

2017

NW Portland Parking Assessment and Permit Analysis Summary

Final Version
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Prepared for:
City of Portland
Bureau of Transportation
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Figure A: Project Study Area (Data Collected November 2017)

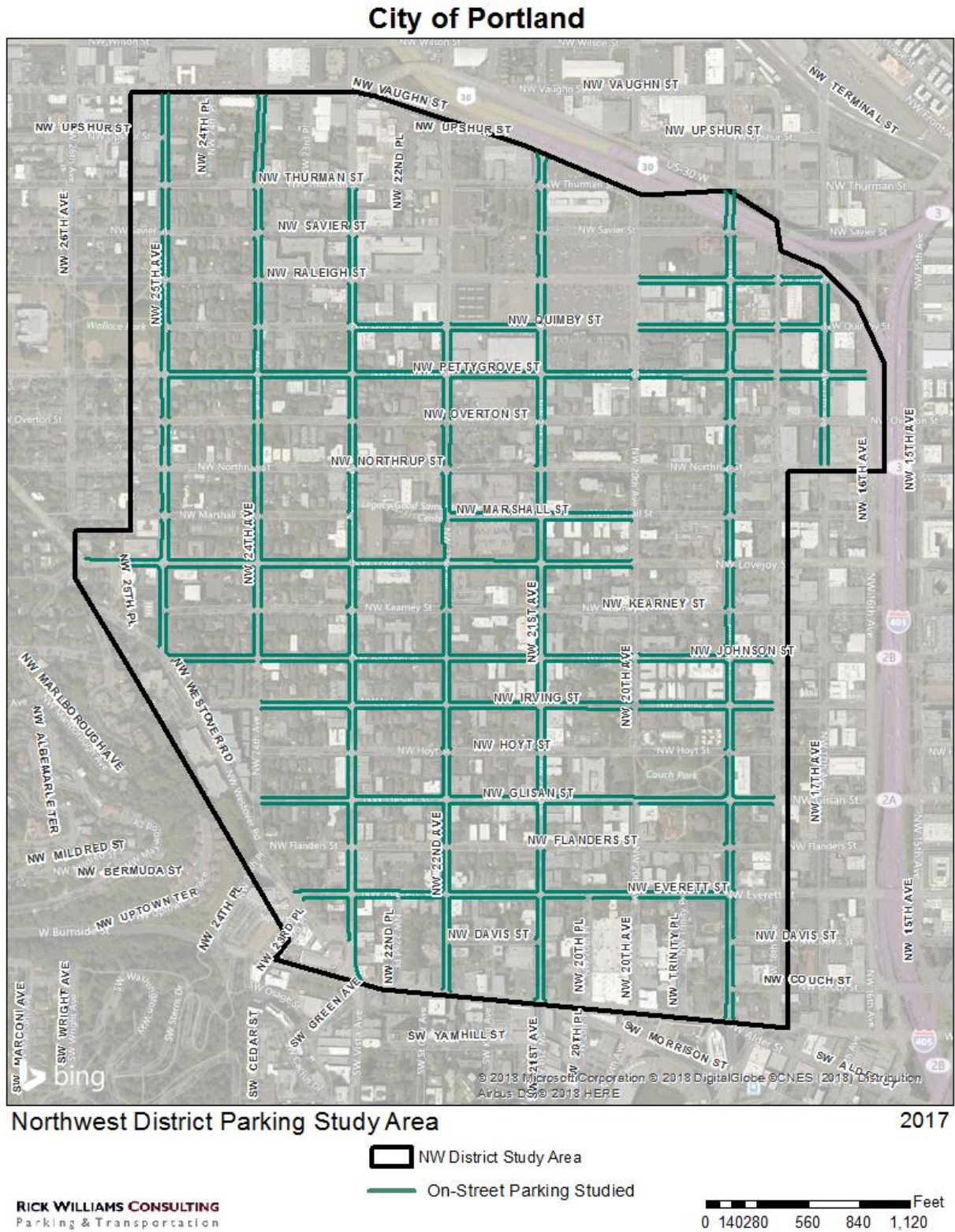


Table 1: Parking Inventory (Data Collected November 2017)

