

## MEMORANDUM

June 27, 2019

To: Ajibola Robinson

Organization: Arlington Public Schools

From: Diane Lambert, MPH; Sheila Borkar, P.E.; Thomas Hillman, AICP

Project: Arlington Public Schools Performance Monitoring

### **Re: Task 4: Arrival and Dismissal Procedure Evaluation**

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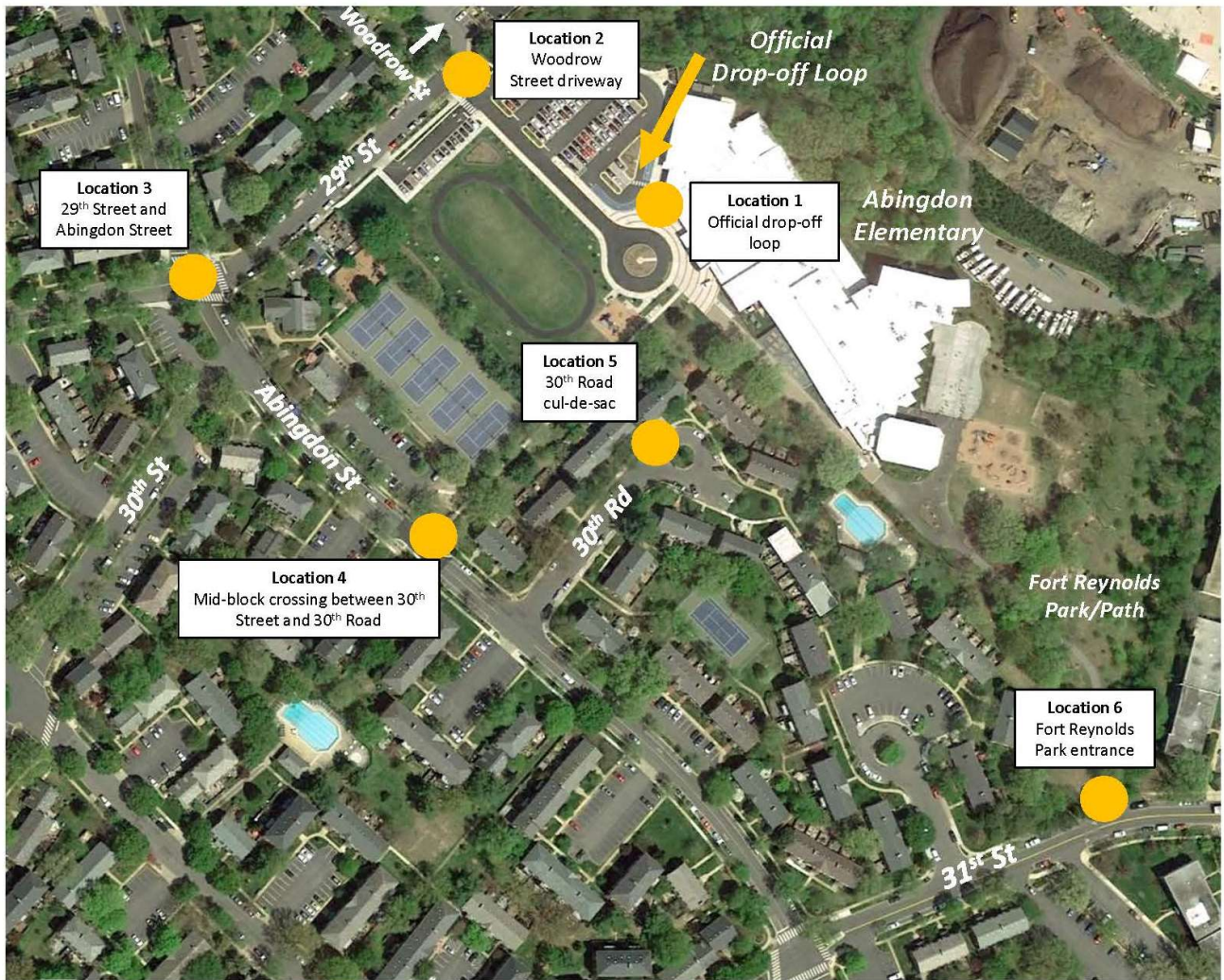
Use permit condition #63 for Abingdon Elementary School required Arlington Public Schools to review and study the operations and impacts of its student drop-off and pick-up procedures. Toole Design Group participated in a scoping meeting via conference call on April 26, 2019, between Arlington County Department of Environmental Services and Arlington Public Schools staff, and a scope of work was approved the following week containing detailed specifications for arrival and dismissal observations on a typical weather day, and arrival observations on an inclement weather day to control for differences in travel patterns based on weather conditions.

