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TECHNICAL MEMORANDUM

To: Matt Byrne — MCN Build

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Date: September 10, 2019

Subject: Rocketship DC3 School Operations Evaluation

INTRODUCTION

This memorandum presents the future operations of the Rocketship DC3 School located at 5450 3rd Street, NE in Washington, DC, as shown in Figure 1 and Figure 2. The project will redevelop two (2) existing warehouses on-site into a school for approximately 440 Rocketship school students, 120 AppleTree school students, and 160 middle school students. Rocketship Education is a nationwide Kindergarten to Grade 5 public charter school that currently operates at campuses in Ward 7 and Ward 8 within Washington, DC. Due to the growing demand, a third campus will open at 3rd Street, NE in the fall of 2020. AppleTree is a public charter preschool that operates in Washington, DC. The Rocketship DC3 will host grades Pre-K 3 and Pre-K 4 students from AppleTree. An additional 160 middle school students between grades 5 through 8 will result in a total of approximately 700 students and 74 staff members at full buildout of the school, which is expected in the fall of 2024.

The scope of this study addresses the future operations associated with the campus circulation, pick-up/drop-off activity, and parking operations for the future school.

This memorandum includes the following four (4) sections:

- Existing Transportation Conditions: This section summarizes the vehicular access, public transit, and pedestrian facilities in the vicinity of the school site.
- School Profile: This section reviews the projected enrollment and schedule for each of the three (3) schools. Included is a review of the projected multimodal trip generation for the schools.
- Proposed Operations: This section reviews the transportation features of the project, including the proposed site plan, pick-up/drop-off operations, and parking accommodations. It includes descriptions of the site's vehicular access, loading facilities, and pedestrian/bicycle accommodations.
- Transportation Demand Management: This section outlines the proposed TDM plan for the development based on specific needs of the site.

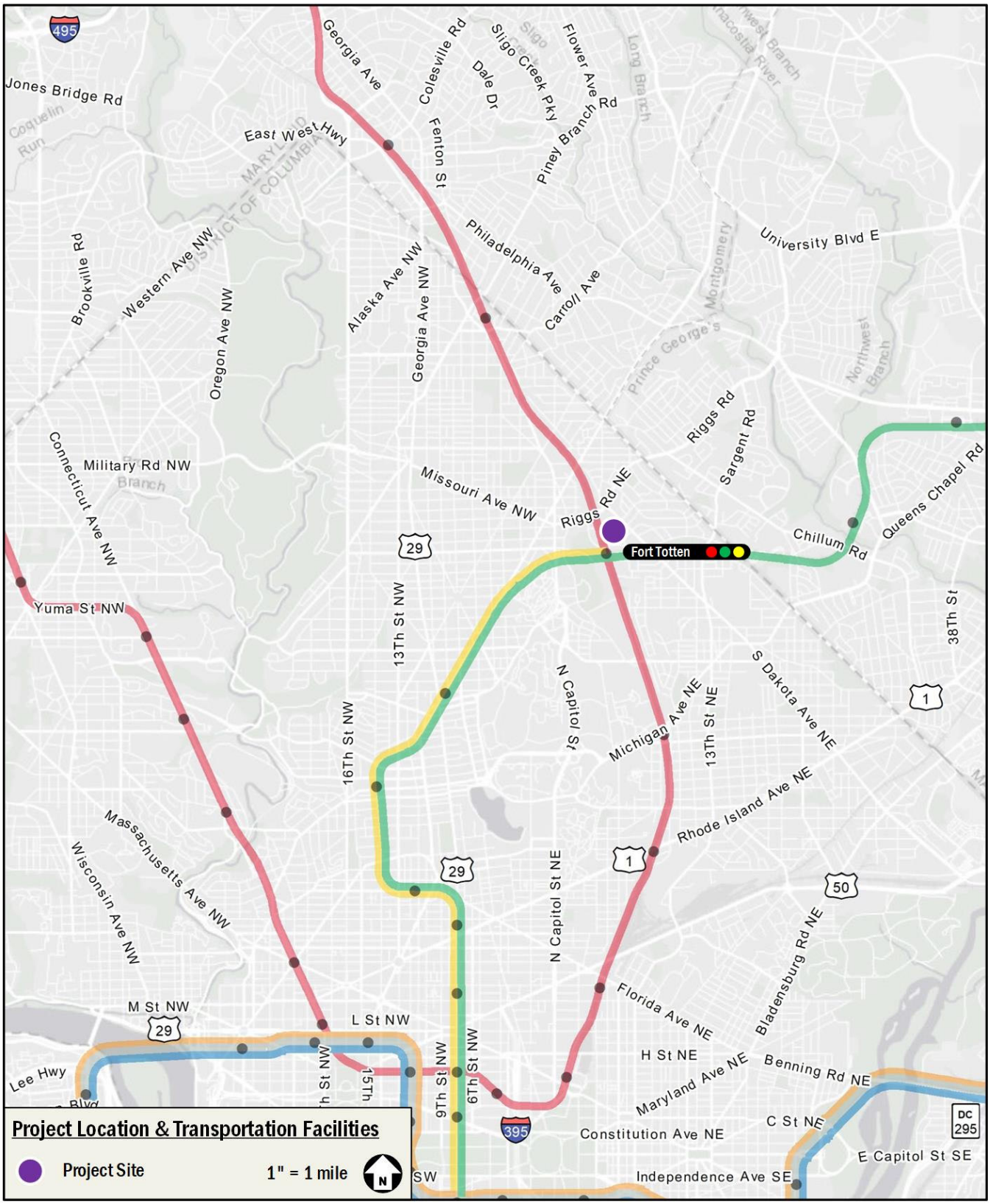

Figure 1: Regional Location

Figure 2: Site Location

Existing Transportation Conditions

This section reviews the existing vehicular, transit, and pedestrian facilities in the vicinity of the school site. The site is just north of the Fort Totten Metrorail Station, which provides service on the Red, Green, and Yellow Lines and where several Metrobus routes stop. The site is also served by a pedestrian network consisting of sidewalks and crosswalks along the streets surrounding the site. The site is served by an on-street bicycle network, consisting of nearby bicycle lanes, signed routes and off-street bicycle trails.

Vehicular

The site is accessible from several principal arterials such as Riggs Road to the west and east, New Hampshire Avenue to the north, and South Dakota Avenue and North Capitol Street to the south. These roadways create southern connectivity the downtown DC area and eastern connectivity to Rhode Island Avenue (US-1) and New York Avenue (US-50), both of which provide access to the DC-295 and the Capital Beltway (I-495), which surrounds Washington, DC and its inner suburbs.

