



# WINOOSKI AVE

## TRANSPORTATION STUDY

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## North Winooski Ave Parking Management Plan (PMP)

City Council-Stakeholder Committee Meeting #3 | Phase B

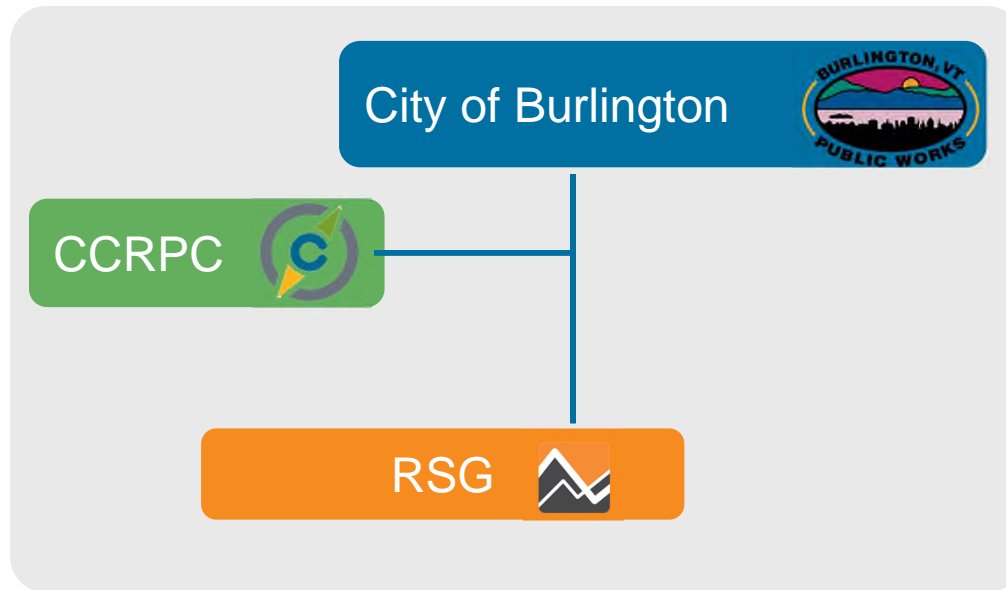
October 28, 2021

# Committee Meeting #3: Agenda

1. Welcome, Introductions, Changes to the Agenda
2. Public comment period
3. Review survey results (Jonathan Slason, RSG)
4. Parking model results
5. Future conditions
6. Management options
7. Evaluation of management strategies
8. Public Comment Period
9. Next Steps



# Project Team Structure



## City of Burlington

- Nicole Losch

## CCRPC

- Bryan Davis
- Chris Dubin
- Sai Sarepalli

## RSG

- Jonathan Slason
- Aaron Lee
- Justin Culp



# **City Council-Stakeholder Committee, PMP Purpose and Goals**

# Stakeholder Committee

Seven Members as directed by City Council:

## City Council TEUC:

- Mark Barlow
- Jack Hanson
- Jane Stromberg

## Community members:

- Charles Sizemore
- Kelly Duggan
- Kirsten Merriman Shapiro
- Maxwell Horovitz



# Committee Role & Responsibilities

City Council direction:

- Approve the Scope of Work, methodology, and public engagement plan for the Parking Management Plan
- **Review recommendations of the draft PMP**
- Approve the final PMP
  - Ward 2/3 NPA presentation before final approval



# Committee Structure

- Committee will function as a public body
- Committee members may not meet in person or via email to discuss the Parking Management Plan outside of established meetings
- Follow open meeting law requirements
  - DPW will advertise meetings
  - Meeting materials available online
- Meetings are open to the public and include time for public comments

[Committee Procedures are available online](#)



# Purpose and Goals

## Interim Actions resulting from Corridor Study

As directed by City Council, the North Winooski Avenue Parking Management Plan (PMP) will **identify practical strategies for balancing parking supply and demand north of Pearl Street, with the goal of meeting essential parking needs while freeing up space for dedicated bike lanes.**

### Achieving this goal by:

- Convening this Committee
- Model how actual demand compares to parking supply based on observed conditions (data on parking occupancy in the corridor and the overlapping demands of the various land uses)
- Management strategies to influence the demand for parking in the corridor
- Engage with the community to account for impacts and identification of the essential parking needs.





# Scope of Work

Phased approach:

**PHASE A:** technical work not directly impacted by COVID

- Understand the source of parking demand
- Committee approved the Phase A scope in March 2021

**PHASE B:** management strategies and public engagement

- Understand local travel behaviors
- **Evaluate and analyze potential management strategies**





# Public Comment Period

## **To participate in public comment via Zoom:**

- If signed in via Zoom, please use the “Raise Your Hand” feature to alert the project team that you wish to speak during public comment period. When it’s your turn to speak, your name will be called and you will be unmuted. In the event of challenges with Zoom video, please use the call-in option.
- If you are calling in, please press \*9 which will alert the project team that you wish to speak. Your phone # will be called out and you will be unmuted when it’s your turn to speak.
- Comments in the YouTube livestream are not monitored – please participate through Zoom platform or phone, connection details:  
<https://www.burlingtonvt.gov/dpw/WinAveImprovements>

If you encounter any difficulties when attempting to speak during public forum, please email [nlosch@burlingtonvt.gov](mailto:nlosch@burlingtonvt.gov).



# Public Survey

# Public Survey


**Goal:** Understand travel behaviors, parking needs and experiences, and travel / parking preferences.

User groups	Count	Percent of overall users
Visit	341	28.9%
Live	243	20.6%
Work	182	15.5%
Travel Through	287	24.3%
Own property	52	4.4%
Own business	39	3.3%
Carpool	35	3.0%
Total	766 unique respondents classify as 1,179 'users' of the corridor	100.0%

**Dates:** August 11<sup>th</sup> 2021 through September 8<sup>th</sup> 2021

**Response:** 766 surveys were completed by individuals with an interest in the study area.

The web survey was sent out via city and CCRPC newsletters, direct mailings to addresses in the study area, Front Porch Forum posts, email to project contact list, community email forums, lawn signs, postcards and flyers distributed to businesses and gathering places. Translation services were provided by AALV, Inc. where 29 respondents were able to take the survey




**North Winooski Avenue Street Parking Survey**

In 2020 Burlington City Council approved a Resolution to have dedicated bike lanes in each direction on North Winooski Avenue. This will impact street parking. With your help, a Parking Management Plan will identify practical solutions for parking needs while freeing up space for bike lanes in each direction.

**Your input will shape the future of North Winooski Avenue!**

 [bit.ly/WinAveSurvey](https://bit.ly/WinAveSurvey)  
Survey expires August 31, 2021

Gift cards awarded to randomly selected survey respondents!

Scan with your phone's camera to take the survey 

Project website: [bit.ly/WinAvePMP](https://bit.ly/WinAvePMP)  
Contact Us: Nicole Losch, Senior Planner, [nlosch@burlingtonvt.gov](mailto:nlosch@burlingtonvt.gov) (802) 391-6809

# Public Survey

The following conclusions can be made from the review of the survey data:

- Regardless of relationship to the corridor, everyone stated that their concerns for safety impact their travel decisions.
- Most people are interested in off-street dedicated parking but don't want to pay for it.
- Most people report using on-street parking on North Winooski Ave.
- Off-street owners of parking spaces are not interested in sharing them although employees and visitors would be interested in using shared off-street lots.



# Public Survey

## Residents in the Study Area

- Own vehicles at a slightly lower rate than the region, state, and national averages.
- 57% of residents use or have access to a driveway for their vehicles.
- 35% of residents use the street for parking either due to a lack of a driveway or it is enough of an inconvenience to make it useable.
- 42% of residents find it frequently difficult to park close to their home. 23% report no difficulty at all.
- 25% of residents would bike more in the study area if it were safer.
- 63% would likely park in an off-street lot within 1 block of the destination.
- 65% of residents indicate that a residential parking permit would increase their visits to the study area or have little to no impact on their travel.



# Public Survey

## Employed Persons in the Study Area

- 71% of employed persons use a vehicle frequently to get to and from work. 20% frequently use transit, walk, or bike.
- 54% of employed persons report parking on North Winooski Avenue, 13% on a side street in the study area, or 4% on side street outside of the study area. 24% report parking in off-street lots.
- 18% of employed persons report parking 1 or 2 days a week. 46% report parking 5 days a week and 11% report parking 7 days a week.
- Between 65% and 82% of employed persons report disagreeing or strongly disagreeing with paying for parking for parking spaces. 72% report agreeing to park a block away for off street space.
- 21% of employed persons would agree to park less often if the employer paid for the commute.
- Employees are generally interested in parking in shared off-street lots, regardless of whether it was their own place of employment.



# Public Survey

## Visitors in the Study Area

- Between 64% and 83% of visitors to the study area report going to food and dining or other shopping activities.
- Visitors use a more diverse set of modes relative to employees. 43% frequently avoid using a vehicle while 45% of visitors do frequently use a vehicle.
- Most visitors do park on North Winooski Avenue or a side street one block either side. 24% report parking in off-street parking lots.
- 70% of visitors report not paying for parking.
- 65% of visitors are in the study area 1 day a week or less. 80% are in the study area 2 days or less a week.
- Visitors are nearly split on the effect of paying for parking along the corridor.
- Visitors would likely bike more if biking was made safer.
- Visitors are also willing to park off street a block away from their destination.
- Visitors are interested in more short-term parking spaces.





# Public Survey

## Owners or Managers of Places of Employment

- Respondents appear to underestimate the degree to which North Winooski Avenue is serving as a parking lot for their employees as well as overestimating the demand for side streets.
- Owners and managers report that truck loading needs are most frequent (69% of responses) between 9am and 3pm. These coincide with the periods of highest parking demand.
- Owners and managers all agree that it would be difficult to attract or retain employees if parking was more difficult.
- Owners and managers are not interested (66% of respondents) in sharing their off-street parking lot.
- Owners and managers appear split as to the effects introducing additional meter spaces or time limited spaces or the effect of remote parking lots. There is agreement that short-term spaces (30 min or less) would be beneficial to all users.



# Public Survey

## Owners of Commercial Property and/or Residential Rental Units

- Property owners who provide off-street parking note it is usually at capacity (73% of respondents).
- 70% of owners do not charge for residential parking and 44% do not provide enough spaces (how much is enough is subjective for the respondent to determine) for every unit.
- 73% of owners do not provide off-street parking for commercial tenants but the ones who do mostly restrict it to the commercial tenant and their customers.
- 82% of owners agree that it would be more difficult to rent or lease property if they charged for parking.
- They are not interested in sharing their off-street parking.