This memorandum provides a summary of findings from observations conducted on May 14<sup>th</sup> (typical weather day), May 16<sup>th</sup> (parking counts only) and June 13<sup>th</sup> (inclement weather day) of 2019. On May 14<sup>th</sup>, the temperature during morning arrival was approximately 56 °F, with no rain. The temperature during dismissal was approximately 60 °F, with no rain. On June 13<sup>th</sup>, the temperature during morning arrival was approximately 66 °F and cloudy with some light precipitation; heavier rain had moved through the area earlier in the morning.

Student arrival and dismissal behaviors were observed at six locations on the school site and on adjacent neighborhood streets, as shown in Figure 1. In addition to the arrival and dismissal observations, a meeting was held to gather stakeholder feedback from local civic association members on May 14<sup>th</sup> at 8:15 AM. During this meeting, several neighborhood concerns were discussed, such as the speed of vehicles exiting the drop-off loop and main staff parking lot in front of the intersection with S Woodrow Street, and unofficial drop-offs in the S 30<sup>th</sup> Road cul-de-sac. Neighbors expressed concern about speeding vehicles leaving the staff parking lot during the evening commuter peak after 5:00 PM; however, Toole Design staff was not scoped to conduct observations during this time period.

Overall, no operation or safety concerns were observed during arrival and dismissal at Abingdon Elementary. The following pages summarize the findings of each required observation element outlined in the scope of work and include recommendations that may be considered to improve the effectiveness of the drop-off and pick-up procedures.

Figure 1. Observation Locations



## Observation of School Arrival (7:10 – 8:10 am)

### Arrival Observation Element A

*Observe staff and parent behaviors in unloading zone, note variations from written procedures*

*(Observations recorded by Toole Design staff on-site)*

#### Staff

- Two staff members were observed helping students unload from vehicles starting at 7:35 am. Staff members were located at either end of the marked blue drop-off zone.
- Staff members were not wearing safety vests or holding stop paddles; instead, they were guiding parent traffic by verbal communication or by waving to them to continue further in the drop-off loop.
- On the inclement weather day, only one staff member was present. In addition, two student patrols were present during arrival to help younger students unload from vehicles.

#### Parent

- Parents were observed letting children unload from vehicles before the blue-marked drop-off zone after 7:50 am (when drop-off queue was >10 cars long). Students walked along the sidewalk outside of the staff parking lot to access the school entrance.
- Doors open to dropped-off students at 7:35 am; before that time students must wait outside of the school. On the inclement weather day some vehicles were observed idling in the drop-off loop until the doors opened, at which time students exited the vehicles.
- Two vehicles that arrived after the second arrival bell were observed using the bus loop to drop off their children.

### Arrival Observation Element B

*Observe morning arrival in the designated unloading zone and quantify the number of students arriving in a family vehicle, including the number of students per vehicle*

*(Student drop-offs tallied by Toole Design staff on-site)*

		Vehicles delivering 1 student	Vehicles delivering 2 students	Vehicles delivering 3 students	Vehicles delivering 4 students	Total
May 14 <sup>th</sup> (typical weather day)	# Vehicles	99	33	1	1	134
	# Students	99	66	3	4	172
June 13 <sup>th</sup> (inclement weather day)	# Vehicles	115	31	3	0	149
	# Students	115	62	9	0	186

On May 14<sup>th</sup>, between 7:10 am and 8:10 am a total of 134 vehicles moved through the Abingdon Elementary unloading zone, delivering 172 students to school.

- 74% of vehicles dropped off one student,
- 25% of vehicles dropped off two students, and
- 1% of vehicles dropped off three or more students.

On June 13<sup>th</sup>, between 7:10 am and 8:10 am, a total of 149 vehicles moved through the Abingdon unloading zone, delivering 186 students to the school. This is a slight increase from the number of drop-offs observed on the typical weather day.

- 77% of vehicles dropped off one student,
- 21% of vehicles dropped off two students, and
- 2% of vehicles dropped off three students.

**Arrival Observation Element C**

*Observe arrival in the designated unloading zone and report the number of vehicles in the drop-off queue in 5-minute intervals; calculate the average and maximum on-site and off-site queue lengths of vehicles dropping off students*

*(Queue length recorded by Toole Design staff on-site at the end of every five-minute interval)*

	7:10	7:15	7:20	7:25	7:30	7:35	7:40	7:45	7:50	7:55	8:00	8:05	Average queue	Maximum queue
May 14 <sup>th</sup> (typical weather day)	1	4	4	0	5	5	5	13	9	11	5	0	5	13
June 13 <sup>th</sup> (inclement weather day)	0	1	3	3	2	7	4	8	14	3	0	0	4	14

There did not appear to be significant variation between the typical weather day and the inclement weather day with respect to the distribution of vehicle volumes and the maximum queue.