Use Type	All		Metered (All)		Signed (All)		Metered	Metered OBP	Signed	Signed OBP
	Stalls	% of Total	Stalls	% of Total	Stalls	% of Total	Stalls	Stalls	Stalls	Stalls
5 Minutes	5	< 1%	0	0%	5	< 1%	0	0	5	0
15 Minutes	18	< 1%	0	0%	18	< 1%	0	0	18	0
30 Minutes	83	3.0%	73	2.7%	10	< 1%	73	0	10	0
1 Hour	26	1.0%	0	0%	26	1.0%	0	0	26	0
2 Hours	144	5.3%	91	3.3%	53	1.9%	91	0	53	0
4 Hours	2,329	85.2%	1,720	62.9%	609	22.3%	363	1,357	0	609
ADA accessible (2 Hours)	1	< 1%	1	< 1%	0	0%	1	0	0	0
ADA accessible (4 Hours)	3	< 1%	2	< 1%	1	< 1%	0	2	0	0
No Limit ¹	12	< 1%	0	0%	0	0%	0	0	0	0
Construction	112	4.1%	0	0%	0	0%	0	0	0	0
On-Street Supply Studied	2,733	100%	1,887	69.0%	722	26.4%	528 (19.3%)	1,359 (49.8%)	112 (4.1%)	610 (22.3%)

¹ No Limit and Construction stalls are neither metered nor signed. Metered and signed stalls complete 95.5% of the on-street supply, leaving the rest to No Limit and Construction spaces (4.5%). Since the time of the study the No Limit stalls have been converted to stalls with parking controls.

Table 2: 2017 On-Street Parking Utilization

Use Type	Stalls	Peak Occupancy Peak Hour	Stalls Available	Average Length of Stay ²	Violation Rate ³
On-Street Supply	2,733	80.5% 11:00 AM – 12:00 PM	497	3h 12m	20.3%
5 Minutes (Signed)	5	N/A Under Construction	N/A	N/A	N/A
15 Minutes (Signed)	14	42.9% 6:00 – 7:00 PM	8	N/A	32.0%
30 Minutes (Signed)	10	100% 11:00 AM – 12:00 PM	0	N/A	50.0%
30 Minutes (Metered)	73	64.8% 6:00 – 7:00 PM	25	N/A	36.5%
1 Hour (Signed)	26	73.1% 1:00 – 2:00 PM 6:00 – 7:00 PM	7	2h 32m	48.4%
2 Hours (Signed)	53	92.5% 10:00 – 11:00 AM	4	3h 35m	56.5%
2 Hours (Metered)	91	83.5% 6:00 – 7:00 PM	15	1h 35m	9.6%
4 Hours (Signed – OBP)	609	87.8% 11:00 AM – 12:00 PM	74	4h 55m	35.5%
4 Hours (Metered)	375	73.0% 6:00 – 7:00 PM	96	2h 10m	6.7%
4 Hours (Metered – OBP)	1,389	84.2% 6:00 – 7:00 PM	215	3h 35m	17.1%
ADA accessible (2 Hour – Signed)	1	100% Multiple	0	1h 15m	0%
ADA accessible (4 Hour – Metered – OBP)	2	50.0% 4:00 – 7:00 PM	1	1h 30m	0%
ADA accessible (4 Hour – Signed – OBPS)	1	100% 9:00 AM – 7:00 PM	0	8h 0m	100%
No Limit (Enforcement Hours)	12	100% 2:00 – 5:00 PM	0	8h 32m	N/A

² Average length of stay filtered to show non-permit users only (excluding ADA accessible and No Limit stalls).

³ Violation rates are likely lower than reported due to the ability of users to 'plug the meter' (add additional time beyond the posted time restriction) – users can do this through the pay station or the Parking Kitty app.

Figure B: Secondary Peak Hour Study Area (Data Collected February 2018)