# Demographics of all respondents

Gender	Percent	Responses
Female	50.8%	389
Male	38.3%	293
Non-binary	3.4%	26
Other	0.8%	6
Prefer not to answer	6.7%	51
Totals		765

Race	Percent	Responses
Black or African American	2.9%	22
American Indian or Alaska Native	0.3%	2
Asian or Asian American	1.0%	8
Native Hawaiian or other Pacific Islander	0.1%	1
White or Caucasian	77.9%	596
More than one race	3.3%	25
Prefer not to answer	10.8%	83
Other	3.7%	28
Totals		765

Walk Difficulty	Percent	Responses
Yes	12.2%	93
No	87.8%	672
Totals		765

Age	Percent	Responses
17 or younger	0.1%	1
18 to 24	10.1%	77
25 to 34	24.8%	190
35 to 44	21.2%	162
45 to 54	14.8%	113
55 to 64	14.0%	107
65 to 74	8.6%	66
75 or older	2.2%	17
Prefer not to answer	4.2%	32
Totals		765

Work Status	Percent	Responses
Full-time	68.1%	521
Part-time	12.3%	94
Temporary / Seasonal	2.6%	20
Unemployed	7.2%	55
Student	5.5%	42
Prefer not to answer	9.2%	70

Note: one completed response is missing from these tables



# Demographics of all respondents

Annual Income (Approx.)	Percent	Responses
Less than \$14,999	7.5%	57
Between \$15,000 and \$24,999	6.5%	50
Between \$25,000 - \$49,999	20.7%	158
Between \$50,000 - \$74,999	17.0%	130
Between \$75,000 - \$99,999	10.5%	80
Between \$100,000 - \$124,999	9.9%	76
Between \$125,000 - \$149,999	4.2%	32
Between \$150,000 - \$199,999	3.3%	25
More than \$200,000	3.0%	23
Prefer not to answer	17.5%	134
Totals		765

Education Attainment	Percent	Responses
Fewer than 12 grades with no high school diploma	2.1%	16
High School or GED alternative credential	5.0%	38
Some college	10.7%	82
I am currently enrolled in college	3.8%	29
Associate degree (for example: AA, AS)	3.8%	29
Bachelor's degree (for example: BA, BS)	42.9%	328
Master's degree (for example: MA, MS, MEd, MSW, MBA)	22.7%	174
Professional degree beyond a bachelor's degree (for example: MD, DDS, JS)	4.6%	35
Doctorate degree (for example: PhD, EdD)	4.4%	34
Totals		765



# Resident Demographics to weight data

Sex	Census	Survey
Male	51.1%	40.7%
Female	48.9%	59.3%

Age	Census	Survey
18 to 34	70.0%	54.3%
35 to 64	23.3%	39.9%
65 to 74	4.1%	4.9%
75 or older	2.5%	0.8%

Race	Census	Survey
White	80.3%	85.2%
Black	9.2%	4.1%
American Indian Native	0.0%	0.4%
Asian	7.1%	0.8%
Native Hawaiian and Pacific Islander	0.1%	0.4%
Multiple Race	3.2%	5.8%
Other	0.0%	3.3%

Income	Census	Survey
under 15k	24.8%	14.4%
15k to 25k	17.0%	13.6%
25k to 50k	21.9%	31.7%
50k to 75k	16.7%	21.8%
75k to 100k	8.8%	9.9%
100k to 125k	4.4%	5.3%
125k or more	6.5%	3.3%

Walk Difficulty	Census	Survey
Yes	6.3%	11.5%
No	93.7%	88.5%



# Equity travel patterns

## Survey lower-income households (small sample size)

Most common mode in the corridor	I typically drive a vehicle	I typically walk	I typically bike	I typically take the bus
HH income <25k per year and survey respondent >25 yrs old	25%	0%	50%	25%
HH income <50k per year and survey respondent >25 yrs old	27%	36.4%	27.3%	9.1%

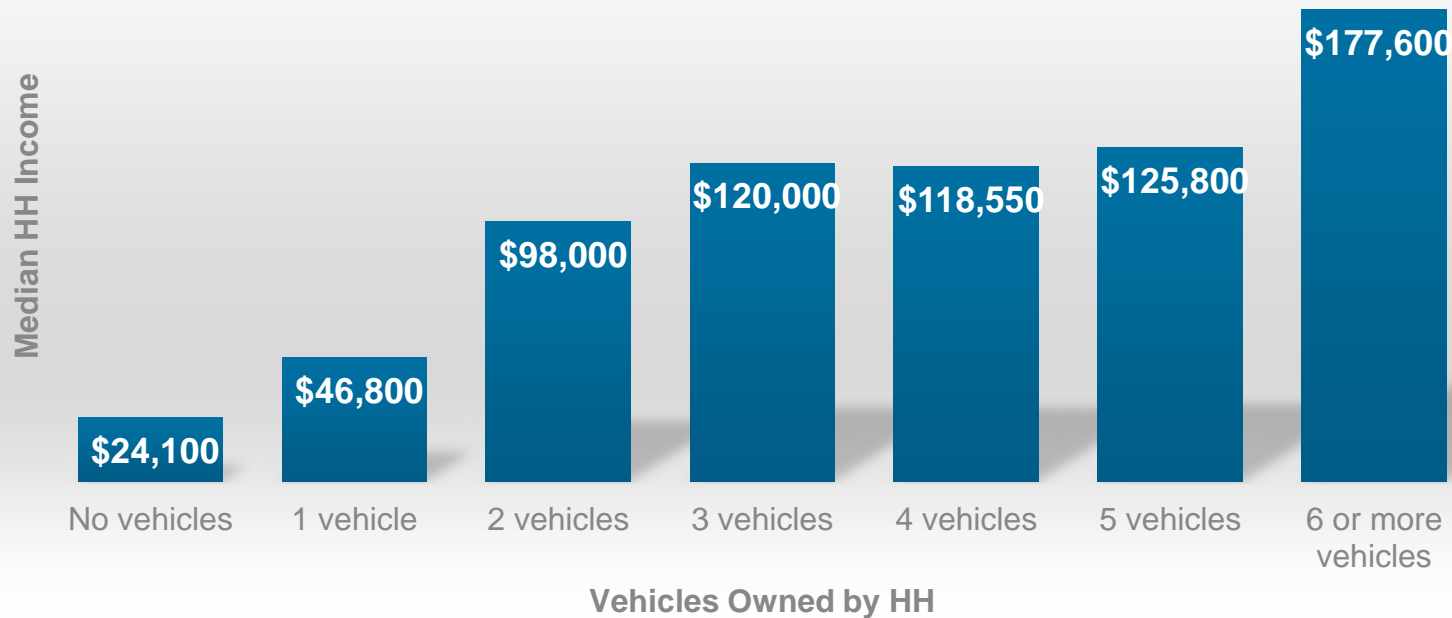
## ACS Census data for commute mode by race

Study Area	Population	Drove alone	Carpool	Transit
Black	8%	3%	18%	21%
Asian	9%	4%	13%	15%
2+ races	2%	3%	0%	0%
Hispanic / Latino + Mixed Race	4%	4%	1%	2%
White	79%	88%	69%	62%



# Equity travel patterns

Number of Vehicles per HH by Median HH Income for Northwestern Vermont



Source: ACS 5-year PUMS for northwestern Vermont





## Parking Model



# Existing Parking Supply

- All parking spaces: 1,630
- On-street: 364 (223 along North Winooski, 141 on side streets)
- Off-street spaces: 1,266
- Restricted off-street (dedicated residential or non-shared commercial): 990
- Off-street shared with one more than one use: 276
- Average 1.3 spaces off-street per household unit



Source: RSG using Google Earth background image

*Source of data: RSG counts for Winooski Avenue and Google aerial photos for off-street spaces. City and CCRPC staff supported some additional field data collection.*

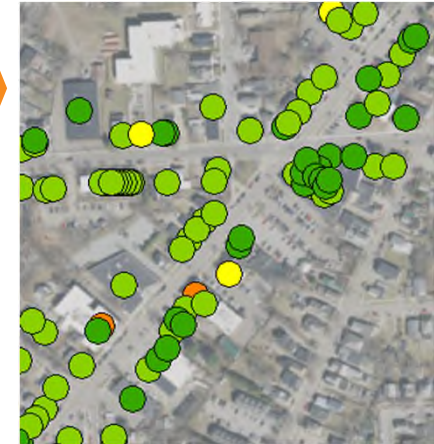


# Turning that Data into a Model

Step 1: (ULI) Parking generation rates and sensitivity for how a collection of land uses may lower net parking supply needed to meet individual land use demands



Step 2: Converted all land uses into a land use type and an estimated square footage (ArcGIS shapefiles)



Step 3: Created a Python Script that created a utility function that assigned the estimated demand to various parking lots

```
# Add chooser column summed over generator IDs
demand_df = demand_df.join(
    demand_df.groupby(gen_agg_cols) [
        [LOT_DIST_COL, lot_capacity_col, LOT_DEMAND_COL]
    ].sum(),
    on=gen_agg_cols,
    rsuffix="_sum",
)

# Define distance score as inverse of gen-to-lot distance relative to all lots
demand_df["distance_score"] = (
    1 - (demand_df[LOT_DIST_COL] / demand_df[("LOT_DIST_COL")_sum])
) * distance_factor

demand_df.loc[
    demand_df[LOT_DIST_COL] == demand_df[("LOT_DIST_COL")_sum],
    "distance_score",
] = distance_factor

# Weight lots by relative size
demand_df["capacity_score"] = (
    demand_df[lot_capacity_col] / demand_df[("lot_capacity_col")_sum]
) * capacity_factor

# Weight lots by inverse of popularity
demand_df["lot_demand_score"] = 1 - (
    (demand_df[LOT_DEMAND_COL] / demand_df[("LOT_DEMAND_COL")_sum])
    * scarcity_factor
)

# Weight lots by private access
demand_df["private_lot_score"] = demand_df[PRIVATE_LOT_COL] * private_lot_factor

demand_df["UTILITY_COL"] = np.exp(
    demand_df[
        "distance_score",
        "capacity_score",
        "lot_demand_score",
        "private_lot_score",
    ]
)
```

Step 4: Excel Pivot Tables are created to analyze lot by lot demand across weekday and weekend hours