**Arrival Observation Element D**

*Observe and note queue lengths along S Woodrow Street at the intersection of 29<sup>th</sup> Street S and note general function of intersection.*

*(Queue length recorded by Toole Design staff on-site at the end of every five-minute interval)*

	7:10	7:15	7:20	7:25	7:30	7:35	7:40	7:45	7:50	7:55	8:00	8:05	Average	Maximum
May 14 <sup>th</sup> (typical weather day)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
June 13 <sup>th</sup> (inclement weather day)	0	0	0	0	0	0	0	0	0	0	0	0	0	0

**Typical weather day:**

- One parent vehicle and one school bus were observed yielding to a vehicle exiting the S Woodrow Street when all three approached the intersection at the same time.
- A total of 10 cars were observed exiting S Woodrow Street during the observation period, with no more than two in any five-minute period. Vehicles did not have to wait at the entrance/no queuing was observed.
- One (1) vehicle was observed making a U-turn at the end of 29<sup>th</sup> Street S. This vehicle may have dropped off children along the sidewalk on 29<sup>th</sup> Street S (i.e school driveway).
- Four (4) vehicles were observed crossing 29<sup>th</sup> Street S and entering the small parking lot from the drop off loop instead of turning right onto 29<sup>th</sup> Street S. when exiting the school.

**Inclement weather day:**

- At 7:34 am, one aggressive driver was observed honking at another driver at the entrance to the school driveway as they were entering. This did not involve vehicles on S Woodrow Street.
- Two (2) vehicles were observed making a U-turn at the end of 29<sup>th</sup> Street S, including one taxi. These vehicles may have dropped off children along the sidewalk on 29<sup>th</sup> Street S (i.e school driveway).

**Arrival Observation Element E**

*Observe and quantify the number of vehicles parking and/or dropping off students along S Abingdon Street between 30<sup>th</sup> Street S and 30<sup>th</sup> Road S, including details on which side of the street (east or west).*

*(On typical weather day, drop-offs recorded by video and counted by Quality Counts.*

*On inclement weather day, drop-offs counted manually by Toole Design staff on-site.)*

		7:10	7:15	7:20	7:25	7:30	7:35	7:40	7:45	7:50	7:55	8:00	8:05	Average	Maximum
May 14 <sup>th</sup> (typical weather day)	East	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	West	0	0	0	0	0	0	0	0	0	0	0	0	0	0
June 13 <sup>th</sup> (inclement weather day)	East	0	0	0	0	3	0	0	0	0	0	0	0	0	3
	West	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Inclement weather day:

- Relatively few vehicles parallel parked on S Abingdon Street to drop off students. However, approximately 10 vehicles were observed entering the Fairlington Villages Unit Association parking lot to drop off students. Some parked and walked their children to the front of the school, others idled as students exited the vehicle.

### Arrival Observation Element F

*Observe and tally the presence of vehicles parking and/or dropping off along 1) 29<sup>th</sup> Street S between S Woodrow Street and S Abingdon Street, 2) 31<sup>st</sup> Street S at the pedestrian connection to Fort Reynolds Park, 3) 30<sup>th</sup> Road S in the cul-de-sac.*

*(Drop-offs counted manually by Toole Design staff on-site.)*

		7:10	7:15	7:20	7:25	7:30	7:35	7:40	7:45	7:50	7:55	8:00	8:05
May 14 <sup>th</sup> (typical weather day)	29 <sup>th</sup> St S between S Woodrow St	0	0	0	0	1	0	0	0	0	0	0	0
	31 <sup>st</sup> St S at the pedestrian connection to Fort Reynolds Park	0	0	0	0	0	0	0	0	0	0	0	0
	30 <sup>th</sup> Rd S in the cul-de-sac	0	0	0	0	1	0	0	1	9	1	0	0
June 13 <sup>th</sup> (inclement weather day)	29 <sup>th</sup> St S between S Woodrow St and S Abingdon St	0	0	0	0	0	0	0	0	0	0	0	0
	31 <sup>st</sup> St S at the pedestrian connection to Fort Reynolds Park	0	0	0	0	0	0	0	0	0	0	0	0
	30 <sup>th</sup> Rd S in the cul-de-sac	0	0	0	0	0	0	2	2	5	3	2	0

Typical weather day:

- Three (3) vehicles were observed using the 30<sup>th</sup> Road S cul-de-sac to turn around; no students were observed exiting the vehicles.

