 8.3.2.3.b Regional Facilities of the Storm Drainage and Environmental Criteria Manual the development will not discharge runoff to state waters and regional detention is provided for the overall development. Therefore, no permanent BMPs would be required for this development. The Quick N Clean development is part of Sub-basin 8.0 per the Kimley Horn Report. This basin consists of 1.94 acres with a design impervious percentage of 85%. Allowable runoff rates for this basin are 6.13cfs and 12.90cfs for the 5yr and 100yr storm events respectively. The proposed development is approximately 66% impervious with proposed runoff rates of 4.60cfs and 12.49cfs for the 5yr and 100yr storm events respectively. The proposed development runoff is less than the allowable runoff for the subject basin.

Runoff Comparison Table		
<i>Runoff (cfs)</i>	5yr	100yr
<i>Proposed Runoff</i>	4.60	12.49
<i>Allowable Runoff</i>	6.19	12.90
<i>Net Change</i>	-1.59	-0.41

Improvements outlined in this drainage letter and depicted on the construction documents shall not increase the risk of endangerment to life or have negative impacts on adjacent or downstream property or watersheds.

Sincerely,



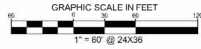
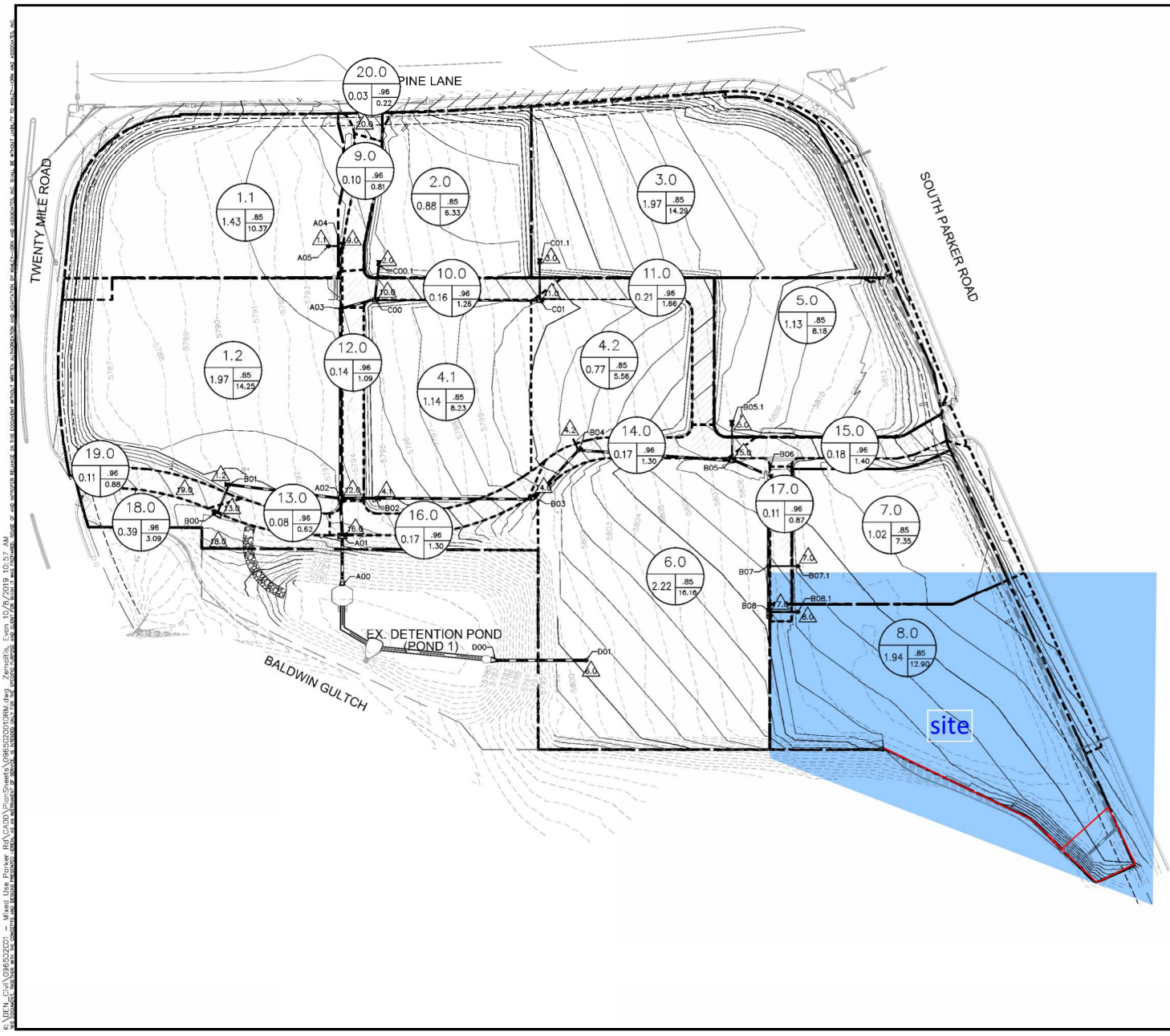
Andrew D'Olier, EIT
Assistant Project Manager



