WELLS + ASSOCIATES

GEORGETOWN DAY SCHOOL

COMPREHENSIVE TRANSPORTATION REVIEW

September 2017

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INTRODUCTION

This report presents a Comprehensive Transportation Review (CTR) conducted in conjunction with the proposal by Georgetown Day School (herein referred to as GDS, or the School) to relocate its Middle and Lower Schools located at 5530 MacArthur Boulevard NW to its High School campus located at 4200 Davenport Street NW (Square 1673, Lots 822 and 824). The proposed site for the Lower/Middle School currently is occupied by the vacant Tenleytown Safeway and three single-family homes. The site is located on Square 1672, Lots 4, 14, 804, 812, and 815 and is zoned MU-4, R-2, and R-3. The site is located north and east of the High School and generally is bounded by Ellicott Street to the north, 42nd Street to the east, Davenport Street to the south, and residences to the west. The site location is shown on Figure 1.

To relocate the Lower/Middle School and unify it with the High School campus, the School proposes to raze the existing Safeway building and construct a new four-story school that will house the Lower and Middle Schools. A new athletic field also will be provided with one level of parking (housing 106 parking spaces) beneath the field. The proposed site plan is shown on Figure 2.

In conjunction with the relocation of the Lower/Middle School, GDS proposes to increase the cap at its Davenport campus from the current cap of 500 students to 1,200 students. The increased cap would accommodate the 500 students currently allowed at the High School, the 575 currently allowed at the Lower and Middle Schools, and an increase of 125 students across the three divisions. The faculty/staff cap would be increased from 100 full-time equivalent (FTE) faculty/staff to 260 FTEs. The increased cap would accommodate the 100 faculty/staff currently employed at the High School, 120 faculty/staff currently employed at the Lower and Middle Schools, and an increase of 40 additional faculty/staff members across the three divisions.

Access to the existing High School is provided via Davenport Street, which provides access to 145 below-grade parking spaces and 51 surface parking spaces for the High School. The High School's pick-up/drop-off operation occurs within the existing surface parking lot adjacent to the high school athletic field.

In conjunction with the proposed application, a new curb cut is proposed on River Road to provide an additional access point to the High School garage. Access to the new Lower/Middle school will be provided via a new curb cut on Davenport Street (to replace the existing Safeway curb cut on Davenport Street) and the existing public alley on Ellicott Street. An existing curb cut on 42nd Street will be closed in conjunction with the project.

The purpose of this report is to:

- Evaluate existing traffic operation and safety conditions,
- Evaluate future traffic conditions without the proposed project,
- Evaluate future traffic conditions with the proposed project,
- Identify existing mode choice alternatives,
- Identify any traffic operational impacts associated with the proposed project,
- Evaluate the appropriateness of the proposed parking and drop-off/pick-up areas,
- Evaluate the effectiveness of the proposed loading facilities, and
- Recommend transportation improvements (including roadway, operational, and demand management strategies) to mitigate the impact of the project and promote the safe and efficient flow of vehicular and pedestrian traffic associated with the proposed redevelopment.

STUDY SCOPE

This CTR was undertaken to assess the impacts of the proposed development on the surrounding roadway network. The scope of the study and proposed methodologies were approved by the District Department of Transportation (DDOT). The agreed upon scope is included in Appendix A.

The study area was selected based on those intersections that potentially could be affected by the proposed project. The following intersections were identified for detailed analysis, as agreed to by DDOT:[i]

1. Fessenden Street/Wisconsin Avenue*
2. Fessenden Street/41st Street*
3. Ellicott Street/River Road
4. Ellicott Street/43rd Place
5. Ellicott Street/Public Alley
6. Ellicott Street/Wisconsin Avenue
7. Ellicott Street/41st Street*
8. Wisconsin Avenue/42nd Street
9. River Road/Davenport Street/43rd Place
10. Davenport Street/42nd Street
11. Davenport Street/Wisconsin Avenue
12. Chesapeake Street/43rd Street
13. Chesapeake Street/River Road
14. Chesapeake Street/42nd Street
15. Chesapeake Street/Wisconsin Avenue
16. River Road/42nd Street
17. Brandywine Street/42nd Street
18. Brandywine Street/River Road
19. Brandywine Street/Wisconsin Avenue
20. River Road/Wisconsin Avenue
21. Albemarle Street/42nd Street
22. Albemarle Street/Wisconsin Avenue
23. River Road/New Site Driveway

[i] The intersections denoted by an asterisk (*) were not included in the PM Commuter peak hour study area since the volume of traffic generated by the campus during the PM Commuter peak hour is expected to be less than the current trip generation (with the Safeway open).

EXISTING TRANSPORTATION FACILITIES

ROADWAY NETWORK

General details regarding the surrounding roadway segments, including the functional classification, average daily traffic (ADT) volume, and speed limits are summarized in Table 1. The existing lane use and traffic control at the study intersections is illustrated on Figures 3A-3C.

Table 1
Roadway Network Details

Roadway	Functional Class	ADT (vpd)	Speed Limit (mph)
Wisconsin Avenue	Principal Arterial	34,600	30
Fessenden Street	Collector	2,500	25
41st Street	Local	2,300	25
Ellicott Street	Local	N/A	25‡
River Road	Minor Arterial	8,400	25†
43rd Place	Local	N/A	25‡
42nd Street	Collector/Local§	5,700	25†
Davenport Street	Local	N/A	25‡
43rd Street	Local	N/A	25‡
Chesapeake Street	Local	N/A	25†
Brandywine Street	Local	N/A	25‡
Albemarle Street	Collector	1,400	25†

* The ADT volume is based on DDOT historical traffic volume data collected in 2014, which are the most recent data available.
† A 15 mph School Speed Limit When Children are Present is posted for traffic.
‡ Speed limit unposted in the study area; assumed to be 25 mph.
§ 42nd Street is a collector south of River Road and is a local north of River Road.

MULTI-MODAL TRANSPORTATION FACILITIES

Public Transportation Facilities and Services

The subject site is well served by public transportation, including both bus and Metrorail, as shown on Figure 4. The subject site is approximately 0.4 miles from the Tenleytown – AU Metro Station, which provides access to Metro's Red Line. Riders can transfer to the Blue, Orange, and Silver Lines at the Metro Center Station or to the Green and Yellow lines at the Gallery Place – Chinatown Station. The minimum and maximum headways for the Red Line are summarized in Table 2.

Table 2
Metrorail Headways (in minutes)

Headway†	AM Rush 5:00 AM – 9:30 AM	Midday 9:30 AM – 3:00 PM	PM Rush 3:00 PM – 7:00 PM	Evening 7:00 PM – 9:30 PM	Late Night 9:30 PM – Close	Weekend Open – 9:30 PM	Weekend 9:30 PM – Close
Red Line (Tenleytown – AU Station)							
Min	0:03	0:12	0:03	0:06	0:15	0:12	0:15
Max	0:06	0:12	0:06	0:10	0:18	0:15	0:15

† Headways presented represent headways in both directions.

The site also is proximate to a number of bus stops serving eleven Metrobus routes (30N, 30S, 31, 33, 37, 96, N2, H2, H3, H4, and M4). The minimum, maximum, and average headways for the WMATA routes are provided in Table 3.

Table 3
Metrobus Headways (in minutes)

Headway	Northbound/Westbound			Southbound/Eastbound		
	AM Peak 7:00 AM – 10:00 AM	Midday 10:00 AM – 4:00 PM	PM Peak 4:00 PM – 7:00 PM	AM Peak 7:00 AM – 10:00 AM	Midday 10:00 AM – 4:00 PM	PM Peak 4:00 PM – 7:00 PM
Friendship Heights – Southeast Line (30N, 30S)						
Min	0:31	0:27	0:19	0:16	0:18	0:22
Max	0:39	0:35	0:33	0:34	0:35	0:39
Average	0:34	0:31	0:28	0:28	0:29	0:30
Wisconsin Avenue Line (31, 33)						
Min	0:10	0:08	0:04	0:05	0:06	0:07
Max	0:21	0:21	0:16	0:18	0:22	0:21
Average	0:15	0:15	0:08	0:08	0:14	0:13
Wisconsin Avenue Limited – Metro Extra (37)						
Min	N/A	N/A	0:18	0:15	N/A	N/A
Max	N/A	N/A	0:26	0:18	N/A	N/A
Average	N/A	N/A	0:20	0:16	N/A	N/A
East Capitol Street – Cardozo Line (96)						
Min	0:19	0:18	0:21	0:20	0:21	0:21
Max	0:27	0:27	0:24	0:24	0:24	0:21
Average	0:21	0:24	0:21	0:22	0:23	0:21
Massachusetts Avenue Line (N2)						
Min	0:28	0:30	0:10	0:10	0:28	0:16
Max	0:31	0:31	0:25	0:31	0:30	0:34
Average	0:29	0:30	0:19	0:19	0:30	0:26
Crosstown Line (H2, H3, H4)						
Min	0:02	0:07	0:05	0:10	0:06	0:06
Max	0:16	0:18	0:18	0:16	0:16	0:14
Average	0:08	0:15	0:10	0:12	0:14	0;09

Table 3 (continued)
Metrobus Headways (in minutes)

Headway	Northbound/Westbound			Southbound/Eastbound		
	AM Peak 7:00 AM – 10:00 AM	Midday 10:00 AM – 4:00 PM	PM Peak 4:00 PM – 7:00 PM	AM Peak 7:00 AM – 10:00 AM	Midday 10:00 AM – 4:00 PM	PM Peak 4:00 PM – 7:00 PM
Nebraska Avenue Line (M4)						
Min	0:00	0:05	0:01	0:05	0:30	0:20
Max	0:18	0:22	0:17	0:30	0:31	0:20
Average	0:09	0:14	0:10	0:12	0:30	0:20

Pedestrian Facilities

The District of Columbia Pedestrian Master Plan (the Pedestrian Plan) strives to make Washington, DC safer and more walkable by improving sidewalks, roadway crossings, and the quality of the pedestrian environment as well as by ensuring that the District's policies and procedures support walking.

The Pedestrian Plan provides an overview of existing pedestrian conditions, recommends new pedestrian projects and programs, establishes performance measures, and provides a plan for implementation through 2018. As part of the Pedestrian Plan, eight priority corridors (one in ward) were identified based on areas of heavy pedestrian traffic and deficient walking conditions. The priority corridor in Ward 3 is Wisconsin Avenue NW between Western Avenue and Woodley Road, which falls within the study area. Within the study area, the Pedestrian Plan calls for construction of curb extensions, reconstruction or replacement of ADA ramps, installation of high visibility crosswalks and/or restriping of existing crosswalks, construction of sidewalks to "fill in" gaps, reconstruction of sidewalks in disrepair, and removal of bus stops. Excerpts from the Pedestrian Plan, which include more details of the recommendations within the study area, are included in Appendix B. Field observations in the study area indicate that many of the recommendations have been implemented.