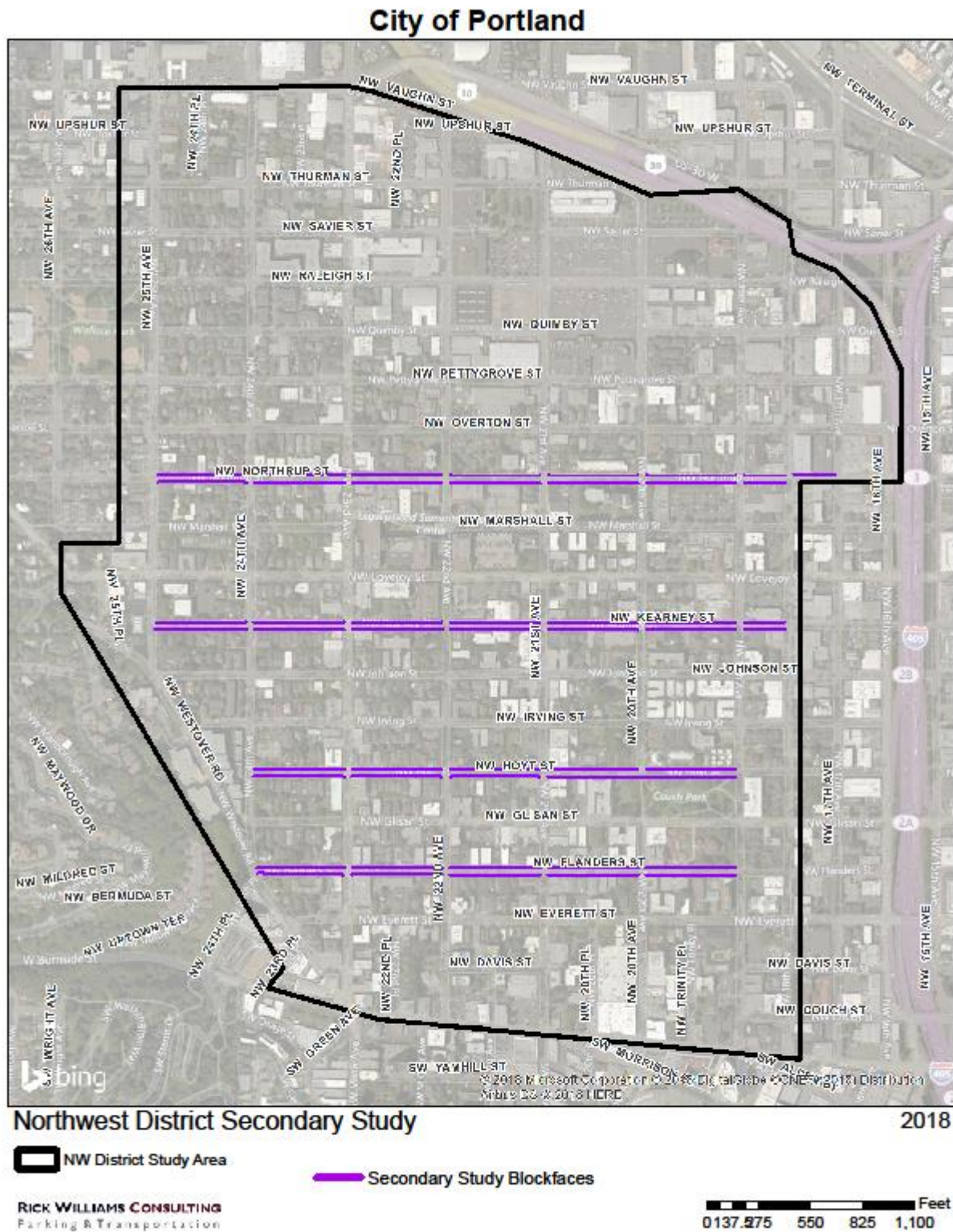


Table 3: Secondary Parking Inventory (Data Collected February 2018)

Use Type	All		Metered (All)		Signed (All)		Metered	Metered OBP	Signed	Signed OBP
	Stalls	% of Total	Stalls	% of Total	Stalls	% of Total	Stalls	Stalls	Stalls	Stalls
10 Minutes	3	< 1%	0	0%	3	< 1%	0	0	3	0
30 Minutes	29	3.4%	29	3.4%	0	0%	29	0	0	0
1 Hour	7	< 1%	0	0%	7	< 1%	0	0	7	0
2 Hours	16	1.9%	0	0%	16	1.9%	0	0	16	0
4 Hours	785	93.2%	623	74.0%	162	19.2%	58	565	0	162
ADA accessible (4 Hours)	1	< 1%	1	< 1%	0	0%	0	1	0	0
No Limit ⁴	1	< 1%	0	0%	0	0%	0	0	0	0
Construction	0	0%	0	0%	0	0%	0	0	0	0
On-Street Supply Studied	842	100%	653	77.6%	188	22.3%	87 (10.3%)	566 (67.2%)	26 (3.1%)	162 (19.2%)
Overnight On-Street Supply ⁵	856	100%								

⁴ No Limit and Construction stalls are neither metered nor signed. Metered and signed stalls complete 95.5% of the on-street supply, leaving the rest to No Limit and Construction spaces (4.5%). Since the time of the study the No Limit stalls have been converted to stalls with parking controls.

⁵ All stalls are No Limit after enforcement hours. Data was collected between 2:00 – 4:00 AM.

Table 4: Secondary On-Street Parking Utilization

Use Type	Stalls	Occupancy 11 AM – 12 PM	Stalls Available	Permits Displayed ⁶	% Occupied w/ Permits
Midday On-Street Supply	842	86.1%	113	513	73.4%
10 Minutes (Signed)	3	0%	3	N/A	N/A
30 Minutes (Metered)	29	40.7%	16	2	18.2%
1 Hour (Signed)	7	85.7%	1	0	0%
2 Hours (Signed)	16	87.5%	2	2	14.3%
4 Hours (Signed – OBP)	162	89.5%	17	83	57.2%
4 Hours (Metered)	58	78.0%	11	0	0%
4 Hours (Metered – OBP)	565	88.8%	61	421	87.0%
ADA accessible (4 Hour – Metered – OBP)	1	0%	1	N/A	N/A
No Limit	1	0%	1	N/A	N/A
<i>Overnight On-Street Supply</i>	<i>856</i>	<i>77.3%⁷</i>	<i>192</i>	<i>517</i>	<i>79.1%</i>

⁶ While Carshare and ADA accessible permits are the only valid permits displayed in non-or by permit stalls, all permits displayed were collected.