Tom Burry, PE
Department Manager - Engineer of Record

Attachments

- Overall Drainage Map
- Quick N Clean Post Drainage Map



LEGEND

- | | |
|--|--|
| | A = BASIN DESIGNATION
B = AREA (ACRES)
C = BASIN IMPERVIOUSNESS
D = 100YR DESIGN STORM RUNOFF (CFS) |
| | FLOW DIRECTION |
| | DRAINAGE BASIN BOUNDARY |
| | EXISTING PROPERTY LINE |
| | EXISTING CONTOUR |
| | PROPOSED CONTOUR |
| | EXISTING STORM SEWER |
| | PROPOSED STORM SEWER |
| | PROPOSED STORM INLET |

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NO.	REVISION	BY	DATE

Kimley»Horn
 9509 148th St, Irvine, CA 92618-3535, Inc.
 9509 Soles Rd, Suite 100, San Jose, CA 95120
 Parker - Document: 096502001.dwg, 2/28/2000

DESIGNED BY: DLS
 DRAWN BY: ECZ
 CHECKED BY: DLS
 DATE: 11/11/19

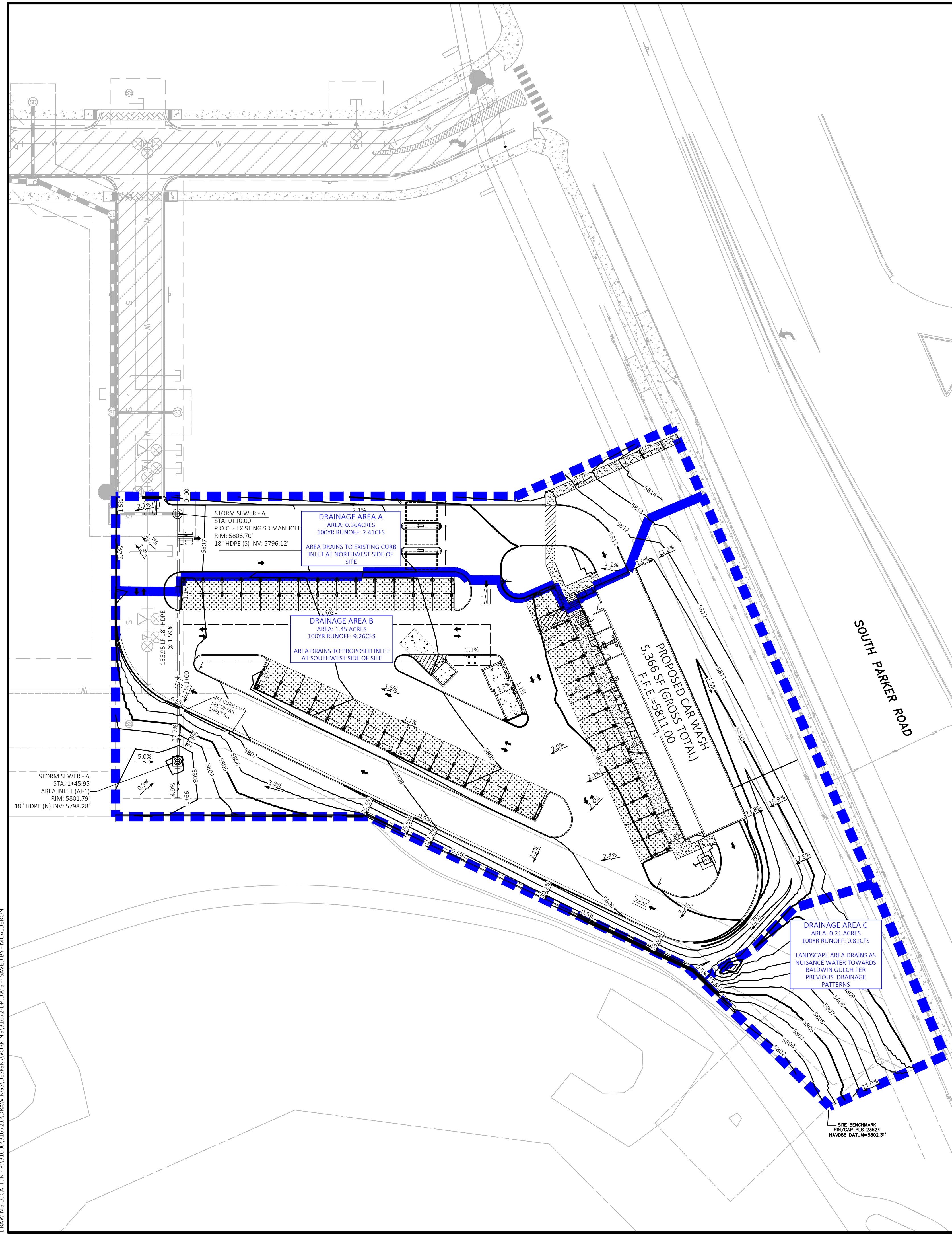
PARKER & PINE
 PARKER, CO
 CONSTRUCTION DOCUMENTS
PRELIMINARY DRAINAGE AREA MAP

PRELIMINARY
 FOR REVIEW ONLY
 NOT FOR
 CONSTRUCTION