A summary of the pedestrian facilities at each of the study intersections is presented in Table 4. Pedestrian facilities and likely walking routes to the Metro Station and nearest bus stops within ¼ mile of the site and stops that serve Nebraska Avenue, per DDOT's request, are shown on Figure 5. Figure 5 also shows pedestrian activity and deficiency according to the Pedestrian Master Plan. An inventory of existing deficiencies and gaps in the pedestrian network are shown on Figure 6.

Table 4
Pedestrian Inventory by Intersection

Intersection	Pedestrian Heads/ Countdown Signals	Type of Crosswalks	One Ramp/ Crosswalk	Tactile Warning Strip
Fessenden Street/Wisconsin Avenue	Yes	All legs - High Visibility	Yes	Yes
Fessenden Street/41st Street	NA	All legs - Standard	Yes	No Note 1
Ellicott Street/River Road	NA	All legs - Standard	Yes Note 2	No
Ellicott Street/43rd Place	NA	All legs - Standard	Yes	Yes
Ellicott Street/Wisconsin Avenue	Yes	All legs – High Visibility	No Note 3	No Note 4
Ellicott Street/41st Street	NA	All legs - Standard	Yes	Yes
Wisconsin Avenue/42nd Street	NA	West Leg - Standard Note 5	Yes	Yes
River Road/Davenport Street/43rd Place	NA	All legs – Standard Note 6	Yes	No Note 7
Davenport Street/ 42nd Street	NA	West Leg – High Visibility Note 8	Yes	Yes
Davenport Street/ Wisconsin Avenue	Yes	North and East legs – Standard Note 9	Yes	No Note 10

1. Ramps on the northwest corner of the intersection do not have tactile warning strips.
2. One ramp without tactile warning strip is present on the southeast corner of the intersection.
3. One ramp with tactile warning strip is present on the northeast corner of the intersection.
4. Tactile warning strips are present for the ramp on the northeast, northwest, and southeast corners of the intersection.
5. Crosswalk present only on western leg.
6. Crosswalk missing on the eastern leg of the intersection.
7. Tactile warning strip present only on the southeast corner of the intersection.
8. Crosswalk is present only on the western leg.
9. Crosswalks are present only on the northern and eastern legs.
10. Tactile warning strips present only on the northeast and southeast corners of the intersection.

Table 4 (continued)
Pedestrian Inventory by Intersection

Intersection	Pedestrian Heads/ Countdown Signals	Type of Crosswalks	One Ramp/ Crosswalk	Tactile Warning Strip
Chesapeake Street/ 43rd Street	NA	All legs – Standard Note 11	No Note 12	No
Chesapeake Street/ River Road	NA	North and South Legs – Standard Visibility Note 13	Yes	No
Chesapeake Street/ 42nd Street	NA	All Legs – High Visibility	Yes	Yes
Chesapeake Street/ Wisconsin Avenue	NA	North Leg – High Visibility East Leg – Standard Note 14	Yes	Yes
River Road/ 42nd Street	No Note 15	All Legs – High Visibility	No Note 16	No Note 17
Brandywine Street/42nd Street	NA	All Legs – High Visibility	No Note 18	Yes
Brandywine Street/ River Road	NA	All Legs – High Visibility	No Note 19	No Note 20
Brandywine Street/ Wisconsin Avenue	Yes	All Legs – High Visibility	Yes	Yes

11. Crosswalks present only on the northern, western, and southern legs.
12. One ramp present on the northwest and southwest corner of the intersection.
13. Crosswalks present only on the northern and southern legs. Crosswalk missing on the eastern leg of the intersection.
14. Crosswalks are only present along the northern and eastern legs.
15. Pedestrian heads are only present on the western leg for pedestrians crossing River Road.
16. One ramp with tactile warning strips is present on the southeast corner of the intersection.
17. Ramps on the northeast and northwest corners of the intersection do not have tactile warning strips.
18. One ramp with tactile warning strip is present on the northeast corner of the intersection.
19. One ramp with tactile warning strips is present on the northwest corner and one ramp without tactile warning strips is present on the southeast corner of the intersection.
20. Tactile warning strips are only present for the ramp on the northwest corner of the intersection.

Table 4 (continued)
Pedestrian Inventory by Intersection

Intersection	Pedestrian Heads/ Countdown Signals	Type of Crosswalks	One Ramp/ Crosswalk	Tactile Warning Strip
River Road/ Wisconsin Avenue	Yes	North and West Legs – High Visibility Note 21	Yes	Yes
Albemarle Street/42nd Street	Yes	All Legs – High Visibility	No Note 22	Yes
Albemarle Street/Wisconsin Avenue	Yes	All Legs – High Visibility	Yes	No Note 23

21. Crosswalks present only on the northern and western legs.
22. One ramp with tactile warning strip is present on the northeast corner of the intersection.
23. Ramps on the northwest corner of the intersection do not have tactile warning strips.

Bicycle Facilities

The District of Columbia Bicycle Master Plan (the Bicycle Plan) seeks to create a more bicycle-friendly city by establishing high-quality bicycle facilities and programs that are safe and convenient.

The Bicycle Plan provides bicycle levels of service (BLOS) for roadways in the District where bicycles share the road with vehicles. The Bicycle Plan also reports the number of bicycle crashes that occurred between 2000 and 2002. Finally, the Bicycle Plan identifies areas and corridors that are barriers to cyclists. These barriers include "freeways, railroad and highway grade separations, neighborhoods with heavy traffic, and other impediments to bicycle travel." No such barriers exist in the study area.

Bicycle facilities and likely biking routes to the Metro Station and nearest bus stops within ½ mile of the site are shown on Figure 7. Figure 7 also shows the BLOS for roadways in the study area and the reported bicycle crashes in the study area, per the Bicycle Plan.

North of Chesapeake Street, sharrows are painted on the east and west sides of River Road. South of Chesapeake Street, sharrows are painted on the east and west sides of 43rd Street and 42nd Street.

Capital Bikeshare

Two Capital Bikeshare stations are located within a ¼ mile radius of the site, as shown on Figure 4. The closest station is located on the northeast corner of the Wisconsin Avenue/Fessenden Street intersection. The station has 15 docks.

The District of Columbia Capital Bikeshare Development Plan outlines a system-wide expansion plan including 99 new Bikeshare stations by the end of 2018 and 21 existing stations to be expanded by the end of 2017. In the vicinity of the site, the nearest new Bikeshare station is identified on Wisconsin Avenue near Harrison Street.

Capital Bikeshare offers four membership options: 24 hours ($8), three days ($17), day key membership ($10 fee + $7 per day), 30 days ($28), or one year ($85). Capital Bikeshare also offers a single trip fare for $2. Under any membership option, the first 30 minutes of use are free; users then are charged a usage fee for each additional 30-minute period. Bicycles can be returned to any station with and available dock.

Car Sharing Services

Two car-sharing providers currently operate in the District. Zipcar requires a $25 application fee and members can choose from four plans: occasional driving plan - $70 per year (pay as you go based on the standard hourly or daily rate), monthly plan - $7 per month (pay as you go based on the standard hourly or daily rate), or extra value plan - $50 per month, $75 per month (1 month rollover), $125 per month (2 month rollover), and $250 per month (2 month rollover) (after using up the monthly cash, pay as you go based on a discounted hourly or daily rate). Cars must be returned to the same designated parking spaces from which they were picked up.

Two Zipcars are located within ¼ mile of the site on street at Wisconsin Avenue/Brandywine Street, as shown on Figure 4. Two Zipcars are located just outside ¼ mile of the site at 40th Street/Albemarle Street.

Car2Go requires a one-time $5 application fee. Once registered, a member card is issued, which enables members to access and available car. Car2Go members can choose from two plans: smart fortwo – $0.32 per minute/$15 per hour/$59 per day, and Mercedes-Benz CLA & GLA – $0.45 per minute/$19 per hour/$79 per day. No reservation is required and car usage is charged by the minute, with hourly and daily maximum fees. Unlike Zipcar, a Car2Go vehicle does not have to be returned to its original location. A Car2Go vehicle can be parked in any unrestricted curbside parking space, in any metered/paystation curbside parking space (without paying meter/paystation fees), or in any residential permit parking space. Car2Go currently has 500 vehicles in the District.

EXISTING CONDITIONS ANALYSIS

TRAFFIC VOLUMES

Vehicular turning movement, pedestrian, and bicycle counts were conducted at the study intersections on typical weekdays (Tuesday, Wednesday, or Thursday) when schools were in session. The counts generally were conducted from 7:00 AM to 9:00 AM and from 2:00 PM to 7:00 PM. Counts were conducted in 2014 and 2015 and were factored to the year 2017 using a growth rate of ½ percent per year, compounded annually.

AM, PM School, and PM Commuter peak hours for each of the study intersections were determined individually to provide the most conservative peak hour analysis. The existing (2017) vehicular peak hour traffic volumes are shown on Figures 8A-8C. Traffic count data are included in Appendix C.

CAPACITY ANALYSIS

Capacity/level of service (LOS) analyses were conducted at the study intersections based on the existing lane use and traffic control shown on Figures 3A-3C, existing traffic volumes shown on Figures 8A-8C, existing pedestrian volumes shown on Figures 9A-9C, and existing traffic signal timings obtained from DDOT, included in Appendix D.

Synchro software (Version 9) was used to evaluate levels of service at the study intersections during the peak hours. Synchro is a macroscopic model used to evaluate the effects of changing intersection geometrics, traffic demands, traffic control, and/or traffic signal settings and to optimize traffic signal timings. The levels of service reported were taken from the Highway Capacity Manual 2000 (HCM) reports generated by Synchro. Level of service descriptions is included in Appendix E. The results of the analyses are summarized in Table 5. Capacity analysis worksheets are included in Appendix F.

As shown in Table 5, under existing conditions, none of the signalized study intersections operate at an overall level of service E or F. The following is a summary of the various intersections that currently have one or more lane groups that operate at a LOS E or LOS F:

- Ellicott Street/Wisconsin Avenue – eastbound left/through/right operates at a LOS E during the AM peak hour;
- Wisconsin Avenue/42nd Street – eastbound left/right operates at a LOS F during the AM peak hour;
- Davenport Street/Wisconsin Avenue – westbound left/through/right operates at a LOS E during the AM peak hour;

- Brandywine Street/Wisconsin Avenue – westbound left/through/right operates at a LOS E during the AM peak hour and southbound left operates at a LOS E during the commuter PM peak hour; and
- River Road/Wisconsin Avenue – eastbound left/right operates at a LOS E during the AM peak hour;
- Albemarle Street/Wisconsin Avenue – eastbound left and westbound left/through operates at a LOS E during the AM peak hour.

