NEW ELEMENTARY SCHOOL

REED SITE, ARLINGTON PUBLIC SCHOOLS CONCEPT DESIGN

VMDO

BLPC + PFRC JOINT MEETING

BUILDING LEVEL PLANNING COMMITTEE
PUBLIC FACILITIES REVIEW COMMITTEE

1. **Welcome / Opening remarks**
2. **Updates**
3. **County Staff Presentation**
4. **Transportation and Parking**
   - **a. APS GO! Survey**
   - **b. Pedestrian Access**
   - **c. Parking Demand**
   - **d. Parent Pick-up/Drop-off**
5. **BLPC/PFRC Discussion**
6. **Public Comments**
7. **Next Steps & Adjourn**

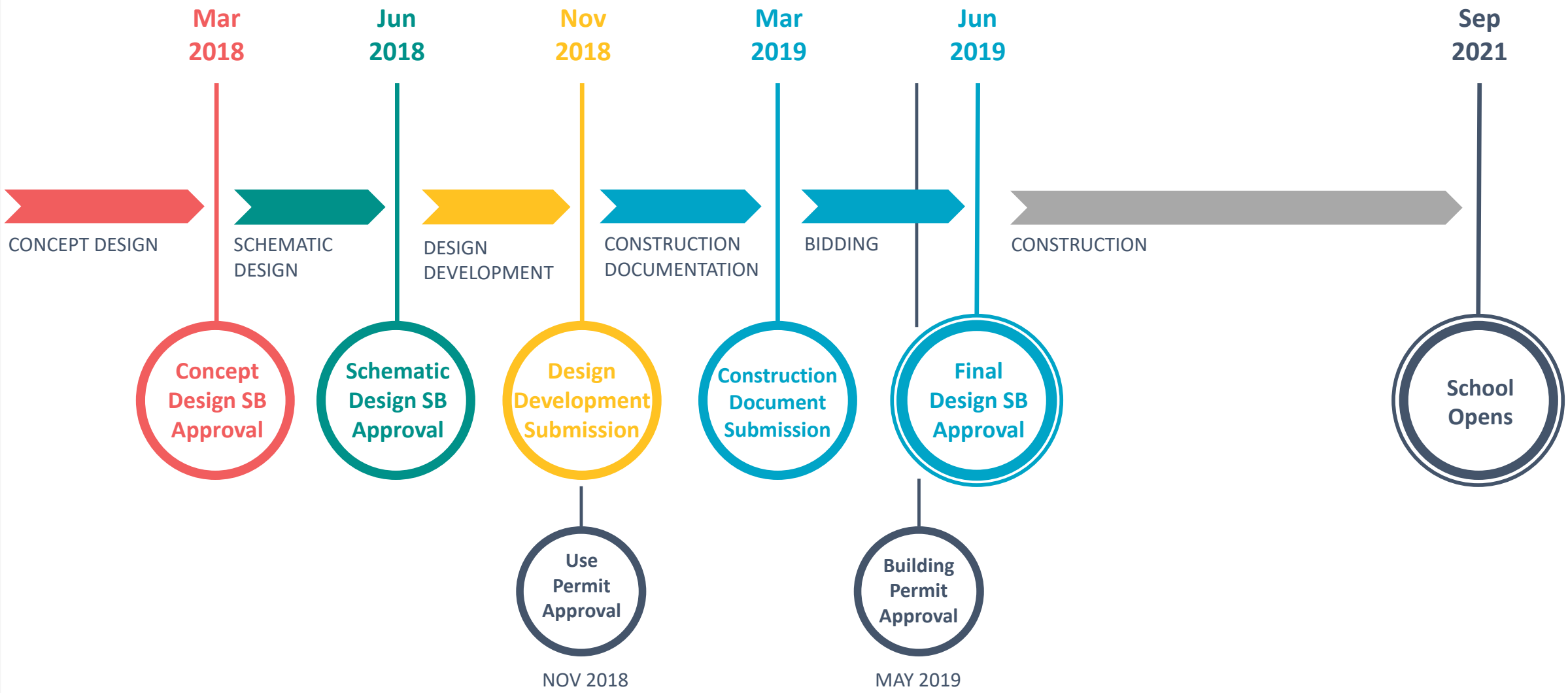
VMDO

February 21, 2018

WELCOME / OPENING REMARKS

PROJECT PARAMETERS

1. Create a **new neighborhood elementary school** with an attendance zone
2. Support APS Strategic Plan Goals, specifically **Goal #4 – Provide Optimal Learning Environments**
3. Address capacity by providing at least **725 seats**
4. Open by start of school **2021**
5. Spend a maximum project cost **$49 million, with options for less**



OVERALL PROJECT TIMELINE

UPDATES

SINCE WE LAST MET…

- February 9th – School Board Committee of the Whole Meeting
- February 15th – School Board approved Construction Manager at-Risk (CMR) contract award to Gilbane Building Company
- Ongoing activities:
  - Concept Design phase cost estimates
  - Concept Design report for School Board
  - Transportation Study

COUNTY STAFF PRESENTATION

REED SCHOOL UPDATE

FEBRUARY 21, 2018

ARLINGTON
VIRGINIA

SITE PARKING CONSIDERATIONS

1. Library parking on-site
2. All APS parking on-site
3. Maintain existing site amenities

LIBRARY PARKING

- Zoning ordinance requirement
  - 1 space per 500 square feet of floor area
- Library has 9 full-time staff
  - 33 spaces marked reserved for library staff
- Average 79 new visitors per hour
  - Peak weekdays 10am-12pm
    Thursday & Friday story time

REED PROJECT

- Adjusted based on actual needs
- Adjusted based on TDM
  - Swanson/APS Go data
- All parking to be provided on-site*
- Preserve on-street parking in the vicinity for retail and library use (as it exists today)

SCHOOL PARKING: ZONING ORDINANCE SECTION §14.3.7

Parking Calculations for Reed Site - School			
ZO Requirement for Employee Parking			
	Employee Parking Ratio	Number of Students	Required Parking Spaces
Elementary Employees	1 Space per 7.5 Students	725	97
Elementary Employees	1 Space per 7.5 Students	1,000	134
ZO Requirement for Visitors Parking			
	Visitor Parking Ratio	Number of Students	Required Parking Spaces
Elementary Visitors	1 Space per 40 Students	725	19
		1,000	25
TOTAL Elementary Requirements		725 Students	116
		1,000 Students	159
	Library Parking Ratio	Floor Area	Required Parking Spaces
Library Parking	1 Space/500 sq. ft. floor area	16,403 sq. ft.	33
Total ZO Required Parking Elementary + Library			
		725 Students	149
		1,000 Students	192

SCHOOL PARKING : MODIFICATION

Section §14.3.7.c of the Zoning Ordinance permits the County Board to modify parking requirements for schools to balance other County environmental and recreational goals and objectives.

SITE AMENITIES

- Maintain existing sport fields/courts
  - Middle school baseball field
  - (2) basketball courts
  - Soccer field
- Maintain County property
  - Green Space
  - Champion Tree

NEXT STEPS

Transportation study

School/library/retail coordination

VDOT coordination

ARLINGTON
VIRGINIA

ARLINGTON
VIRGINIA

TRANSPORTATION AND PARKING

TRANSPORTATION SCHEDULE

Overall Schedule

March 8th
Information Item to School Board

March 22nd
Action Item to School Board

April through June
Schematic Design

Transportation Schedule

January 24th
Finalized Scoping Agreement

February 8th
Traffic Data Collection

February 21st
BLPC/PFRC Transportation Meeting

March 21st
BLPC/PFRC Transportation Meeting

Late April
Draft Transportation Report Released

May & June
Transportation Report Comments and Revisions

After Schematic Design
TDM, Parking and Arrival/Dismissal Plans

TOPICS

MEETING 1: 02-21-2018

APS Go! Survey data
What is it telling us?

Pedestrian access and walking routes
How can we improve and expand the walk zone?

Parking demand
Estimates and thoughts on supply needs

Parent drop-off and pick-up
Estimates and thoughts on accommodations and operations

MEETING 2: 03-21-2018 (*PRELIMINARY*)

Vehicular traffic to/from school
How much and when?

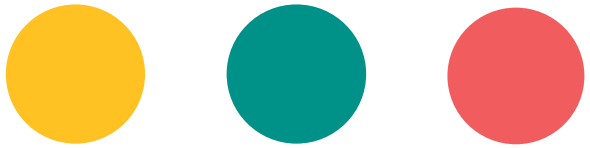
Traffic capacity at nearby intersections
Implications on school access

School buses
Initial thoughts on routing and maneuvering

Potential Improvements
Roadway geometry & operations

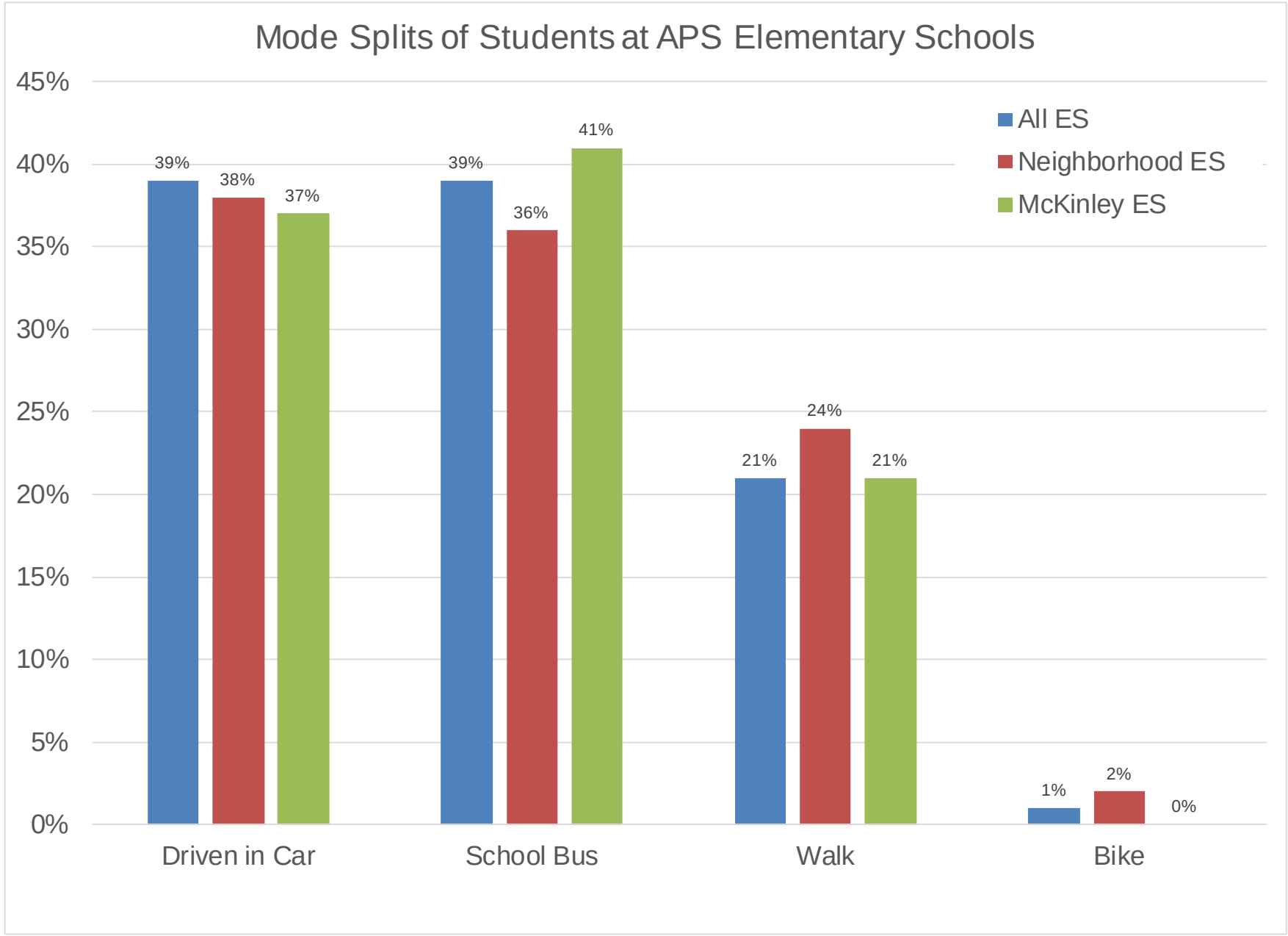
Responses to comments from Meeting #1

APS GO! SURVEY DATA



STUDENT MODE SPLIT

Mode Split data for Elementary schools is pretty consistent between neighborhood serving schools

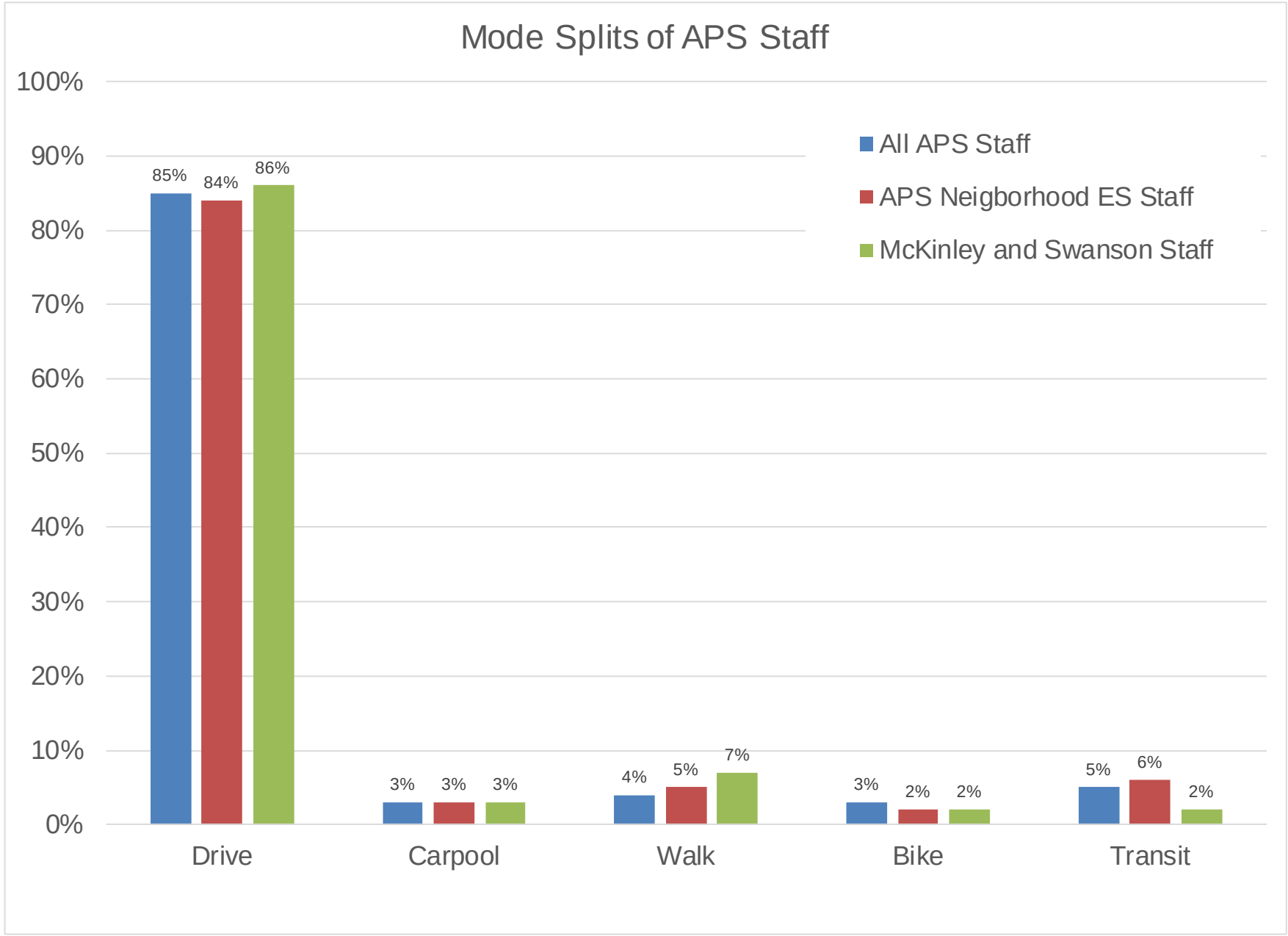


STAFF MODE SPLIT

Mode Split data for staff is also pretty consistent across schools.