⁷ Parking occupancy at 2:00 – 4:00 AM

Figure C: Combined Study Area (Figure A & Figure B)

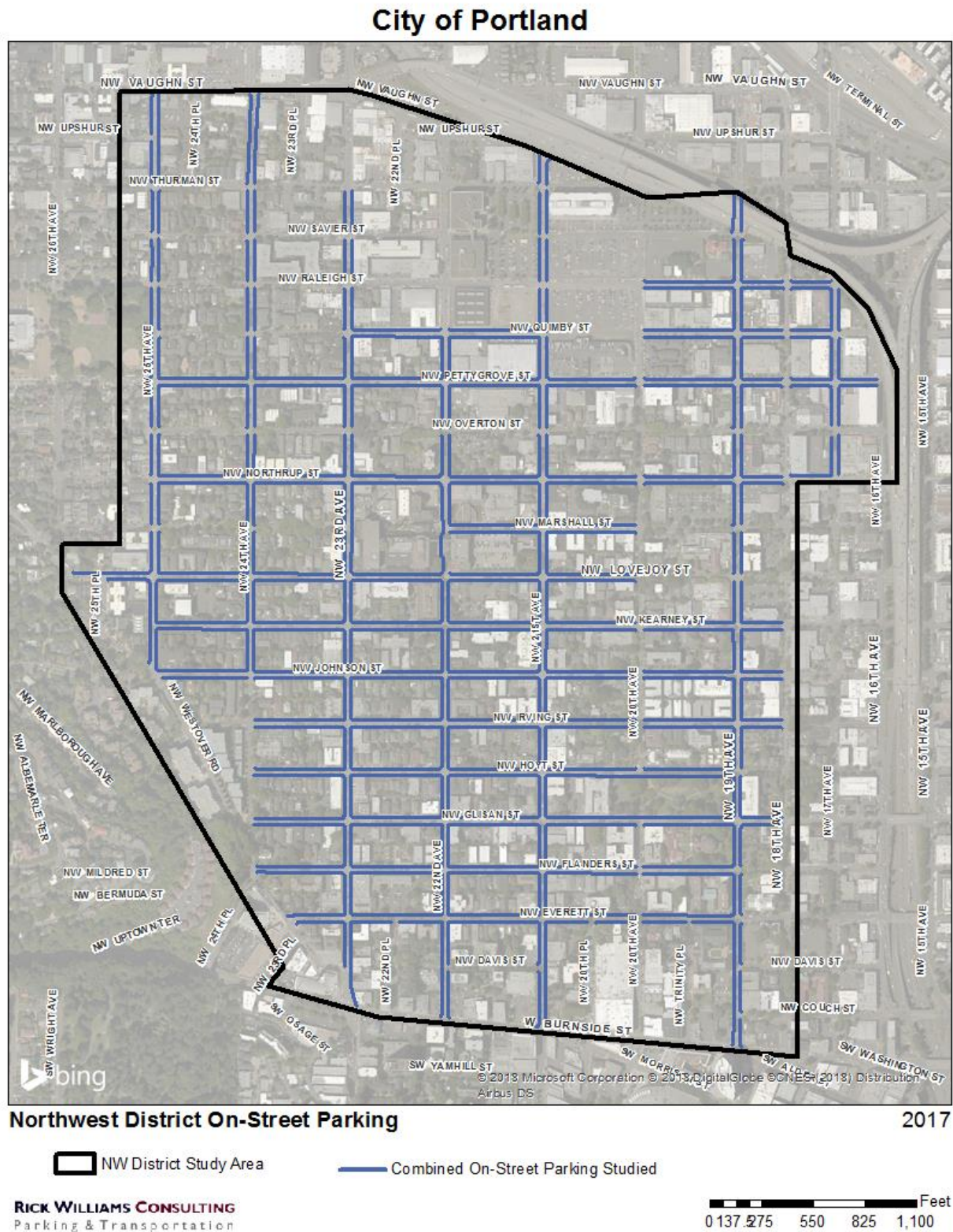


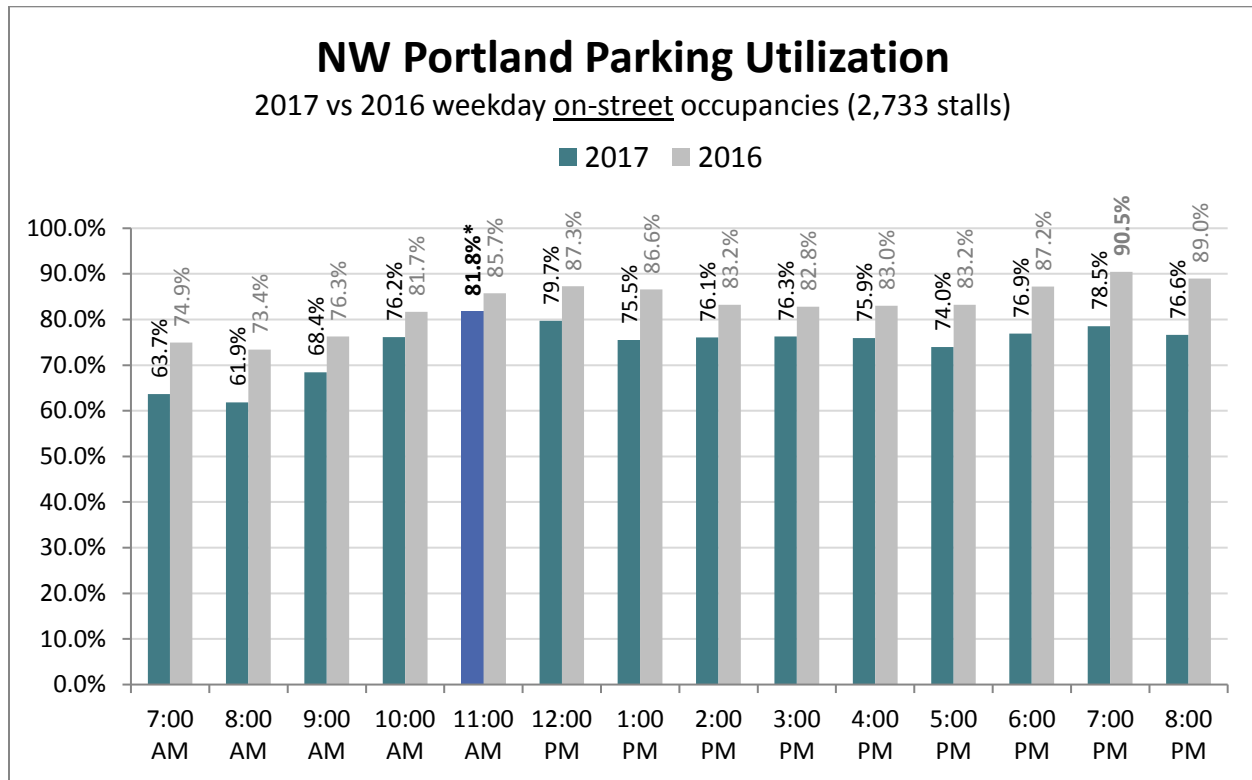
Table 5: Combined On-Street Parking Inventory (Figures A & B)

Use Type	All		Metered (All)		Signed (All)		Metered	Metered OBP	Signed	Signed OBP
	Stalls	% of Total	Stalls	% of Total	Stalls	% of Total	Stalls	Stalls	Stalls	Stalls
5 Minutes	5	< 1%	0	0%	5	< 1%	0	0	5	0
10 Minutes	3	< 1%	0	0%	3	< 1%	0	0	3	0
15 Minutes	18	< 1%	0	0%	18	< 1%	0	0	18	0
30 Minutes	112	3.1%	102	2.9%	10	< 1%	102	0	10	0
1 Hour	33	< 1%	0	0%	33	< 1%	0	0	33	0
2 Hours	160	4.5%	91	2.5%	69	1.9%	91	0	69	0
4 Hours	3,114	87.1%	2,343	65.5%	771	21.6%	421	1,922	0 ⁸	771
ADA accessible (2 Hours)	1	< 1%	1	< 1%	0	0%	1	0	0	0
ADA accessible (4 Hours)	4	< 1%	3	< 1%	1	< 1%	0	3	0	1
No Limit ⁹	13	< 1%	0	0%	0	0%	0	0	0	0
Construction	112	4.1%	0	0%	0	0%	0	0	0	0
On-Street Supply Studied	3,575	100%	2,540	71.1%	910	25.4%	615 (17.2%)	1,925 (53.8%)	138 (3.9%)	772 (21.6%)

⁸ 117 stalls added to Signed – Or by permit.

⁹ No Limit and Construction stalls are neither metered nor signed. Metered and signed stalls complete 95.5% of the on-street supply, leaving the rest to No Limit and Construction spaces (4.5%). Since the time of the study the No Limit stalls have been converted to stalls with parking controls.