The site is directly served by Kennedy Street/3rd Street, accessible via South Dakota Avenue. Access to the site area is complimented by an existing network of connector and local roadways.

Transit

The site is within a four-minute walk of the Fort Totten Metrorail Station, serviced by the Red, Green, and Yellow lines. The station also services multiple bus routes located within the bus bays to the east of the station entrance. These bus lines connect the site to many areas of DC, including the F6, K6, K9, and R1 and R2 lines which also service Prince George's County, Maryland. The Fort Totten station is currently served by 12 Metrobus routes. The 80 route provides one-seat service to several areas of downtown, DC and is classified as a Priority Corridor Network, which has undertaken improvements to increase service, reliability, and capacity. Table 1 shows a summary of the bus route information for the routes that serve the site, including service hours, headway, and distance to the nearest bus stop.

The Red Line provides service from Shady Grove to Glenmont in Montgomery County, Maryland via downtown, Washington DC. The Green Line provides service from Greenbelt, Maryland to Branch Avenue in Prince George's County, serving the Southwest and Southeast quadrants of the District. The Yellow Line provides service from Greenbelt, Maryland to Huntington in Fairfax County, Virginia, serving Arlington County, Alexandria, and Reagan National Airport. Connections to other Metrorail lines closer to the Downtown, DC area can be made by transferring at the Metro Center (via the Red Line) and L'Enfant Plaza (via the Green and Yellow Lines) stations. The proximity to the Fort Totten Metrorail station and the bus routes that serve the station allow much of the DC metropolitan area to be accessible from the school. Existing transit facilities surrounding the site are shown on Figure 3.

Table 1: Summary of Bus Route Information

Route Number	Route Name	Service Hours	Headway	Walking Distance to Nearest Bus Stop
B98	Bladensburg Operator Shuttle (Employees Only)	Northbound: 7:00 AM-9:00 PM Southbound: 7:27 AM-8:47 PM	20 min	0.2 miles, 4 minutes
E2	Ivy City-Fort Totten Line	Weekdays: 5:46 AM-12:30 AM Weekends: 5:40 AM-1:15 AM	20-62 min	0.2 miles, 4 minutes
E4	Military Road-Crosstown Line	Weekdays: 4:52 AM-1:45 AM Weekends: 5:20 AM-2:00 AM	6-45 min	0.2 miles, 4 minutes
F6	New Carrollton-Fort Totten Line	Westbound: 5:52 AM-10:18 PM Eastbound: 5:34 AM-9:35 PM	24-65 min	0.2 miles, 4 minutes
K2	Takoma-Fort Totten Line	Northbound: 6:18 AM-6:40 PM Southbound: 6:10 AM-7:16 PM	11-24 min	0.2 miles, 4 minutes
K6	New Hampshire Ave-Maryland Line	Weekdays: 5:15 AM-1:05 AM Weekends: 6:05 AM-1:11 AM	6-35 min	0.2 miles, 4 minutes
K9	New Hampshire Ave-Maryland Limited Line	Northbound: 6:00 AM-6:50 PM Southbound: 5:45 AM-6:53 AM	11-19 min	0.2 miles, 4 minutes
R1, R2	Riggs Road Line	Weekdays: 5:03 AM-11:10 PM Weekends: 6:00 AM-9:41 PM	4-69 min	0.2 miles, 4 minutes
60, 64	Fort Totten-Petworth Line	Weekdays: 5:00 AM-2:15 AM Weekends: 5:00 AM-2:17 AM	1-45 min	0.2 miles, 4 minutes
80	North Capitol Street Line	Weekdays: 4:58 AM-1:15 AM Weekends: 5:29 AM-1:24 AM	5-45 min	0.2 miles, 4 minutes

Figure 3: Existing Transit Facilities

Bicycle Facilities

The project site is located in an area with excellent bicycle facilities. Existing on-street facilities consist of bicycle lanes along Gallatin and Hamilton Streets to the west and along Riggs Road to the east, signed routes along Kennedy Street to the west and Fort Totten Drive to the south. These facilities are supplemented by a network of off-street trails that takes riders to within 0.2 miles of the school. Adjacent to the Fort Totten Metrorail station is an entrance to the Metropolitan Branch Trail. The trail consists of a network of off-street trails and on-street connections that connect Union Station with Silver Spring, Maryland. Figure 4 illustrates the existing bicycle facilities in the area.

Using these connections along the on-street and off-street routes within the study area, bicyclists have access to a number of robust regional bicycle facilities. To accommodate these cyclists, the site is planned to provide on-site bicycle facilities as discussed in detail in the operations section.

The Capital Bikeshare program provides additional cycling options for staff members. The Bikeshare program has placed over 500 Bikeshare stations across the Washington, DC metropolitan area with over 4,300 bicycles provided. There are two (2) nearby Capital Bikeshare stations: a 19-dock station at the Fort Totten Metrorail station located 0.2 miles south of the site and a 15-dock station at the intersection of 3rd Street and Riggs Road located four (4) blocks to the northeast. Figure 4 illustrates the existing Capital Bikeshare facilities in the area.

In addition to Capital Bikeshare, DDOT has engaged in a program with dockless transportation companies, allowing point-to-point dockless bikesharing and electric scootering. Bicycle and scooter availability are tracked through mobile phone applications for each company individually.

Figure 4: Existing Bicycle Facilities

Pedestrian Facilities

Overall, the pedestrian facilities within the study area provide excellent connections to major local destinations, including the Fort Totten Metrorail station. A summary of the pedestrian facilities within a 0.25-mile walk of the site is shown in Figure 5, with a summary of sidewalk width and buffer requirements provided in Table 2.

Within the study area shown, most roadways are classified low to moderate density residential. In general, most sidewalks within the study area meet DDOT standards for minimum sidewalk width, including South Dakota Avenue and Riggs Road. The sidewalks that do not meet DDOT standards are typically along routes that provide a minimum unobstructed width of 6 feet but do not provide the minimum buffer width. Many of these sidewalks are located on lower-volume neighborhood streets or are in areas with a narrow right-of-way (such as Riggs Road running underneath the Metrorail Red Line.

