TooleDesignGroup



Arlington Public Schools

Wilson School Site Evaluation

Traffic Analysis and Pick-up/Drop-off location

Building Level Planning Committee

March 30, 2016

Presentation Overview



- Review traffic impact analysis of school traffic
 - Includes pipeline developments
 - Includes assumptions about staff and student travel
 - Analyzes peak hour for arrival and dismissal
- Share issues and opportunities for
 - Parent drop-off
 - Vehicular transportation network

Study Area and Analysis Approach

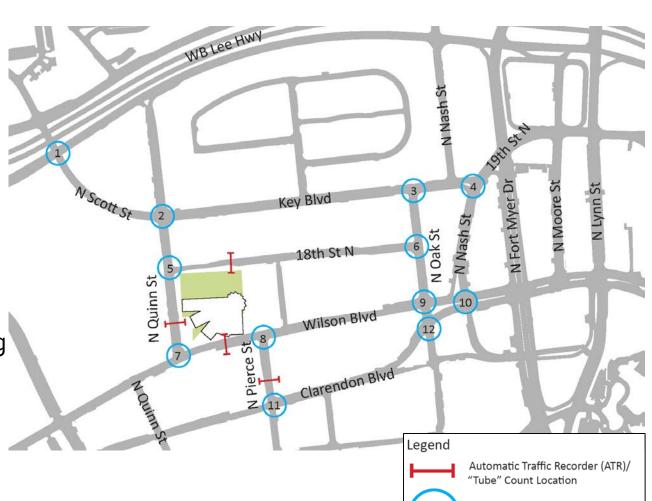


Turning Movement Count (TMC) &

Capacity Analysis Location

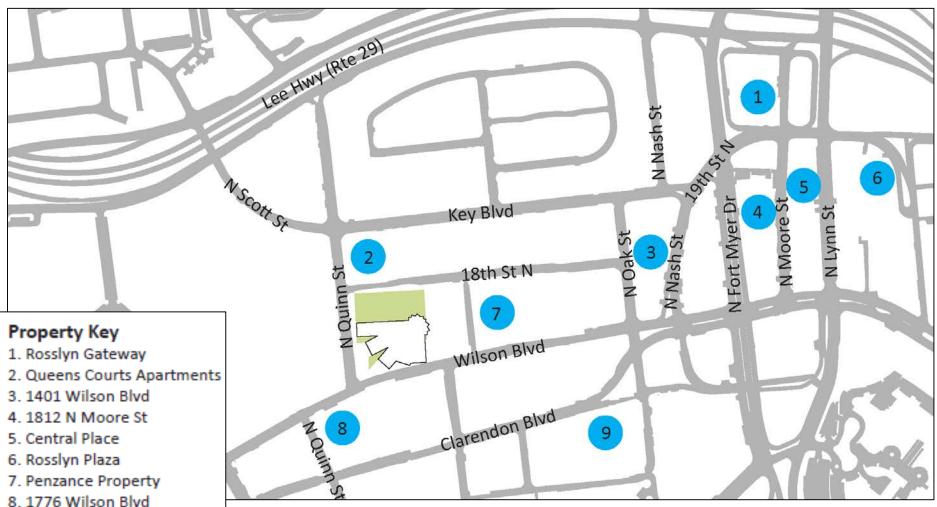
What we analyzed...

- Arrival peak hour (8:20-9:20AM)
- Dismissal peak hour (3:15-4:15PM)
- 12 study intersections (see right)
- Vehicular delay, Level of Service and queuing
- Impact of pipeline developments



Pipeline Developments





Sedona/Slate Apartments

Calculating Trip Generation



- Trip generation, an estimate of the number of vehicle trips that can be expected, is an essential part of the traffic analysis
- Includes: Students, Buses, Staff, Visitors
- Students, both being dropped off and driving themselves, represent the largest number of trips arriving and leaving the school site