Inclement weather day:

- At the 30<sup>th</sup> Road S cul-de-sac, parents were observed parking in the cul-de-sac and walking their children to the school entrance.



### Arrival Observation Element G

*Observe and quantify parking capacity at on-site parking lots and Fairlington Community Center parking lot prior to the beginning of the school day.*

*(Parking occupancy counted manually by Toole Design staff on-site.)*

	Period	Time	Fairlington Villages Unit Association			Abingdon Elementary School Main Lot				29 <sup>th</sup> St Lot
			APS	EV*	General	Admin Staff	Temporary Parking	ADA	General	General
	Available spaces	N/A	16	2	14	5	7	4	57	16
May 14 <sup>th</sup> , 2019	Pre-arrival	7:00 AM	9	0	11	0	0	0	15	0
	Post-arrival	8:05 AM	11	0	10	5	7	2	56	16
May 16 <sup>th</sup> , 2019	Pre-arrival	7:10 AM	15	1	9	0	0	0	24	0
	Post-arrival	8:10 AM	16	1	14	5	3	0	55	16
June 13 <sup>th</sup> , 2019	Pre-arrival	7:00 AM	8	1	7	0	0	0	20	0
	Post-arrival	8:10 AM	12	1	9	5	4	1	56	16

\*Electric Vehicle parking spaces

At the Fairlington Villages Unit Association Center, APS maintains a formal shared parking agreement to utilize 16 of the 32 parking lot spaces for staff and APS visitor parking. These spaces are indicated by signs placed at each parking space. These spaces appear to be utilized near or at capacity. Some of the cars parked in APS-reserved spaces displayed APS staff tags; however, the use of these tags was inconsistent, so it could not be determined if APS staff were using spaces not designated for APS community members as well, or if some of the vehicles parked in these spaces were school visitors.

**Observation of School Dismissal (2:15 – 3:15 pm)**

\*Note: Per the scope of work, observation of school dismissal was not conducted on an inclement weather day.

<b>Dismissal Observation Element A</b> <i>Observe staff and parent behaviors in unloading zone, note variations from written procedures</i> <i>(Observations recorded by Toole Design staff on-site)</i>	
<p><u>Staff</u></p> <ul style="list-style-type: none"> <li>• Staff and student patrols were observed helping children into vehicles. No significant variations from written procedures noted. Staff members were located at either end of the marked blue drop-off zone.</li> <li>• Staff members were not wearing safety vests or holding stop paddles; instead, they were guiding parent traffic by verbal communication or by waving to them to continue further in the drop-off loop.</li> <li>• Staff members used handheld radio transceivers (walkie-talkies) to communicate with staff inside the school.</li> </ul> <p><u>Parent</u></p> <ul style="list-style-type: none"> <li>• No variations from written procedures were noted during dismissal. Parents began queuing in drop-off loop before dismissal bell and stayed in their vehicles as students loaded into the vehicles.</li> </ul>	

<b>Dismissal Observation Element B</b> <i>Observe afternoon dismissal in the designated loading zone and note safety or operational conflicts as necessary.</i> <i>(Observations recorded by Toole Design staff on-site)</i>	
<ul style="list-style-type: none"> <li>• No safety or operational conflicts noted during dismissal.</li> </ul>	

<b>Dismissal Observation Element C</b> <i>Observe dismissal in the designated loading zone and report the average and maximum on-site and off-site queue lengths of vehicles picking up students.</i> <i>(Queue length recorded by Toole Design staff on-site at the end of every five-minute interval)</i>		
	Average	Maximum
May 14 <sup>th</sup> (typical weather day)	6	16

**Dismissal Observation Element D**

*Observe and note queue lengths along S Woodrow St at the intersection of 29<sup>th</sup> Street S.*

*(Queue length recorded by Toole Design staff on-site at the end of every five-minute interval)*

	2:15	2:20	2:25	2:30	2:35	2:40	2:45	2:50	2:55	3:00	3:05	3:10	Average	Maximum
May 14 <sup>th</sup> (typical weather day)	0	0	0	0	0	0	0	0	0	0	0	0	0	0

- 5 vehicles observed entering the S Woodrow Street during this hour.
- 5 vehicles observed exiting the S Woodrow Street driveway during this hour. Vehicles did not have to wait at the entrance/no queuing was observed.