Nearby schools have higher percentage walking, but fewer transit riders.

APS Go! data from 2013 showed a APS-wide staff mode split of 93% drive-alone, compared to 84% in the 2016 surveys.



PEDESTRIAN ACCESS

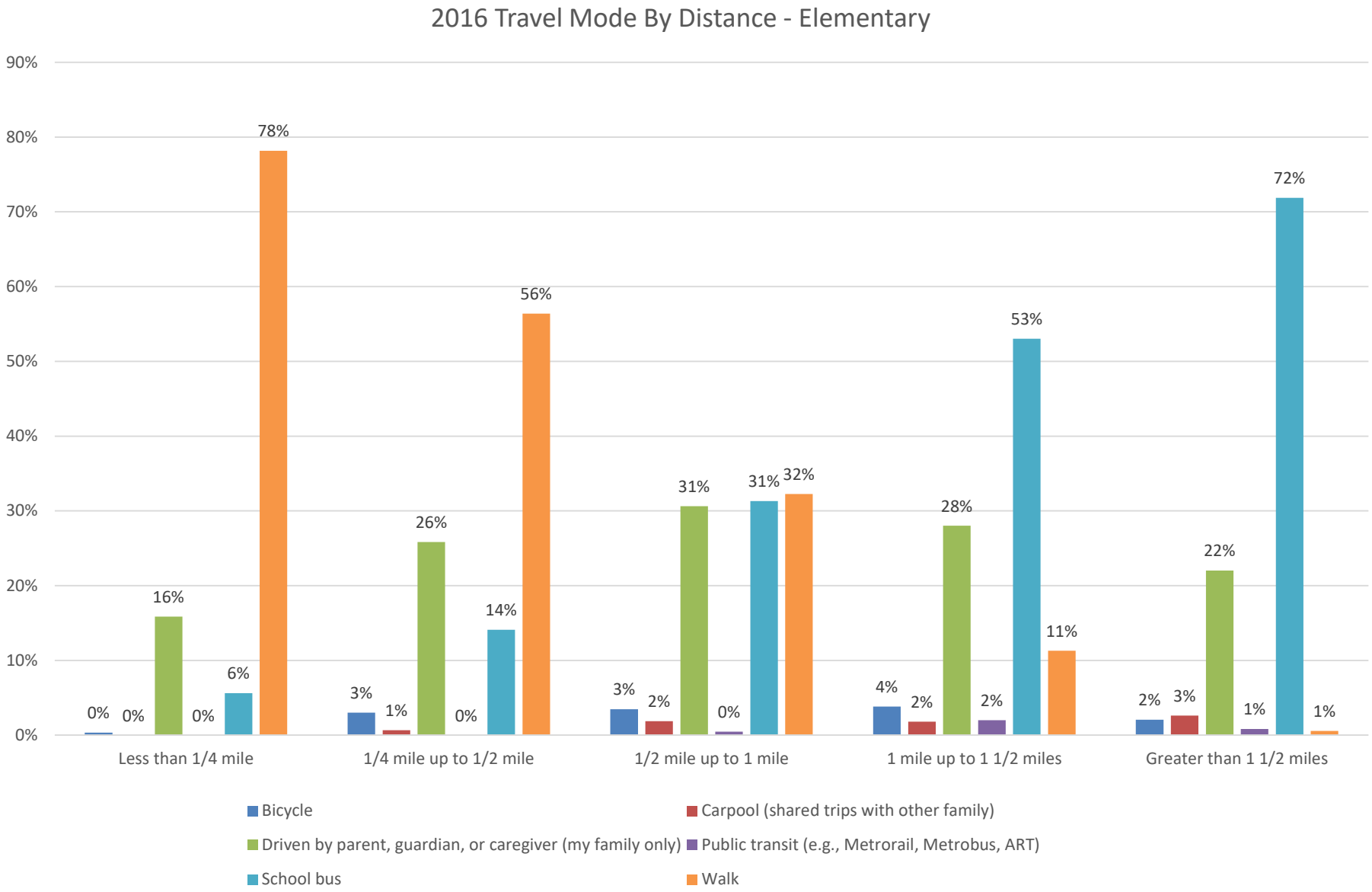
PEDESTRIAN ACCESS & WALK ZONE

APS policies

Review of walking route quality

Potential improvements to expand/enhance walk zone

System Level Mode of Access By Distance



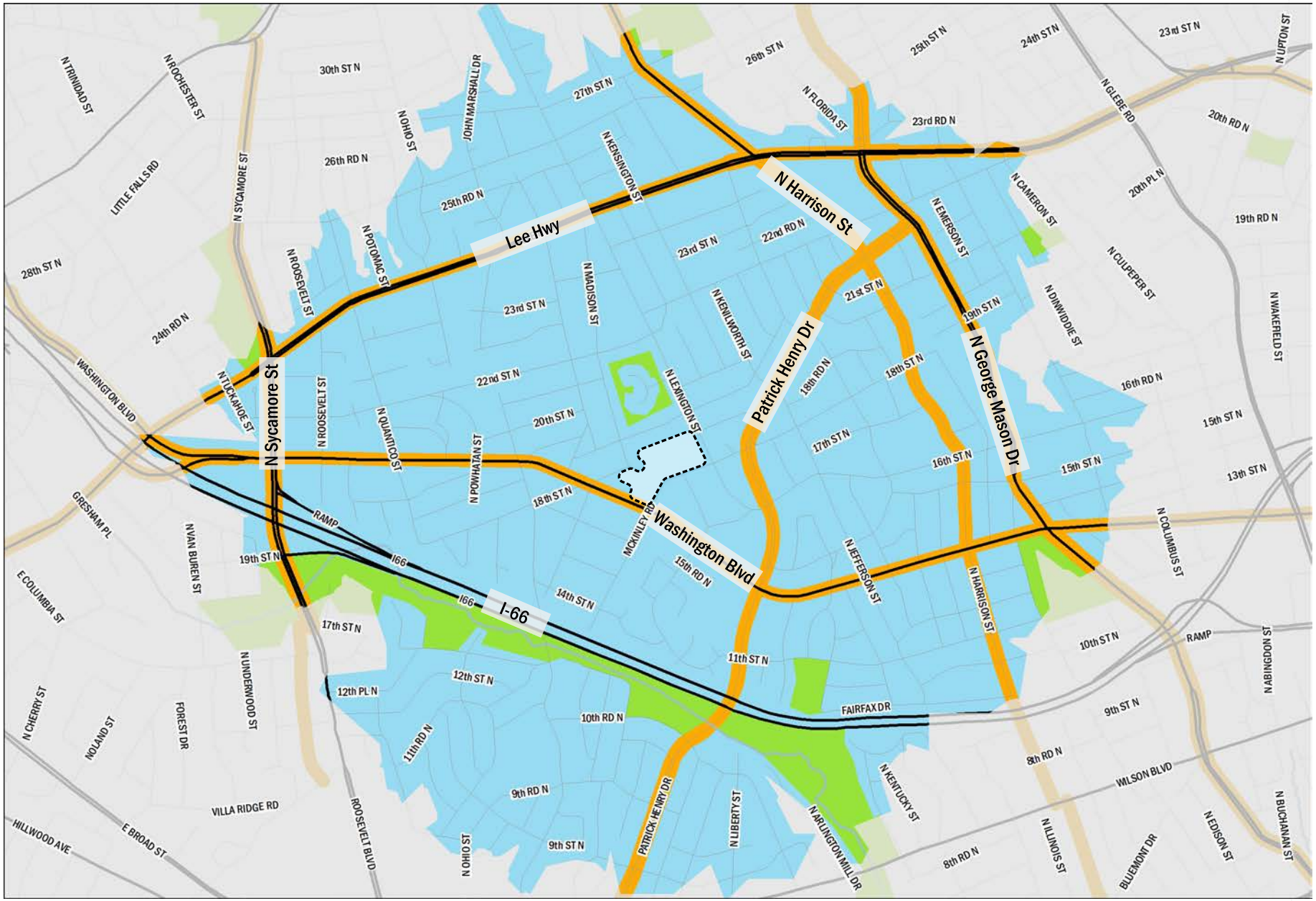
ONE MILE NETWORK

First step in identifying the walk zone

Walking distances one-mile from school site.

1-mile Walkshed

Arterials



PLANNING UNITS

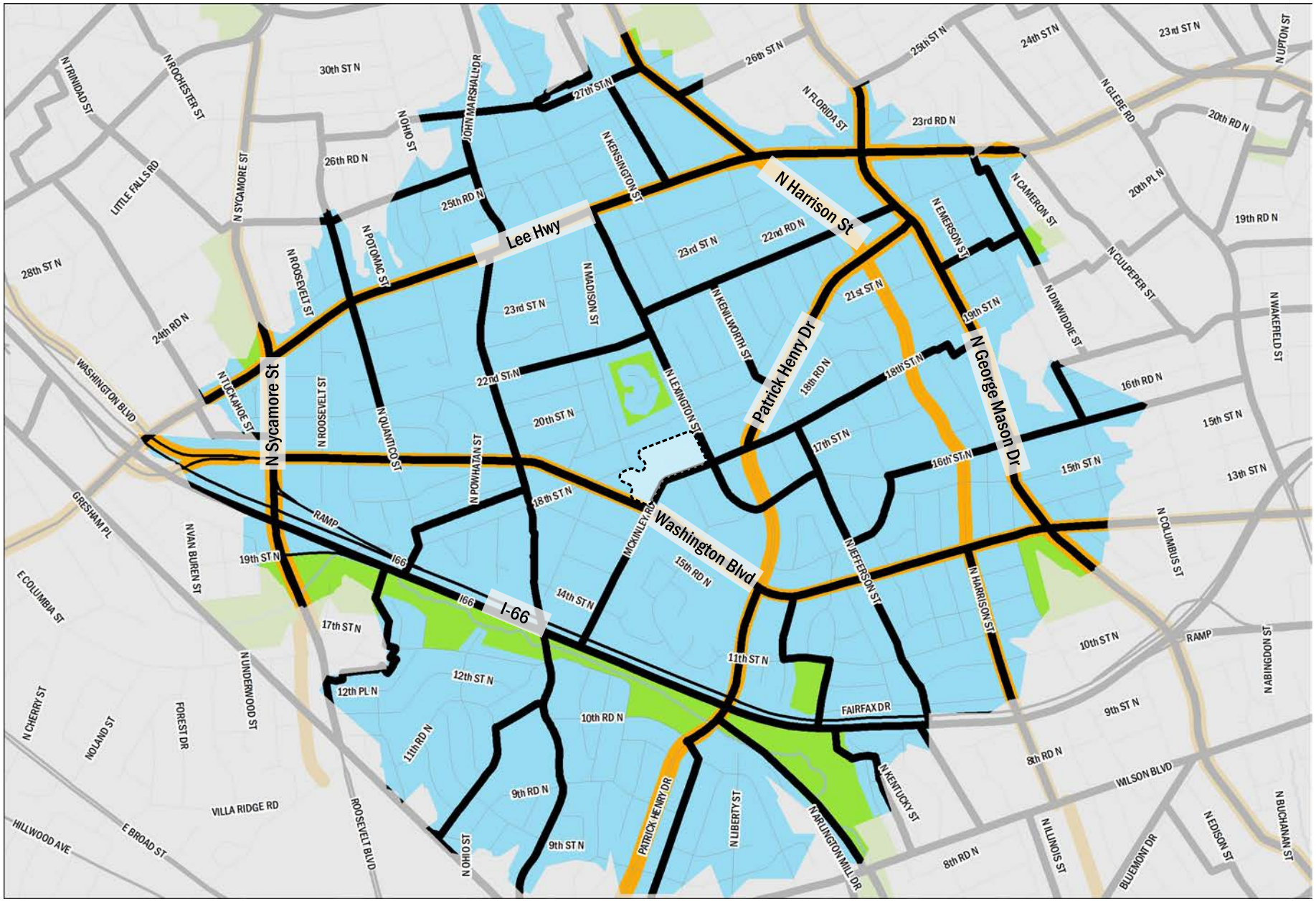
Building blocks of school boundaries, and thus also of walk zones