Table 5
Level of Service Summary

Lane Group	Existing Conditions			Background Conditions		
	AM	PM School	PM Commuter	AM	PM School	PM Commuter
1. Fessenden Street/Wisconsin Avenue*						
EBL	D	C	-	D	C	-
EBTR	D	D	-	D	D	-
WBL	D	D	-	D	D	-
WBTR	D	D	-	D	D	-
NBLTR	B	B	-	B	B	-
SBLTR	B	B	-	B	B	-
Overall	**B**	**B**	**-**	**B**	**B**	**-**
2. Fessenden Street/41st Street*						
EBLTR	B	B	-	B	B	-
WBLTR	B	A	-	B	A	-
NBLTR	A	A	-	A	A	-
SBLTR	B	A	-	B	A	-
3. Ellicott Street/River Road						
EBLTR	D	C	C	D	C	C
WBLTR	C	C	C	C	C	C
NBLTR	A	A	A	A	A	A
SBLTR	A	A	A	A	A	A
4. Ellicott Street/43rd Place						
EBLTR	A	A	A	A	A	A
WBLTR	A	A	A	A	A	A
NBLTR	A	A	A	A	A	A
SBLTR	A	A	A	A	A	A

[x.x] = unsignalized intersection control delay in sec/veh
(x.x) = signalized intersection control delay in sec/veh
* Since the proposed project is anticipated to generate fewer trips during the PM commuter peak hour than when the Safeway was in operation, the study area for the PM commuter peak hour was reduced. Therefore, levels of service are not provided for the PM commuter peak hour for these intersections.

Table 5 (continued)
Level of Service Summary

Lane Group	Existing Conditions			Background Conditions		
	AM	PM School	PM Commuter	AM	PM School	PM Commuter
5. Ellicott Street/Public Alley						
EBLTR	A	A	A	A	A	A
WBLTR	A	A	A	A	A	A
NBLTR	A	A	A	A	A	A
SBLTR	B	B	B	B	B	B
6. Ellicott Street/Wisconsin Avenue						
EBLTR	E (58.5)	D	D	E (59.6)	D	D
WBLTR	D	D	D	D	D	D
NBLTR	A	B	B	A	B	B
SBLTR	A	B	B	A	B	B
Overall	**B**	**B**	**B**	**B**	**B**	**B**
7. Ellicott Street/41st Street*						
EBLTR	A	A	-	A	A	-
WBLTR	A	A	-	A	A	-
NBLTR	A	A	-	A	A	-
SBLTR	A	A	-	A	A	-
8. Wisconsin Avenue/42nd Street						
EBLR	F (134.5)	D	C	F (153.8)	D	C
NBT	A	A	A	A	A	A
SBT	A	A	A	A	A	A
9. River Road/43rd Street/Davenport Street						
EBLTR	C	B	C	C	B	C
WBLTR	C	C	C	C	C	C
NBLTR	A	A	A	A	A	A
SBLTR	A	A	A	A	A	A
10. Davenport Street/42nd Street						
EBLR	C	B	B	C	B	B
NBLT	A	A	A	A	A	A
SBTR	A	A	A	A	A	A

[x.x] = unsignalized intersection control delay in sec/veh
(x.x) = signalized intersection control delay in sec/veh
* Since the proposed project is anticipated to generate fewer trips during the PM commuter peak hour than when the Safeway was in operation, the study area for the PM commuter peak hour was reduced. Therefore, levels of service are not provided for the PM commuter peak hour for these intersections.

Table 5 (continued)
Level of Service Summary

Lane Group	Existing Conditions			Background Conditions		
	AM	PM School	PM Commuter	AM	PM School	PM Commuter
11. Davenport Street/Wisconsin Avenue						
EBLTR	D	D	D	D	D	D
WBLTR	E (68.5)	D	D	E (70.4)	D	D
NBLTR	A	A	A	A	A	A
SBLTR	A	A	A	A	A	A
Overall	**A**	**A**	**A**	**A**	**A**	**A**
12. Chesapeake Street/43rd Street						
EBTR	A	A	A	A	A	A
WBLT	A	A	A	A	A	A
NBLR	A	A	A	A	A	A
SBLTR	B	B	B	B	B	B
13. Chesapeake Street/River Road						
EBLTR	C	C	C	C	C	C
WBLTR	C	D	C	C	D	C
NBLTR	A	A	A	A	A	A
SBLT	B	A	A	B	A	A
Overall	**B**	**B**	**B**	**B**	**B**	**B**
14. Chesapeake Street/42nd Street						
EBLTR	B	A	A	B	A	A
WBLTR	A	A	A	A	A	A
NBLTR	A	A	A	A	A	A
SBLTR	B	A	A	B	A	A
15. Chesapeake Street/Wisconsin Avenue						
EBLR	B	B	B	B	B	B
NBLT	A	A	A	A	A	A
SBTR	A	A	A	A	A	A
16. River Road/42nd Street						
EBLTR	A	A	A	A	A	A
WBLTR	A	B	B	A	B	B
NBLTR	C	C	C	C	C	C
SBLTR	D	C	C	D	C	C
Overall	**B**	**B**	**B**	**B**	**B**	**B**

[x.x] = unsignalized intersection control delay in sec/veh
(x.x) = signalized intersection control delay in sec/veh
* Since the proposed project is anticipated to generate fewer trips during the PM commuter peak hour than when the Safeway was in operation, the study area for the PM commuter peak hour was reduced. Therefore, levels of service are not provided for the PM commuter peak hour for these intersections.

Table 5 (continued)
Level of Service Summary

Lane Group	Existing Conditions			Background Conditions		
	AM	PM School	PM Commuter	AM	PM School	PM Commuter
17. Brandywine Street/42nd Street						
EBLTR	A	A	A	A	A	A
NBLTR	A	A	A	A	A	A
SBLTR	A	A	A	A	A	A
18. Brandywine Street/River Road						
EBL	C	C	C	C	C	C
EBR	B	B	B	B	B	B
WBLR	B	B	B	B	B	C
NBT	A	A	A	A	A	A
SBT	A	A	A	A	A	A
19. Brandywine Street/Wisconsin Avenue						
WBLTR	E (62.6)	D	D	E (63.9)	D	D
NBL	B	A	B	B	A	B
NBTR	A	A	A	A	A	A
SBL	D	D	E (56.4)	D	D	E (58.6)
SBLTR	C	C	C	C	C	C
Overall	**C**	**B**	**B**	**C**	**B**	**B**
20. River Road/Wisconsin Avenue						
EBLR	E (65.3)	D	D	E (69.8)	D	D
NBTR	A	A	A	A	A	A
SBTR	A	A	A	A	A	A
Overall	**B**	**A**	**A**	**B**	**A**	**A**
21. Albemarle Street/42nd Street						
EBLTR	C	B	B	C	B	B
WBLTR	B	B	B	B	B	B
NBLTR	B	B	B	B	B	B
SBLTR	B	B	C	B	B	C
Overall	**B**	**B**	**B**	**B**	**B**	**B**

[x.x] = unsignalized intersection control delay in sec/veh
(x.x) = signalized intersection control delay in sec/veh
* Since the proposed project is anticipated to generate fewer trips during the PM commuter peak hour than when the Safeway was in operation, the study area for the PM commuter peak hour was reduced. Therefore, levels of service are not provided for the PM commuter peak hour for these intersections.

Table 5 (continued)
Level of Service Summary

Lane Group	Existing Conditions			Background Conditions		
	AM	PM School	PM Commuter	AM	PM School	PM Commuter
22. Albemarle Street/Wisconsin Avenue						
EBL	E (65.2)	D	D	E (65.4)	D	D
EBTR	D	C	C	D	C	C
WBLT	E (62.5)	D	D	E (72.8)	D	D
WBR	D	D	D	D	D	D
NBTR	C	C	C	C	C	C
SBTR	A	A	A	A	A	A
Overall	**C**	**C**	**C**	**C**	**C**	**C**

[x.x] = unsignalized intersection control delay in sec/veh
(x.x) = signalized intersection control delay in sec/veh
* Since the proposed project is anticipated to generate fewer trips during the PM commuter peak hour than when the Safeway was in operation, the study area for the PM commuter peak hour was reduced. Therefore, levels of service are not provided for the PM commuter peak hour for these intersections.

QUEUE ANALYSIS

A queue analysis was conducted for existing conditions using the 95th percentile queue lengths reported by Synchro. The results are summarized in Table 6. Queue reports are provided in Appendix F. Queues that extend to adjacent intersections are typical in urban environments where intersections are closely spaced.

As shown in Table 6, the following lane groups have 95th percentile queues that exceed the available storage under existing conditions:

- Fessenden Street/Wisconsin Avenue – westbound approach;
- Ellicott Street/Wisconsin Avenue – northbound and southbound approaches;
- River Road/42nd Street – westbound and northbound approaches;
- Brandywine Street/42nd Street – southbound approach;
- Brandywine Street/Wisconsin Avenue – northbound left, southbound approaches;
- Albemarle Street/42nd Street – eastbound approach, and
- Albemarle Street/Wisconsin Avenue – westbound left/through approach.

Table 6
Synchro 95th Percentile Queue Summary (in feet)

Lane Group	Available Storage†	Existing Conditions			Background Conditions		
		AM	PM School	PM Commuter	AM	PM School	PM Commuter
1. Fessenden Street/Wisconsin Avenue*							
EBL	90'	34	46	-	34	48	-
EBTR	85'/250'	108	111	-	109	113	-
WBL	90'	224	102	-	237	104	-
WBTR	40'/90'	237	176	-	240	180	-
NBLTR	270'	240	266	-	250	273	-
SBLTR	185'/410'	218	237	-	226	245	-
2. Fessenden Street/41st Street*							
EBLTR	425'	30	38	-	30	38	-
WBLTR	225'	48	33	-	48	35	-
NBLTR	125'/250'	15	20	-	15	20	-
SBLTR	120'/380'	30	10	-	30	10	-
3. Ellicott Street/River Road							
EBLTR	30'/450'	30	16	11	32	17	11
WBLTR	80'	26	25	21	28	26	22
NBLTR	100'	1	0	1	1	0	1
SBTR	200'/590'	1	1	0	1	1	0
4. Ellicott Street/43rd Place							
EBLTR	285'	8	5	5	8	5	5
WBLTR	285'	5	10	8	5	10	8
NBLTR	90'/375'	8	3	5	10	3	5
SBLTR	90'/445'	0	3	3	0	3	3
5. Ellicott Street/Public Alley							
EBLTR	245'	0	0	0	0	0	0
WBLTR	70'/145'	1	2	1	1	2	1
NBLTR	45'	8	8	8	8	8	8
SBLTR	90'	0	1	1	0	1	1

† All distances measured to nearest intersection or end of turn lane, as appropriate. Where two storage lengths are given, the first is the distance to the driveway; the second is the distance to the nearest intersection.