**Dismissal Observation Element E**

*Observe and quantify the number of vehicles parking and/or picking up students along S Abingdon Street between 30<sup>th</sup> Street S and 30<sup>th</sup> Road S, including details on which side of the street (east or west).*

*(Pick-ups recorded by video and counted by Quality Counts.)*

		2:15	2:20	2:25	2:30	2:35	2:40	2:45	2:50	2:55	3:00	3:05	3:10	Average	Maximum
May 14 <sup>th</sup> (typical weather day)	East Side	0	0	0	0	0	1	0	0	0	0	0	0	0	1
	West side	0	0	0	0	0	1	0	0	0	0	0	0	0	1

- Vehicles which picked up students were parked along S Abingdon Street before 2:40 pm. Vehicles waited for children to be released.

**Dismissal Observation Element F**

*Observe and tally the presence of vehicles parking and/or picking up along 1) 29<sup>th</sup> St S between S Woodrow St and S Abingdon St, 2) 31<sup>st</sup> St S at the pedestrian connection to Fort Reynolds Park, 3) 30<sup>th</sup> Rd S in the cul-de-sac.*

*(Pick-ups counted manually by Toole Design staff on-site.)*

		2:15	2:20	2:25	2:30	2:35	2:40	2:45	2:50	2:55	3:00	3:05	3:10
May 14 <sup>th</sup> (typical weather day)	29 <sup>th</sup> St S between S Woodrow St and S Abingdon St	0	0	0	0	0	0	0	0	0	0	0	0
	31 <sup>st</sup> St S at the pedestrian connection to Fort Reynolds Park	0	0	0	0	0	0	2	0	0	0	0	0
	30 <sup>th</sup> Rd S in the cul-de-sac	0	0	0	0	1	0	0	0	0	0	0	0
<ul style="list-style-type: none"> <li>• Traffic queues were observed backing up to 29<sup>th</sup> Street S when students were unloading from school buses from other schools at S Abingdon Street S &amp; 29<sup>th</sup> Street S.</li> <li>• Two parents asked Toole Design for directions about where to pick up their children, perhaps indicating a lack of familiarity with official school procedures.</li> </ul>													

**Dismissal Observation Element G**

*Observe and quantify parking capacity at on-site parking lots and Fairlington Community Center parking lot prior to the end of the school day.*

*(Parking occupancy counted manually by Toole Design staff on-site.)*

	Period	Time	Fairlington Villages Unit Association			Abingdon Elementary School Main Lot				29 <sup>th</sup> St Lot
			APS	EV	General	Admin Staff	Temporary Parking	ADA	General	General
	Availability	N/A	16	2	14	5	7	4	57	16
May 14 <sup>th</sup> , 2019	Pre-dismissal	2:10 PM	11	0	13	5	6	2	58	16
	Post-dismissal	3:20 PM	6	0	9	4	5	1	24	8
May 16 <sup>th</sup> , 2019	Pre-dismissal	2:30 PM	9	0	11	5	9	2	57	16
	Post-dismissal	3:20 PM	8	0	10	5	8	2	45	7

At the Fairlington Villages Unit Association Center, APS maintains a formal shared parking agreement to utilize 16 of the 32 parking lot spaces for staff and visitor parking. These spaces are indicated by signs placed at each parking space. These spaces appear to be utilized near capacity. Some of the cars parked in APS-reserved spaces displayed APS staff tags; however, the use of these tags was inconsistent, so it could not be determined if APS staff were using spaces not designated for APS staff as well.

## **Recommendations**

Overall, no operation or safety concerns were observed during the arrival and dismissal at Abingdon Elementary. Based on the arrival and dismissal observations summarized above, as well as stakeholder feedback at the community meeting, Toole Design Group proposes the following recommendations to improve the effectiveness of the drop-off and pick-up procedures:

- Ensure staff supervising drop-off and pick-up wear safety vests. The use of stop paddles may be optional as drivers appeared to be following staff directions given by verbal communication and hand signals.
- Provide multiple communications to parents regarding written drop-off procedures to enhance compliance, including posting them on the school website.
- Emphasize approved drop off locations and explicitly discourage drop off at 30<sup>th</sup> Rd S in the cul-de-sac and in the Fairlington Villages Unit Association Center.
- Send regular reminders to parents to drive defensively, highlighting the following key safety behaviors:
  - Come to a complete stop at crosswalks – do not roll through them.
  - Exit the school driveway at 29<sup>th</sup> street slowly and be aware of and courteous to vehicles exiting S Woodrow Street.
  - “Be a good neighbor” when driving on roads surrounding the school. Drive cautiously and be aware of children crossing the street.
- Monitor use of parking tags by staff to enhance compliance and ensure appropriate usage of parking spaces.