ADA standards require that all curb ramps be provided wherever an accessible route crosses a curb and must have a detectable warning. Additionally, curb ramps shared between two (2) crosswalks is not desired. As shown in Figure 5, under existing conditions most crosswalks and curb ramps meet standards along the major pedestrian routes of Riggs Road, Galloway Street, South Dakota Avenue, and 25th Street. The pedestrian facilities in the area provide students and staff a quality walking environment to/from major destinations, such as nearby bus stops at the Fort Totten Metrorail Station and businesses along Riggs Road to the northeast.

Table 2: Sidewalk Requirements

Street Type	Minimum Buffer Width	Minimum Sidewalk Unobstructed Width	Total Minimum Sidewalk Width
Residential (Low to Moderate Density)	4-6 feet	6 feet	10 feet
Residential (High Density)	4-8 feet	8 feet	13 feet
Central DC and Commercial Areas	4-10 feet	10 feet	16 feet

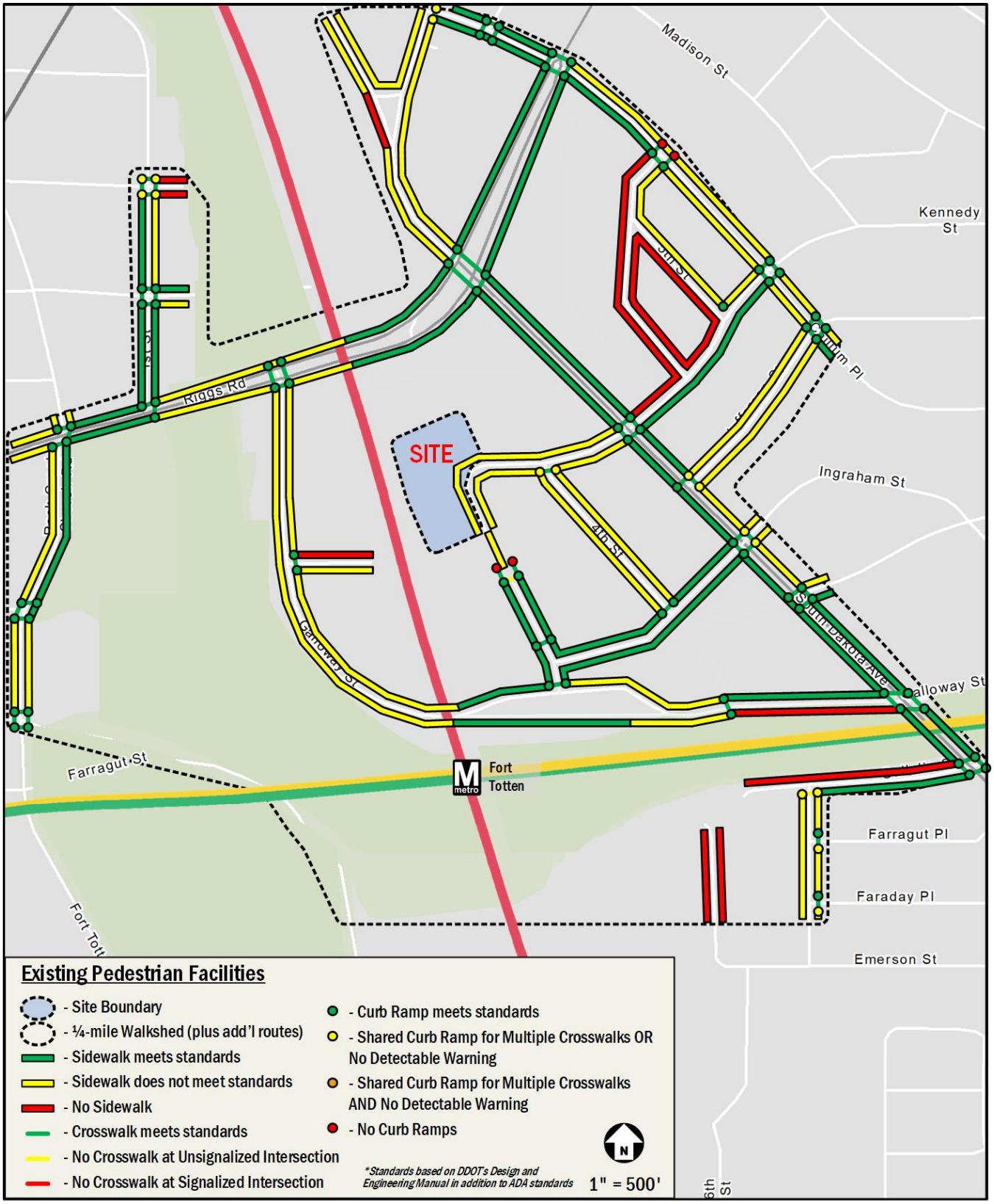

Figure 5: Existing Pedestrian Facilities

SCHOOL PROFILE

This section outlines the enrollment profile of the Rocketship DC3 campus, including student and staff information.

Student Enrollment

The Rocketship DC3 campus will open in phases, starting in the 2020-21 school year. The first phase will open for Preschool, Elementary, and Middle School children with total of 260 students and 25 staff members. Subsequent phases will see enrollment gradually ramp up in each succeeding year up to 2024-25, at which time the school will be at full enrollment for all grade levels with a total of 700 students and 74 staff members. The breakdown of students by grade level is as follows:

Table 3: Student Enrollment By Year

Grade Levels	Academic Year	
	2020-2021	2024-2025*
PK-3	40	60
PK-4	40	60
Kindergarten	50	70
Grade 1	50	70
Grade 2	0	70
Grade 3	0	70
Grade 4	0	70
Grade 5	40	110**
Grade 6	40	40
Grade 7	0	40
Grade 8	0	40
Total	**260**	**700**

**Enrollment in the interim years will be approximately 396 in 2021-22, 548 in 2022-23, and 657 in 2023-24*

***Grade 5 includes 70 Rocketship Students and 40 Middle School Students*

School Schedule

The Rocketship DC3 campus is proposing the following schedule:

- 6:30 AM: Before School Care begins
- 7:15 to 7:45 AM: Arrival for Rocketship and AppleTree Schools
- 7:45 AM: Start of day for Rocketship and AppleTree students
- 7:45 to 8:15 AM: Arrival for Middle School students
- 8:15 AM: Start of day for Middle School students
- 9:30 to 10:00 AM: On-site food deliveries
- 12:30 to 1:00 PM: On-site trash pick-up
- 3:45 to 4:10 PM: Kindergarten Dismissal
- 3:55 to 4:15 PM: Grades 1 and 2 Dismissal
- 4:05 to 4:30 PM: Grades 3 to 5 Dismissal
- 4:15 PM: Middle School Dismissal
- 4:30 to 6:30 PM: Afterschool Programs

The proposed school schedule follows a staggered arrival and dismissal process, allowing the impact of inbound and outbound school trips to be spread out across the commuter peak hours.