* Since the proposed project is anticipated to generate fewer trips during the PM commuter peak hour than when the Safeway was in operation, the study area for the PM commuter peak hour was reduced. Therefore, queues are not provided for the PM commuter peak hour for these intersections.

Table 6 (continued)
Synchro 95th Percentile Queue Summary (in feet)

Lane Group	Available Storage†	Existing Conditions			Background Conditions		
		AM	PM School	PM Commuter	AM	PM School	PM Commuter
6. Ellicott Street/Wisconsin Avenue							
EBLTR	45'/420'	174	136	135	178	138	137
WBLTR	40'/365'	121	74	58	123	75	58
NBLTR	100'	85	447	382	87	457	394
SBLTR	140'	196	204	197	202	210	204
7. Ellicott Street/41st Street*							
EBLTR	215'/370'	8	8	-	8	8	-
WBLTR	145'	3	3	-	3	3	-
NBLTR	145'/385'	15	13	-	15	13	-
SBLTR	160'	13	8	-	13	8	-
8. Wisconsin Avenue/42nd Street							
EBLR	250'	174	52	38	187	56	41
NBT	280'	0	0	0	0	0	0
SBT	110'	0	0	0	0	0	0
9. River Road/43rd Street/Davenport Street							
EBLTR	295'	2	1	3	2	1	3
WBLTR	250'/375'	8	2	3	9	2	3
NBLTR	525'	1	1	0	1	1	0
SBLTR	335'	4	2	2	4	2	2
10. Davenport Street/42nd Street							
EBLR	165'	56	19	12	58	20	12
NBLT	220'/340'	19	7	5	19	7	5
SBTR	250'/375'	0	0	0	0	0	0
11. Davenport Street/Wisconsin Avenue							
EBLTR	30'	5	5	7	5	5	7
WBLTR	195'	161	65	72	166	68	77
NBLTR	310'	51	116	70	51	136	80
SBLTR	55'/265'	74	86	101	76	88	104

† All distances measured to nearest intersection or end of turn lane, as appropriate. Where two storage lengths are given, the first is the distance to the driveway; the second is the distance to the nearest intersection.

* Since the proposed project is anticipated to generate fewer trips during the PM commuter peak hour than when the Safeway was in operation, the study area for the PM commuter peak hour was reduced. Therefore, queues are not provided for the PM commuter peak hour for these intersections.

Table 6 (continued)
Synchro 95th Percentile Queue Summary (in feet)

Lane Group	Available Storage†	Existing Conditions			Background Conditions		
		AM	PM School	PM Commuter	AM	PM School	PM Commuter
12. Chesapeake Street/43rd Street							
EBTR	285'	0	0	0	0	0	0
WBLT	325'	0	3	0	0	3	0
NBLR	120'/430'	3	5	4	3	5	4
SBLTR	490'	13	5	8	13	6	8
13. Chesapeake Street/River Road							
EBLTR	285'	69	70	68	70	74	70
WBLTR	325'	54	86	87	56	88	87
NBLTR	445'	55	65	98	58	66	101
SBLT	490'	294	78	88	304	80	91
14. Chesapeake Street/42nd Street							
EBLTR	330'	23	8	5	25	8	5
WBLTR	120'/275'	8	5	10	8	5	10
NBLTR	300'	28	20	18	28	23	20
SBLTR	120'/765'	53	33	35	55	33	35
15. Chesapeake Street/Wisconsin Avenue							
EBLR	275'	32	9	9	32	9	9
NBLT	460'	4	3	6	4	3	6
SBTR	340'	0	0	0	0	0	0
16. River Road/42nd Street							
EBLTR	470'	1	24	3	1	24	4
WBLTR	75'	66	109	144	70	112	155
NBLTR	25'	146	156	179	149	159	182
SBLTR	300'	225	165	144	230	167	146
17. Brandywine Street/42nd Street							
EBLTR	75'/435'	5	3	3	5	3	3
NBLTR	260'	23	25	33	23	28	33
SBLTR	35'	43	40	30	43	40	33

† All distances measured to nearest intersection or end of turn lane, as appropriate. Where two storage lengths are given, the first is the distance to the driveway; the second is the distance to the nearest intersection.

* Since the proposed project is anticipated to generate fewer trips during the PM commuter peak hour than when the Safeway was in operation, the study area for the PM commuter peak hour was reduced. Therefore, queues are not provided for the PM commuter peak hour for these intersections.

Table 6 (continued)
Synchro 95th Percentile Queue Summary (in feet)

Lane Group	Available Storage†	Existing Conditions			Background Conditions		
		AM	PM School	PM Commuter	AM	PM School	PM Commuter
18. Brandywine Street/River Road							
EBL	20’	0	0	1	0	0	1
EBR	35’	8	7	6	8	7	6
WBLR	240’	25	45	68	28	47	79
NBT	255'/410’	0	0	0	0	0	0
SBT	50’	0	0	0	0	0	0
19. Brandywine Street/Wisconsin Avenue							
WBLTR	20'/380’	168	129	153	172	132	156
NBL	100’	76	30	159	90	34	194
NBTR	95’/215’	78	46	58	87	54	50
SBL	50’	93	69	106	96	69	121
SBLTR	435’	479	362	401	490	370	412
20. River Road/Wisconsin Avenue							
EBLR	420'	359	117	226	377	127	244
NBTR	70'	55	50	15	54	50	23
SBTR	215'	19	19	18	20	19	18
21. Albemarle Street/42nd Street							
EBLTR	95'	171	79	94	174	80	96
WBLTR	125'/575'	79	52	89	68	52	82
NBLTR	515'	130	117	108	132	119	109
SBLTR	260'	144	125	132	148	128	134
22. Albemarle Street/Wisconsin Avenue							
EBL	575'	110	55	63	110	58	64
EBTR	575'	306	108	123	313	110	128
WBLT	150'	274	162	243	307	165	274
WBR	150'	2	7	0	9	8	0
NBTR	465'	381	428	371	396	441	386
SBTR	145'	48	34	4	50	33	7

† All distances measured to nearest intersection or end of turn lane, as appropriate. Where two storage lengths are given, the first is the distance to the driveway; the second is the distance to the nearest intersection.

* Since the proposed project is anticipated to generate fewer trips during the PM commuter peak hour than when the Safeway was in operation, the study area for the PM commuter peak hour was reduced. Therefore, queues are not provided for the PM commuter peak hour for these intersections.

SAFETY ANALYSIS

Crash data at the study intersections were obtained from DDOT. The information provided by DDOT included the total number of crashes over the latest three years of available data (i.e. 2013, 2014, and 2015) at each intersection and was further categorized by type of crash, time of day, day of week, weather conditions, roadway conditions, type of vehicle, pedestrian involvement, and crash severity. Based on the data, Table 7 shows the overall intersection crash rates at each of the study intersections.

As shown in Table 7, the crash rates at the Fessenden Street/Wisconsin Avenue and Brandywine Street/42nd Street intersections are above 1.0, which is considered high by DDOT.

Table 7
Crash Data Summary

Intersection	Type of Control	No. of Crashes (3 Years)	ADT (veh/day)	Crash Rate (MEV)
Fessenden Street/Wisconsin Avenue	Signal	22	15,030	1.34
Fessenden Street/41st Street	All-way Stop	3	6,440	0.43
Ellicott Street/River Road	Two-way Stop	2	8,960	0.20
Ellicott Street/43rd Place	All-way Stop	0	1,860	0.00
Ellicott Street/Public Alley	Two-way Stop	0	2,070	0.00
Ellicott Street/Wisconsin Avenue/42nd Street	Signal	11	21,650	0.46
Ellicott Street/41st Street	All-way Stop	1	2,450	0.37
Wisconsin Avenue/42nd Street	One-way Stop	6	19,200	0.29
River Road /Davenport Street/43rd Street	Two-way Stop	4	8,120	0.45
Davenport Street/42nd Street	One-way Stop	1	3,960	0.23
Davenport Street/Wisconsin Avenue	Signal	12	19,420	0.56
Chesapeake Street/43rd Street	Two-way Stop	0	1,930	0.00
Chesapeake Street/River Road	Signal	1	7,810	0.12
Chesapeake Street/42nd Street	All-way Stop	0	4,970	0.00
Chesapeake Street/Wisconsin Avenue	One-way Stop	7	19,760	0.32
River Road/42nd Street	Signal	5	9,100	0.50
Brandywine Street/42nd Street	All-way Stop	6	4,900	1.12
Brandywine Street/River Road	Two-way Stop	5	6,160	0.74
Brandywine Street/Wisconsin Avenue	Signal	22	25,050	0.80
River Road/Wisconsin Avenue	Signal	18	26,830	0.61
Albemarle Street/42nd Street	Signal	2	8,190	0.22
Albemarle Street/Wisconsin Avenue	Signal	21	29,760	0.64

Fessenden Street/Wisconsin Avenue

A review of the crash types at the Fessenden Street/Wisconsin Avenue intersection reveals that the majority of the crashes at the intersection involved side swipe collisions (five crashes or 23 percent of the total number of crashes). Other crashes making up a significant portion of collisions included rear end collisions (14 percent) and backing collisions (14 percent). There were two crashes involving pedestrians (9 percent) at the intersection. In both cases, pedestrians were in the crosswalk crossing with the signal when the crashes occurred.

The majority of crashes occurred under clear weather conditions (82 percent) and during the day time (68 percent). In order to make recommendations to improve safety, details regarding the crash history, primarily direction of travel, would need be needed.

Brandywine Street/42nd Street

A review of the crash types at the Brandywine Street/42nd Street intersection reveals that the majority of the crashes at the intersection involved parked vehicles (three crashes or 50 percent of the total number of crashes). One crash involved a bicycle; no crashes involved pedestrians.

Half of the crashes occurred under clear weather conditions. The majority (83 percent) occurred during the daytime. In order to make recommendations to improve safety, details regarding the crash history, primarily direction of travel, would need be needed.

FUTURE BACKGROUND CONDITIONS

TRAFFIC VOLUMES

Overview

In order to forecast year 2021 background traffic volumes in the study area without the proposed redevelopment, increases in traffic associated with growth outside the immediate site vicinity (regional growth) and increases in traffic associated with planned or approved but not yet constructed developments in the study area (pipeline developments) were considered.