Month	Sep	.T			
Day	Weekend	.T			
Category	On Street	.T			
Sum of PctFull		Column Labels .T			
Row Labels	LOT_UID	8	13	18	Grand Total
Riverside Ave	3	7.5%	29.5%	25.5%	20.8%
Riverside Ave to Archibald Street	1	11.8%	24.5%	22.4%	19.5%
Riverside Ave to Archibald Street	7	15.3%	37.9%	35.7%	29.6%
Archibald	2	55.9%	100.0%	100.0%	85.3%
Archibald	4	22.3%	37.7%	34.0%	31.3%
Archibald Street to Union Street	5	21.3%	37.4%	33.5%	30.7%
Archibald Street to Union Street	6	31.3%	55.6%	49.7%	45.5%
Union Street To North Street	8	24.4%	52.0%	46.9%	41.1%
Union Street To North Street	9	37.7%	72.4%	61.5%	57.2%
North Street To North Street	10	16.7%	32.5%	28.2%	25.8%
North	11	24.0%	58.5%	51.0%	44.5%
North	13	17.2%	44.5%	41.1%	34.3%
Union	12	23.5%	44.5%	37.9%	35.3%
North Street to Grant Street	14	21.7%	30.9%	34.9%	29.1%
North Street to Grant Street	15	24.5%	34.5%	39.2%	32.7%
Grant Street to Pearl Street	18	100.0%	100.0%	100.0%	100.0%
Grant Street to Pearl Street	19	100.0%	100.0%	100.0%	100.0%
Crombie	20	21.9%	39.3%	34.0%	31.7%
Decatur	21	20.7%	30.7%	25.8%	25.7%
Grant Street	16	57.0%	61.5%	78.1%	65.5%
Grand Total		28.5%	44.7%	42.9%	38.7%

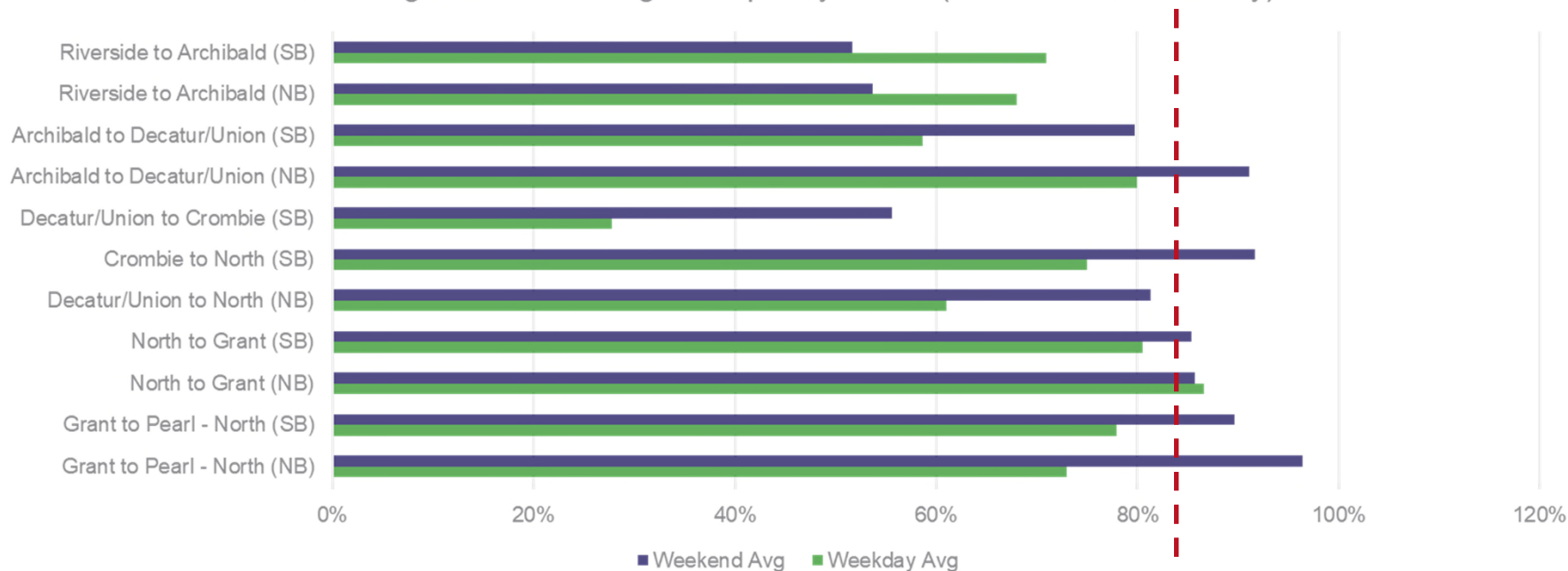


# On Street Parking Occupancy Data from Corridor Study

Weekday average on-street observed occupancy = 69%

Parking Model average weekday on-street occupancy = 77% (between 9am and 7pm)

Parking Utilization - Avg Occupancy Rates (Weekend & Weekday)



Source: 2018 observations made by RSG, City, and CCRPC staff

85% often considered "full"

# Detailed occupancy data from corridor study

SEGMENT	CURB	DIRECTION	SUNDAY AM	FRIDAY LATE AM	MONDAY LATE AM	MONDAY LATE AFTERNOON	WEDNESDAY PM	SAT AM	SAT AFTERNOON	OVERALL AVG	WEEKDAY AVG	WEEKEND AVG
Grant to Pearl - North (NB)	East	NB	54%	75%	35%	75%	107%	114%	121%	83%	73%	96%
Grant to Pearl - North (SB)	West	SB	61%	93%	48%	71%	100%	100%	108%	83%	78%	90%
North to Grant (NB)	East	NB	68%	86%	86%	82%	93%	93%	96%	86%	87%	86%
North to Grant (SB)	West	SB	81%	69%	84%	91%	78%	88%	88%	83%	80%	85%
Decatur/Union to North (NB)	East	NB	80%	36%	52%	68%	88%	76%	88%	70%	61%	81%
Crombie to North (SB)	West	SB	75%	50%	75%	75%	100%	100%	100%	82%	75%	92%
Decatur/Union to Crombie (SB)	West	SB	44%	33%	22%	11%	44%	67%	56%	40%	28%	56%
Archibald to Decatur/Union (NB)	East	NB	80%	47%	67%	87%	120%	93%	100%	85%	80%	91%
Archibald to Decatur/Union (SB)	West	SB	83%	43%	57%	39%	96%	70%	87%	68%	59%	80%
Riverside to Archibald (NB)	East	NB	33%	72%	50%	61%	89%	56%	72%	62%	68%	54%
Riverside to Archibald (SB)	West	SB	39%	77%	68%	84%	55%	32%	84%	63%	71%	52%

Source: 2018 observations made by  
SG, City, and CCRPC staff

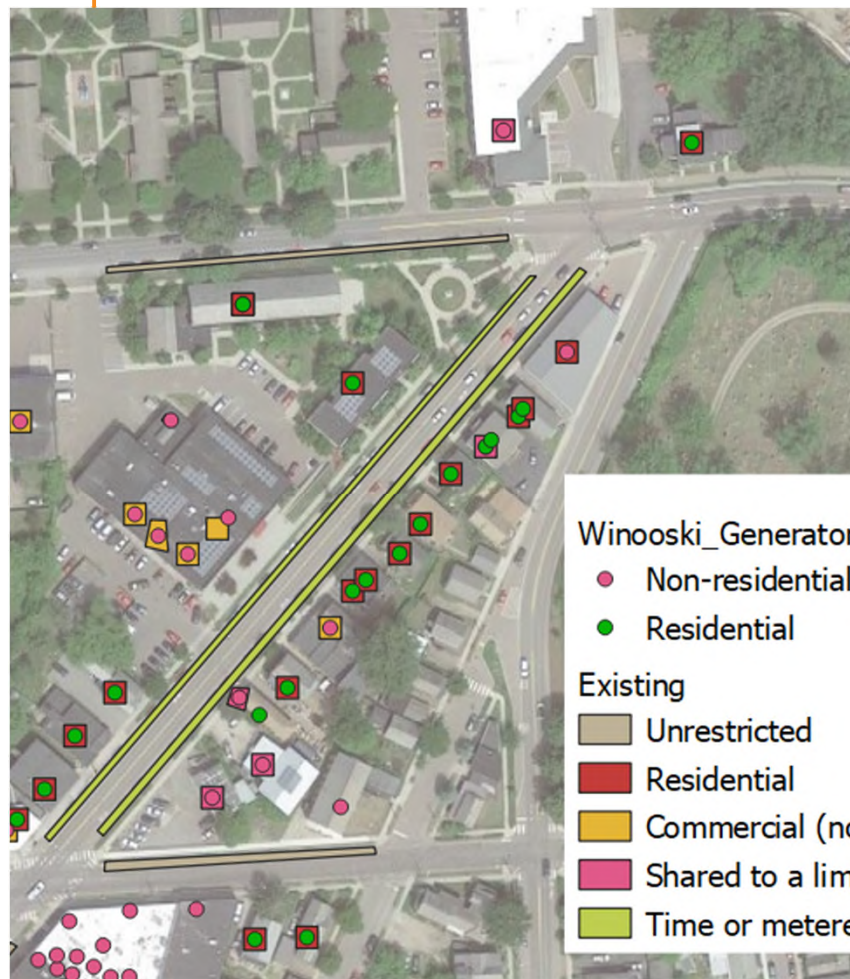




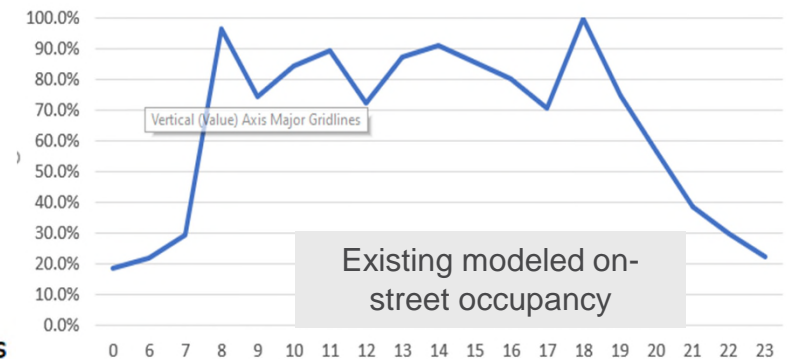
# **North Winooski Avenue Conditions and Modeled Occupancy**