Only PUs fully within the one-mile network can be included in the walk zone

1-mile Walkshed

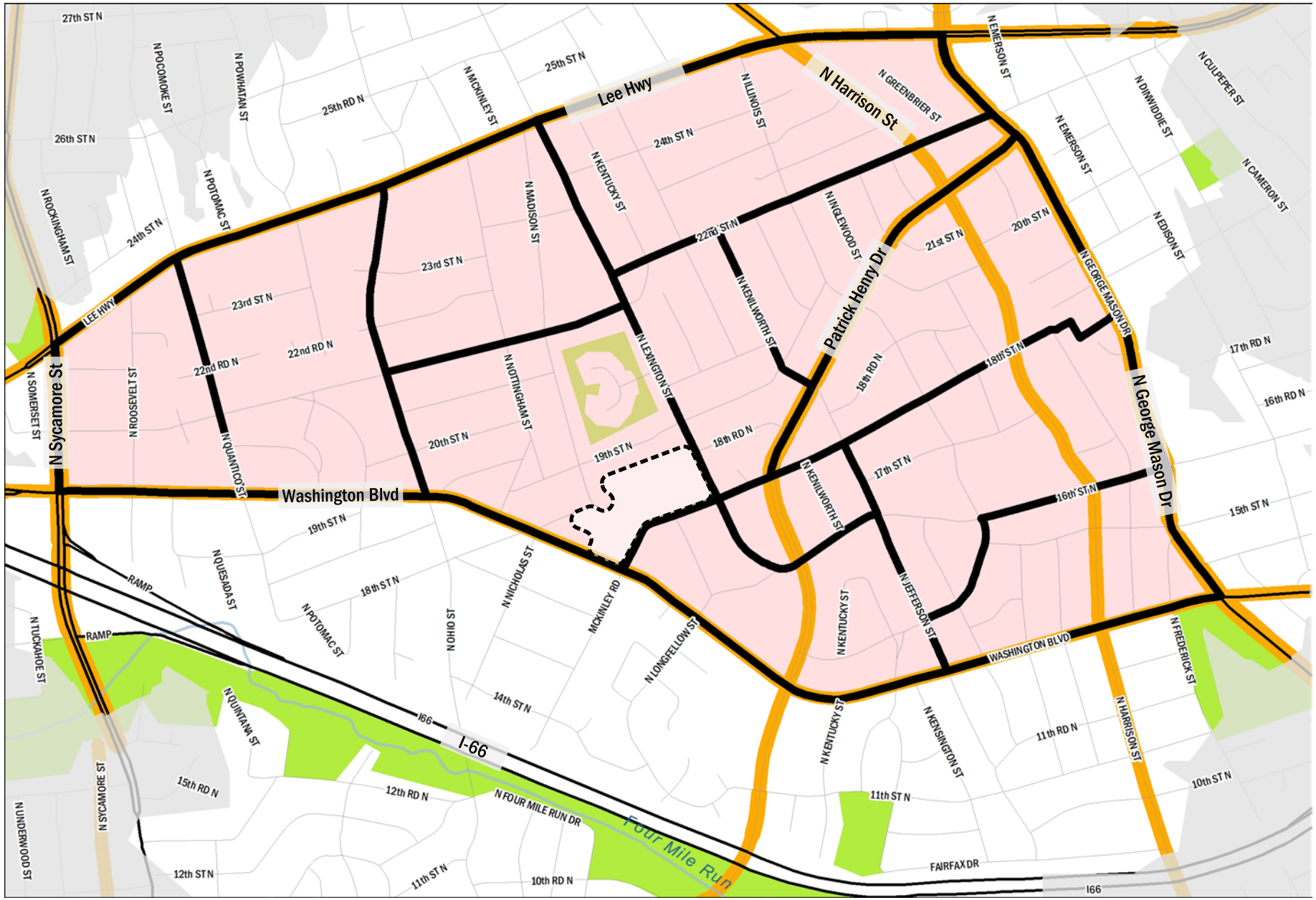
Arterials

Planning Units



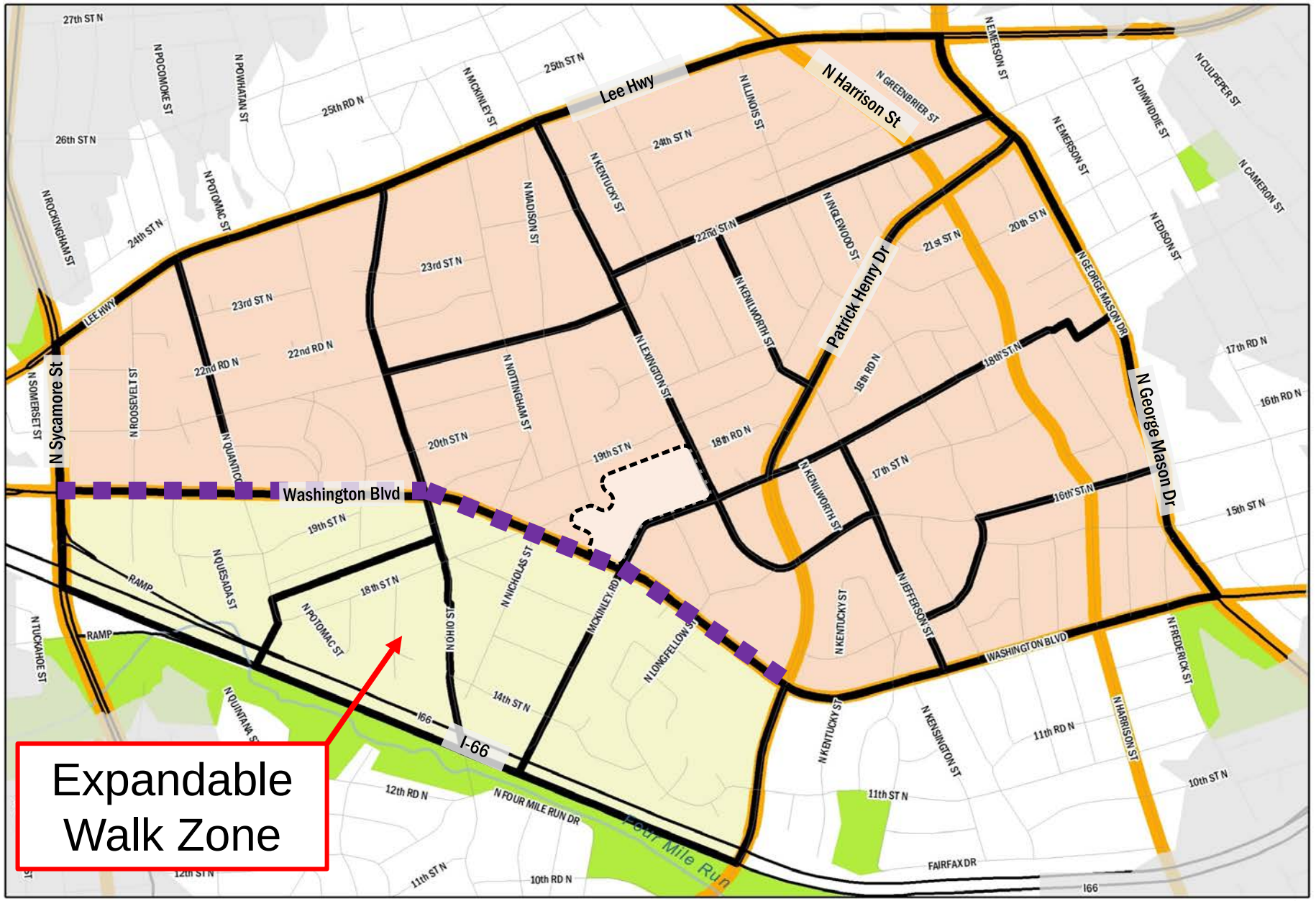
PRELIMINARY WALKZONE

The area around the school within the unconstrained 1 mile whose edges are defined by certain barriers or constraints.



EXPANDABLE WALKZONE

Planning Units within the one-mile walk, near the school, but with barriers in between. Potentially walkable with additional safety measures.



WALK SHED ANALYSIS

The following is a walk shed analysis of the potential new ES walk zone.

The walk shed analysis is a review of the quality of the walking experience for each Planning Unit that can potentially be included in the walk zone

<u>Considerations in walk shed analysis:</u>

Sidewalks

- What's the sidewalk coverage in the PU?
- What's the sidewalk coverage on the entire walking route (between PU and site)
- How many blocks just have sidewalks on one side of the street?

Crossings

- What are the potential difficult crossings on walking routes from PUs?
- How easy would difficult crossing be to mitigate?