Regional Growth

To account for potential increases in traffic associated with regional growth and developments outside of the study area, a growth rate was applied to existing traffic volumes. DDOT's historical ADT volume maps were examined to determine an appropriate growth rate for the study area. The historical ADTs indicate that traffic volumes in the study area generally have a growth rate less than one percent per year. Therefore, a growth rate of ½ percent per year, compounded annually over four years (2017 to 2021), conservatively was applied to the

existing vehicular volumes shown on Figures 8A-8C. The resulting 2021 volumes with regional growth are shown on Figures 10A-10C.

Pipeline Developments

Three developments that are planned in and around the study area were identified and considered as part of the background traffic growth for the 2021 study year (see Figure 11 for locations). A summary of each pipeline development is provided below.

4000 Brandywine Street

The 4000 Brandywine Street redevelopment will include approximately 100 residential units. Upon completion, the project will generate an estimated 21 AM peak hour vehicle trips and 29 PM peak hour vehicle trips.

Trip generation and site assignments for the project were taken from the *4000 Brandywine Street Transportation Impact Analysis* for the EISF (Wells + Associates, August 2016).

4600 Wisconsin Avenue (Tenley View)

The Tenley View redevelopment will feature 60 multi-family residential units and 14,000 SF of ground floor retail space. The proposed project was not leased at the time counts were conducted.

The project is expected to generate 21 AM peak hour vehicle trips and 38 PM peak hour vehicle trips as presented in the *Transportation and Parking Assessment Report for the Planned Unit Development Application for 4600 Wisconsin Avenue* (O.R. George & Associates, September 17, 2012). Trip generation and site assignments for the project were taken from this report.

4700 Wisconsin Avenue

The 4700 Wisconsin Avenue development will include approximately 16 residential units and 3,724 SF of retail space, including the existing Steak & Egg restaurant. The number of new trips generated by the redevelopment is projected to be de minimis. Therefore, the number of site trips generated by this pipeline were not explicitly taken into account. Rather, the regional growth rate applied to the traffic volumes in the study area would account for traffic associated with this redevelopment.

Combined Pipeline Developments

Details for each of the pipeline developments and trip assignments are included in Appendix G. The traffic associated with the pipeline developments combined is shown at each of the study intersections on Figures 12A-C.

Background Forecasts

Background 2021 traffic forecasts (without the proposed redevelopment) were developed by combining the existing traffic volumes grown to the year 2021 (shown on Figures 10A-C) with the pipeline traffic volumes (shown on Figures 12A-C). The resulting 2021 background traffic forecasts are shown on Figures 13A-C.

CAPACITY ANALYSIS

Capacity/level of service (LOS) analyses were conducted at the study intersections based on the existing lane use and traffic control shown on Figures 3A-C, future background traffic forecasts shown on Figures 13A-C, and existing DDOT traffic signal timings.

The level of service results for the 2021 background conditions without the Georgetown Day School redevelopment are presented in Appendix H and summarized in Table 6. As shown in Table 6, background conditions generally are consistent with existing conditions.

QUEUE ANALYSIS

A queue analysis was conducted for 2021 conditions without the Georgetown Day School redevelopment. Synchro was used to conduct the analyses, using the 95th percentile queue lengths. The results are summarized in Table 7. Queue reports are provided in Appendix H.

As shown in Table 7, the 95th percentile queues at the study intersections under background conditions generally are consistent with existing conditions.

SITE ANALYSIS

OVERVIEW

GDS proposes to relocate its Lower/Middle School located at 4530 MacArthur Boulevard NW to the existing Safeway site located at 4203 Davenport Street NW. With the Safeway's location adjacent to the GDS High School campus located at 4200 Davenport Street NW, the move of the Lower/Middle School will allow GDS to create one unified campus for all three divisions.

The site of the Lower/Middle School is located on Square 1672, Lots 4, 14, 804, 812, and 815 in Ward 3, which is in the northwest quadrant of the District. The site is zoned MU-4 and R-2.

To accommodate the proposed addition of the Lower/Middle School on the Davenport campus, GDS proposes to increase its current student cap from 500 to 1,200 students. The increase will accommodate the 500 students currently enrolled in the High School (500 students were enrolled at the time data were collected), 575 students currently enrolled at the Lower/Middle School (601 students were enrolled at the time data were collected), plus an additional 125 students across the three divisions. GDS also proposes a corresponding increase in faculty/staff from its current cap of 100 full-time equivalent (FTE) faculty/staff to 260 FTEs. The increased cap would accommodate the 100 faculty/staff currently employed at the High School, 120 faculty/staff currently employed at the Lower and Middle Schools, and an increase of 40 additional faculty/staff members across the three division.

SITE ACCESS AND CIRCULATION

Overview

The proposed development has been designed to facilitate access via all modes of transportation including vehicular (including drop-off/pick-up and parking), pedestrian, and bicycle. Specifically, drop-off/pick-up areas have been carefully designed to ensure that additional vehicles coming to campus can be accommodated without adverse impacts to adjacent public streets.

Access to the High School currently is provided via Davenport Street. Access to the Safeway site currently is provided via a curb cut on Davenport Street, a curb cut on 42nd Street, and the public alley off Ellicott Street.

To facilitate the flow of traffic into and out of the campus, a new curb cut is proposed on River Road to provide a second point of ingress and egress to the High School garage. As requested by DDOT, the left turn ingress and left turn egress at this location was evaluated in detail and is discussed further below.

Access to the Lower/Middle School will be provided via a new curb cut on Davenport Street to replace the existing curb cut for Safeway and via the existing public alley on Ellicott Street. The curb cut on Davenport Street will provide ingress and egress for the school. The public alley will provide ingress and egress for the Lower/Middle School's proposed loading facilities but will provide egress only from the Lower/Middle School garage.

The existing curb cut on 42nd Street will be closed in conjunction with the project. To address concerns regarding cut-through traffic utilizing the River Road and Ellicott Street accesses, the School will physically restrict traffic from entering campus after hours via the Ellicott Street and River Road driveways.

The overall proposed vehicular circulation for the site is shown on Figure 14A.

River Road Access

The proposed driveway on River Road will significantly improve access and circulation options for school traffic. Especially for traffic traveling on River Road, the proposed driveway gives school traffic a more direct point of access rather than driving through local neighborhood streets. The heaviest left turn inbound movement is projected to occur during the morning peak hour when opposing, northbound traffic on River Road is the lightest. During the afternoon peak hours, when the opposing, northbound traffic on River Road is heavier, the left turn inbound movement at the driveway is projected to be minimal. Nevertheless, at DDOT's request, both the left turn inbound and outbound were evaluated in detail.

Gap Study

At DDOT's request, a minimum gap study was conducted to evaluate the feasibility of allowing left turns at the proposed driveway. The study was conducted on Wednesday, September 6, 2017, during the AM (7:30 AM – 8:30 AM), PM School (3:00 PM – 4:00 PM), and PM Commuter (5:00 – 6:00 PM) peak hours. The results of this study are summarized below on Table 8 and included in Appendix I.

Table 8
Gap Study

Peak Hour	Gap ≤ 4 sec	4 sec < Gap ≤ 7 sec	Gap > 7 sec	Total
AM Peak				
NB gaps	13	20	106	139
% of NB gaps	**9%**	**15%**	**76%**	**100%**
SB gaps	14	40	79	133
% of SB gaps	**11%**	**30%**	**59%**	**100%**
% of total gaps	**10%**	**22%**	**68%**	**100%**

Table 8 (continued)
Gap Study

Peak Hour	Gap ≤ 4 sec	4 sec < Gap ≤ 7 sec	Gap > 7 sec	Total
PM School Peak				
NB gaps	17	37	120	174
% of NB gaps	**10%**	**21%**	**69%**	**100%**
SB gaps	20	39	122	181
% of SB gaps	**11%**	**22%**	**67%**	**100%**
% of total gaps	**11%**	**21%**	**68%**	**100%**
PM Commuter Peak				
NB gaps	20	52	128	200
% of NB gaps	**10%**	**26%**	**64%**	**100%**
SB gaps	26	46	115	187
% of SB gaps	**14%**	**25%**	**61%**	**100%**
% of total gaps	**12%**	**25%**	**63%**	**100%**

The Highway Capacity Manual (2010) was used to determine the required gaps in traffic to facilitate left turns. Inbound left turns require approximately four seconds and outbound left turns require approximately seven seconds. Details are included in Appendix I.

As shown in the table above, approximately 91 percent of the vehicle gaps in northbound traffic during the AM peak hour were greater than four seconds. During the PM School and PM Commuter peak hours, 90 percent of the northbound vehicle gaps were greater than four seconds. Given this, the inbound left turn can easily be accommodated.

For outbound left turns, there must be gaps of seven seconds or greater for northbound and southbound traffic, according to the Highway Capacity Manual (2010). Approximately 68 percent of the vehicle gaps in both directions during the AM peak hour were greater than seven seconds. During the PM School peak hour, 68 percent of vehicle gaps in both directions were adequate. During the PM Commuter peak hour, 63 percent of vehicle gaps in both directions were adequate.

Given the low volume of outbound left turns expected from the site driveway, the School has agreed to restrict the River Road driveway to be Right-In/Right-Out/Left-In.

Queueing Analysis

At the request of DDOT, queueing analyses for the driveway were included in the vehicular analysis presented in subsequent sections of the report. Based on these results, queues are

projected to be contained within available storage on all approaches. The southbound 95th percentile queue for the shared left/through lane group on River Road at the driveway is projected to be less than one car length. Likewise, the outbound (westbound) 95th percentile shared right/left lane group also is projected to be less than one car length.

While queues on the southbound approach are expected to be minimal, the School has also evaluated the possibility of providing a turn lane. River Road is approximately 36 feet wide with Residential Permit Parking (RPP) on both sides of the roadway. In order to accommodate a 9-foot wide left turn lane and 10-foot wide through lanes on River Road, parking would need to be removed on the west side of the roadway and the parking lane on the east side of the road would need to be reduced to seven feet.

The provision of a left turn lane would also require the removal of approximately 13 RPP spaces in order to provide appropriate storage, tapers, and transitions. The 9-foot wide left turn lane would require a waiver from DDOT as the minimum lane width for new lanes is 11 feet. In the absence of a waiver, parking also would need to be removed from the east side of the roadway.

Based on the acceptable levels of service projected for the proposed driveway and minimal queues (both of which are provided in more detail in a subsequent section), the availability of sufficient gaps to accommodate the left turn inbound maneuver, and given the impacts to on-street parking required to accommodate a left turn lane, a left turn lane is not recommended.