Figure D: Combined Hourly On-Street Parking Utilization



* 3,575 stalls (includes 842 Secondary peak hour counts)

Table 6: Combined On-Street Parking Utilization

Use Type	Stalls	Peak Hour Occupancy 11 AM – 12 PM	Stalls Available	Permits Displayed	% Occupied with Permits
On-Street Supply	3,575	81.8%	610	1,404	51.1%
5 Minutes (Signed)	5	N/A Under Construction	N/A	N/A	N/A
10 Minutes (Signed)	3	0%	3	0	0%
15 Minutes (Signed)	18	27.8%	13	2	40.0%

Use Type	Stalls	Peak Hour Occupancy 11 AM – 12 PM	Stalls Available	Permits Displayed	% Occupied with Permits
30 Minutes (Signed)	10	100%	0	1	10.0%
30 Minutes (Metered)	102	45.4%	53	8	18.2%
1 Hour (Signed)	33	66.7%	11	4	18.2%
2 Hours (Signed)	69	84.1%	11	10	17.2%
2 Hours (Metered)	91	74.7%	23	6	8.8%
4 Hours (Signed – OBP)	771	88.2%	91	267	39.3%
4 Hours (Metered)	421	67.9%	123	0	0%
4 Hours (Metered – OBP)	1,922	85.0%	279	1,082	68.2%
ADA accessible (2 Hours – Metered)	1	100%	0	0	0%
ADA accessible (4 Hour – Metered – OBP)	3	0%	3	0	0%
ADA accessible (4 Hour – Signed – OBP)	1	100%	0	1	100%
No Limit	13	84.6%	2	1	9.1%
Construction	112	N/A	N/A	N/A	N/A