School Site-Generated Trips

Trip generation for the proposed school campus was determined based on information provided by each school regarding projected student/employee mode split, start/end times, and comparable data from other DC area schools.

Based on the information provided by the schools, the mode splits assumed are summarized in Table 4. A higher auto mode split was assumed for AppleTree students given their young age, with parents picking up and dropping off their children. A lower auto mode split (and a higher transit mode split) was assumed for older students attending Rocketship School and the Middle School. The majority of school staff is expected to use public transportation to and from the school given the site's proximity to the Fort Totten Metrorail Station. Staff members are enrolled in the school's Commuter Policy program, which incentivizes public transportation over single occupancy vehicles.

Table 4: Mode Split

	Mode			
	Drive	Transit	Walk	Bike
Students (AppleTree)	70%	30% Combined Non-Auto		
Students (Rocketship)	30%	70% Combined Non-Auto		
Students (Middle School)	20%	80% Combined Non-Auto		
Staff (All Schools)	30%	65%	3%	2%

A summary of the vehicle trip generation for the overall school is provided in Table 5 for all three (3) peak hours in Table 5. As such the new school is expected to generate 307 vehicular trips (163 inbound, 144 outbound) during the morning peak hour, 247 vehicular trips (114 inbound, 133 outbound) during the afternoon school peak hour, and 120 vehicular trips (59 inbound, 61 outbound) during the afternoon commuter peak hour. Detailed calculations are included in the Technical Attachments.

Table 5: Vehicular Trip Generation

	School	AM Commuter Peak Hour 7:15-8:15 AM			PM School Peak Hour 3:45-4:45 PM			PM Commuter Peak Hour 6:00-7:00 PM		
		In	Out	Total	In	Out	Total	In	Out	Total
Students	AppleTree	57	57	114	55	55	110	14	14	28
	Rocketship	65	65	130	46	46	92	36	36	72
	Middle School	22	22	44	13	13	26	9	9	18
	All Students	144	144	288	114	114	228	59	59	118
Staff	All Staff	19	0	19	0	19	19	0	2	2
	Total	**163**	**144**	**307**	**114**	**133**	**247**	**59**	**61**	**120**

PROPOSED OPERATIONS

The planned operations for the Rocketship DC3 campus are presented in the following section; specifically addressing the following:

- Site Access and Circulation
- Pick-Up and Drop-Off Operations
- Traffic Control Personnel
- Parking
- Transportation Demand Management (TDM)

Site Access and Circulation

The existing site consists of two (2) buildings, which will be renovated to accommodate three (3) schools. A new lobby will be constructed between the two buildings to function as the main pedestrian entrance. The site is located at the confluence of Kennedy and 3rd Streets. Access to the site is from Kennedy Street to the east. South of the site, 3rd Street is pedestrian-only, connecting to a residential development and Fort Totten Metrorail station via an off-street path. Vehicular access to the site will utilize two (2) existing curb cuts—the eastern curb cut to enter the parking area and pick-up/drop-off area and the southern curb cut to exit onto 3rd Street. A third curb cut, which served the loading berths of the southern building, will be removed as part of the redevelopment. During the scheduled loading delivery periods, the exit-only curb cut will be utilized by delivery vehicles to access the loading berth located adjacent to the south building. Deliveries are schedule outside of the arrival/dismissal periods to avoid conflicts. The pick-up/drop-off driveway will operate as a one-way eastbound/southbound drive aisle with bypass lane in order to ensure efficient operations.

Vehicles who park along Kennedy Street/3rd Street will be able to access the pedestrian entrance to the school.

Pick-up and Drop-off Operations

During morning drop-off, vehicles will enter the drop-off loop from 3rd Street at the eastern curb cut. Vehicles will then enter the pick-up/drop-off lane and enter the drop-off zone along the east side of the school. This space is approximately 200 feet long and will be able to accommodate eight (8) vehicles. An additional two (2) vehicles can be accommodated on the campus for a total of 10 vehicles. Between five (5) and 10 staff members from each school will be on-hand to assist the children out of the vehicle and bring them inside the school. It will not be necessary for parents to walk their children into the school due to the presence of staff at the drop-off zone. With this protocol enacted, vehicles can swiftly move through the drop-off process and be on their way.

After the student has been dropped-off, the vehicle will proceed to the exit at 3rd Street via the southern curb cut. Parents will be encouraged to drop-off student's curbside; however, parents of younger children who wish to park their vehicle and walk into the school will be allowed to park in the parent pick-up/drop-off spaces located in the parking lot or on-street spaces. Parents will only be able to park on-street during the arrival and dismissal period, subject to a 15-minute limit. There will be a combined 5 spaces designated for parents/visitors. Due to limited parking on campus, parents will be encouraged to drop their child off in the drop-off zone.

Afternoon pick-up operations will follow the same route as the morning drop-off. A staff member will be located at the school driveway entrance communicating the student's names associated with each vehicle to one of the staff members located in

the pick-up zone. The parents are given a placard with their child's name at the beginning of the school year. This placard will be located on the dashboard of their vehicle at all times during the pick-up process. Once vehicles enter the pick-up zone and are identified, the child will be guided by staff to their vehicle. Similar to the morning drop-off time period, up to eight (8) vehicles will be able to queue at the pick-up lane and there will be approximately five (5) to 10 staff members to assist with the afternoon pick-up. The proposed operations will be managed in the same manner with partial enrollment as well as full enrollment. The pick-up/drop-off operations are shown on Figure 7 and Figure 8 for the morning drop-off and afternoon pick-up periods, respectively.

Traffic Control Personnel

During the morning drop-off and afternoon pick-up period, there will be at least five (5) to 10 staff members to assist with drop-off. Additionally, traffic control personnel will be at the entrance site driveways and adjacent to the bicycle parking area to control pedestrian and vehicular interactions as well as ensure back-ups are not created off-campus by vehicles entering the school. The morning drop-off operations and traffic control personnel are shown in Figure 7. The afternoon pick-up operations and traffic control personnel are shown in Figure 8.

Parking

The school site contains a total of 17 parking spaces in the surface lot as detailed in Figure 6. A breakdown of the available parking in each area is provided in Figure 7 and Figure 8 and described below.