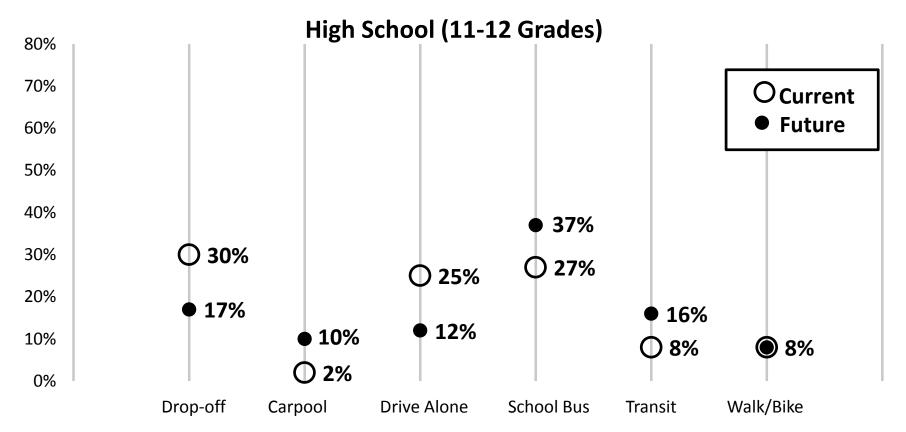
Student Mode Splits



- Looked at three group of students separately
 - Grades 6-8, Grades 9-10, and Grades 11-12
 - Travel choices vary between groups
- Likelihood of mode change from current based on
 - Geographic location of school
 - Improved access to transit
 - Cost of parking for students
 - Student surveys

Mode Splits - Current & Future High School (11th & 12th Grade)

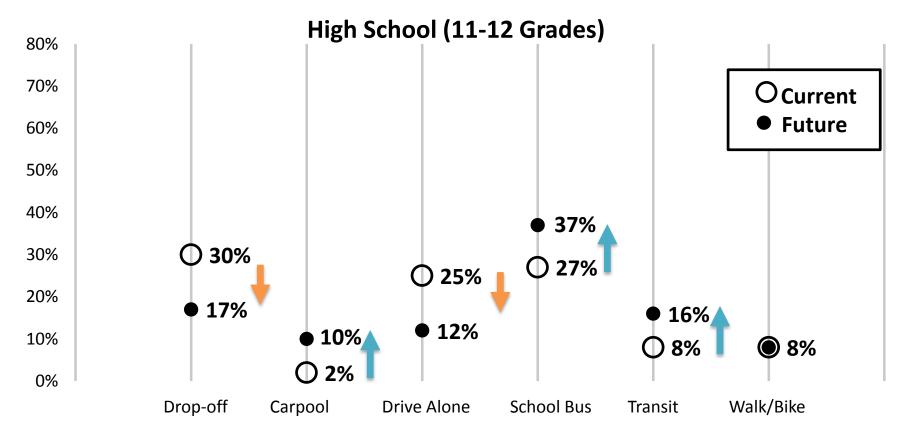




231 students (11th&12th grades)

Mode Splits - Current & Future High School (11th & 12th Grade)

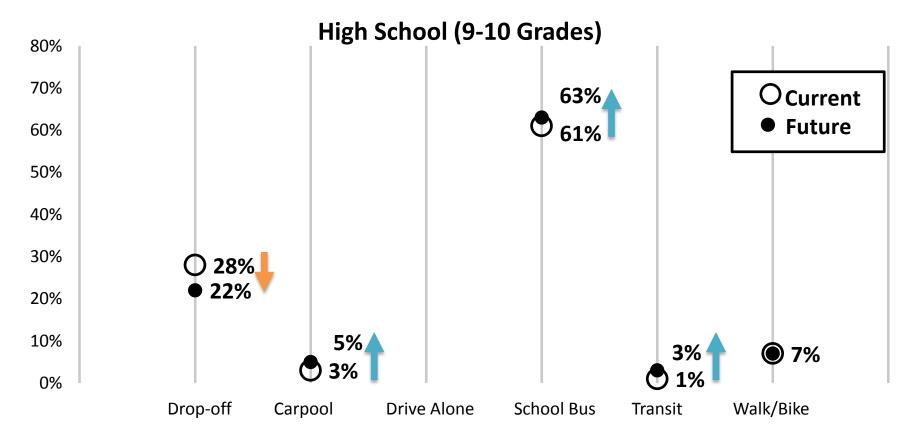




231 students (11th&12th grades)