SIDEWALK COVERAGE

Large variation in sidewalk coverage in Planning Units

A% / B%

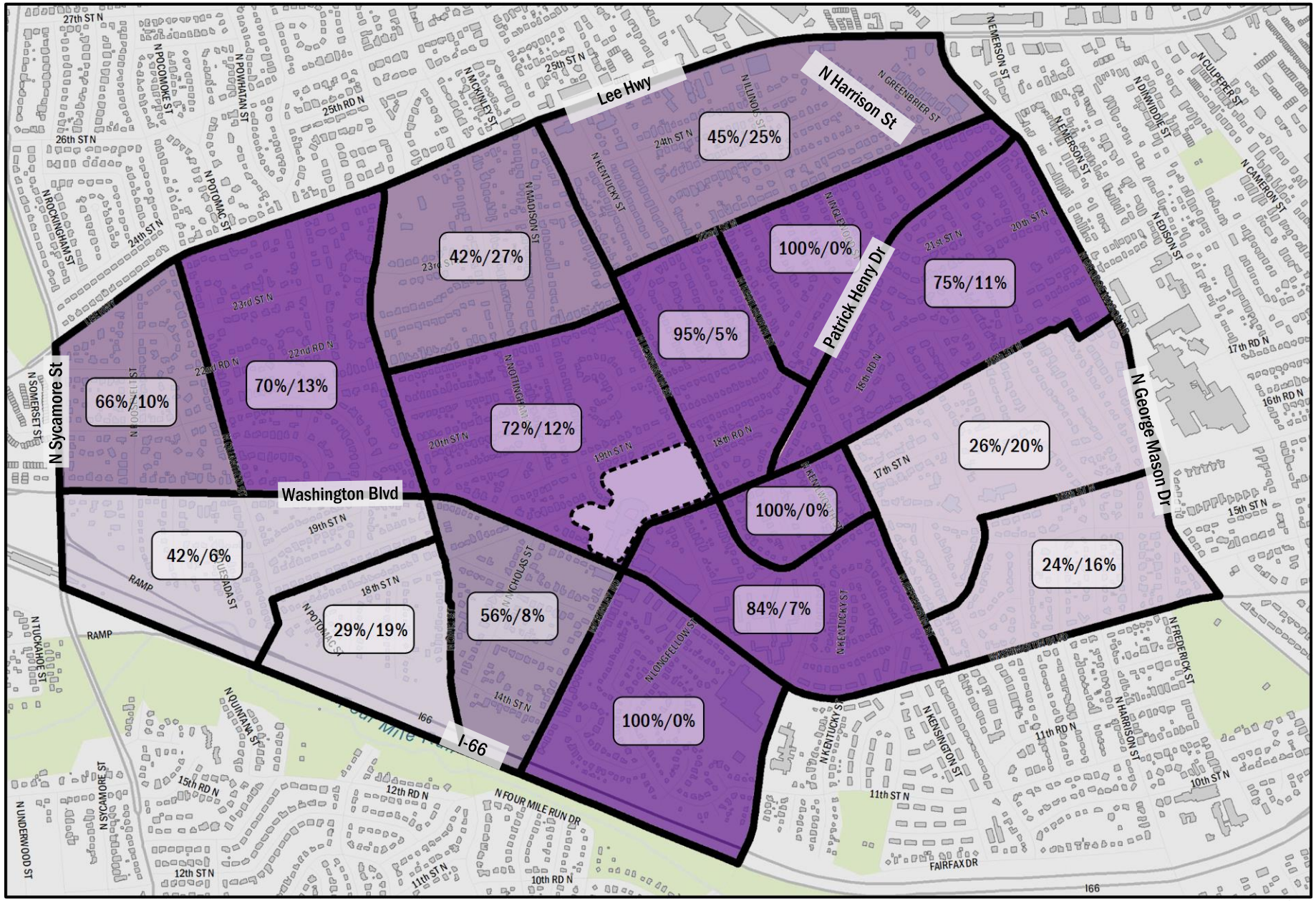
A - % Sidewalk on Both Sides of Street

B - % Sidewalk on One Side of Street

Over 80% coverage

50% to 80% coverage

Under 50% coverage



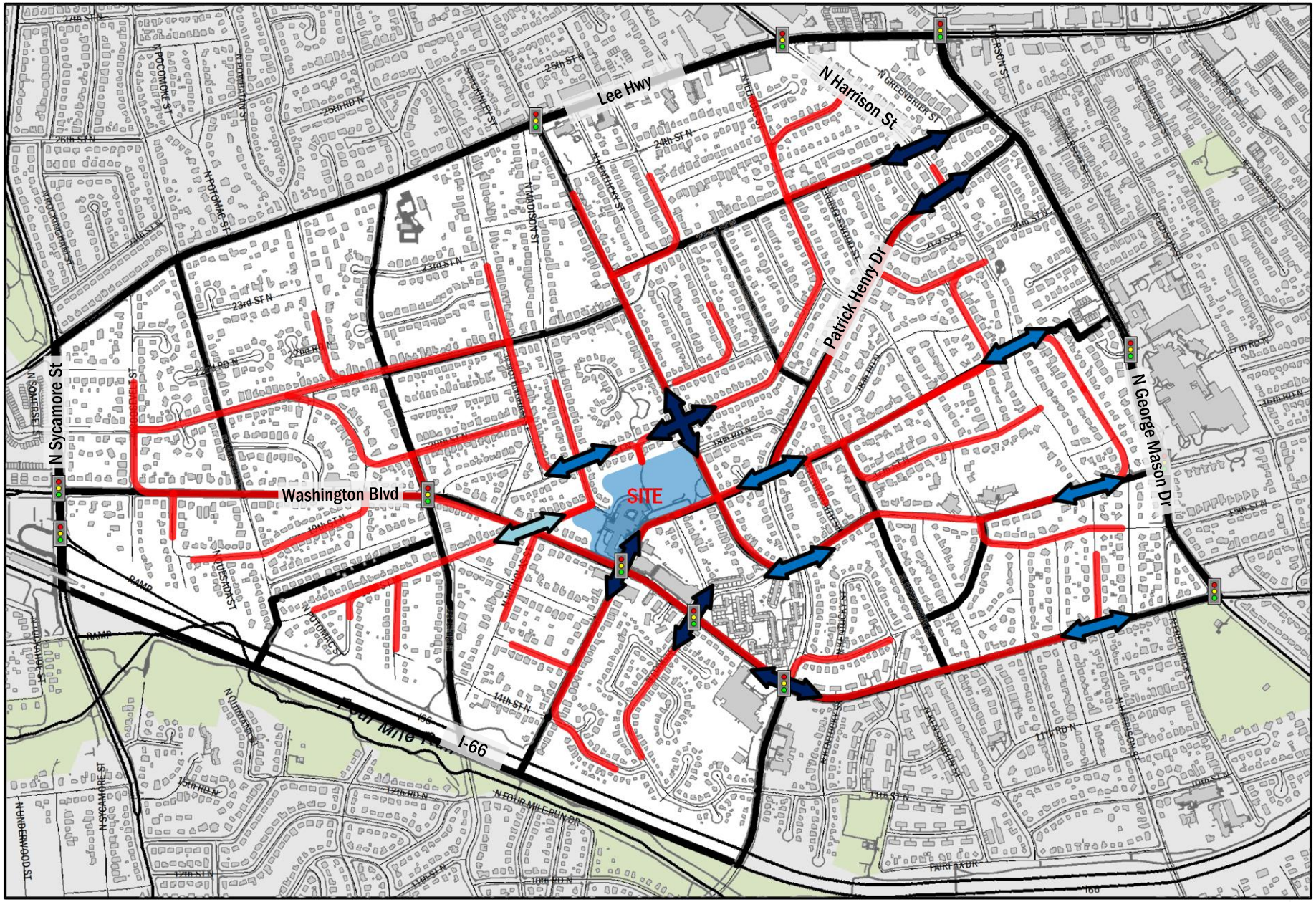
CROSSING QUALITY

A review of the quality of crossing at arterials and other significant streets

Acceptable
- signalized
- minimal crossing distance

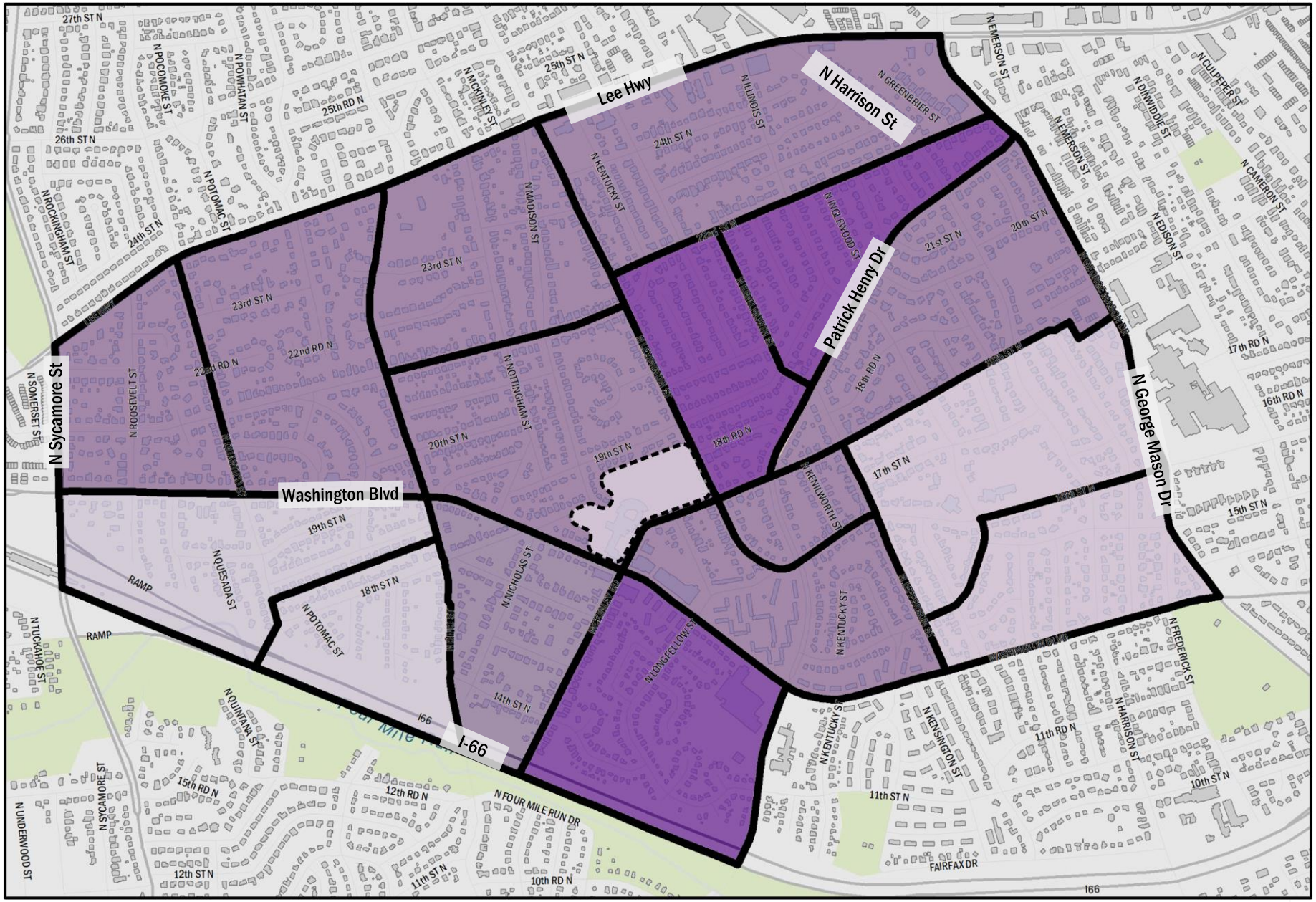
Acceptable w/ Improv.
- adding crossing guards
- intersection improvements

Req. Significant Improv.
- unsignalized
- large crossing distance
- would require substantial mitigation



COMBINED "GRADE"

The gaps in sidewalks will prove a challenge in establishing high quality walking routes



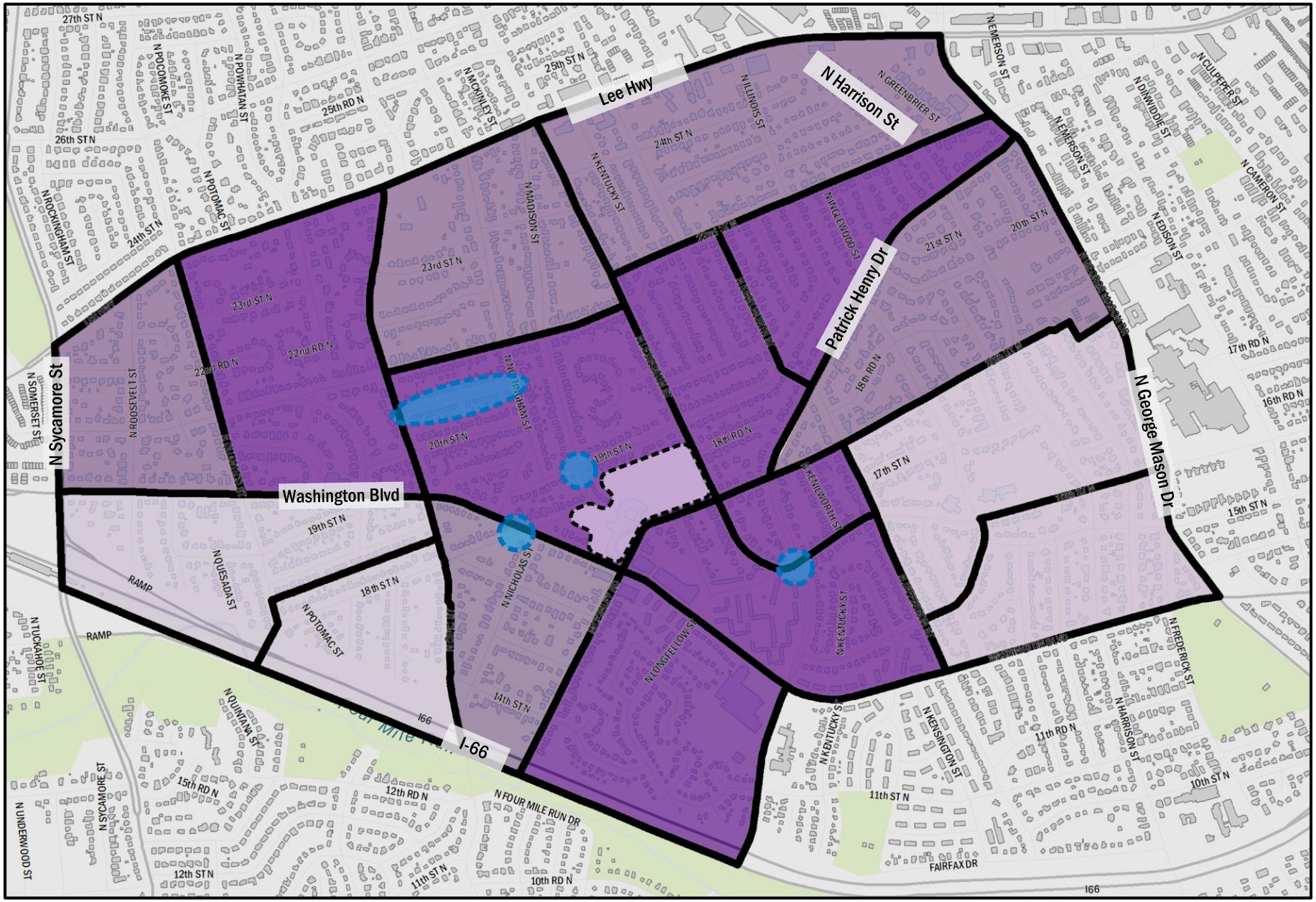
Good sidewalk coverage and crossings

Some sidewalk gaps and/or difficult crossings

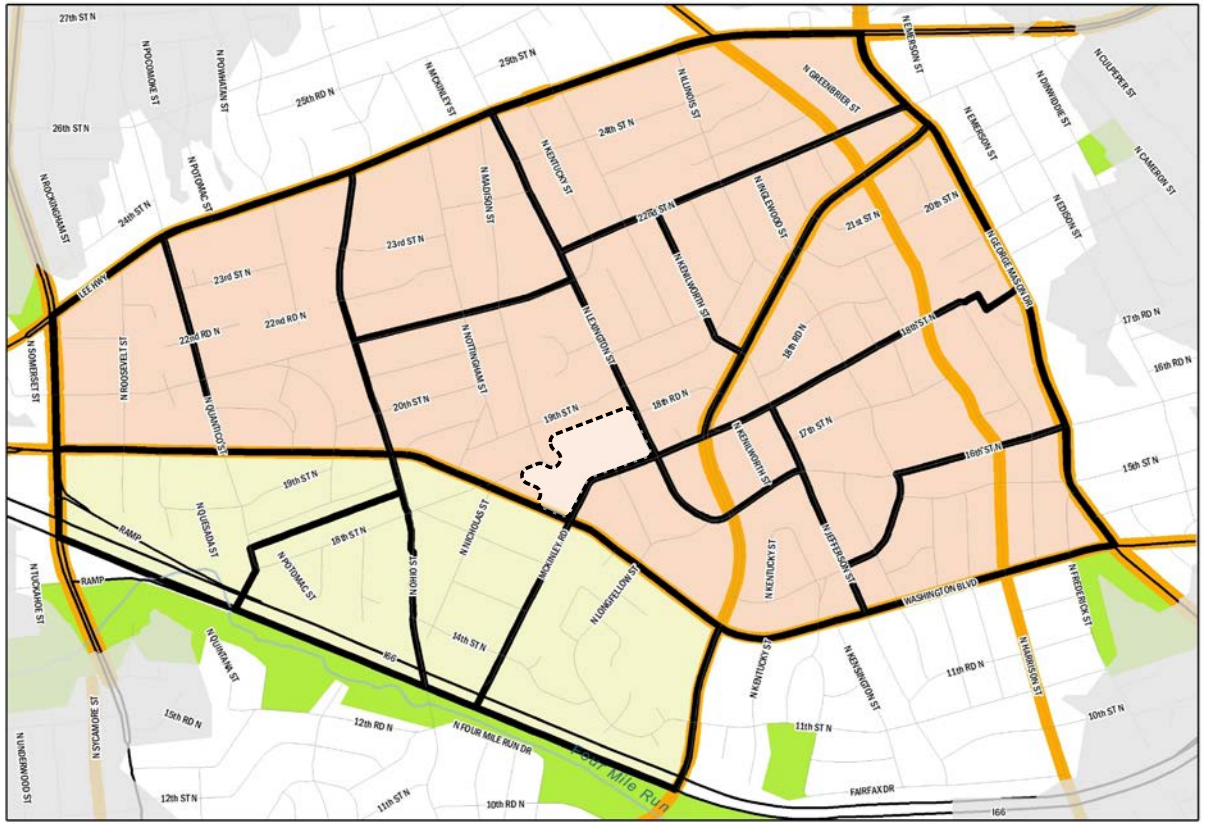
Significant sidewalk gaps and/or difficult crossings

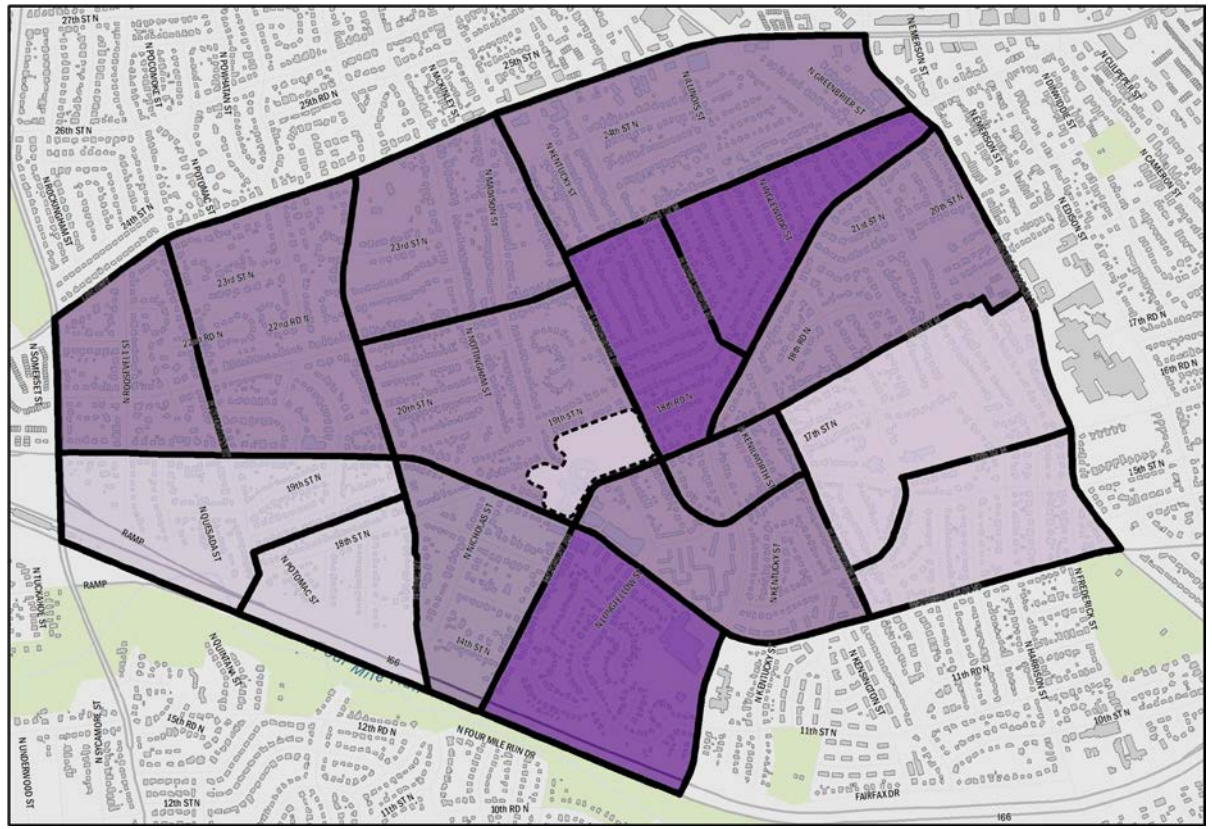
EXAMPLE MITIGATIONS

A crossing guard (or similar solution) on Patrick Henry and filling in some sidewalks on 21st Street can help improve a few Planning Units adjacent to the site



COMPARISON OF WALK ZONE AND WALK SHED ANALYSIS





- Some low quality PUs in preliminary APS walk zone
- Some high quality PUs in expandable APS walk zone

COUNTY PROJECTS

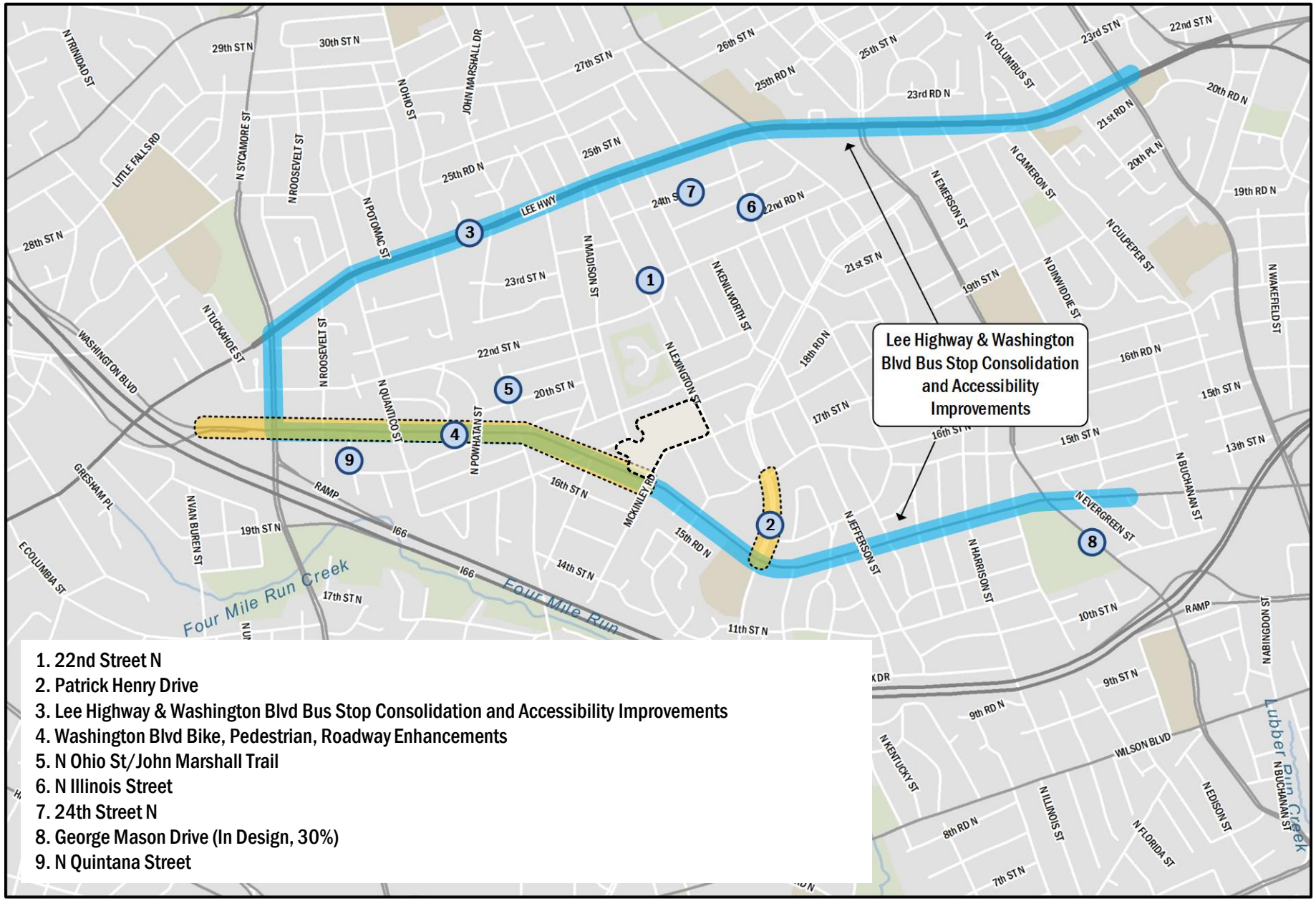
Multiple projects will improve pedestrian and bicycle network

Most will not have direct impact on the walk shed analysis results

Planned Improvement

Limits of Improvement

Lee Hwy and Washington Blvd Bus Stop Improvements



PEDESTRIAN

PEDESTRIAN THOUGHTS AND DISCUSSION

Improving quality of walking routes

- What is communities opinion of quality of walking in these neighborhoods?
- Need to review potential mitigations and look for others to improve routes

Impact of sidewalk gaps

- Should PUs with sidewalk gaps be in walk zone or not?
- Will parents be more likely to drive from these areas if they are in walk zone vs. bus zone?