Staff

A limited number of staff will be permitted to park in the parking lot. The staff will have a combined count of 10 on-campus parking spaces. With a total of 74 staff members and only 10 permitted parking spaces on-campus, staff members will be encouraged to take public transit, carpool, or walk/bike. The school's Commuter Policy program and short walk to the Fort Totten Metrorail station will incentivize staff members to use non-auto modes as a primary means of commuting.

Visitors

Visitors including parents picking up or dropping off their child will be permitted to park within the parking lot, with on-street parking allowed during arrival and dismissal periods only. A total of five (5) visitor spaces have been reserved on campus. On-street spaces for visitors will be signed for 15-minute parking during pick-up/drop-off times in order to allow for parents to park and walk their young child into the classroom. An additional two (2) spaces are reserved for handicapped accessibility.

Bicycle Parking

The school site will include bicycle parking spaces to encourage students and staff alike to use cycling as a practical commuting option. 26 short-term spaces are proposed adjacent to the on-campus parking lot and in front of the school entrance. Under current Zoning Regulations (ZR16), a public educational facility is required to provide a minimum of one (1) long-term bicycle space for every 7,500 square feet and a minimum of one (1) short-term bicycle space for every 2,000 square feet, resulting in a minimum of eight (8) long-term spaces and 28 short-term spaces.

The combination of proposed on-site bicycle parking, availability of nearby bicycle facilities, and the school's commitment to bicycle safety will make cycling an attractive option for students and staff.

TRANSPORTATION DEMAND MANAGEMENT (TDM) PLAN

Transportation Demand Management (TDM) is the application of policies and strategies used to reduce travel demand or to redistribute demand to other times or spaces. TDM typically focuses on reducing the demand of single-occupancy, private vehicles during peak period travel times, or on shifting single-occupancy vehicular demand to off-peak periods. The following TDM measures are proposed as part of the combined campus:

School-Wide TDM Elements

- Designate a staff member to serve as Transportation Management Coordinator (TMC) who will be responsible for oversight of the TDM plan, adherence to driving and parking regulations, and encourage and facilitate carpooling;
- Continue to support and grow a culture around walking, biking, carpooling and public transit use among students and staff;
- Provide secure bicycle parking/storage facilities for students and staff;
- Maintain trained crossing guards at appropriate intersections near school;
- Establish a walking club;

Student/Parent TDM Elements

- Encourage carpooling by offering a parent listserv which will allow parents to find carpool matches;
- Coordinate bike safety/education courses for students;
- Establish and provide parents with information on walking school buses and bike trains;

Faculty/Staff TDM elements

- Offer SmartBenefits to faculty and staff to encourage the use of public transportation;
- Offer Environmental Benefits to employees who walk or bicycle to work;
- Encourage carpooling by offering a staff listserv which will allow staff to find carpool matches; and,

SUMMARY AND CONCLUSIONS

This memorandum presents the planned operations of the Rocketship DC3 School located at 5450 3rd Street, NE in Washington, DC. The DC3 School will house 440 Rocketship school students, 120 AppleTree school students, and 160 Middle School students, for a total of 700 students and 74 staff. The school is expected to open by the 2020-21 school year, with full enrollment reached by the 2024-25 school year. Recommendations to address the future operations of the Rocketship DC3 campus are as follows:

- Create a one-way pick-up/drop-off curbside area with a bypass lane.
- Designate 15-minute parking spaces to visitors for parents who wish to walk their child into school.
- Designate enough Traffic Control Personnel in order to allow for efficient circulation.
- Implement a Traffic Demand Management (TDM) Plan in order to reduce the demand of single-occupancy, private vehicles during peak period travel times.