Figure E: Combined Peak Hour Occupancy Heat Map

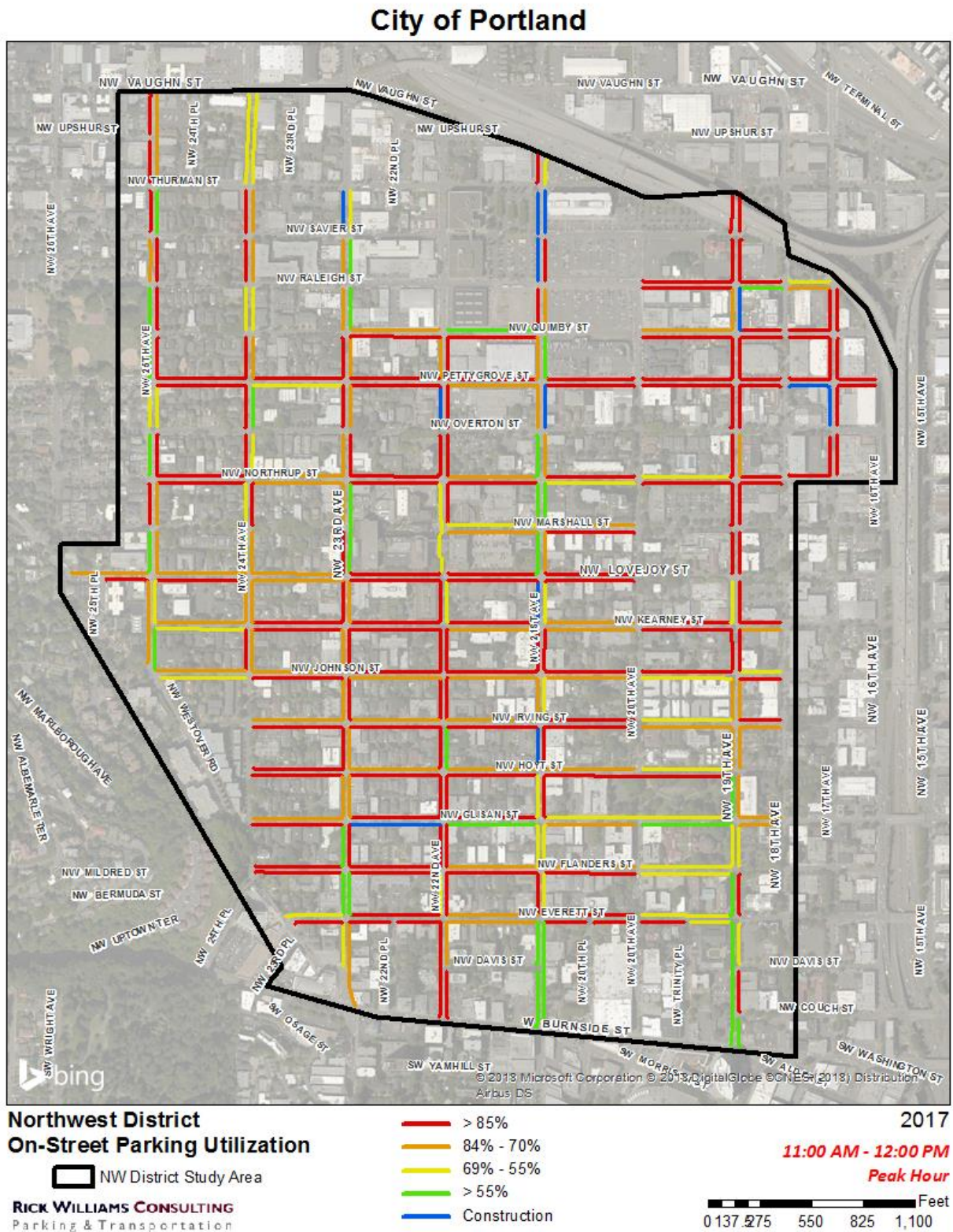


Table 7: Combined Parking Permit Usage (3,575 stalls)

Permit Type	Peak Hour 11 AM – 12 PM (Secondary ¹⁰)	Peak Hour Permit Count Distribution			Overnight 2 – 4 AM
		4 Hour Metered OBP	4 Hour Signed – OBP	Permits not in OBP stalls	
ADA	10 (2)	4 (1)	3 (1)	3 (0)	0
Temporary	83 (24)	64 (21)	13 (2)	6 (1)	21
Carshare	10 (1)	4 (0)	2 (0)	4 (1)	2
Residential	823 (260)	660 (218)	149 (40)	14 (2)	470
Employee	478 (226)	350 (181)	100 (40)	28 (5)	24
Total Observed	1,404 (513)	1,082 (421)	267 (83)	55 (9)	517
Occupied Stalls	2,748 (699)	1,587 (484)	680 (145)	481 (70)	654
% Occupied by Permits	51.1% (73.4%)	68.2% (87.0%)	39.3% (57.2%)	11.4% (12.9%)	79.1%

¹⁰ Permits observed during peak hour for Secondary survey – 842 surveyed stalls

Table 8: 2017 On-Street Permit Parking Utilization by User Group

Use Type	Stalls Peak Occupancy (2016 Peak)	User Group	2017 Users (2016)
2 Hours Signed	69 84.1% (90.3%)	All	58 (28)
		Non-permit Users	48 (24)
		Permits Displayed ¹¹	10 (4)
2 Hours Metered	91 83.5% (88.6%)	All	76 (70)
		Non-permit Users	73 (70)
		Permits Displayed	3 (0)
4 Hours Metered	421 67.9% (77.2%)	All	298 (328)
		Non-permit Users	298 (321)
		Permits Displayed	0 (7)
4 Hours Signed OBP	771 88.2% (94.3%)	All	680 (509)
		Non-permit Users	414 (253)
		Permit Users	266 (256)
4 Hours Metered OBP	1,922 85.0% (91.7%)	All	1,643 (1,649)
		Non-permit Users	561 (297)
		Permits Users	1,082 (1,352)

¹¹ Permits displayed in 2-Hour signed and metered stalls are not considered valid permit users. While detailed individually in this table, true average length of stay is observed only with all users.

Permit Analysis

Table 9: NW Permit Allocations – Yearly Comparison

Year	2017	2016	Change
Business	3,386	4,054	-668
Guest	0	1,094	-1,094
Resident	3,600	3,412	188
Total Allocated	6,986	8,560	-1,574

Table 10: Summary of Permit Use

		A	B	C
	Observation	Sample Size	Percent of Sample	Stalls in NW Parking District
1	On-street stalls in all NW parking district	N/A	N/A	5,447 ¹²
2	On-street stalls surveyed – sample size	3,575 ¹³	100%	
3	Stalls <u>Signed</u> 4 Hour OBP	771	22%	1,175
4	Stalls <u>Metered</u> 4 Hour OBP	1,922	54%	2,926
5	Stalls where permits are not valid (Stalls without an OBP designation)	878	25%	1,346
	Extrapolation Analysis			
6	Permits in <u>Signed</u> 4 Hour OBP* - peak hour	267	19%	405
7	Permits in <u>Metered</u> 4 Hour OBP* - peak hour	1,082	77%	1,649

¹² Stall total for the entire Northwest parking district (metered and permit stalls). Number provided by PBOT.

¹³ Includes 2,733 from the November study and an additional 842 (mostly) residential stalls to have more comparable cross section of stalls types studied in 2016.