Expandable Walk Zone

- Should any PUs rated highly be added to the walk zone?

Link to Online form:
https://survey.k12insight.com/survey.aspx?k=SsSRTVsYTQsPsPsP&lang=0&data=

APS Contact: Gladis Bourdouane, gladis.bourdouane@apsva.us

PARKING DEMAND

REQUIRED PARKING BY ZONING

150 TOTAL REQUIRED SPACES

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116 SCHOOL SPOTS

(19 VISITOR SPACES = (725 STUDENTS) / (40 STUDENTS/SPACE))
+
(97 STAFF SPACES = (725 STUDENTS) / (7.5 STUDENTS/SPACE))

34 LIBRARY SPOTS

(34 SPACES = (16,750 SF TOTAL AREA OF LIBRARY) / (500 SF PER SPACE))

SCHOOL PARKING DEMAND

Based on:

- 146 staff
- Staff driving mode split of 86% drive alone and 3% carpool
- Visitor data from APS Go! and prior APS ES reports

We are predicting:

- Peak staff parking demand: 120 spaces
- Peak visitor parking demand: 8 spaces
- Total: 128 spaces

With further TDM reductions, assuming the drive-alone percentage falls to 80%:

- The resulting staff demand is 111 spaces
- Total demand reduces to 119 spaces

EXISTING PARKING

Parking Demand Estimates (At Mid-Day)

Based on:

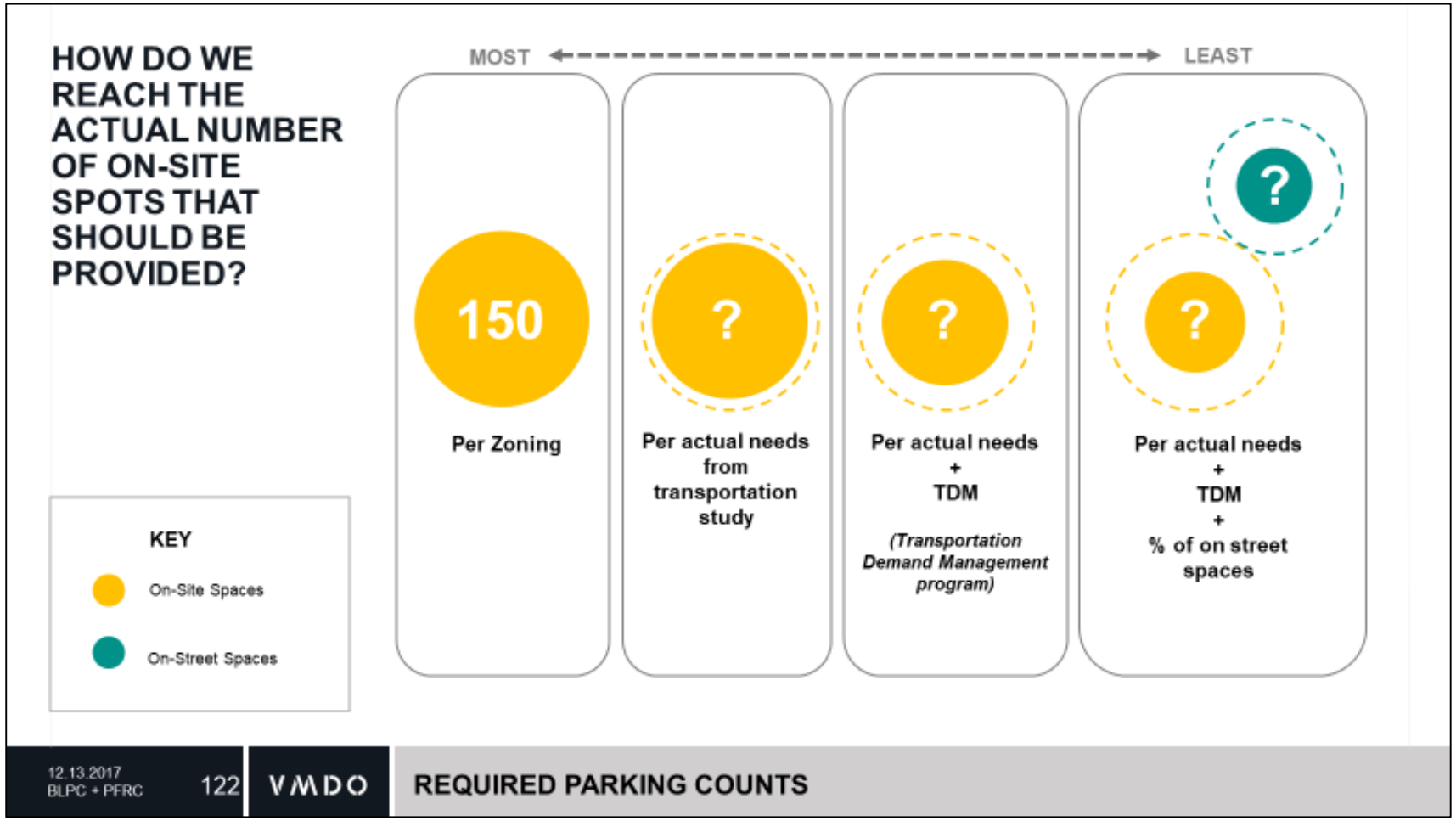
- Parking data collection
- Information from Library, Integration Station and Children's school about their staffing needs and travel patterns
- Information from the Library on their visitor demand

We estimate current parking to be:

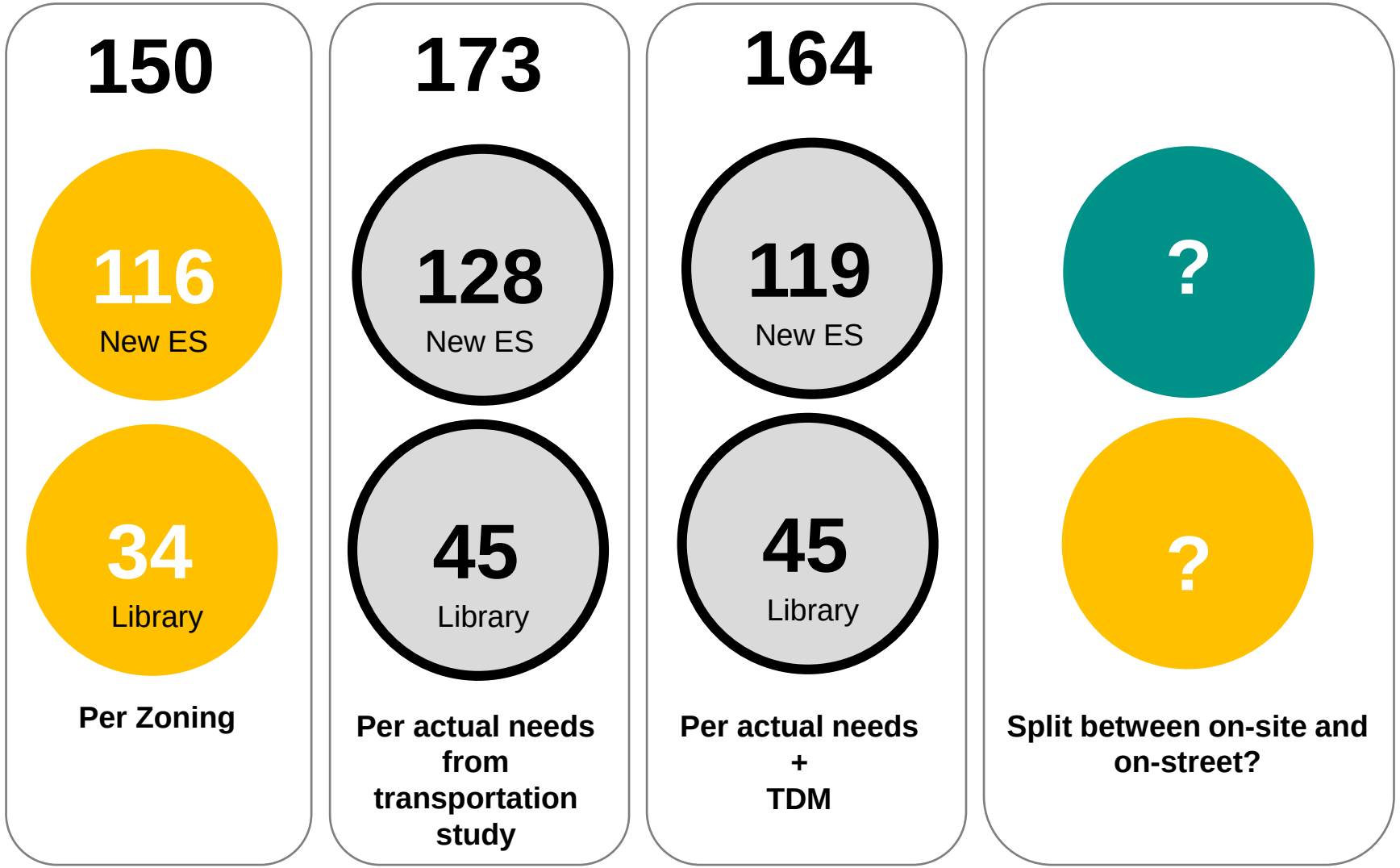
- Library: 15 staff/volunteer, 30 patrons
- Integration Station & Children's School: 40 staff

WHAT DO THESE ESTIMATES MEAN?

Remember that placeholder parking slide we've been using:



HOW DO WE REACH THE ACTUAL NUMBER OF ON-SITE SPOTS THAT SHOULD BE PROVIDED?



KEY

- On-Site Spaces
- On-Street Spaces

HOW DO WE REACH THE ACTUAL NUMBER OF ON-SITE SPOTS THAT SHOULD BE PROVIDED?

COMPARING ON-SITE PARKING PROVIDED FOR RECENT PROJECTS

	Fleet	Stratford	Wilson	Abingdon	McKinley	Discovery
Capacity	752 ES 1,086 MS	1,000 MS	775 MS/HS	725 ES	684 ES	630 ES 997 MS
Date of Use Permit Approval	22-Apr-17	18-Mar-17	25-Feb-17	19-Sep-15	20-Sep-14	21-Sep-13
Parking Spaces Required by Zoning	292	159	378	116	108	258
Parking Spaces Provided	250	134	100	98	56	209
Difference b/t Provided and Zoning (under)	(42)	(25)	(278)	(18)	(52)	(49)

Notes:

1. Data derrived from Arlington County Government staff reports prepared for the Use Permit hearing.

2. Parking spaces provided includes spaces on APS property, ACG property, and dedicated off-site spaces. Excludes spaces on-street.

EXISTING PARKING

On site

- Northwest Lot: 46 spaces
- 18th Street Lot: 26 spaces
- Total: 72 spaces

Existing demand

- Estimated at 85 spaces (45 for library, 40 for Integration Station and Children's School)
- Some use of on-street parking

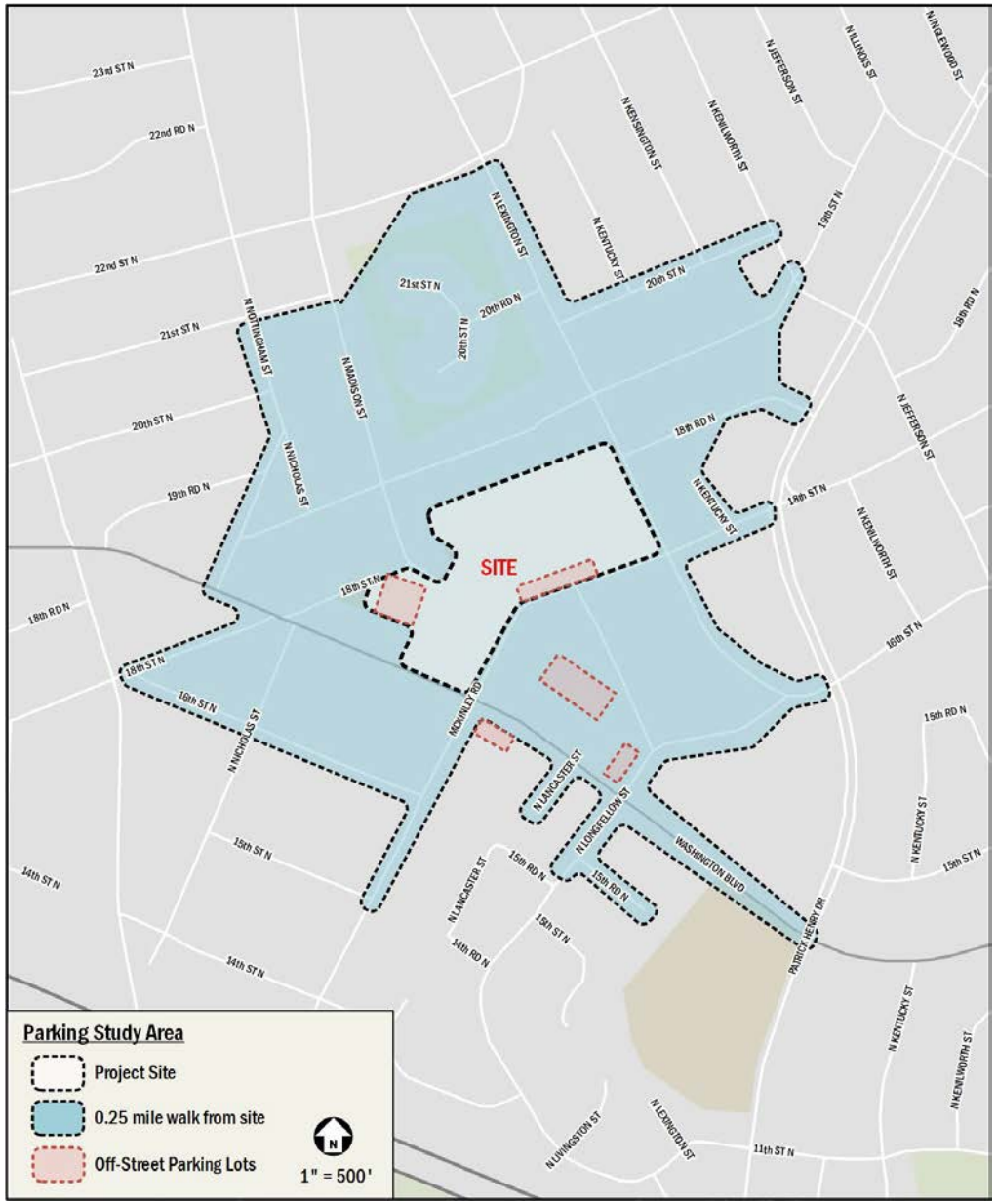
Predicted Demand with new ES

- Estimated at 164 spaces
- 92 more spaces than on-site
- Mitigated somewhat by library visitors use of on-street parking