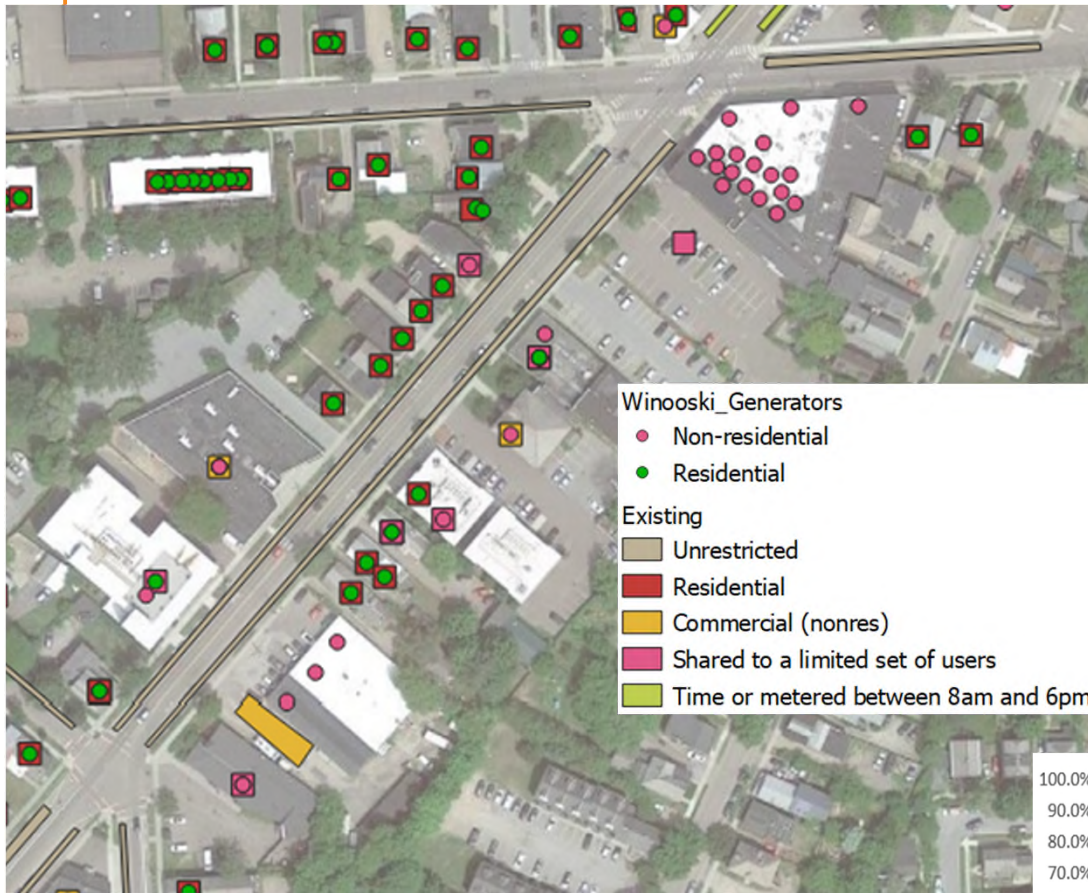
# Riverside to Archibald



- On-Street is already managed by 1hr and 2 hr zones limiting residential and long-term employee parking.
- Heavily constrained off-street parking supply relative to HH's (0.72 spaces per HH).
- Health Center parking demand from clients and staff (~140 employees with 76 spaces on site).
- Model and observations suggest >85% occupancy throughout weekday business hours.
- 40 jobs in businesses other than Health Center.

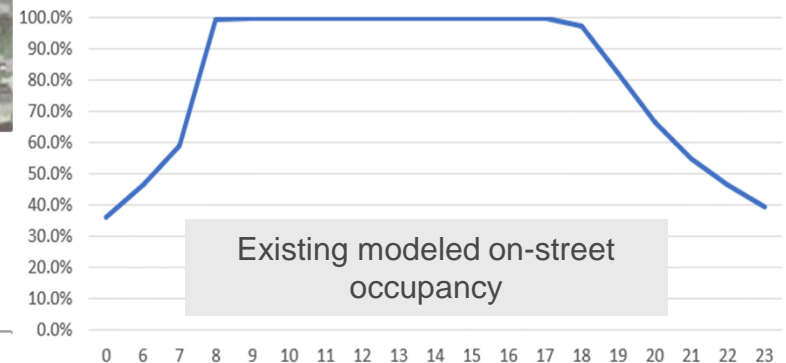


# Archibald to Union/Decatur



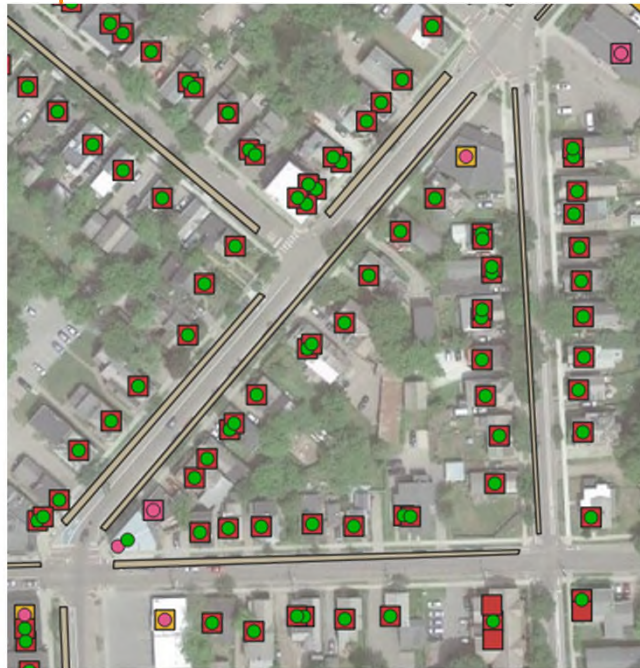
Heavily residential Archibald (~1.1 spaces per HH) and Decatur (1.6 spaces per HH) are <50% occupied during mid-day weekdays. Parking occupancy decreases as spaces open up on Winooski and in commercial lots.

- One of least constrained off-street parking supply relative of HH's (1.25 spaces per HH).
- High employment (140 people) with ~128 spaces for non-residential uses.
- Model matches some observations in weekday PM with 80-120% of occupancy.





# Union/Decatur to North Street



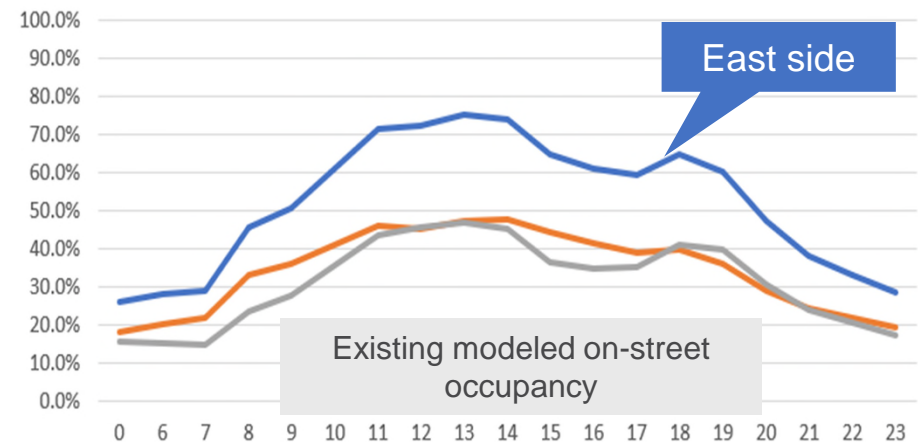
## Land Use

- Non-residential
- Residential

## Future

- Unrestricted
- Residential
- Commercial (nonres)
- Shared to a limited set of users
- Time or metered between 8am and 6pm

- Average weekday observations and model ~ 55% occupied on-street parking.
- Above the corridor average (1.3) by having ~1.5 off-street spaces per HH.
- 15 jobs are in this segment.
- Crombie has ~ 1.5 spaces per HH. Less than 50% occupancy ratios for mid-days. Increasing to 60-70% evenings.