Kimley»Horn
 Kimley-Horn and Associates, Inc.

PROJECT NO.
 096502001
 DRAWING NAME
 096502001DRM



DRAINAGE



POST DEVELOPMENT STORMWATER RUNOFF
Rational Method
Project: Quick N Clean
Address: Parker Rd. & Pine Lane Ave.
Parker, CO
Based Upon: City of Parker and UDFCD Drainage Manual

Time of Concentration

Min	Notes
Tc	Min. Tc for urbanized conditions

Subbasin A (Onsite and Offsite)

Total Area	0.36 acres	15,541 SF	Notes
Paved Area	0.24 acres	10,346 SF	Area drains to existing curb inlet at northwest side of site
Drive and Walks	0.02 acres	843 SF	
Lawns, Sandy Soil	0.10 acres	4,352 SF	
% Impervious (Composite)	72%		
Hydrologic Soil Group	B		
Runoff Coefficient (UDFCD NRCS Table)	Syr	100yr	
			0.76
One Hour Point Rainfall (in) (Table S.1 Town of Parker Manual)	Syr	100yr	
			2.6
Rainfall Intensity (in/hr) (Equation RA-S UDCEC)	Syr	100yr	
			8.82
Runoff (cfs)	Syr	100yr	
			2.41

Subbasin B (Onsite and Offsite)