EXISTING PARKING

Parking Data Collection

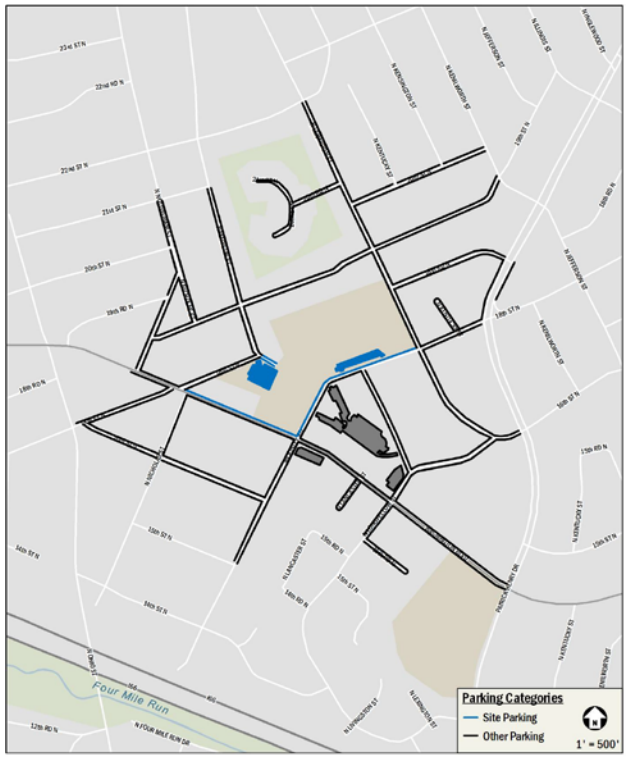
- Data collected 12.12.2017 (a Tuesday) from 6am to 10pm
- 1,395 on-street parking spaces in the study area
- Peak total parking demand (both on and off-street lots) occurs between 11 am and Noon
- Retail parking demand peaks mid-day
- On-street parking on Lexington/18th adjacent to site is mostly available during the day

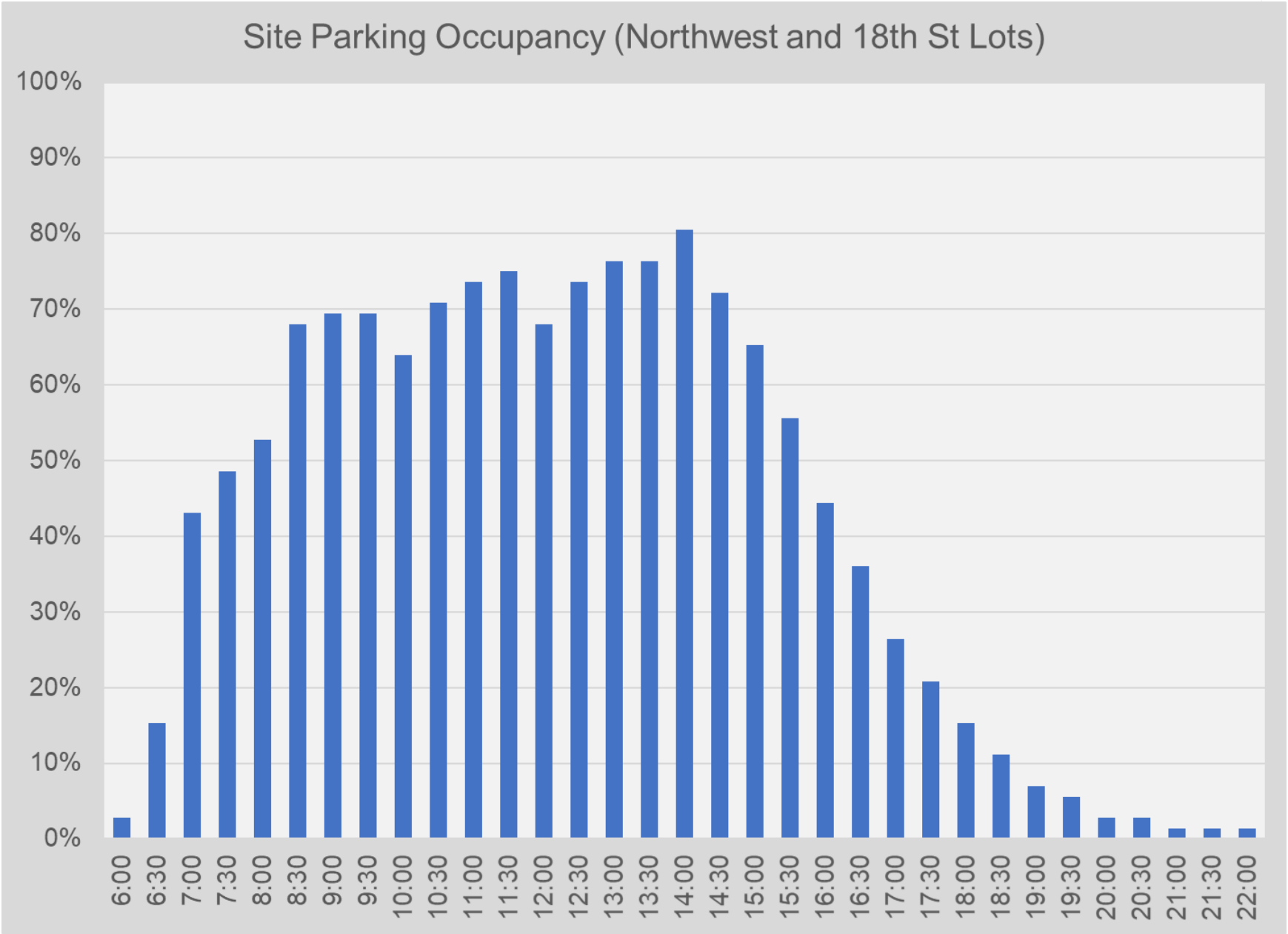


EXISTING SITE PARKING

Parking lots serve the Library and Pre-Ks

Peaks mid-day
(58 of 72 spaces at 2pm)

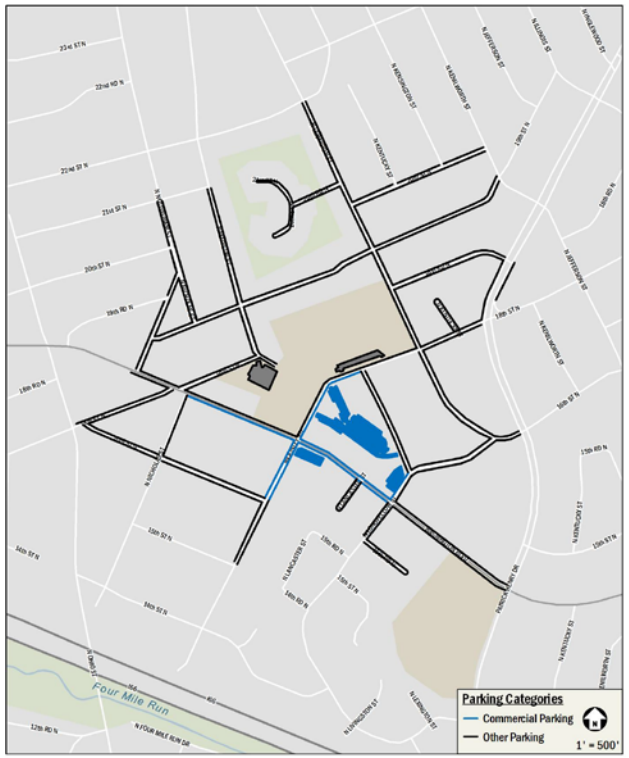


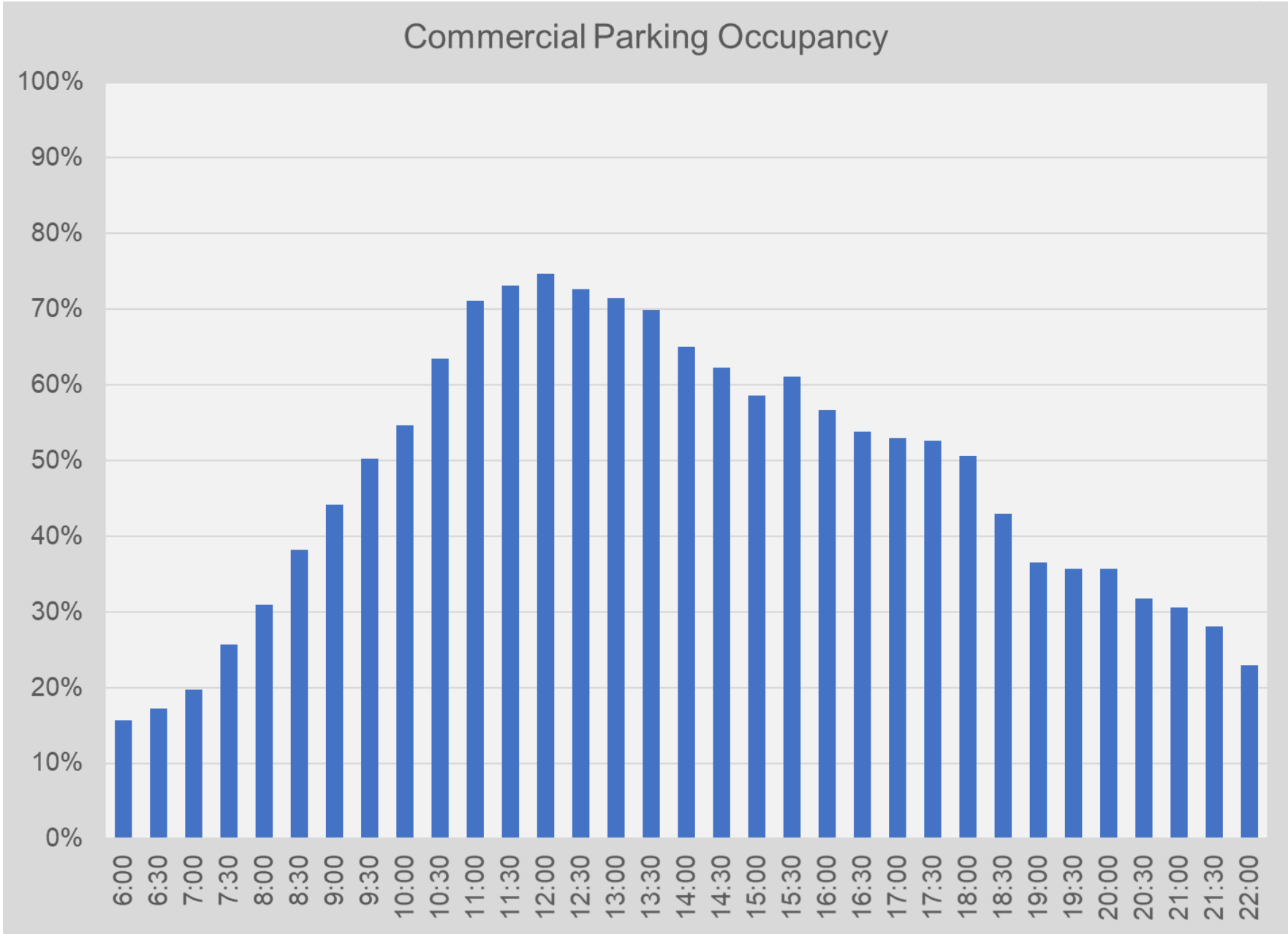


COMMERCIAL PARKING

Combination of lots serving retail, including on and off-street

Peaks mid-day
(186 of 249 spaces)