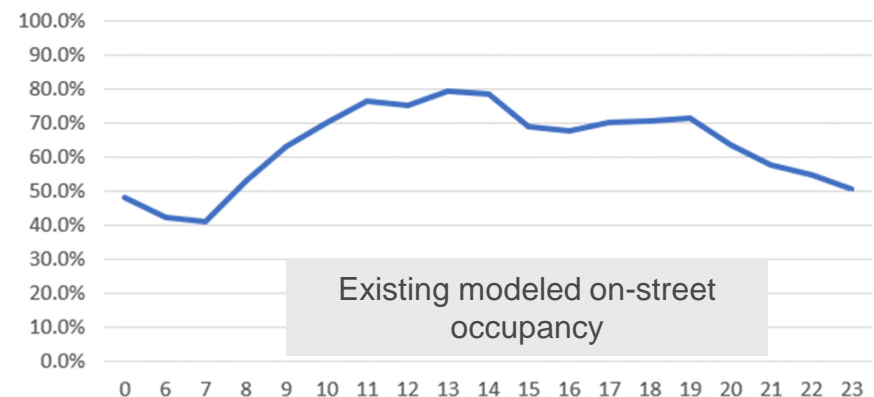




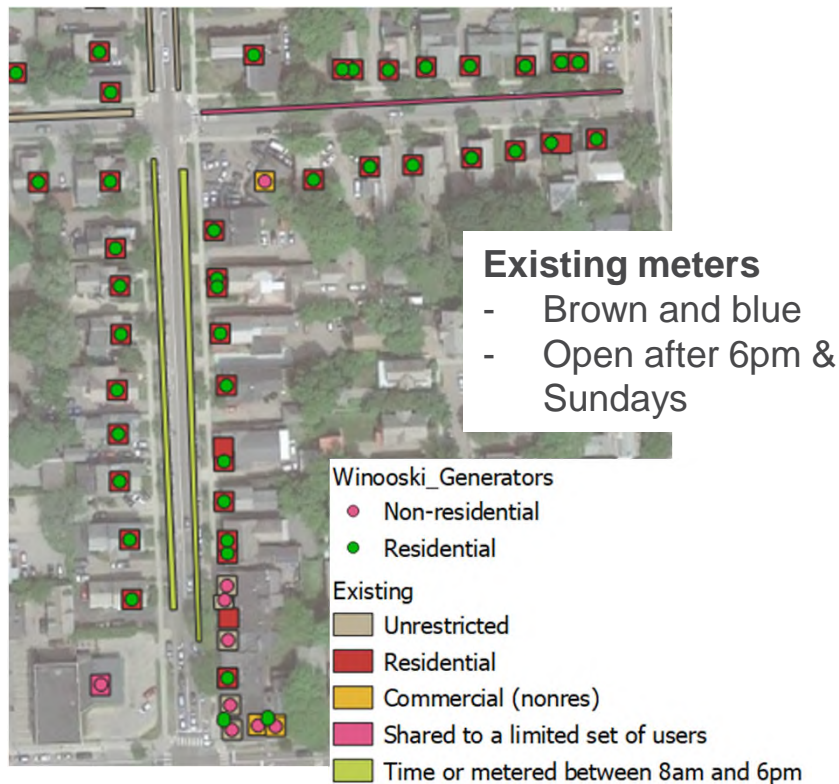
# North Street to Grant Street



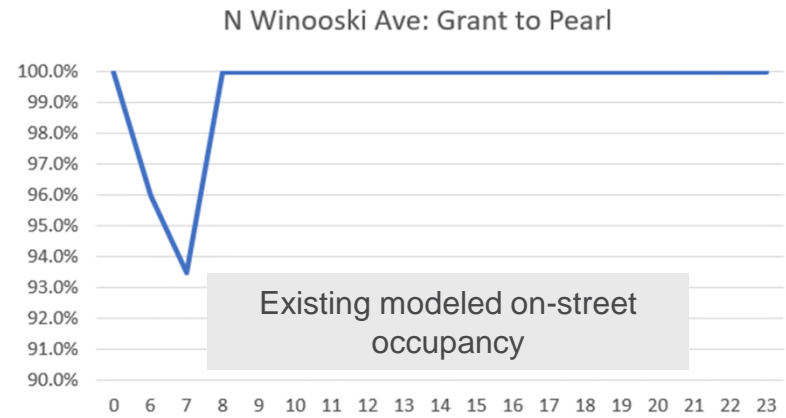
- Most dense residential part of corridor with 131 household units at an average of 1.5 off-street spaces per unit provided.
- The metered parking to the south may lead to a higher demand for this segment.
- 33 jobs in the segment.
- Model and observations align around occupancy of ~75-80%.



# Grant Street to Pearl Street



- 2<sup>nd</sup> most dense residential part of corridor with 105 household units at an average of .70 off-street spaces per unit provided.
- Most constrained in the study area by having the fewest off-street spaces per HH unit and employment constraints.
- Approximately 50% fewer spaces for the demand relative to other segments in the study area.
- 25 jobs in the segment.



Model suggests occupancy of ~100%. Observations suggest closer to 80% on weekdays and 95-100% on weekends. Meter effect is not well captured by the model, which may lead to lower occupancy during the weekdays. The 80% occupancy is in-line with goals for metered spaces.



## **Side Streets Occupancy with the Model**

# Side Street Occupancy using the Model

Side Streets in Study Area	Number of On-Street Spaces in study area	Weekday Average Occupancy (% filled)			
		8am	1pm	6pm	Average
Riverside Ave	15	87%	100%	90%	92%
Archibald	25	66%	97%	57%	73%
North	25	23%	46%	40%	36%
Union	17	37%	54%	46%	45%
Crombie	16	24%	33%	29%	29%
Decatur	17	47%	57%	49%	51%
Grant Street (unregulated)	13	48%	55%	53%	52%
Grant Street (RPP)	13	35%	35%	33%	34%
<b>Totals &amp; Average</b>	<b>141</b>	<b>45%</b>	<b>61%</b>	<b>49%</b>	<b>52%</b>





## **Future conditions**

# Overarching Themes

- Proposed concept to remove east side parking between Riverside Ave. to Union and from North Street to Pearl Street
- Change in zoning that removed parking minimums in corridor
- Removing on-street parking will increase overall occupancy of remaining on- and off-street spaces
- Specific segments are affected more than others



1hr spaces remain on west side  
(remove 33 spaces)



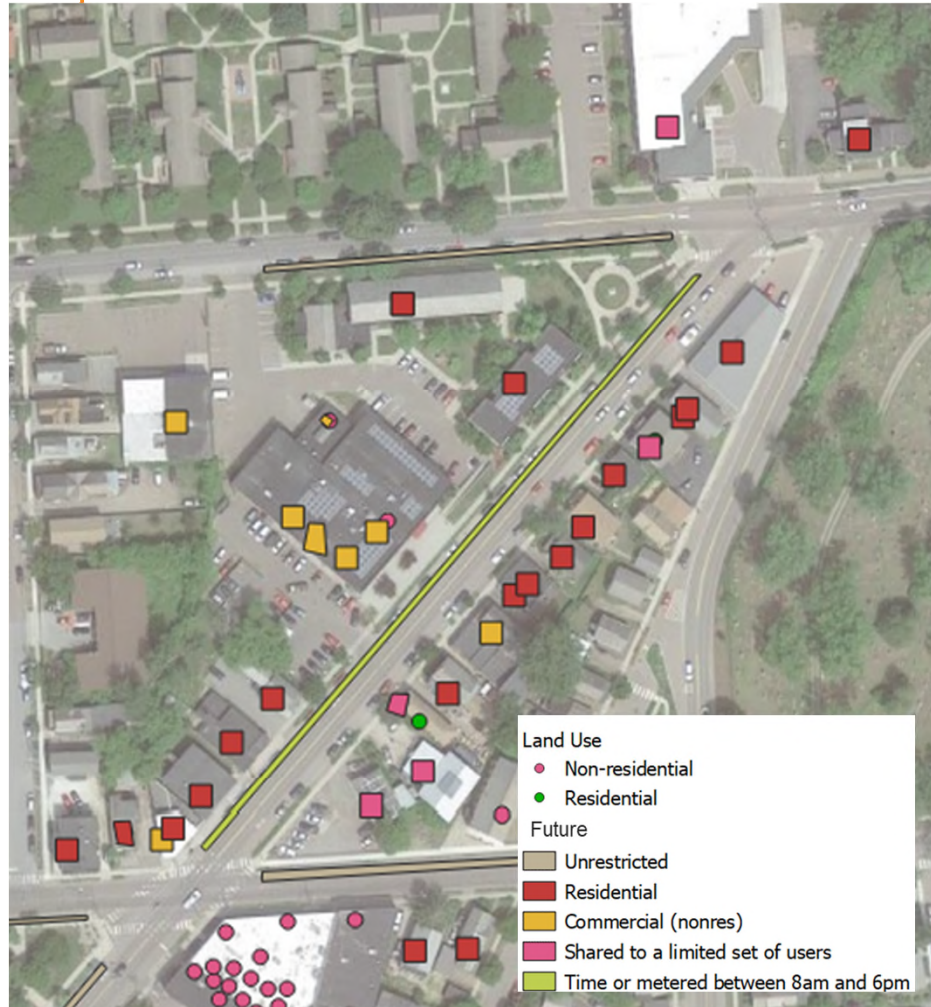
Unmanaged existing spaces



Paid parking south of Grant St.  
(remove 28 spaces between North and Grant and 14 spaces between Grant and Pearl)



# Riverside to Archibald



## Parking ratios

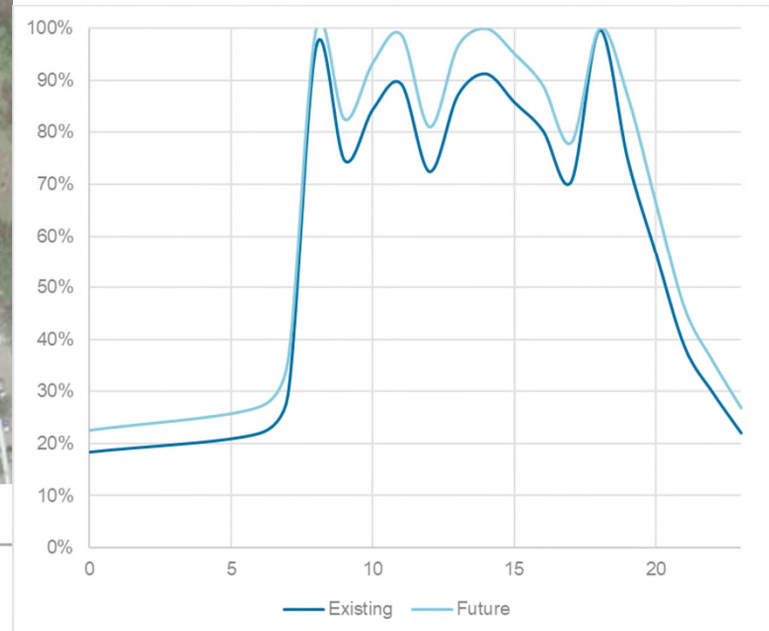
(total spaces) / (dwelling units + employees)

- existing: 1.18
- Future: 1.09

## Model

Existing daily avg. occupancy: 64%

Future daily avg. occupancy: 72%



# Archibald to Union/Decatur



## Parking ratios

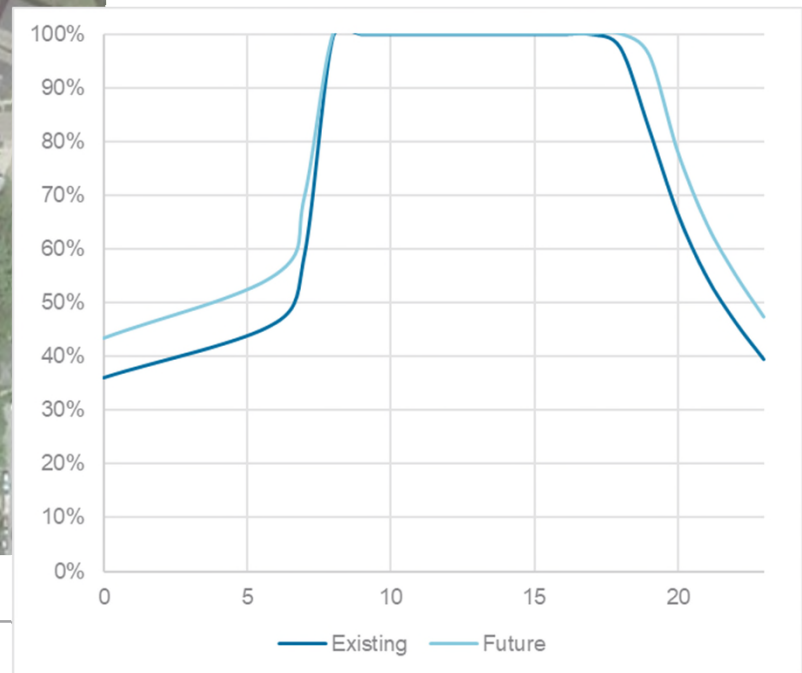
(total spaces) / (dwelling units + employees)