Total Area	1.45 acres	63,020 SF	Notes
Paved Area	0.76 acres	33,093 SF	Area drains towards proposed inlet at southwest corner of site
Drive and Walks	0.03 acres	1,372 SF	
Roofs	0.12 acres	5,417 SF	
Lawns, Sandy Soil	0.53 acres	23,198 SF	
% Impervious (Composite)	63%		
Hydrologic Soil Group	B		
Runoff Coefficient (UDFCD NRCS Table)	Syr	100yr	
			0.72
One Hour Point Rainfall (in) (Table S.1 Town of Parker Manual)	Syr	100yr	
			2.6
Rainfall Intensity (in/hr) (Equation RA-S UDCEC)	Syr	100yr	
			8.82
Runoff (cfs)	Syr	100yr	
			9.26

Subbasin C (Onsite and Offsite)

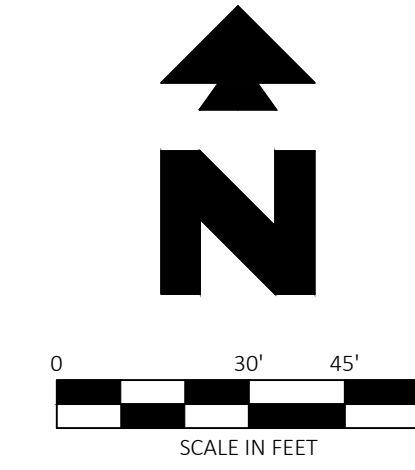
Total Area	0.21 acres	9,062 SF	Notes
Paved Area	0.00 acres	0 SF	Landscape area drains as nuisance flow towards Baldwin Gulch per drainage patterns.
Lawns, Sandy Soil	0.21 acres	9,062 SF	
% Impervious (Composite)	2%		
Hydrologic Soil Group	B		
Runoff Coefficient (UDFCD NRCS Table)	Syr	100yr	
			0.44
One Hour Point Rainfall (in) (Table S.1 Town of Parker Manual)	Syr	100yr	
			2.6
Rainfall Intensity (in/hr) (Equation RA-S UDCEC)	Syr	100yr	
			8.82
Runoff (cfs)	Syr	100yr	
			0.81

Total Runoff (CFS)

Total Area	2.01 acres	87,623 SF	
Paved Area	1.00 acres	43,379 SF	
Drive and Walks	0.05 acres	2,215 SF	
Roofs	0.12 acres	5,417 SF	
Lawns, Sandy Soil	0.96 acres	36,612 SF	
% Impervious (Composite)	66%		
Hydrologic Soil Group	B		
Runoff (cfs)	Syr	100yr	
			12.49



Know what's below.
Call before you dig.



EXISTING LEGEND:

- PROPERTY LINE/RIGHT OF WAY LINE
- ⊙ COMMUNICATIONS MANHOLE
- ⊙ SANITARY SEWER MANHOLE
- ⊙ STORM SEWER MANHOLE
- GAS --- UNDERGROUND GAS LINES
- COM --- UNDERGROUND COMMUNICATIONS LINES
- STM --- UNDERGROUND STORM SEWER LINES

PROPOSED LEGEND

- ▬ BASIN BOUNDARY
- - - - - STORM DRAIN

FLOOD ZONE INFORMATION

SUBJECT PROPERTY IS LOCATED WITHIN ZONE "X", AREAS OF MINIMAL FLOOD HAZARD, AS DETERMINED BY THE NATIONAL FLOOD INSURANCE PROGRAM.
MAP NUMBER: 08035C0067G
EFFECTIVE DATE: MARCH 16, 2016

BENCHMARK

SITE BENCHMARK
PIN/CAP PLS 23524
NAVD88 DATUM = 5802.31'

SITE BENCHMARK
INLET MANHOLE
NAVD88 DATUM = 5809.46'

PROPOSED DRAINAGE MAP AND BASIN ARE BASED ON BASIN NO. 8 IN PARKER AND PINE RETAIL DRAINAGE REPORT PREPARED BY KIMLEY HORN ENGINEERING NOVEMBER 2019