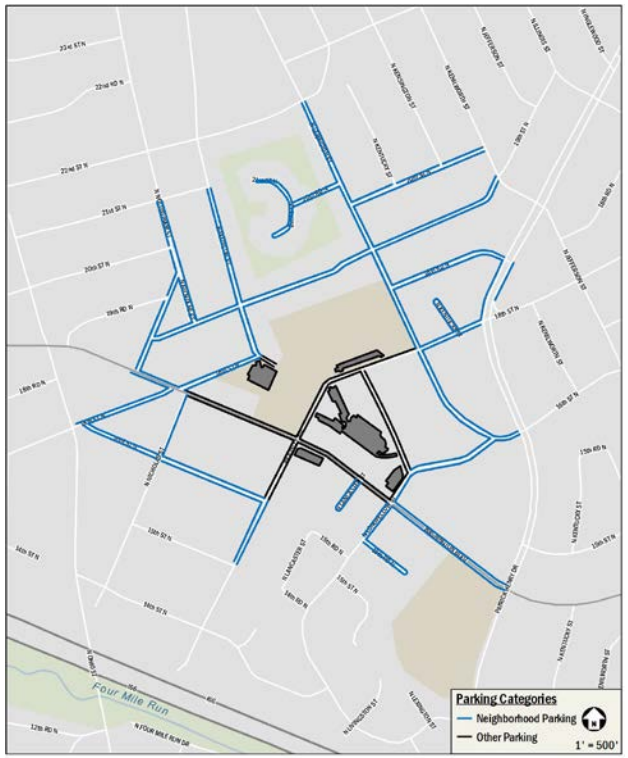


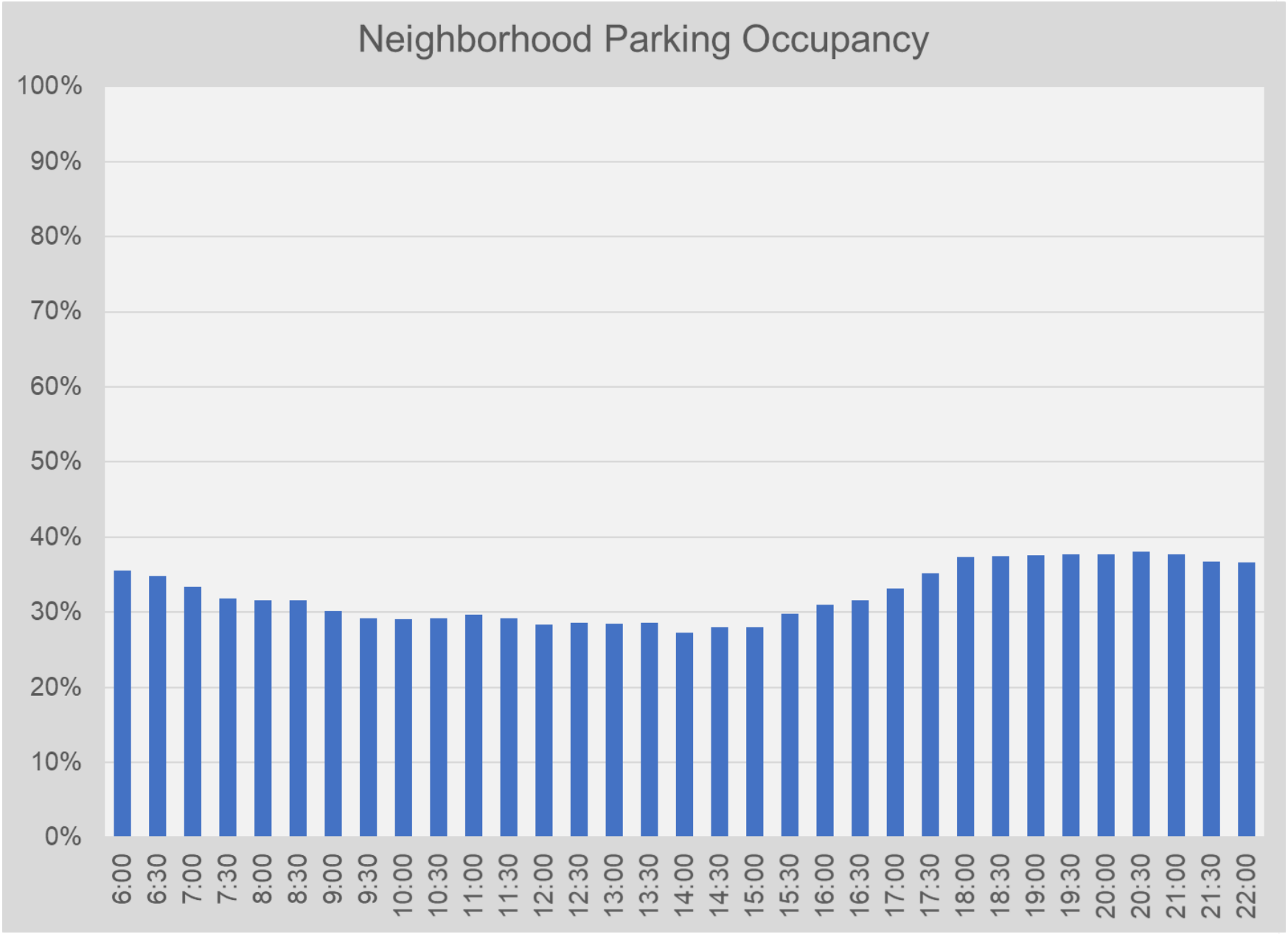


NEIGHBORHOOD PARKING

On-street parking on residential streets

Peaks overnight





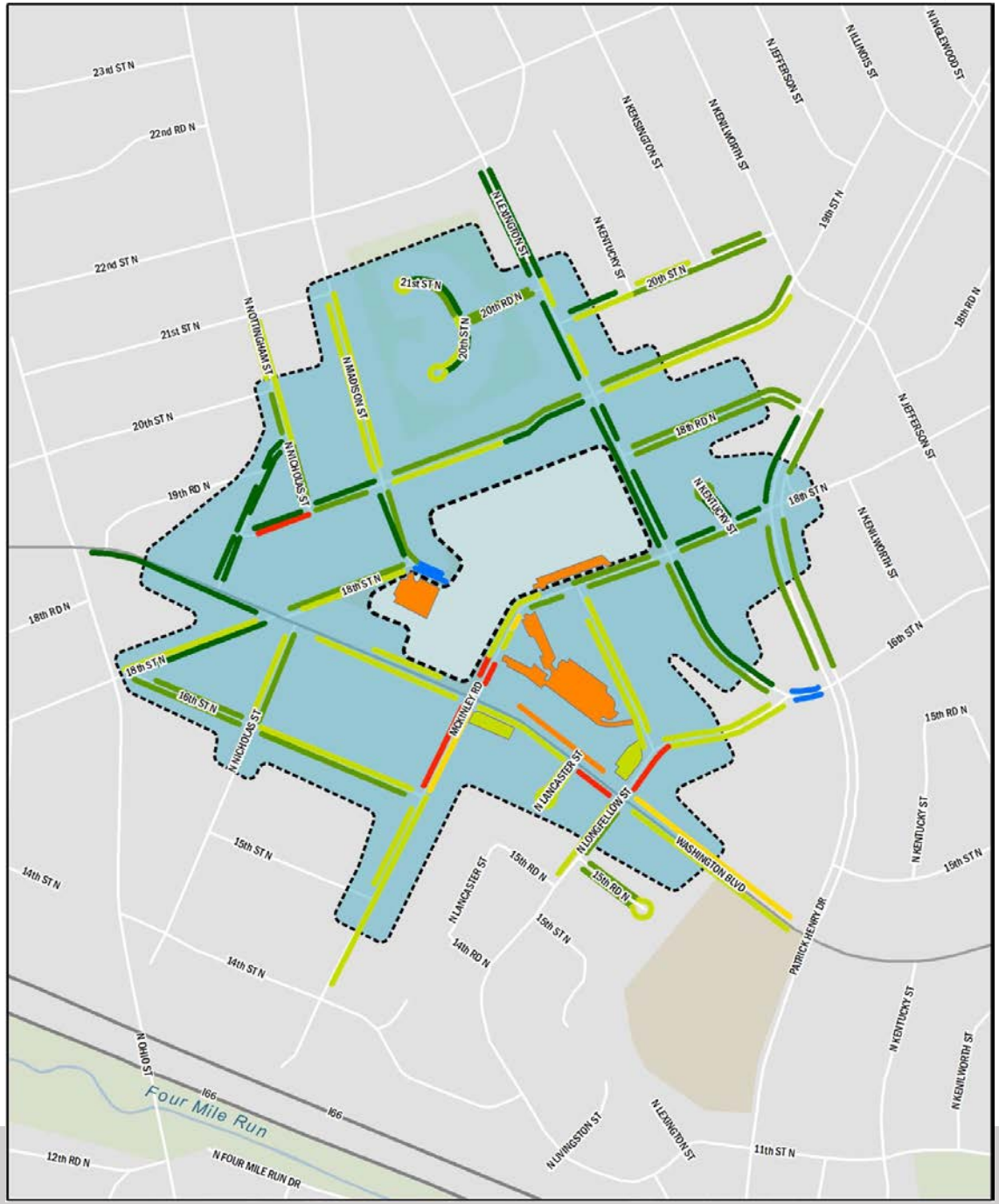
PEAK PARKING

2:00 to 2:30 PM

Library, Pre-K & Retail parking all peak early afternoon

2pm selected since it is highest peak of site parking

Nearby residential streets have significant availability



EXISTING

Visual representation of the parking data at 2pm on typical weekday

Assigned parked cars to uses based on observations and demand estimates

Multiple use vehicles (e.g. retail + library) are not specifically identified

Pre-K

Library

Retail

WITHOUT PRE-Ks

Existing demand without the 40 spaces used by Integration Station and Children's School

Assumes all library staff & volunteers park in NW lot, and visitors use 18th Street lot and on-street parking

Library parking:

- Using 34 of 72 on-site spaces
- 11 cars parked on street

Pre-K

Library

Retail

WITH NEW ES

Prior slide, but with 119 more vehicles parked for the new ES

On-Site (72 spaces)

- 34 library on-site
- 38 new ES on-site

Off-Site

- 11 library off-site
- 81 new ES off-site

New ES

Library

Retail

ON-SITE PARKING

81 new parking spaces takes up around 25,000 square feet (given an efficient lay-out)

To park all demand from new ES on site would decrease the amount of green-space and athletic fields

New ES

Library

Retail

ON-STREET POTENTIAL

If on-street parking is used, the amount of area needed for on-street parking can decrease significantly.

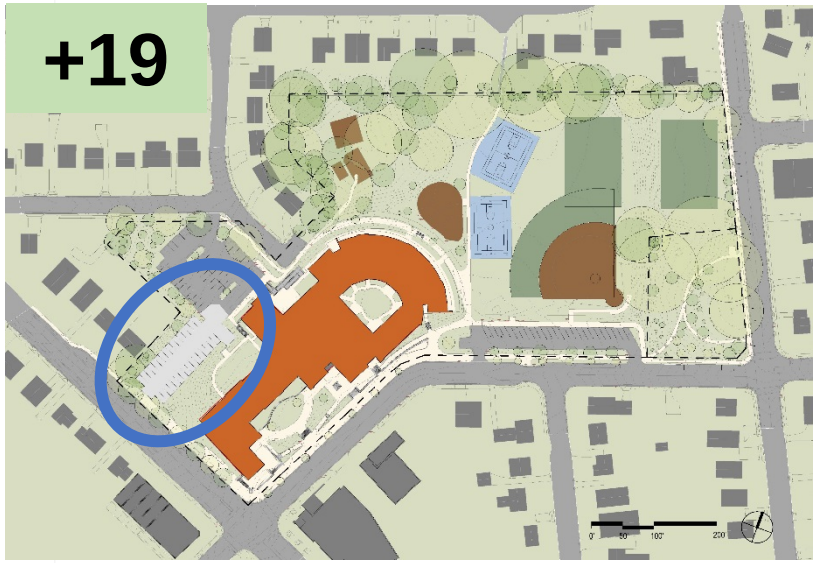
This diagram shows a reduction from 81 to 46 spaces, assuming some on-street parking is used.

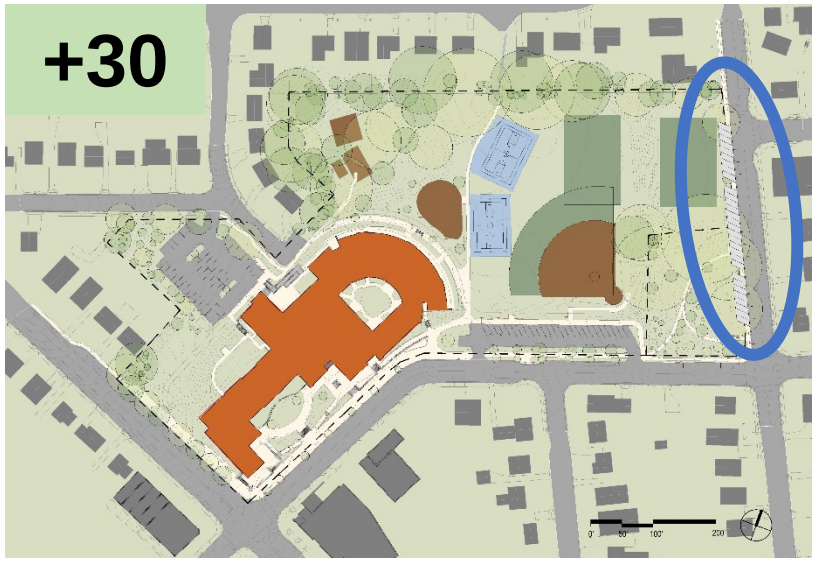
New ES

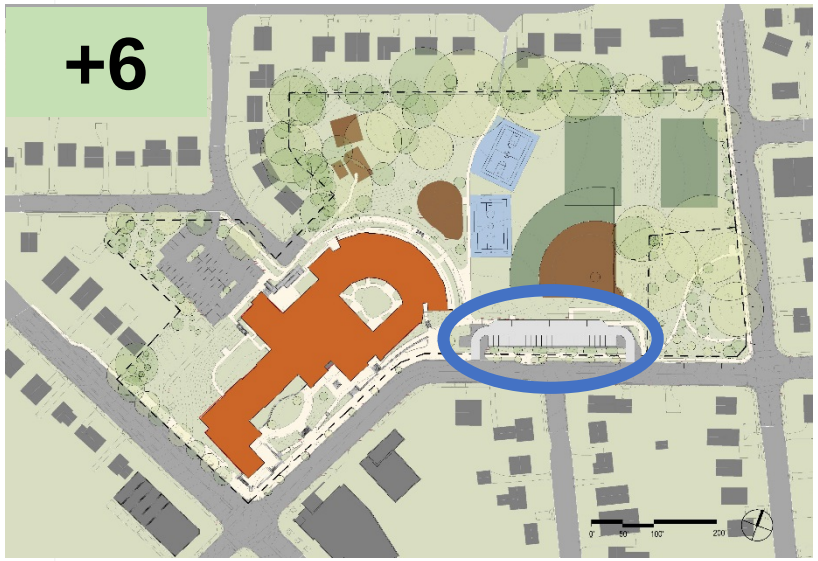
Library

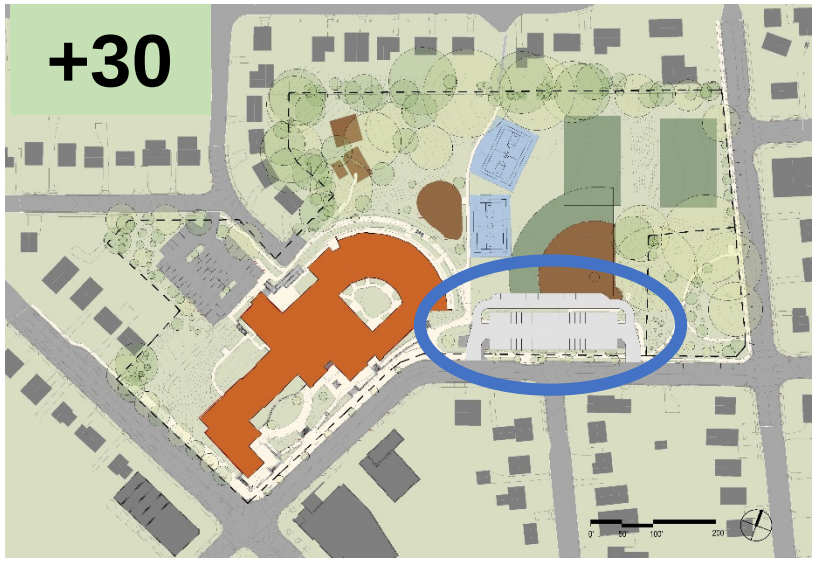
Retail

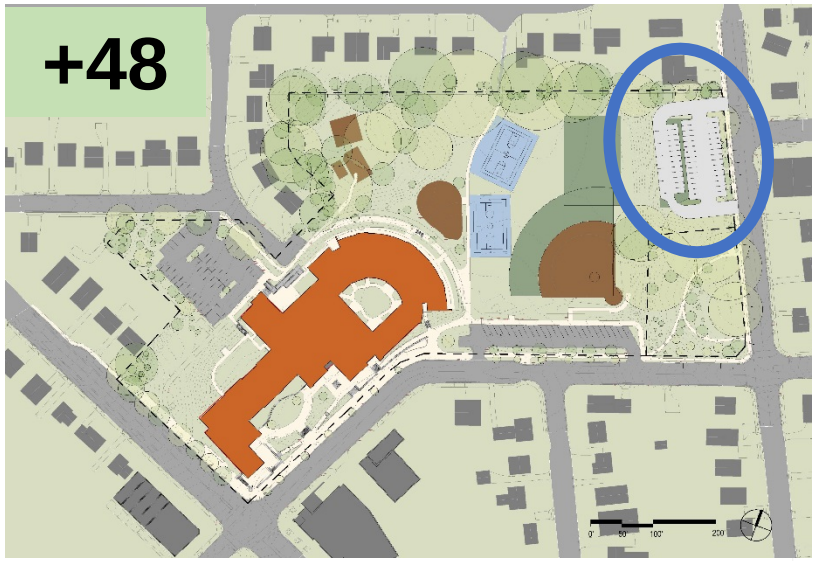
PARKING OPTIONS











PARKING THOUGHTS & DISCUSSION POINTS

Trade-offs

Greenspace/Athletic fields

versus use of On-street parking

versus Cost of building parking

Use of on-street parking

Operational changes: Should the restrictions on on-street parking change to facilitate it's use? – e.g. make some unrestricted parking 2-hour only parking to deter staff parking

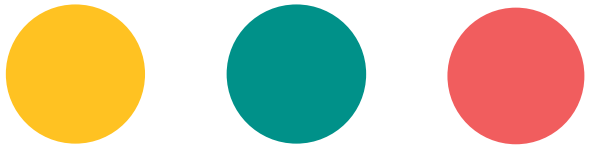
Policy changes: Can the library and new ES control where their employees park?