- existing: 1.35
- Future: 1.28

## Model

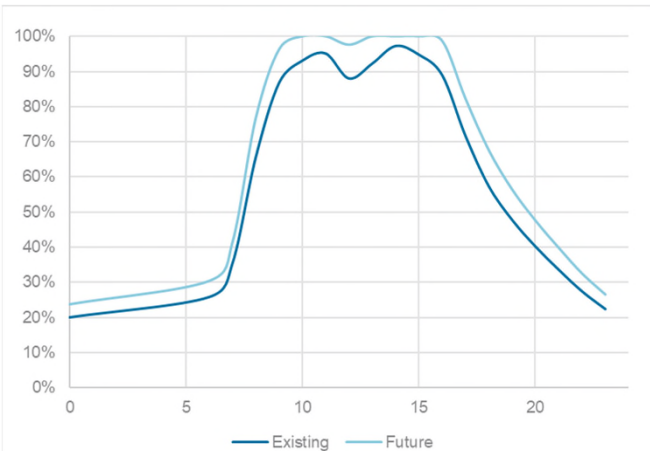
Existing daily avg. occupancy: 80%

Future daily avg. occupancy: 85%





## Archibald

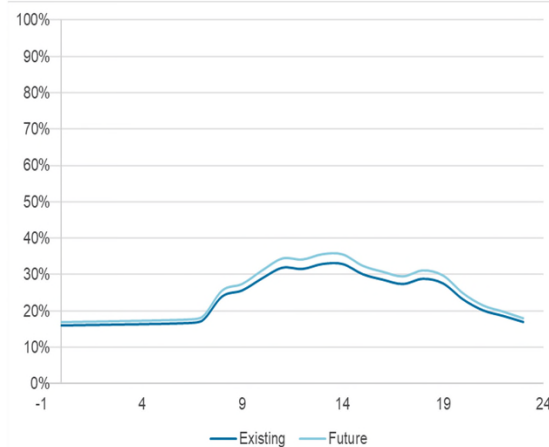


### Model

Existing daily avg.  
occupancy: 62%  
Future daily avg.  
occupancy: 69%

Core working hours  
between 9am to 4pm shown  
to increase in demand and  
occupancy

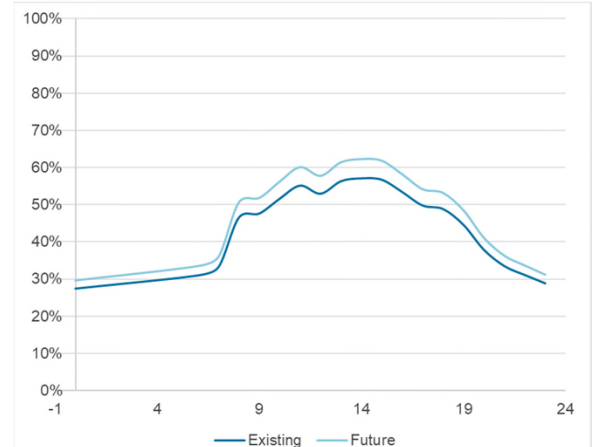
## Crombie



### Model

Existing daily avg.  
occupancy: 25%  
Future daily avg.  
occupancy: 27%

## Decatur



### Model

Existing daily avg.  
occupancy: 44%  
Future daily avg.  
occupancy: 48%



# Union/Decatur to North Street



## Parking ratios

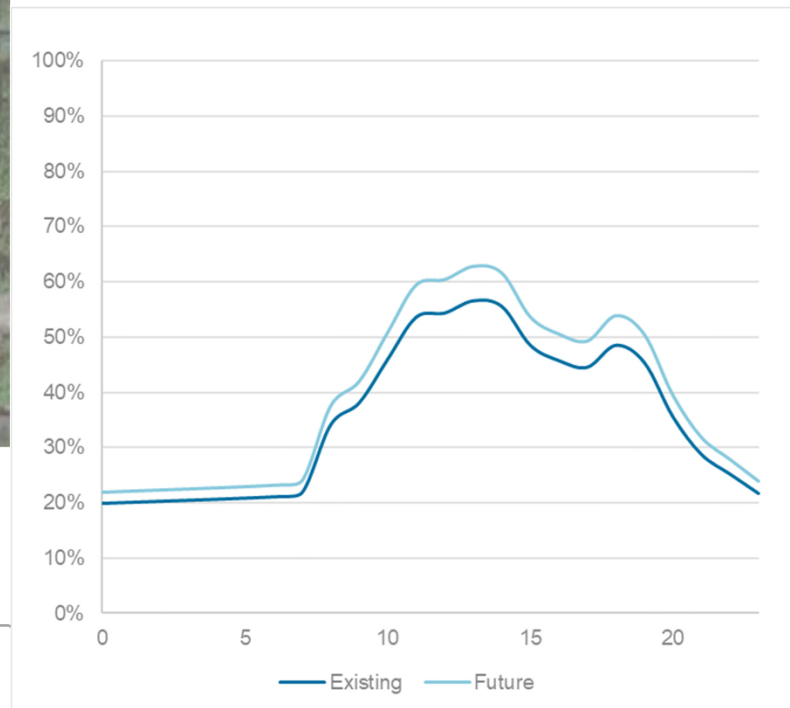
(total spaces) / (dwelling units + employees)

- Existing & Future: 1.84

## Model

Existing daily avg. occupancy: 39%

Future daily avg. occupancy: 43%



# North Street to Grant Street



## Parking ratios

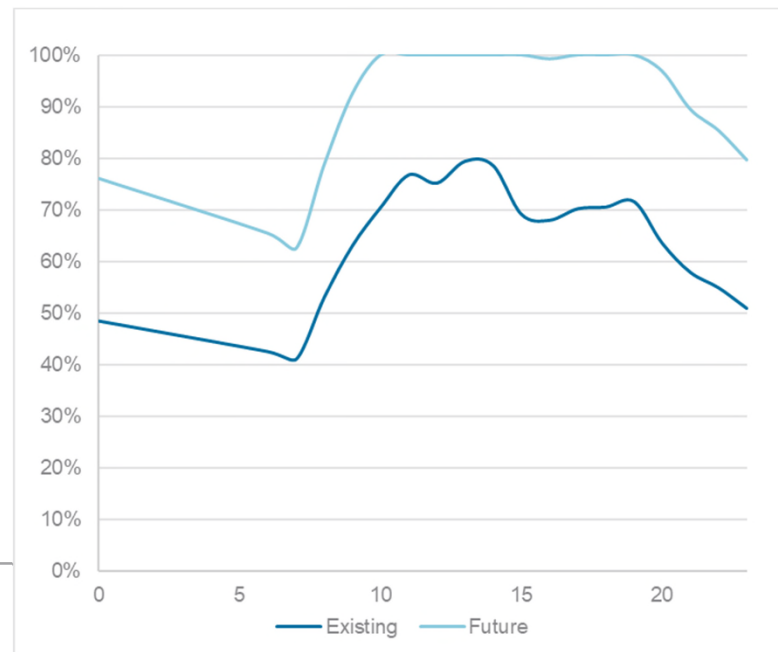
(total spaces) / (dwelling units + employees)

- Existing: 1.74
- Future: 1.57

## Model

Existing daily avg. occupancy: 63%

Future daily avg. occupancy: 91%



# Grant Street to Pearl Street



## Parking ratios

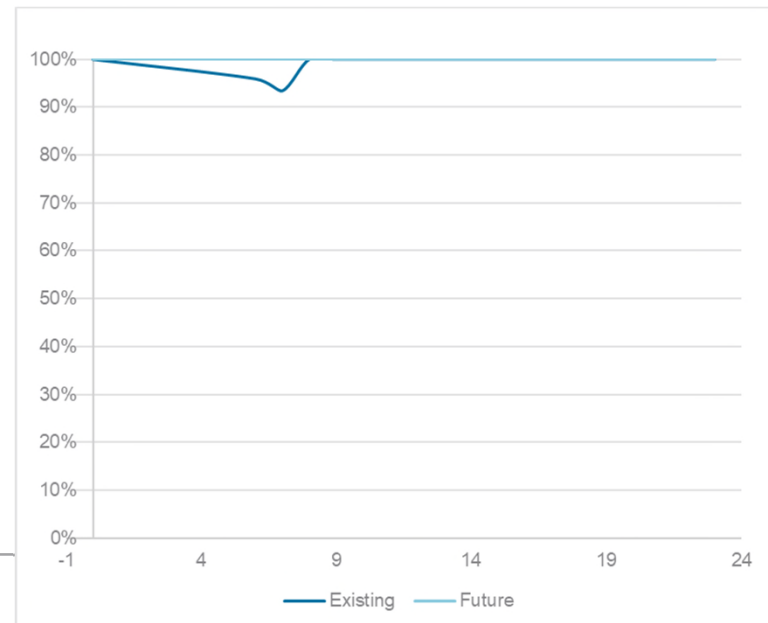
(total spaces) / (dwelling units + employees)

- Existing: 0.78
- Future: 0.67

## Model

Existing daily avg. occupancy: 99%

Future daily avg. occupancy: 100%





## Management options



# Menu of Management Strategies

*Easier*

*Typical sequence*

- Improve definition of parking spaces
- Designate more short-term (5min, 15min, 30min) drop off/ loading spaces
- Time limits to increase turnover
- Paid parking to increase turnover
- Residential parking permits (RPP)
- New off-street capacity
- Remote lots
- Mode shifts

*Harder*



# Management Strategies

- Improve definition of parking spaces



Bottom Photo credit: ANDREW HARRISON/STAFF, Cranbury Press



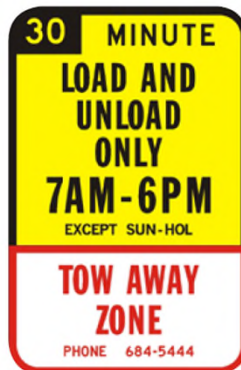
# Management Strategies

- Designate more short-term (5min, 15min, 30min) drop off/ loading spaces



## PASSENGER LOAD

All vehicles may stop for 3 minutes to pick up and drop off passengers during posted hours. (Curb color: white.)



## LOAD AND UNLOAD

All vehicles may load/unload during posted hours. (Curb color: yellow.)