8	Permits observed in all other stall types ¹⁴	55	4%	37
9	Permits displayed during peak hour and extrapolated to all on-street stalls	1,404	N/A	2,091

* vehicles displaying permits should be parked in these stall types

Table 11: Observations of Permit Allocation

Observation		2017
1	Peak hour occupancy in 4 Hour or By Permit stalls (Signed/Metered)	88% / 85%
2	Peak hour demand in 4 Hour or By Permit stalls if 37 permits now using non-permit stalls are allocated to OBP stalls	88%
3	Permits allocated and FTE allowance per business	3,386 80% FTE
4	Permits allocated to residents	3,600
5	Business permit "float" ¹⁵ based on permits allocated (3,386) / and peak hour permits observed (478 observed, extrapolated to 729)	464% (3,386/729)
6	Residential permit "float" based on permits allocated (3,600) / and peak hour permits observed (822 observed, extrapolated to 1,253)	287% (3,600/1,253)
7	Permits displayed in peak hour @88% occupancy (extrapolated ¹⁶)	2,091 permits
8	Estimated permits needed to be reduced (from 6,986) as a strategy to lower peak occupancy in 4 Hour or By Permit stalls from 88% to 84% (4 percentage points). ¹⁷	<318 ¹⁸ >
9	RECOMMENDATION: Maximum permits allocated in 2018	6,600
10	Estimated distribution of users in 4 Hour or By Permit stalls in peak hour @ 84% occupancy	1,996 permits
11	RECOMMENDATION: Discuss options to reduce business permits based on FTE (cap – open enrollment). Residential permit reduction can be approached in several ways – (e.g., per household, per unit, units without off-street parking, open enrollment).	<i>See next section</i>

¹⁴ Ideally no vehicles displaying permits would be parked in these stall types; they are not intended for permit holders.

¹⁵ Float is the relationship between permits allocated and vehicles parked using a permit.

¹⁶ Figure extrapolated to the entire NW parking district (5,447 stalls).

¹⁷ This assumes that existing transient parkers would continue to use these stalls. All efforts to decrease occupancies to 84% would be made through reduced permit sales.

¹⁸ This reduction in permit allocation is intended to achieve an 84% occupancy goal – applies only to existing conditions. It does not take into account new development or growth (in residents or employment).

SAC Recommendations

Formatting Recommendations

- Expand meter coverage in NW parking district. Convert any signed stall type to metered stalls (including OBP).
- Reduce and redistribute the number of 30 Minute stalls – equivalent to a 70% occupancy level in the peak hour (currently 45% from 11 AM – 12 PM)
- Convert 1 Hour stalls (currently 33 of them) to 2 Hour
- Consider changing enforcement hours to 10 AM – 8 PM (currently 9 AM – 7 PM)
- Change wrap-around 2 Hour and 4 Hour Metered to 4 Hours Metered OBP (change should be based on occupancy analysis)

Current Permit Allocation

Starting September 2017

- Employee Permits - .8 FTE
- Residential Permits – 30 or more units with occupancy certificate prior to September 2017 allocated to the building at .6 per unit. Buildings with 30 or more units with occupancy certificate after September 2017 allocated to the building at .4 per unit.
- Eliminate guest permits
- Cost for all permits \$180

Permit Recommendations

- Reduce total permits allocated by 325 based on 2017 data collection.
Reduction proportional to observed use in peak hour – 60% residential (195), 40% business (130)

Employee Permits

- To remain unchanged at 0.8 FTE

Residential Permits

- Anyone who currently has a permit would keep their permit. The limit/reduction to residential permits would occur by attrition.

- Existing Zone M resident permit holders can renew any permit issued in 2017-18 at a tiered price¹⁹
 - 1st permit = \$180
 - 2nd permit = \$360
 - 3rd permit = \$540
 - 4th permit = \$540
 - Each permit will be tied to a driver's license. If a resident provides a DL for another individual at the same address, they will not be subject to the tiered price.
- Residents that apply September 1, 2018 or later (residing in buildings with certificate of occupancy prior to August 7, 2013)
 - Limit of one permit per licensed driver, maximum of three permits per address
 - Permits will cost \$180 per permit

Residential Permits – Newer Residential Buildings

- Residential buildings with CO after August 7, 2013 will be limited to:
 - 0.6 permits per number of units in the building
- Residential buildings with CO after September 1, 2017 will be limited to:
 - 0.4 permits per number of units in the building

Future Option

- Determine off-street parking spaces available per building and reduce allocation accordingly.

¹⁹ If a resident is renewing one permit, they may qualify for a reduced permit fee on financial hardship or reduced income. There will be a low-income provision available. If the resident meeting 80% of AMI (Portland Housing Bureau) then they are eligible for a base rate Zone M permit.

Low-income self-certification does not apply for residents renewing more than one vehicle.