Impacts of Left-in Restriction

As noted earlier, one of the main benefits of providing the new driveway on River Road is the opportunity for traffic traveling on River Road to access the school directly without needing to circulate on adjacent neighborhood streets. Implementing left-in restrictions at this curb cut would eliminate this benefit and create circuitous routes for pick-up/drop-off traffic to access the School using Chesapeake and Ellicott Streets. During the PM School peak period in particular this issue would be compounded, as High School pick-up traffic must enter via River Road to facilitate the Lower/Middle School pick-up operation.

As demonstrated herein, the left turn inbound will not create any adverse effects. The levels of service are projected to be adequate, the queues are projected to be minimal, and sufficient gaps are present on River Road to accommodate the left turn inbound maneuver. For this reason, coupled with the impacts of restricting the left turn maneuver, the left turn inbound from River Road should be allowed.

It is important to note that the School will physically restrict traffic from entering campus after hours via the River Road driveway, partially alleviating this concern regarding left-ins.

Drop-off/pick-up

High School

Currently, the High School pick-up/drop-off occurs along the private portion of Davenport Street. Traffic travels westbound on Davenport Street, traverses through the surface parking lot in a counter-clockwise manner, and then queues in an eastbound direction in front of the High School along the south side of the Davenport Street traffic circle. Traffic then exits eastbound on Davenport Street toward 42nd Street. The drop-off/pick-up operation can accommodate approximately 35 queued vehicles.

To determine the current utilization and operation of the drop-off/pick-up area, queues were recorded every 30 seconds from 7:00 AM to 9:00 AM and from 2:45 PM to 7:00 PM on Wednesday, May 7, 2014. The maximum queue in the garage during the morning peak was eight vehicles at 8:07 AM. During the PM peak period, the maximum queue was 15 vehicles from 3:15 PM to 3:19 PM. Graphs of the High School garage queue over time are included in Appendix J.

Under proposed conditions, the High School pick-up/drop-off operation will be modified. AM drop-off traffic (7:30 – 8:30 AM) and PM Commuter pick-up traffic (4:00 – 6:00 PM) may enter via River Road or Davenport Street. Due to the configuration of the High School drop-off/pick-up lane and to ensure that all queueing is accommodated on-site, all drop-off traffic must exit via Davenport Street. Teachers and students who drive may enter/exit via Davenport Street or River Road.

During the PM School peak period (2:30 – 4:00 PM), all pick-up traffic must enter via River Road and exit via Davenport Street. Teachers and students who drive may exit via River Road. Because of the amount of space required to accommodate queueing on-site during the afternoon pick-up operation, it is not feasible to allow High School traffic to enter via Davenport Street during this time. Under the proposed drop-off/pick-up plan, approximately 26 vehicles can be accommodated for the High School operation.

Lower/Middle School

To determine the current utilization and operation of the Lower/Middle School drop-off/pick-up, queues were recorded every 60 seconds from 7:30 AM to 8:45 AM and from 2:00 PM to 6:00 PM on Thursday, April 24, 2014. The maximum queue during the morning peak was 21 vehicles, just before 8:00 AM. During the PM peak period, the maximum queue was 60 vehicles, at approximately 3:00 PM. Queues of 40 or more vehicles were sustained from 2:50 PM to 3:20 PM. Lower/Middle School queues during the PM pick-up period were again observed on April 21, 2017 from 2:45 PM to 3:30 PM. The maximum observed queue was 66

vehicles, which occurred at 3:00 PM. Queues of 50 or more vehicles were sustained from 2:54 PM to 3:15 PM. Graphs of the Lower/Middle School queues over time are included in Appendix J.

The drop-off/pick-up operation for the new Lower/Middle School will happen in two locations. Pre-Kindergarten, Kindergarten, and 1st Grade students will be dropped-off and picked-up adjacent to the west side of the school. The pick-up/drop-off operation for 2nd Grade through 8th Grade will occur in the new Lower/Middle School Garage, where three queueing lanes will be formed. AM drop-off traffic (7:30 – 8:30 AM) and PM Commuter pick-up traffic (4:00 – 6:00 PM) may enter via River Road or Davenport Street. Traffic may then exit via River Road or via a right turn onto Ellicott Street.

During the PM School peak period (2:30 – 4:00 PM), all traffic must enter via Davenport Street and may exit via River Road or Ellicott Street. The drop-off/pick-up operation (at both locations combined) can accommodate approximately 68 queued vehicles for the Lower/Middle School operation. The proposed drop-off/pick-up circulation patterns are shown on Figures 15A-B.

Pedestrian and Bicycle Access

Pedestrian access to the proposed Lower/Middle School will be provided via a series of existing and proposed sidewalks. New sidewalks are proposed at the following locations:

- Along the western edge of the property to connect 43rd Street with River Road, per DDOT's request.
- Along the western frontage of the new building adjacent to the Pre-Kindergarten/Kindergarten drop-off/pick-up lane.
- Along the 42nd Street frontage, the streetscape will be improved in conjunction with the new building and a new sidewalk will replace the existing sidewalk along the property frontage.

Through discussions with members of the community, the School understands some neighbors are concerned the 43rd Street pedestrian connection may encourage pick-up/drop-off to occur in the neighborhood and may create safety concerns. In order to address these issues and maintain DDOT's preference for connectivity, the School proposes to provide a pedestrian gate that would be opened during school hours and locked during non-school hours. To ensure that the 43rd Street sidewalk connection does not encourage parents to drop-off/pick-up their students on Ellicott Street or 43rd Street, the School will use a traffic monitor stationed on the perimeter of the site to ensure that parents are not dropping-off/picking-up students on Ellicott Street, 43rd Street, or 42nd Street.

The bicycle and pedestrian circulation is shown on Figure 14B.

Service/Delivery Access

Regular deliveries to the Davenport Street campus currently occur at the loading area on Davenport Street. While the new Lower/Middle School building may occasionally use this area, a new loading area devoted to Lower/Middle School use is proposed just east of the existing alley. This loading area includes one 30-foot loading berth with the required 100 SF loading platform. Trucks making deliveries to the Lower/Middle School will enter the alley system front-first via Ellicott Street, then back-in to the loading berth while on school property. Trucks will then exit the alley front-first onto Ellicott Street.

Diagrams showing the truck maneuvers in and out of the proposed loading area are included in Appendix K. Sight distance triangles for the new proposed site accesses are also included in Appendix K.

PROPOSED PARKING

Vehicular Parking

Based on parking requirements prescribed in the District of Columbia Zoning Regulations of 2016 (ZR16), a minimum of 261 parking spaces are required for the unified GDS campus. A summary of the parking required and provided is shown in Table 9. As shown, the proposed parking supply exceeds the minimum number of required spaces by 21 spaces.

Table 9
Parking Summary

Required	Provided Spaces	
	Existing	Proposed
Lower/Middle School: 2 per 3 teachers and other employees = 2*(142/3) = 95	120‡	106
High School: 2 per 3 teachers and other employees + MAX (1 per 20 classroom seats **or** 1 per 10 seats in largest area usable for public assembly) = 2*(118/3) + (728/10) = 166	196	176
Total: 95+166 = 261 spaces†	316	282

† Per ZR16, within any zone other than an R or RF zone, the minimum vehicle parking requirement shall be reduced by 50 percent for site's within ½ mile of a Metrorail station. Since the majority of the subject site is located within the R-2 and R-3 zones, the 50 percent reduction would not be allowed for the entire site.

‡ The number of existing parking spaces for the Lower/Middle School represents the number of parking spaces currently provided at the existing Lower/Middle School.

Currently, 120 total parking spaces are provided at the Lower/Middle School campus and the peak parking occupancy is 120 vehicles. The High School campus currently has 196 total parking spaces (145 spaces in the garage and 51 spaces in the surface parking lot). The School intends to use the existing parking garage to accommodate a portion of the demand for the Lower/Middle School.

Parking occupancy counts were conducted at the High School to ensure that sufficient parking is provided to accommodate the parking demand for the High School and Lower/Middle School. Parking occupancy counts were conducted at the High School every half hour from 7:00 AM to 9:00 AM and from 2:30 PM to 7:00 PM on Wednesday, May 7, 2014. The peak parking occupancy for the High School occurred at 8:30 AM when 130 spaces were occupied. To account for seniors who did not attend school the day the data collection was taken, the parking occupancy counts were adjusted to include all seniors who typically drive to school. The adjusted peak occupancy was 166 spaces.

The combined peak occupancy for the High School and Lower/Middle School is 286 spaces. With consolidation, the parking occupancy is expected to be reduced by 20 vehicles resulting in a peak parking demand of 266 spaces. This reduced demand is due largely to the relocation of the campus to an area with more transit options. It was assumed the Lower/Middle School staff and faculty demand for parking would be reduced to be consistent with current behavior observed at the High School.

As demonstrated above, the anticipated peak parking demand under the current enrollment can be accommodated by the proposed parking supply. With the proposed increase in enrollment of 125 students (an increase of 11.6 percent) and proposed increase in faculty/staff of 40 (an increase of 18 percent), some increase in parking demand could be expected. However, it is anticipated that the increased parking demand would be offset by the school's proposed Transportation Demand Management Plan, which is described in detail subsequent sections of this report.

Bicycle Parking

Based on bicycle parking requirements prescribed in ZR16, a minimum of 56 parking spaces are required for the new Lower/Middle School. A summary of the parking required and provided is shown in Table 10. As shown, 88 short-term bicycle parking spaces and 16 long-term bicycle parking spaces are proposed.

While the exact number and location of short-term bicycle spaces will be finalized during the public space process, current plans show 44 spaces provided on 42nd Street and 44 spaces provided on Davenport Street. Sixteen long-term bike parking spaces will be provided in the

new Lower/Middle School garage and students, faculty, and staff will have access to shower and changing facilities.

Table 10
Bike Parking Summary

Space Type	Required Spaces	Proposed Spaces
Short-term	88,146 SF 1 per 2,000 SF = 44 spaces†	88 spaces
Long-term	88,146 SF 1 per 7,500 SF = 12 spaces	16 spaces

† Note that per §802.2, after the first 50 bicycle parking spaces are provided for a use additional spaces are required at one half the specified ratio.

PROPOSED LOADING

Currently, the Lower/Middle School receives an average of 33.75 deliveries per week and the High School currently receives an average of 31.75 regular deliveries per week, as summarized in Table 11.