Library & School

Can they share parking?

If not, how does that impact the supply?

PARENT PICK-UP/DROP-OFF



PICK-UP/DROP-OFF

Based on:

- 725 students
- 38% percent driven by parent
- Observations at other ESs

We are estimating:

- Morning Drop-off Queue:
  23 to 28 cars
- Evening Pick-up Queue:
  28 to 61 cars

<u>Why is there such a large range?</u>

Geometry

- How many cars can load/unload at once?
- Is there a pass-by lane?

Operations

- Is the pick-up/drop-off facility staffed?

Proximity to Alternatives

- Will parents be tempted to use an alternative?

PARENT DROP-OFF/PICK-UP TYPES

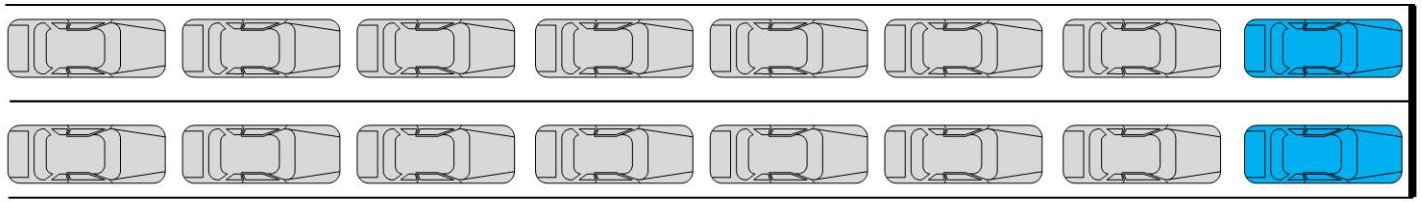
Tollbooth:

- Drop-off/Pick-up only at front
- Orderly queue in multiple lanes
- Requires staff at front of line
- Preferred for AM drop-off

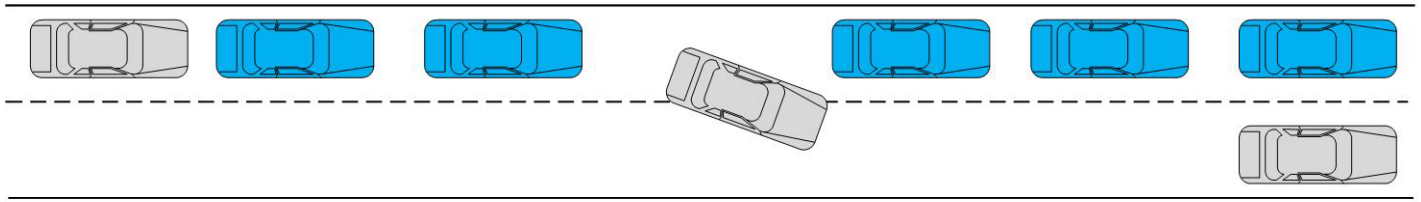
Airport:

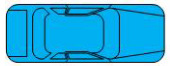
- Many places for parents for drop-off/pick-up
- Includes a bypass/exit lane so parents can go out of order
- Requires long stretch of sidewalk and multiple staff
- Preferred for PM pick-up

Tollbooth

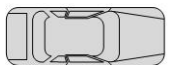


Airport





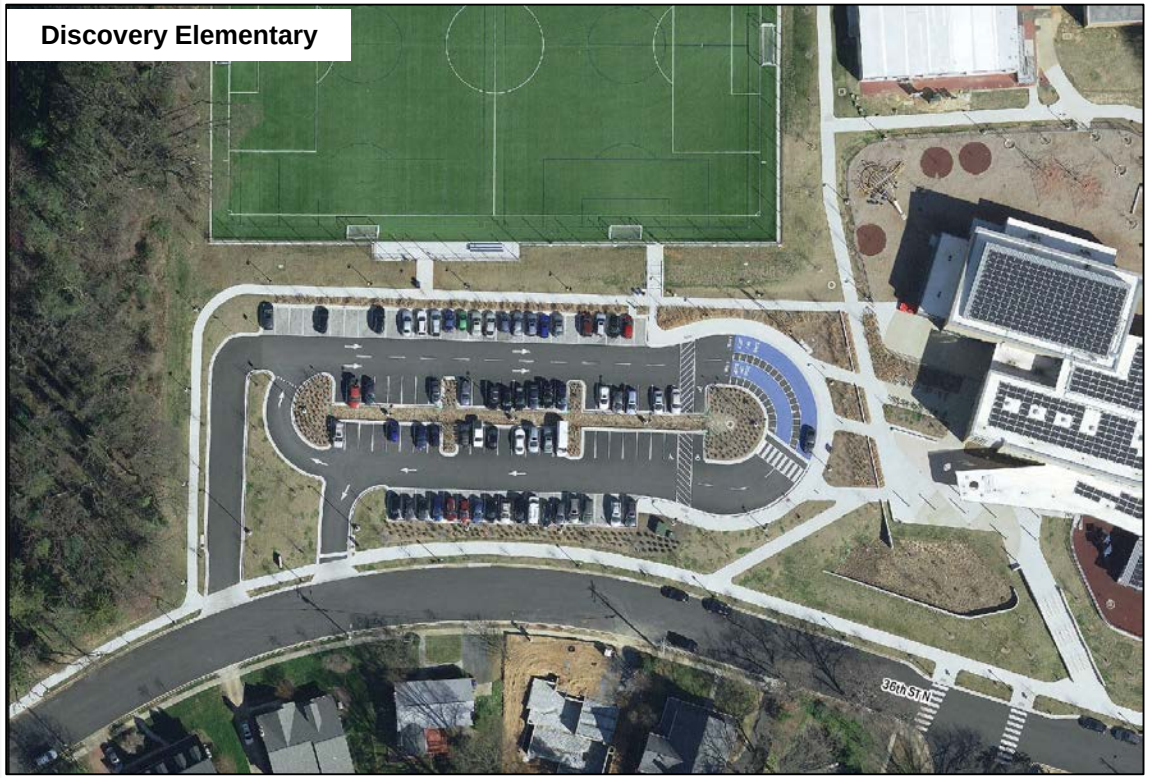
Dropping-off/Picking-off

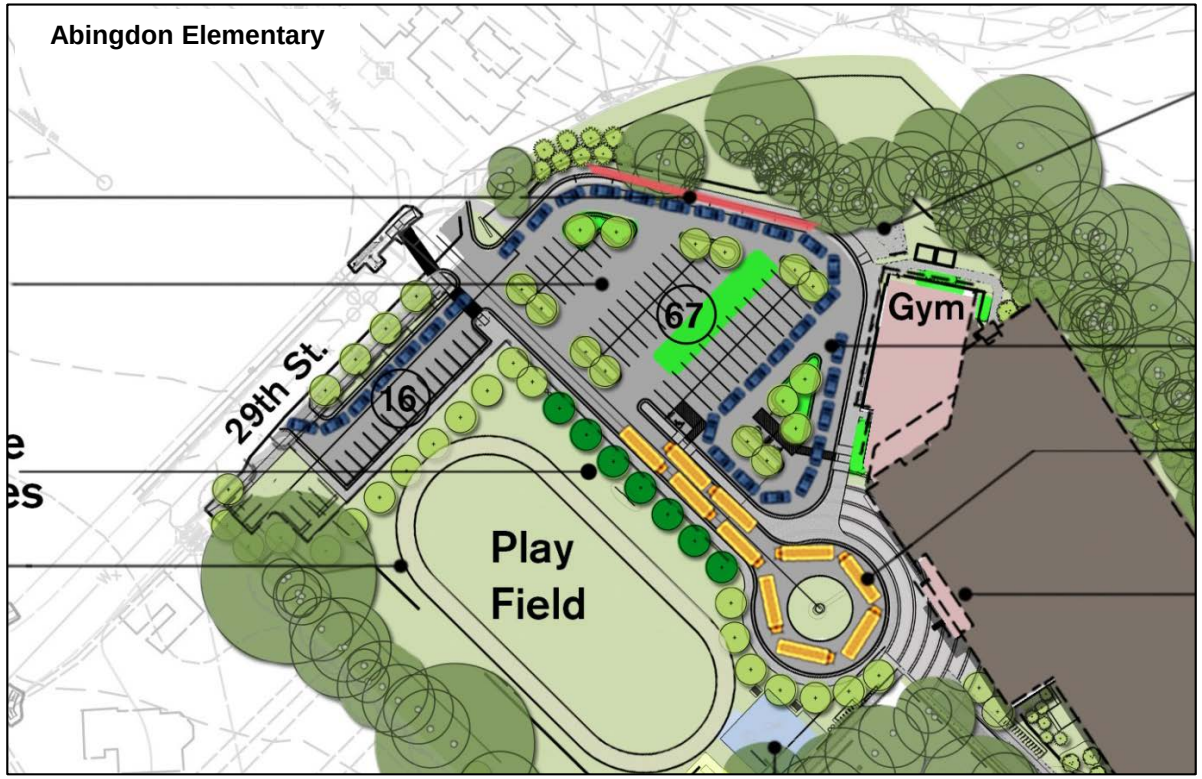


In queue or exiting system

QUEUE LENGTH FACTORS

Examples of different facilities

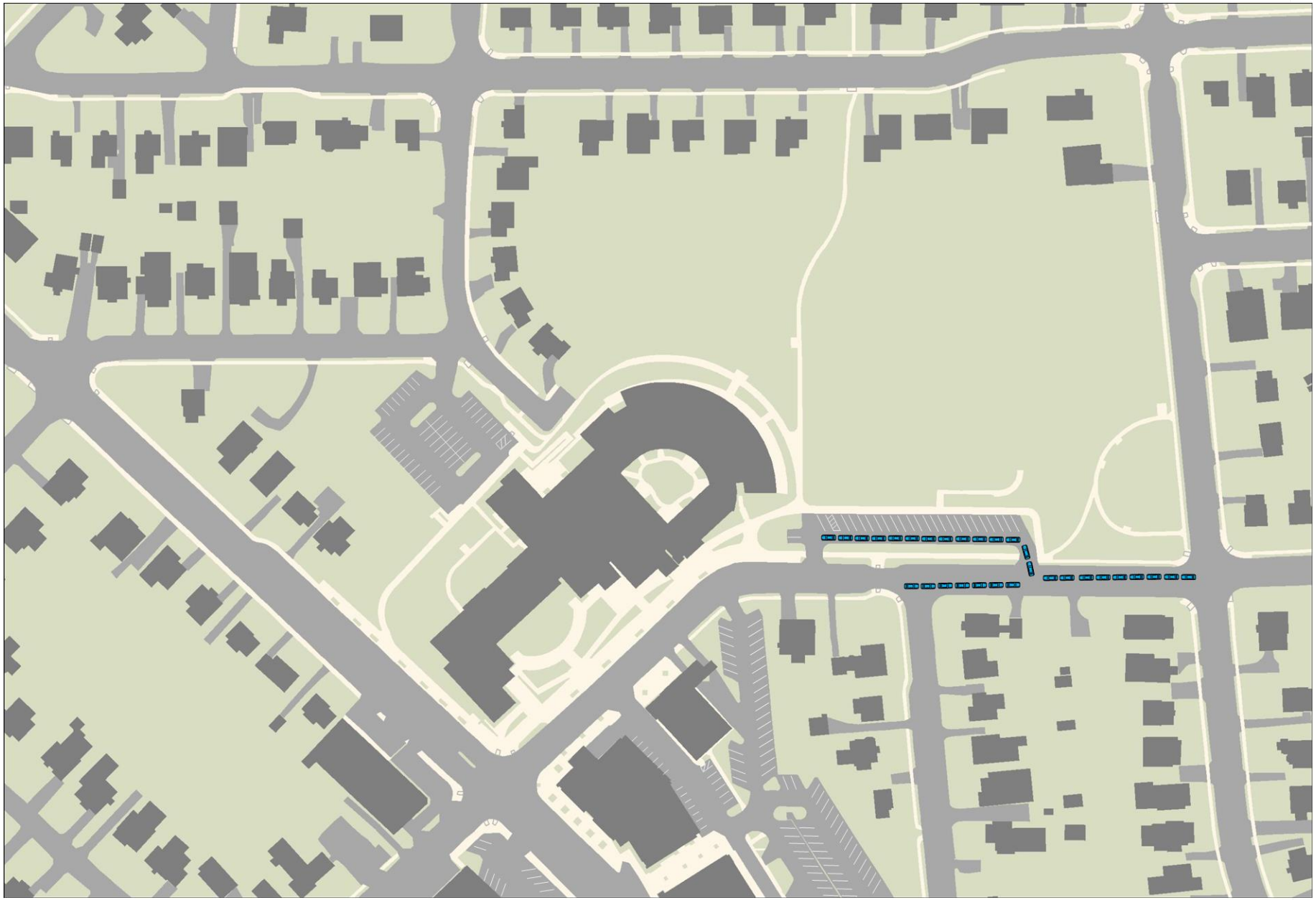




QUEUES

Aim for 30 cars of queueing and use geometry and operational solutions to keep queue within 30

What 30 cars of queuing looks like



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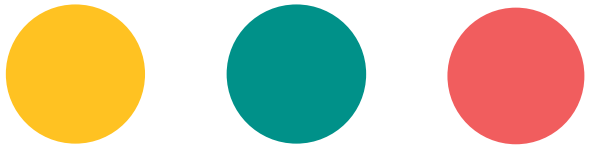
BLPC / PFRC DISCUSSION



PUBLIC COMMENTS

NEXT STEPS & ADJORN

NEXT STEPS

- Process and analyze traffic data
- Assemble information and findings for the March transportation meeting
- Respond to comments/feedback from transportation meetings
- Assemble draft transportation report
- Upcoming Meetings:
  - March 8th – Information Item to School Board
  - March 21st – BLPC/PFRC Transportation Meeting
  - March 22nd – Action Item to School Board
  - April TBD – Schematic Design kick-off

ADJOURN

- Provide feedback to APS via project email: ***reed.info@apsva.us***
- For further information, please contact:

APS Project Manager	County Project Manager
Ajibola (Aji) Robinson PMP 703-228-7738 *ajibola.robinson@apsva.us*	**Nicole Boling** 703-228-3945 *nboling@arlingtonva.us*

- BLPC, PFRC, and Community Meeting dates are scheduled and posted on the APS project website: https://www.apsva.us/design-and-construction/new-elementary-school-at-reed-building/
- Provide feedback and comments to Arlington County: https://commissions.arlingtonva.us/planning-commission/public-facilities-review-committee-pfrc/school-projects/walter-reed/