DETENTION IS PROVIDED FOR THE OVERALL DEVELOPMENT PER OVERALL DEVELOPER PLANS

THE RUNOFF FROM THE PROPOSED QUICK N CLEAN SITE IS LESS THAN OR EQUAL TO THE RUNOFF ALLOCATED TO BASIN NO. 8 IN THE PARKER AND PINE RETAIL DRAINAGE REPORT

BASIN ID	Runoff Summary		
	AREA Ac	Q ₅ CFS	Q ₁₀₀ CFS
1.1	1.43	4.93	10.37
1.2	1.97	6.77	14.25
2.0	0.88	3.00	6.33
3.0	1.97	6.80	14.29
4.1	1.14	3.91	8.23
4.2	0.77	2.65	5.56
5.0	1.13	3.89	8.18
6.0	2.22	7.62	16.06
7.0	1.02	3.48	7.35
8.0	1.94	6.13	12.90
9.0	0.10	0.42	0.81
10.0	0.16	0.65	1.26
11.0	0.21	0.86	1.66
12.0	0.14	0.57	1.09
13.0	0.08	0.32	0.62
14.0	0.17	0.67	1.30
15.0	0.18	0.72	1.40
16.0	0.17	0.67	1.30
17.0	0.11	0.45	0.87
18.0	0.39	1.59	3.09

BASIN NO. 8 RUNOFF VALUES PER PARKER AND PINE RETAIL DRAINAGE REPORT



CEI ENGINEERING ASSOCIATES, INC.
710 W. PINEDALE AVE.
FRESNO, CA 93711
PHONE: (559) 447-3119
FAX: (559) 447-3129

3K1
CLIENT
3K1 CONSULTING SERVICES, LLC.
11811 N. TATUM BOULEVARD,
PHOENIX, ARIZONA 85028
PHONE: (602) 850-8101



PLANS PREPARED FOR
QUICK N CLEAN
7291 E. ADOBE DRIVE, SUITE 115
SCOTTSDALE, AZ 85255
PHONE: (480) 707-3531

REVISION		
NO.	DESCRIPTION	DATE

QUICK N CLEAN
PARKER RD. & PINE LANE AVE.
PARKER, COLORADO
CONSTRUCTION DOCUMENTS

FOR REVIEW ONLY
NOT FOR
CONSTRUCTION

PROFESSIONAL OF RECORD	TB
PROJECT MANAGER	AD
DESIGNER	RM
CEI PROJECT NUMBER	31672
DATE	3/3/2021
REVISION	REV-1

DRAINAGE PLAN
SHEET TITLE
SHEET NUMBER

C6

THE TOWN OF PARKER REVIEW CONSTITUTES GENERAL COMPLIANCE WITH THE TOWN'S STANDARDS AND APPROVED VARIANCES, SUBJECT TO THESE PLANS BEING STAMPED, SIGNED, AND DATED BY THE PROFESSIONAL ENGINEER OF RECORD. REVIEW BY THE TOWN DOES NOT CONSTITUTE APPROVAL OF THE PLAN DESIGN OR ACCURACY AND CORRECTNESS OF ENGINEERING CALCULATIONS. ERRORS IN THE DESIGN OR CALCULATIONS REMAIN THE RESPONSIBILITY OF THE REGISTERED PROFESSIONAL ENGINEER WHOSE STAMP AND SIGNATURE ARE AFFIXED TO THIS DOCUMENT.

THIS REVIEW DOES NOT CONSTITUTE APPROVAL OF ANY PRIVATE ON-SITE IMPROVEMENTS WHICH MAY BE CONSTRUCTION CANNOT COMMENCE UNTIL ALL REQUIRED DRAINAGE/TRAFFIC REPORTS, FINAL DEVELOPMENT PLANS, SPECIAL REVIEWS, GRADING PERMIT, AND/OR OTHER PERMITS ARE COMPLETE, APPROVED AND ON FILE WITH THE TOWN OF PARKER.

TOWN OF PARKER, DIRECTOR OF ENGINEERING / PUBLIC WORKS DATE