Mode Splits - Current & Future High School (9th & 10th Grades)

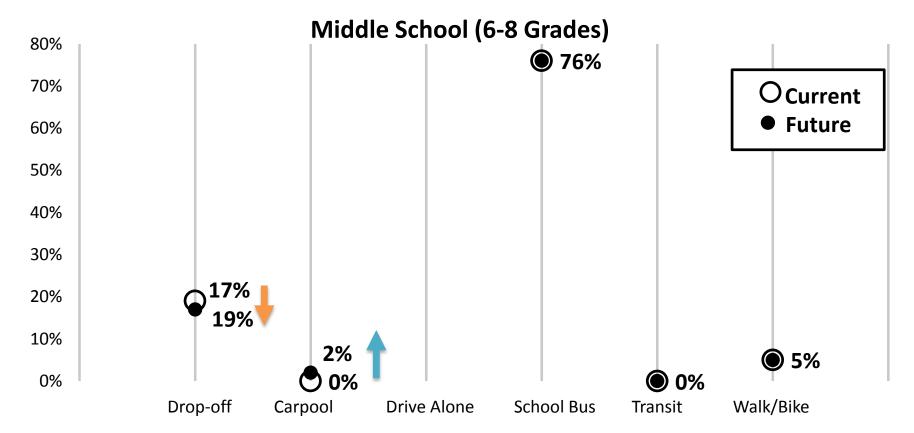




231 students (9th&10th grades)

Mode Splits - Current & Future Middle School (6th - 8th Grades)





253 students (6th-8th grades)

Vehicle Trip Summary Arrival Peak Hour



HB Woodlawn and Stratford Program at Wilson Site

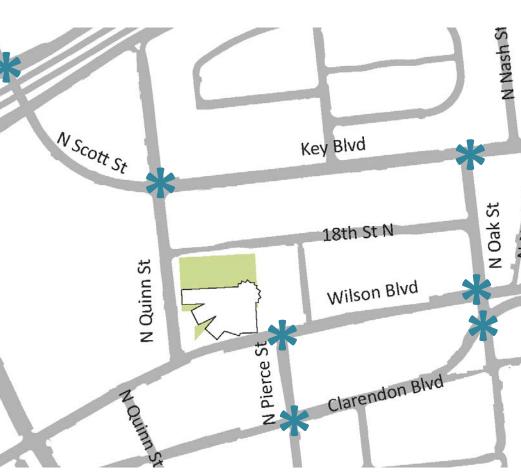
246 student trips

			Student ti
	Arrival Peak Hour		
	IN	OUT	TOTAL
Students Drop Offs/Carpool	112	112	224
Students Drive Alone/Carpool	22	0	22
Staff ¹	68	0	68
Visitors	4	4	8
Buses ²	21	21	42
TOTAL	227	137	364 ³

- 1 Assumes a 94% drive rate.
- 2 Assumes 8 Stratford buses and 13 H-B Woodlawn buses.
- 3 Compared to 295 trips at dismissal peak hour. Also, this is approximately 5% fewer trips at the Wilson site than the current arrival peak hour at the current school location.

Issues and opportunities

- Vehicular transportation network
 - Some intersections may require signal timing changes or additional turn lanes may be needed *
 - One-way streets and offset intersections limit access somewhat
- Remote drop-off



Remote parent drop-off

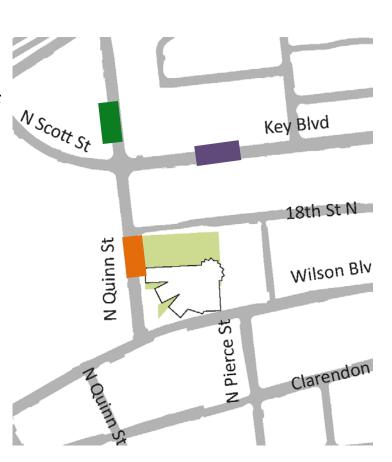


Considerations include:

- Balance of convenience and proximity
- Avoid potential congestion along Quinn Street
- Avoid circuitous routes
- Observe and assess after several months' experience