Table 11
Loading Activities Summary

Type	Upper School	Lower/Middle School
Delivery		
Food delivery service (Panera/UberEats)	2-3 per day	2-3 per day
USPS/UPS	2 per day	2 per day
FedEx/Staples	6 per week	6 per week
Specialty	1 per week	1 per week
Vending	1 per week	1 every other week
Dairy	-	2-3 per week
Supplies	1 per month	1 per month
Furniture and Fixtures	2-3 per year	2-3 per year
Service		
Air Handling	3 per month	3 per month
Alarm/Fire Safety	1 per month	1 per month
Total		
Deliveries per week	~31.75 per week	~33.75 per week

In conjunction with the relocation of the Lower/Middle School, the loading operations for the campus can be consolidated for those deliveries made by the same vendors.

Given when the Safeway site was in operation it was likely more food deliveries were made on a daily basis, the Lower/Middle School site is not expected to significantly increase loading activity on-site. In addition, the curb cut on 42nd Street used for loading access to the Safeway will be closed with the proposed redevelopment.

The loading requirements for the proposed redevelopment are prescribed by ZR16 and are summarized in Table 12 along with the proposed loading facilities.

Table 12
Loading Summary

Required	Proposed
Less than 100,00 SF GFA 1 berth @ 30' 1 platform @ 100 SF 1 service/delivery @ 20'	1 berth @ 30' 1 platform @ 100 SF 1 service/delivery space @ 30' (at HS)

TRIP GENERATION ANALYSIS

Existing Vehicular Trip Generation

To determine the number of trips generated by the High School, counts conducted in the study area were used. Specifically, counts from the Davenport/42nd Street and Ellicott Street/Public Alley intersections were used. Since Safeway was open at the time the counts were conducted, the number of Safeway trips was subtracted from the number of vehicles entering/exiting the campus via Davenport at 42nd Street and via the public alley at Ellicott Street.

The existing trip generation for the Davenport Street campus is summarized in Table 13.

Table 13
Existing Site Trip Generation Summary

Trip Type	*AM Peak*			*PM School Peak*			*PM Commuter Peak*		
	In	*Out*	*Total*	*In*	*Out*	Total	*In*	*Out*	*Total*
High School (500 Students, 100 faculty/staff)									
Existing	294	189	483	80	98	178	63	85	148

Mode Split Survey

A mode split survey was conducted by the School in 2015 of both the parents and faculty/staff to determine travel characteristics for the school. Parents of 601 students responded representing a 56 percent response rate for students. One hundred thirty-eight (138) employees responded to the survey, representing a response rate of 63 percent. The results are summarized in Table 14.

Table 14
Summary of Mode Split Survey

Travel Mode	Car	Walk/Bike	Public Transit	School Bus
Lower/Middle School				
Lower/Middle School Students	84.5%	3%	1%	11.5%
Lower School Employees	97.7%	2.3%	0%	0%
Middle School Employees	95%	5%	0%	0%
High School				
High School Students	80.5%	8%	11.5%	0%
High School Employees	81.2%	9.4%	9.4%	0%

Proposed Vehicular Trip Generation

The number of vehicle trips that will be generated by the school upon completion of the campus consolidation will be comprised of existing High School trips, existing Lower/Middle school trips, and trips associated with the increase in faculty/staff and students based on the proposed cap increases.

To determine the number of trips generated by the Lower/Middle School, Wells + Associates conducted counts at the school on April 24, 2014 from 7:30 AM to 8:45 AM and from 2:00 PM to 6:00 PM.

The anticipated campus-wide trip generation is summarized in Table 15. Note that with the consolidation of the two campuses, the current number of vehicle trips is expected to decrease for a couple of reasons: 1) several families have students in the Lower/Middle school and High School and will be able to drop all of their children off in one trip rather than two and 2) the Davenport campus has more transportation options available to faculty/staff and students so the number of non-auto trips is expected to increase simply based on the location of the Lower/Middle school closer to these transit options. Based on the transportation survey conducted by the school in 2015, the number of vehicle trips is expected to be reduced by eight percent upon consolidation to one campus.

Table 15
Proposed Campus-Wide Site Trip Generation Summary – Without TDM Plan

Trip Type	AM			PM School			PM Commuter		
	In	Out	Total	In	Out	Total	In	Out	Total
Lower/Middle School									
Total Existing Trips	339	283	622	126	154	280	46	65	111
Trips Associated with Cap Increase[1]	31	26	57	11	14	25	4	6	10
High School									
Total Existing Trips	294	189	483	80	98	178	63	85	148
Trips Associated with Cap Increase[2]	37	24	61	10	12	22	8	11	19
Sub-Total Site Trips	701	522	1,223	227	278	505	121	167	288
Consolidation Adjustment	-56	-42	-98	-18	-22	-40	-10	-13	-23
Total	**645**	**480**	**1,125**	**209**	**256**	**465**	**111**	**154**	**265**

[1] Existing trips were grown by 9.1 percent, which represents the percent increase in student and employee caps calculated on a weighted average basis (% increase in employees*# employees + % increase in students*# students ÷ # employees + # students = 0.07*642 + 0.183*142 ÷ 784 = 9.1

[2] Existing trips were grown by 12.7 percent, which represents the percent increase in student and employee caps calculated on a weighted average basis (% increase in employees*# employees + % increase in students*# students ÷ # employees + # students = 0.116*558 + 0.18*118 ÷ 676 = 12.7

The number of net, new vehicle trips added to the campus will be the difference between the total number of proposed campus-wide trips (shown on Table 15) and the existing High School trip generation (shown on Table 13). Since the Safeway was in operation at the time the counts in the study area were conducted, they also would be subtracted to reflect the number of net, new trips added. As shown in Table 16, the proposed consolidation is expected to add 526 vehicle trips during the AM peak hour and 135 vehicle trips during the PM School peak hour. During the commuter peak hour, the number of trips generated by the school is expected to be lower than the number of trips that was generated when the Safeway was in operation.

Table 16
Net New Trips – Without TDM Plan

Trip Type	AM			PM School			PM Commuter		
	In	Out	Total	In	Out	Total	In	Out	Total
Proposed Trips (from Table 15)	645	480	1,125	209	256	465	111	154	265
Existing Trips (from Table 13)	294	189	483	80	98	178	63	85	148
Net Site Trips	351	291	642	129	158	287	48	69	117
Safeway trips to be Removed[1]	-52	-64	-116	-78	-74	-152	-64	-76	-140
Total Net New Trips	**299**	**227**	**526**	**51**	**84**	**135**	**-16**	**-7**	**-23**

[1] Safeway still was in operation at the time traffic counts were conducted. The trip generation for Safeway was determined based on driveway counts.

SITE TRIP DISTRIBUTION AND ASSIGNMENT

The distribution of new peak hour site trips generated by the proposed development was based on student zip codes, the distribution of inbound and outbound trips to/from the site and general knowledge of commuter routes to/from the site. The end link trip distributions are shown in Table 17.

Table 17
Site Trip Distributions

Roadway	Direction	Inbound Distribution		Outbound Distribution	
		AM	PM	AM	PM
Wisconsin Avenue	North	10%	8%	10%	10%
	South	11%	12%	21%	11%
41st and Fessenden Streets	Northeast	20%	14%	12%	20%
Albemarle and Yuma Streets	East	5%	5%	4%	5%
42nd and 43rd Street and Nebraska Avenue	Southwest	25%	31%	35%	25%
Brandywine, Davenport, and Chesapeake Streets	West	12%	13%	8%	12%
River Road	Northwest	17%	17%	10%	17%

Lower/Middle School Site Trips

The site trips for the Lower/Middle School (including the increase associated with the proposed student and faculty/staff increases) were assigned to the roadway network based on the distributions shown in Table 17 and based on the locations of the proposed access and proposed drop-off/pick-up locations. The resulting site trips are shown on Figures 16A – 16C.

High School Site Trips

The site trips for the High School also were assigned to the roadway network based on the distributions shown in Table 17 and based on the proposed changes to the High School access and circulation (namely the new curb cut on River Road). Existing High School trips were rerouted to account for the change. The removal of the existing High School site trips is shown on Figures 17A-17C. The added High School site trips (including the increase associated with the proposed student and faculty/staff increases) accounting for the proposed access and circulation changes are shown on Figures 18A-18C.

Removed Safeway Trips

Since Safeway was in operation at the time the traffic counts in the study area were conducted, the number of trips generated by Safeway were removed from the network. Trips were proportionally removed based on existing intersection counts. The resulting removed Safeway trips are shown on Figures 19A-19C.

Campus-Wide Net New Site Trips

The total number of site trips added to the study area was derived by combining the Lower/Middle School site trips (shown on Figures 16A-16C), the removal of the existing inbound and a portion of the outbound High School Site trips (shown on Figures 17A-17C), the addition of the rerouted High School site trips including the increase in trips associated with the proposed student and faculty/staff caps (shown on Figures 18A-18C), and the removal of the Safeway trips (shown on Figures 19A-19C). The resulting site trips are shown on Figures 20A-20C.

TOTAL FUTURE CONDITIONS

TRAFFIC FORECASTS

Total future traffic forecasts with the proposed redevelopment were determined by combining the 2021 background traffic forecasts shown in Figures 13A-13C with the site traffic volumes shown on Figures 20A-20C to yield the 2021 total future traffic forecasts (without TDM Plan) shown on Figures 21A-21C.

CAPACITY ANALYSIS

Capacity analyses were performed at the study intersections using the existing lane use and traffic controls shown on Figures 3A-3C, the total future peak hour traffic forecasts shown on Figures 12A-12C, and existing signal timings. The level of service results for the 2021 total future conditions with the proposed redevelopment are summarized in Table 18 and included in Appendix M.

By comparing total future levels of service to background levels of service, the impact of the proposed development can be identified. In accordance with DDOT methodology, an impact is defined as follows:

- Degradation in approach or overall level of service to LOS E or LOS F or

- Increase in overall intersection delay by more than five seconds when compared to background conditions for intersections operating at an overall LOS E or LOS F under background conditions.

Level of service impacts are identified as follows:

- Fessenden Street/Wisconsin Avenue – the westbound left turn movement is projected to drop to a LOS E during the AM peak hour;
- Ellicott Street/Wisconsin Avenue – the eastbound approach is projected to drop to a LOS F during the AM peak hour and to a LOS E during the PM school peak hour, the westbound approach is projected to drop to a LOS F during the AM peak hour, and the overall intersection is projected to drop to a LOS E during the AM peak hour; and
- Wisconsin Avenue/42nd Street – the eastbound approach is projected to drop to a LOS E during the PM school peak hour.