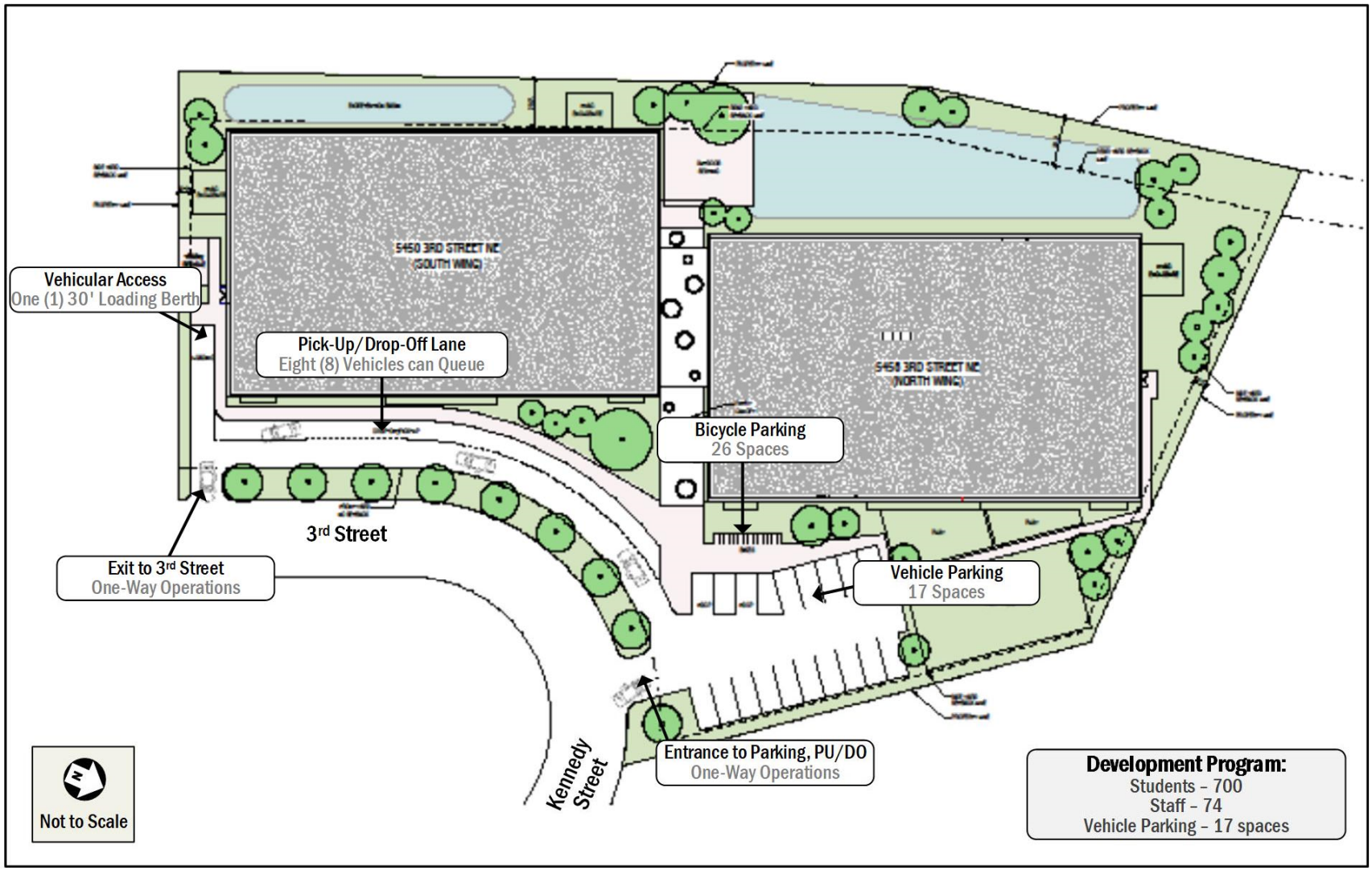

Figure 6: Site Plan

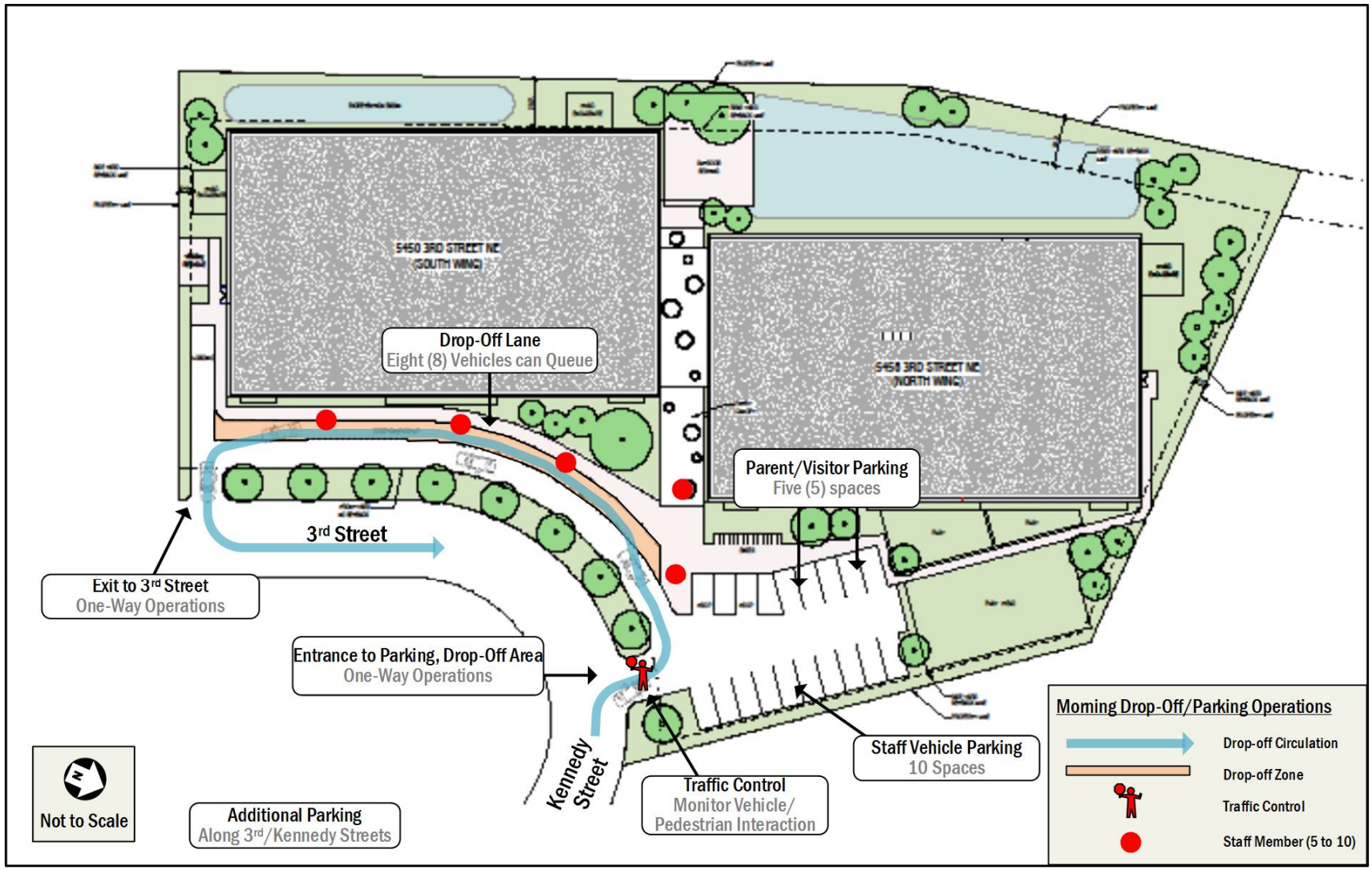

Figure 7: Morning Drop-Off Circulation Plan

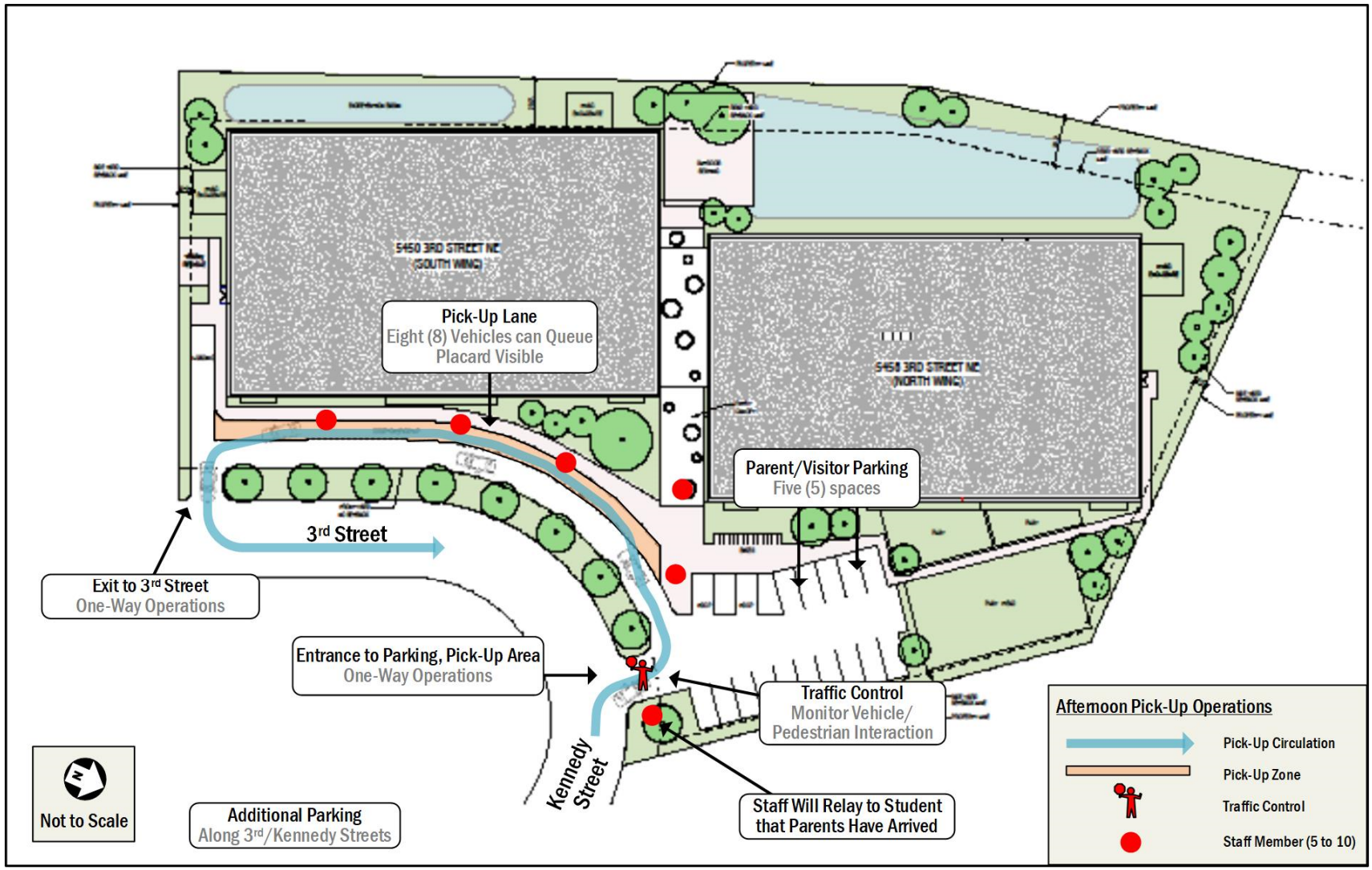

Figure 8: Afternoon Pick-Up Circulation Plan

TECHNICAL ATTACHMENTS

Mode Split Assumptions

School Staff

Description of school component of project:

The school will have approximately 74 staff and 700 students at Full Build.

Pertinent Mode Split data from other sources:

Information Source	Mode						
	SOV	Carpool	Transit	Bike	Walk	Telecommute	Other
CTPP - TAZ Workplace (TAZ 20339)	74%	6%	10%	0%	0%	10%	0%
CTPP - TAZ Workplace (Adjacent TAZ 10244)	80%	5%	11%	0%	2%	2%	0%
Census Tract - Residents (CT 95.08)	45%	4%	45%	1%	2%	2%	1%
State of the Commute 2016 (of District residents)	35%	4%	42%	16%		3%	
WMATA Ridership Survey (average for *Suburban-Inside the Beltway*)	39%		49%	12%		---	

Mode Split assumed in TIS:

Land Use	Mode				
	Drive	Transit	Bike	Walk	Telecommute/Other
Teacher Mode Split	30%	65%	2%	3%	---

Notes: -Census data (CTPP) and School Commuter Policy used as basis for assumptions

'-Census data adjusted based on parking supply of 17 spaces and School's DC Commuter Policy

Table 1 - School Trip Generation (Staff)

74 Staff

Step 1: Base trip generation using Information provided from school

Land Use	Land Use Code	Quantity (x)	AM School Peak Hour (7:15-8:15 AM)			PM School Peak Hour (3:45-4:45 PM)			PM Commuter Peak Hour (6:00-7:00 PM)		