Parent Drop-off

- Parent drop-off analysis includes both:
 - How do students being dropped off ARRIVE?
 - How do parents dropping students off LEAVE?
- Several options being considered:
 - All drop-off on east side of Quinn Street
 - Additional, remote drop-off on Key Blvd, east of Quinn Street
 - Additional, remote drop-off on Quinn Street, north of Key Blvd

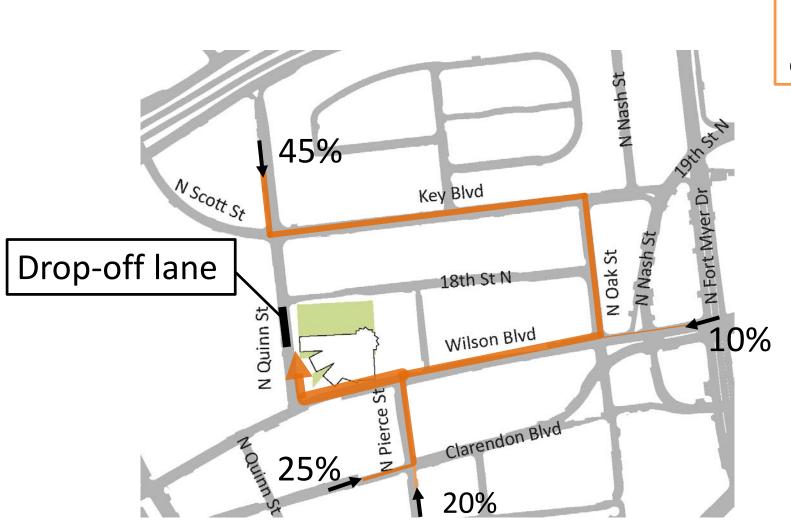


Drop-off on Quinn Street ONLY

How do <u>students being dropped off</u> ARRIVE at the site?



inbound drop-off trips



Drop-off on Quinn Street ONLY

How do parents dropping off students LEAVE the site?

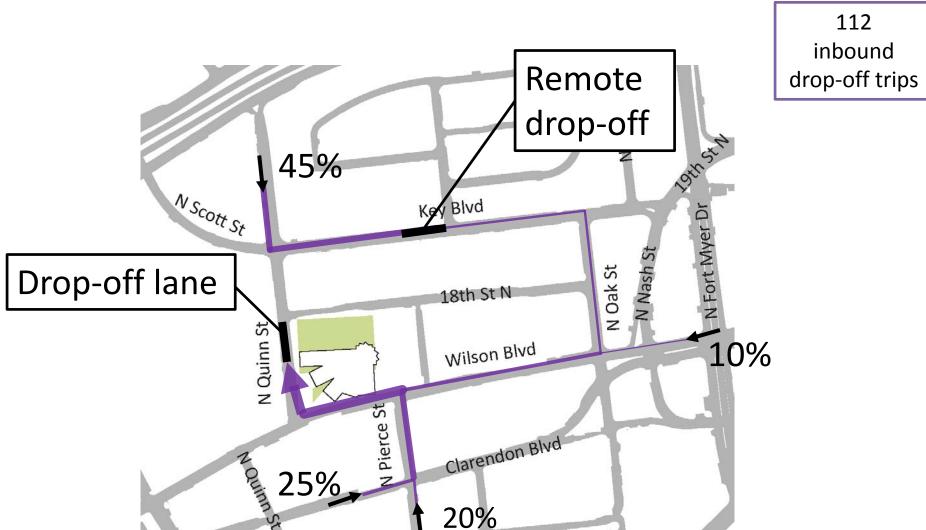




Remote Drop-off on Key Blvd

How do <u>students being dropped off</u> ARRIVE at the site?