# Management Strategies

- Time limits



## TIME-LIMITED AREAS

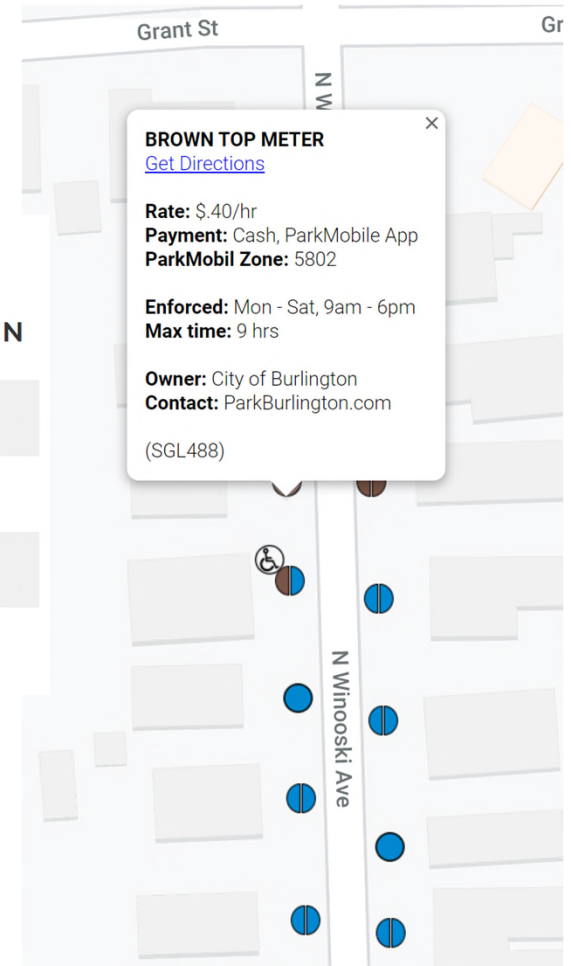
Park up to posted time limit. You must then move your vehicle off the block (both sides of the street): for example, to the next block or around the corner.

# Management Strategies

- Paid parking

## On-Street Meter Rates

METER TYPE	RATE	ACCEPTS	TIME RESTRICTION
SMART METER	\$1.50/HR	CREDIT/DEBIT, COIN, PARKMOBILE	NONE
YELLOW-TOP, SHORT TERM	\$1/HR	COIN, PARKMOBILE	30 MINUTES
BLUE-TOP, MID TERM	\$1/HR	COIN, PARKMOBILE	3 HOURS
BROWN-TOP, LONG TERM	\$0.40/HR	COIN, PARKMOBILE	9 HOURS



### BROWN TOP METER

[Get Directions](#)

**Rate:** \$.40/hr

**Payment:** Cash, ParkMobile App

**ParkMobil Zone:** 5802

**Enforced:** Mon - Sat, 9am - 6pm

**Max time:** 9 hrs

**Owner:** City of Burlington

**Contact:** [ParkBurlington.com](mailto:ParkBurlington.com)

(SGL488)

Source: Park Burlington



# Management Strategies

- Residential parking permits (RPP)

## Students

- Completed Current Lease
- Valid Driver's License
- Valid Registration
- Valid School ID

Students will be issued a permit for up to one year. Students will be issued two guest passes **per dwelling unit**.

## Renters/Homeowners

- Valid Driver's License with address of Resident parking street or valid utility bill with name and address
- Valid Registration

Renters/Homeowners will be issued a permit for up to two years. Renters/Homeowners will be issued two guest passes **per dwelling unit**.



# Management Strategies

- New off-street capacity
  - *Dedicate spaces available for others through management and shared use agreements.*
  - *Construct additional parking capacity*
- Remote lots
  - *Consider lots for large employers*
  - *Nearby lots available for those with infrequent parking needs*
  - *Service with ride hailing, transit, or bike infrastructure*
- Mode shifts
  - *Goal to reduce vehicle ownership and vehicle parking demands*
  - *Transit, bike, walking*
  - *Increasing diversity and intensity of land use*





## **Evaluation of management strategies for N Winooski Ave**

**Committee Discussion and Feedback**

# Process

## GOAL

Identify practical strategies for balancing parking supply and demand north of Pearl Street, with the goal of meeting essential parking needs while freeing up space for dedicated bike lanes.

- Performance Measure
  - Estimate unmet parking demand
  - Develop management options
- Evaluation process
  - Segment by Segment
  - Time of day focus on user groups (Residents, Visitors, Employees, Businesses & orgs)
  - Specific attention to equity and fair impacts

	Base Future
Description	Remove parking. Existing management
Unmet demand (weekday @ 2pm)	39 (5% of estimated total demand)



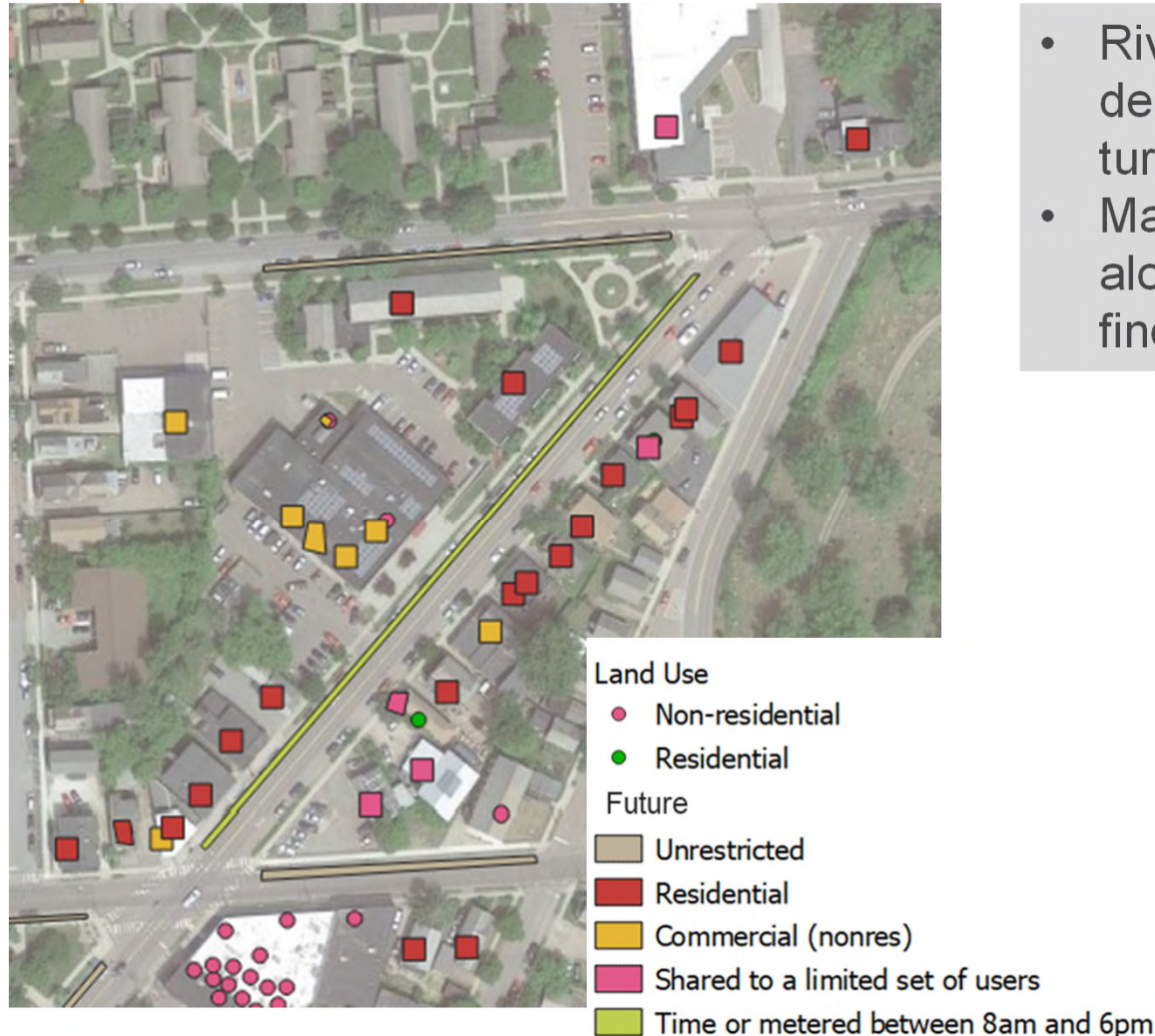
# Task At Hand

- Segment by Segment consideration
- Confirm priorities for user group for each time period
- Identify the applicable Management Strategies for each time period





# Riverside to Archibald



- Riverside remains in very high demand and highly utilized with low turnover if unmanaged
- Management appears to work along N. Winooski with residential finding spaces in evenings.