			In	Out	Total	In	Out	Total	In	Out	Total
School	--	74 staff	63 veh/hr	0 veh/hr	63 veh/hr	0 veh/hr	63 veh/hr	63 veh/hr	0 veh/hr	7 veh/hr	7 veh/hr

Step 2: Convert to people per hour, before applying mode splits

Land Use	People/Car (from NCS Survey)	AM School Peak Hour (7:15-8:15 AM)			PM School Peak Hour (3:45-4:45 PM)			PM Commuter Peak Hour (6:00-7:00 PM)		
		In	Out	Total	In	Out	Total	In	Out	Total
School	1.18 ppl/veh	74 ppl/hr	0 ppl/hr	74 ppl/hr	0 ppl/hr	74 ppl/hr	74 ppl/hr	0 ppl/hr	8 ppl/hr	8 ppl/hr

Step 3: Split between modes, per assumed Mode Splits

Land Use	Mode	Split	AM School Peak Hour (7:15-8:15 AM)			PM School Peak Hour (3:45-4:45 PM)			PM Commuter Peak Hour (6:00-7:00 PM)		
			In	Out	Total	In	Out	Total	In	Out	Total
School	Auto	30%	22 ppl/hr	0 ppl/hr	22 ppl/hr	0 ppl/hr	22 ppl/hr	22 ppl/hr	0 ppl/hr	2 ppl/hr	2 ppl/hr
School	Transit	65%	48 ppl/hr	0 ppl/hr	48 ppl/hr	0 ppl/hr	48 ppl/hr	48 ppl/hr	0 ppl/hr	5 ppl/hr	5 ppl/hr
School	Bike	2%	1 ppl/hr	0 ppl/hr	1 ppl/hr	0 ppl/hr	1 ppl/hr	1 ppl/hr	0 ppl/hr	0 ppl/hr	0 ppl/hr
School	Walk	3%	2 ppl/hr	0 ppl/hr	2 ppl/hr	0 ppl/hr	2 ppl/hr	2 ppl/hr	0 ppl/hr	0 ppl/hr	0 ppl/hr

Step 4: Convert auto trips back to vehicles/hour

Land Use	People/Car (from NCS Survey)	AM School Peak Hour (7:15-8:15 AM)			PM School Peak Hour (3:45-4:45 PM)			PM Commuter Peak Hour (6:00-7:00 PM)		
		In	Out	Total	In	Out	Total	In	Out	Total
School	1.18 ppl/veh	19 veh/hr	0 veh/hr	19 veh/hr	0 veh/hr	19 veh/hr	19 veh/hr	0 veh/hr	2 veh/hr	2 veh/hr