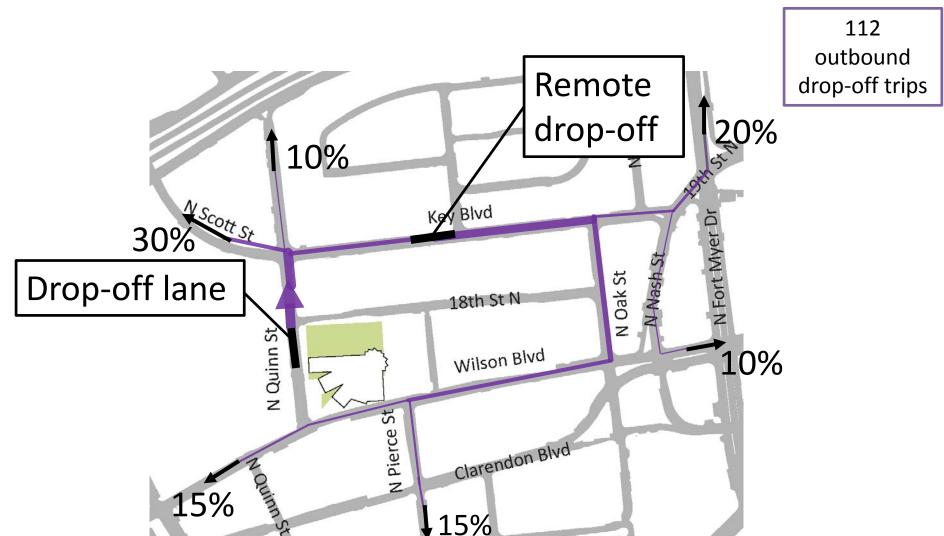




Remote Drop-off on Key Blvd

How do parents dropping off students LEAVE the site?





Remote Drop-off on Quinn Street

How do <u>students being dropped off</u> ARRIVE at the site?



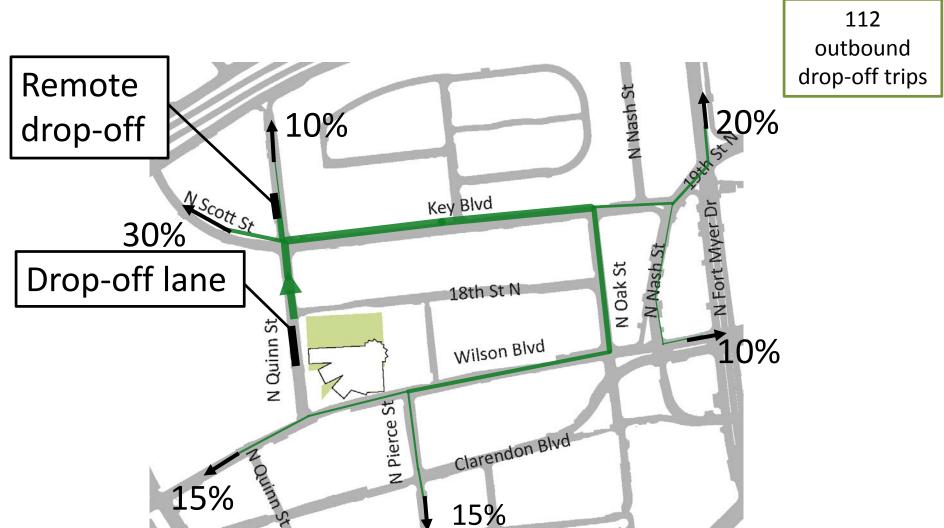


inbound drop-off trips

Remote Drop-off on Quinn Street

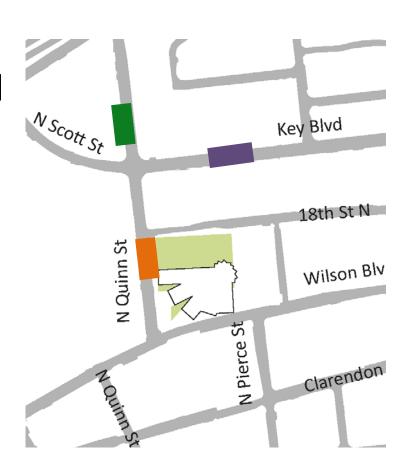
How do parents dropping off students LEAVE the site?





Parent Drop-off Summary

- Location needs to be both convenient for parents and provide a direct and safe connection for students.
- It will be important to observe and assess after school opens



School Bus Management



- Currently working on school bus management for arrival and dismissal
- Assume both schools use 18th Street along school and park properties
- Factoring streetscaping and roadway design
- Shortly, we will present considerations, options and recommendations

QUESTIONS?