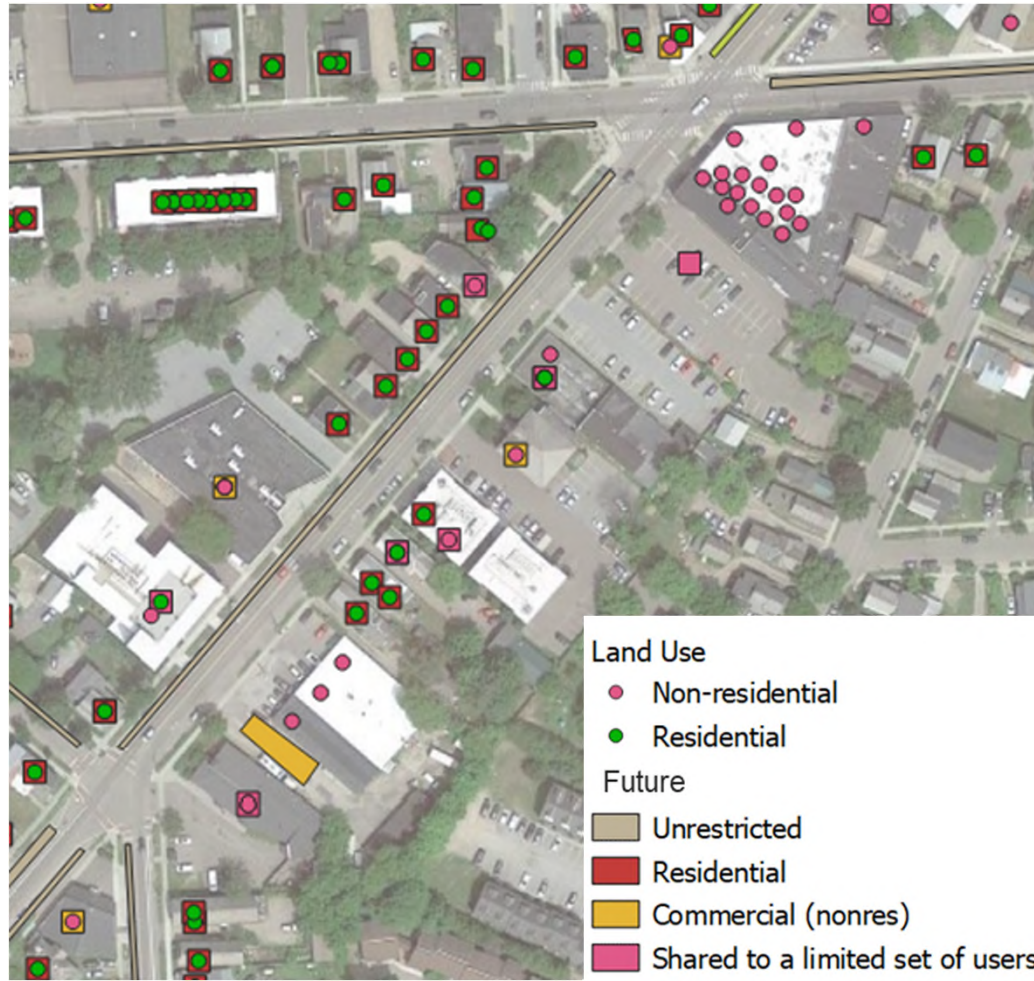


# Riverside to Archibald

- Improve definition of parking spaces
- Designate more short-term (5min, 15min, 30min) drop off/ loading spaces
- Time limits
- Paid parking
- Residential parking permits
- New off-street capacity
- Remote lots
- Mode shifts

	User Group Priority (residents, businesses/orgs, employees, visitors)			Draft Management Options
Overnight	Residents / Visitors / Employees			No priority. Unmanaged.
Morning / Mid-day	Visitors & Commercial	Employees	Residents	Commercial loading (limited to specific times of the day.) and combined to other uses. 15-30 min loading for curbside activity. Interest in having some 2hr parking to compensate for the loss of 2hr parking.
Evening	Residents / Visitors / Employees			Unmanaged. However we might put a few 15 min loading spaces for curbside pickup/drop off.
All Times				New off street capacity.  It is desired to investigate additional <b>off-street spaces</b> . Unlikely in near term. However, the committee needs to inform whether it is strategy worth pursuing. - can more individual engagement with owners of available off-street lots to encourage sharing

# Archibald to Union/Decatur



- Most constrained on-street segment in the northern study area
- Sees overflow demand from northern segment
- Coming from office and some restaurant demand

# Archibald to Union/Decatur

- Improve definition of parking spaces
- Designate more short-term (5min, 15min, 30min) drop off/ loading spaces
- Time limits
- Paid parking
- Residential parking permits
- New off-street capacity
- Remote lots
- Mode shifts

	Use Group Priority (residents, businesses/orgs, employees, visitors)		Draft Management Options
Overnight	Residents / Visitors / Employees		Unmanaged
Morning / Mid-day	Visitors & Commercial	Residents / Employees	2 hr parking limits.  Commercial loading with some short term loading spaces. 15 / 30 min loading
Evening	Residents / Visitors / Employees		Unmanaged



# Union/Decatur to North Street



- Current unmanaged regiment is forecast to see small increase in demand
- Future conditions are expected to approach the 70% occupancy for mid-day hours should initiate the need to review management

# Union/Decatur to North Street

- Improve definition of parking spaces
- Designate more short-term (5min, 15min, 30min) drop off/ loading spaces
- Time limits
- Paid parking
- Residential parking permits
- New off-street capacity
- Remote lots
- Mode shifts

	Use Group Priority (residents, businesses/orgs, employees, visitors)			Draft Management Options
All Times				Unmanaged. Monitor the demand





# North Street to Grant Street



- Most dense residential part of corridor with 131 household units at an average of ~1.4 off-street spaces per unit provided.
- Current unmanaged regiment is forecast to see big change in occupancy. From 75-80% to full most of the day. Pulling some demand from southern block, but also North Street.

# North Street to Grant Street

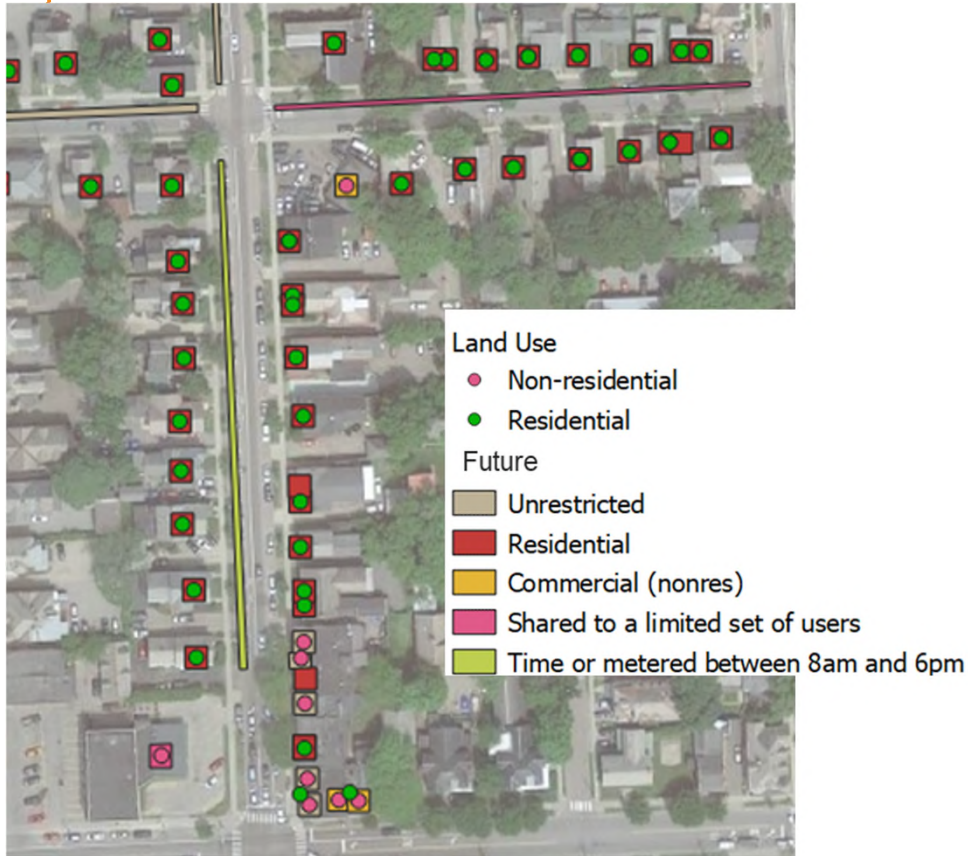
- Improve definition of parking spaces
- Designate more short-term (5min, 15min, 30min) drop off/ loading spaces
- Time limits
- Paid parking
- Residential parking permits
- New off-street capacity
- Remote lots
- Mode shifts

	Use Group Priority (residents, businesses/orgs, employees, visitors)			Draft Management Options
Overnight	Residents / Visitors / Employees			
Morning / Mid-day	Employees / Visitors /			Need to consider whether it is unmanaged or whether there is a mix of blue and brown meters. Are there some spots for short-term parking (15-30 min).  Consider a RPP for evenings/overnight.
Evening	Residents / Visitors / Employees			





# Grant Street to Pearl Street



- 2nd dense residential part of corridor with 105 household units at an average of  $\sim .7$  off-street spaces per unit provided.
- Fewest spaces per users (when accounting for dwelling units and employment)
- High demand continues with this on-street segment (13 spaces) having the highest total unmet parking demand (3x multiple)

# Grant to Pearl

- Improve definition of parking spaces
- Designate more short-term (5min, 15min, 30min) drop off/ loading spaces
- Time limits
- Paid parking
- Residential parking permits
- New off-street capacity
- Remote lots
- Mode shifts

	Use Group Priority (residents, businesses/orgs, employees, visitors)			Draft Management Options
Overnight	Residents	Visitors	Employees	RPP to be brought to the NPA
Morning / Mid-day	Visitors & Commercial	Residents	Employees	Maintain existing mix of blue and brown meters in the section.
Evening	Residents	Visitors	Employees	RPP to be brought to the NPA
All Times				



# PMP Process

## GOAL

Identify practical strategies for balancing parking supply and demand north of Pearl Street, with the goal of meeting essential parking needs while freeing up space for dedicated bike lanes.

- Are we balancing “supply” and “demand”?
- Are essential parking needs being met?
- Are we treating populations equitably and fairly?
  - Specific to racial, income, or other populations of interest





## Committee Discussion



# Public Comment Period

## **To participate in public comment via Zoom:**

- If signed in via Zoom, please use the “Raise Your Hand” feature to alert the project team that you wish to speak during public comment period. When it’s your turn to speak, your name will be called and you will be unmuted. In the event of challenges with Zoom video, please use the call-in option.
- If you are calling in, please press \*9 which will alert the project team that you wish to speak. Your phone # will be called out and you will be unmuted when it’s your turn to speak.
- Comments in the YouTube livestream are not monitored – please participate through Zoom platform or phone, connection details:  
<https://www.burlingtonvt.gov/dpw/WinAveImprovements>

If you encounter any difficulties when attempting to speak during public forum, please email [nlosch@burlingtonvt.gov](mailto:nlosch@burlingtonvt.gov).



## Committee Actions

### **Consensus:**

- **Priority users for each segment and time**
- **Management priorities**



## Next Steps



# Schedule

<b>Phase B</b>	
Survey design	July 26 <sup>th</sup> – August 6 <sup>th</sup>
Field survey	August 9 <sup>th</sup> – 27 <sup>th</sup>
Committee Meeting: review survey, draft evaluation criteria and analysis, preliminary parking management plan	September 9 <sup>th</sup>
Committee Meeting: review and approve parking management plan strategies	October 28 <sup>rd</sup>
NPA Meeting	Nov
Committee Meeting to approve plan to bring to Public Works Commission & City Council	Nov/Dec
Public Works Commission & City Council	Nov/Dec





# Thank You!

## PROJECT INFORMATION:

Burlington Public Works Website: <https://www.burlingtonvt.gov/dpw/WinAveImprovements>

CCRPC Website: [Winooski Avenue Corridor Study](#)

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*Steering Committee*



CHITTENDEN COUNTY RPC  
Communities Planning Together



*Consultant*