Trip Gen Summary for School Staff

Mode	AM School Peak Hour (7:15-8:15 AM)			PM School Peak Hour (3:45-4:45 PM)			PM Commuter Peak Hour (6:00-7:00 PM)		
	In	Out	Total	In	Out	Total	In	Out	Total
Auto	19 veh/hr	0 veh/hr	19 veh/hr	0 veh/hr	19 veh/hr	19 veh/hr	0 veh/hr	2 veh/hr	2 veh/hr
Transit	48 ppl/hr	0 ppl/hr	48 ppl/hr	0 ppl/hr	48 ppl/hr	48 ppl/hr	0 ppl/hr	5 ppl/hr	5 ppl/hr
Bike	1 ppl/hr	0 ppl/hr	1 ppl/hr	0 ppl/hr	1 ppl/hr	1 ppl/hr	0 ppl/hr	0 ppl/hr	0 ppl/hr
Walk	2 ppl/hr	0 ppl/hr	2 ppl/hr	0 ppl/hr	2 ppl/hr	2 ppl/hr	0 ppl/hr	0 ppl/hr	0 ppl/hr

Rocketship Assumptions:	No.	%
Student Population	440	
Estimated No. of RSED Families	308	
Estimated % of Walkers / Metro Riders		70%
Estimated % of Driving Families*		30%
Total Estimated No. of Driving Families	92	
Estimated No. RSED Families in After School Program	46	
Estimated No. of RSED Families in Before-Care	20	

** Currently 20% and 35% of families drive at Rocketship RISE and RLP, respectively, in Wards 8 and 7. Since DC 3 is very near the Ft. Totten Metro Station, more commuters / fewer drivers are anticipated at this campus than in Ward 7.*

AppleTree Assumptions:	No.	%
Student Population	120	
Estimated No. of AT Families	108	
Estimated % of Walkers / Metro Riders		30%
Estimated % of Driving Families*		70%
Total Estimated No. of Driving Families	76	
Estimated No. AT Families in After School Program	15	
Estimated No. of AT Families in Before-Care	12	

Middle School Assumptions:	No.	%
Student Population	160	
Estimated No. of MS Families	120	
Estimated % of Walkers / Metro Riders		80%
Estimated % of Driving Families*		20%
Total Estimated No. of Driving Families	24	
Estimated No. MS Families in After School Program	10	
Estimated No. of MS Families in Before-Care	0	

GRAND TOTAL - Estimated No. Driving Families	192	27%
Adjustment for Siblings	-19	10%
ADJUSTED GRAND TOTAL - No. Driving Families	**173**	**25%**

								Morning Arrival			Afternoon Dismissal		
DAILY SCHEDULE		**Start**	**End**	**% of Driving Families**	**No. of Driving Families**	**No. of Driving Families Adjusted for Siblings**		**No. Drivers Non-Peak Before Care 6:30-7:30**	**No. Drivers at Peak Arrival 7:15-7:45 AM**	**No. Drivers at Peak MS Arrival 7:45-8:15 AM**	**No. Drivers at Peak Dismissal 3:40-4:20 PM**	**No. Drivers at Peak MS Dismissal 4:15-4:45 PM**	**No Drivers at Non-Peak After Care Hours <6:30 PM**
Rocketship	**Arrival**												
	Before Care	6:30 AM	7:30 AM	22%	20	18		18					
	Drop for Morning Assembly	7:15 AM	7:45 AM	78%	72	65			65				
	Dismissal												
	Kinder	3:45 PM	4:10 PM	17%	16	14							
	1st - 2nd Grades	3:55 PM	4:15 PM	17%	16	14							
	3rd - 5th Grades	4:05 PM	4:20 PM	22%	20	18					46		
	Afterschool Care	4:10 PM	6:30 PM	44%	40	36							36
AppleTree	**Arrival**												
	Before Care	6:30 AM	7:30 AM	10%	12	11		11					
	Other Arrival	7:15 AM	7:45 AM	85%	64	57			57				
	Dismissal												
	P3 and P4 Grades	3:40 PM	4:00 PM	51%	61	55					55		
	Afterschool Care	4:00 PM	6:30 PM	13%	15	14							14
Middle School	**Arrival**												
	Before Care	N/A	N/A	N/A	N/A			0					
	Other Arrival	7:45 AM	8:15 AM		24	22				22			
	Dismissal												
	5th - 8th Grades	4:15 PM	4:45 PM		14	13						13	
	Afterschool Care	4:15 PM	6:30 PM		10	9							9
GRAND TOTAL PEAK ARRIVAL / DISMISSAL DRIVERS								**29**	**122**	**22**	**101**	**13**	**59**

Total Drivers Arrival	**173**	Adjusted for Sil
Total Drivers Dismissal	**173**	Adjusted for Sibs

Table 2 - Proposed School Trip Generation (Students)

700 Students

Step 1: Base trip generation using School's Breakdown

Land Use	Land Use Code	Quantity (x)	AM School Peak Hour (7:15-8:15 AM)			PM School Peak Hour (3:45-4:45 PM)			PM Commuter Peak Hour (6:00-7:00 PM)		
			In	Out	Total	In	Out	Total	In	Out	Total
School	--	700 students	144 veh/hr	144 veh/hr	288 veh/hr	114 veh/hr	114 veh/hr	228 veh/hr	59 veh/hr	59 veh/hr	118 veh/hr

Trip Gen Summary by Land Use/Mode

Mode	Land Use	AM Peak Hour School			PM Peak Hour School			PM Peak Hour Commuter		
		In	*Out*	*Total*	*In*	*Out*	*Total*	*In*	*Out*	*Total*
Auto	Staff	19 veh/hr	0 veh/hr	19 veh/hr	0 veh/hr	19 veh/hr	19 veh/hr	0 veh/hr	2 veh/hr	2 veh/hr
	Students	144 veh/hr	144 veh/hr	288 veh/hr	114 veh/hr	114 veh/hr	228 veh/hr	59 veh/hr	59 veh/hr	118 veh/hr
	Net Total	**163 veh/hr**	**144 veh/hr**	**307 veh/hr**	**114 veh/hr**	**133 veh/hr**	**247 veh/hr**	**59 veh/hr**	**61 veh/hr**	**120 veh/hr**