Table 18
Level of Service Summary

Lane Group	Background Conditions			Total Future without TDM Plan		
	AM	PM School	PM Commuter	AM	PM School	PM Commuter
1. Fessenden Street/Wisconsin Avenue*						
EBL	D	C	-	D	C	-
EBTR	D	D	-	D	D	-
WBL	D	D	-	E (78.1)	D	-
WBTR	D	D	-	D	D	-
NBLTR	B	B	-	B	B	-
SBLTR	B	B	-	B	B	-
Overall	B	B	-	C	B	-
2. Fessenden Street/41st Street*						
EBLTR	B	B	-	B	B	-
WBLTR	B	A	-	B	B	-
NBLTR	A	A	-	B	B	-
SBLTR	B	A	-	B	A	-
3. Ellicott Street/River Road						
EBLTR	D	C	C	D	C	C
WBLTR	C	C	C	D	C	C
NBLTR	A	A	A	A	A	A
SBLTR	A	A	A	A	A	A

[x.x] = unsignalized intersection control delay in sec/veh
(x.x) = signalized intersection control delay in sec/veh
* Since the proposed project is anticipated to generate fewer trips during the PM commuter peak hour than when the Safeway was in operation, the study area for the PM commuter peak hour was reduced. Therefore, levels of service are not provided for the PM commuter peak hour for these intersections.

Table 18 (continued)
Level of Service Summary

Lane Group	Background Conditions			Total Future without TDM Plan		
	AM	PM School	PM Commuter	AM	PM School	PM Commuter
4. Ellicott Street/43rd Place						
EBLTR	A	A	A	A	A	A
WBLTR	A	A	A	A	A	A
NBLTR	A	A	A	A	A	A
SBLTR	A	A	A	A	A	A
5. Ellicott Street/Public Alley						
EBLTR	A	A	A	A	A	A
WBLTR	A	A	A	A	A	A
NBLTR	A	A	A	B	A	A
SBLTR	B	B	B	A	B	B
6. Ellicott Street/Wisconsin Avenue						
EBLTR	E (59.6)	D	D	F (327.1)	E (63.9)	D
WBLTR	D	D	D	F (319.2)	D	D
NBLTR	A	B	B	A	B	B
SBLTR	A	B	B	A	B	B
Overall	**B**	**B**	**B**	**E (62.6)**	**B**	**B**
7. Ellicott Street/41st Street*						
EBLTR	A	A	-	A	A	-
WBLTR	A	A	-	A	A	-
NBLTR	A	A	-	A	A	-
SBLTR	A	A	-	A	A	-
8. Wisconsin Avenue/42nd Street						
EBLR	F (153.8)	D	C	F [262.7]	E [38.5]	C
NBT	A	A	A	A	A	A
SBT	A	A	A	A	A	A
9. River Road/43rd Street/Davenport Street						
EBLTR	C	B	C	C	B	C
WBLTR	C	C	C	D	C	C
NBLTR	A	A	A	A	A	A
SBLTR	A	A	A	A	A	A

[x.x] = unsignalized intersection control delay in sec/veh
(x.x) = signalized intersection control delay in sec/veh
* Since the proposed project is anticipated to generate fewer trips during the PM commuter peak hour than when the Safeway was in operation, the study area for the PM commuter peak hour was reduced. Therefore, levels of service are not provided for the PM commuter peak hour for these intersections.

Table 18 (continued)
Level of Service Summary

Lane Group	Background Conditions			Total Future without TDM Plan		
	AM	PM School	PM Commuter	AM	PM School	PM Commuter
10. Davenport Street/42nd Street						
EBLR	C	B	B	C	B	B
NBLT	A	A	A	A	A	A
SBTR	A	A	A	A	A	A
11. Davenport Street/Wisconsin Avenue						
EBLTR	D	D	D	D	D	D
WBLTR	E (70.4)	D	D	E (68.5)	D	D
NBLTR	A	A	A	A	A	A
SBLTR	A	A	A	A	A	A
Overall	**A**	**A**	**A**	**A**	**A**	**A**
12. Chesapeake Street/43rd Street						
EBTR	A	A	A	A	A	A
WBLT	A	A	A	A	A	A
NBLR	A	A	A	A	A	A
SBLTR	B	B	B	B	B	B
13. Chesapeake Street/River Road						
EBLTR	C	C	C	C	D	C
WBLTR	C	D	C	C	D	C
NBLTR	A	A	A	A	A	A
SBLT	B	A	A	B	A	A
Overall	**B**	**B**	**B**	**B**	**B**	**B**
14. Chesapeake Street/42nd Street						
EBLTR	B	A	A	B	A	A
WBLTR	A	A	A	B	A	A
NBLTR	A	A	A	B	A	A
SBLTR	B	A	A	B	A	A
15. Chesapeake Street/Wisconsin Avenue						
EBLR	B	B	B	C	B	B
NBLT	A	A	A	A	A	A
SBTR	A	A	A	A	A	A

[x.x] = unsignalized intersection control delay in sec/veh
(x.x) = signalized intersection control delay in sec/veh
* Since the proposed project is anticipated to generate fewer trips during the PM commuter peak hour than when the Safeway was in operation, the study area for the PM commuter peak hour was reduced. Therefore, levels of service are not provided for the PM commuter peak hour for these intersections.

Table 18 (continued)
Level of Service Summary

Lane Group	Background Conditions			Total Future without TDM Plan		
	AM	PM School	PM Commuter	AM	PM School	PM Commuter
16. River Road/42nd Street						
EBLTR	A	A	A	A	A	A
WBLTR	A	B	B	A	B	B
NBLTR	C	C	C	D	D	C
SBLTR	D	C	C	D	C	C
Overall	**B**	**B**	**B**	**C**	**C**	**B**
17. Brandywine Street/42nd Street						
EBLTR	A	A	A	A	A	A
NBLTR	A	A	A	A	A	A
SBLTR	A	A	A	B	A	A
18. Brandywine Street/River Road						
EBL	C	C	C	C	C	C
EBR	B	B	B	B	B	B
WBLR	B	B	C	B	B	C
NBT	A	A	A	A	A	A
SBT	A	A	A	A	A	A
19. Brandywine Street/Wisconsin Avenue						
WBLTR	E (63.9)	D	D	E (60.9)	D	D
NBL	B	A	B	C	A	B
NBTR	A	A	A	B	A	A
SBL	D	D	E (58.6)	D	D	E (62.6)
SBLTR	C	C	C	D	C	C
Overall	**C**	**B**	**B**	**C**	**C**	**B**
20. River Road/Wisconsin Avenue						
EBLR	E (69.8)	D	D	E (63.9)	D	D
NBTR	A	A	A	A	A	A
SBTR	A	A	A	A	A	A
Overall	**B**	**A**	**A**	**B**	**A**	**A**

[x.x] = unsignalized intersection control delay in sec/veh
(x.x) = signalized intersection control delay in sec/veh
* Since the proposed project is anticipated to generate fewer trips during the PM commuter peak hour than when the Safeway was in operation, the study area for the PM commuter peak hour was reduced. Therefore, levels of service are not provided for the PM commuter peak hour for these intersections.

Table 18 (continued)
Level of Service Summary

Lane Group	Background Conditions			Total Future without TDM Plan		
	AM	PM School	PM Commuter	AM	PM School	PM Commuter
21. Albemarle Street/42nd Street						
EBLTR	C	B	B	C	B	B
WBLTR	B	B	B	B	B	B
NBLTR	B	B	B	C	B	B
SBLTR	B	B	C	C	B	B
Overall	**B**	**B**	**B**	**C**	**B**	**B**
22. Albemarle Street/Wisconsin Avenue						
EBL	E (65.4)	D	D	E (63.7)	D	D
EBTR	D	C	C	D	C	C
WBLT	E (72.8)	D	D	E (64.6)	D	D
WBR	D	D	D	D	D	D
NBTR	C	C	C	C	C	C
SBTR	A	A	A	A	A	A
Overall	**C**	**C**	**C**	**C**	**C**	**C**
23. River Road/New Site Driveway						
WBLR	-	-	-	B	B	B
NBTR	-	-	-	A	A	A
SBLT	-	-	-	A	A	A

[x.x] = unsignalized intersection control delay in sec/veh
(x.x) = signalized intersection control delay in sec/veh
* Since the proposed project is anticipated to generate fewer trips during the PM commuter peak hour than when the Safeway was in operation, the study area for the PM commuter peak hour was reduced. Therefore, levels of service are not provided for the PM commuter peak hour for these intersections.

QUEUE ANALYSIS

A queue analysis was conducted for 2021 conditions with the Georgetown Day School redevelopment. Synchro was used to conduct the analyses, using the 95th percentile queue lengths. The results are summarized in Table 19 and included in Appendix M.

Table 19
95th Percentile Queue Summary (in feet)

Lane Group	Available Storage†	Background Conditions			Total Future without TDM Plan		
		AM	PM School	PM Commuter	AM	PM School	PM Commuter
1. Fessenden Street/Wisconsin Avenue*							
EBL	90'	34	48	-	34	48	-
EBTR	85'/250'	109	113	-	108	113	-
WBL	90'	237	104	-	351	121	-
WBTR	40'/90'	240	180	-	240	180	-
NBLTR	270'	250	273	-	262	278	-
SBLTR	185'/410'	226	245	-	222	238	-
2. Fessenden Street/41st Street*							
EBLTR	425'	30	38	-	43	48	-
WBLTR	225'	48	35	-	78	40	-
NBLTR	125'/250'	15	20	-	25	28	-
SBLTR	120'/380'	30	10	-	50	15	-
3. Ellicott Street/River Road							
EBLTR	30'/450'	32	17	11	22	12	10
WBLTR	80'	28	26	22	27	25	18
NBLTR	100'	1	0	1	1	0	1
SBTR	200'/590'	1	1	0	0	0	0
4. Ellicott Street/43rd Place							
EBLTR	285'	8	5	5	5	5	5
WBLTR	285'	5	10	8	3	13	5
NBLTR	90'/375'	10	3	5	5	3	5
SBLTR	90'/445'	0	3	3	0	3	3
5. Ellicott Street/Public Alley							
EBLTR	245'	0	0	0	0	0	0
WBLTR	70'/145'	1	2	1	0	0	0
NBLTR	45'	8	8	8	36	12	5
SBLTR	90'	0	1	1	0	1	1

† All distances measured to nearest intersection or end of turn lane, as appropriate. Where two storage lengths are given, the first is the distance to the driveway; the second is the distance to the nearest intersection.

* Since the proposed project is anticipated to generate fewer trips during the PM commuter peak hour than when the Safeway was in operation, the study area for the PM commuter peak hour was reduced. Therefore, queues are not provided for the PM commuter peak hour for these intersections.

Table 19 (continued)
95th Percentile Queue Summary (in feet)

Lane Group	Available Storage†	Background Conditions			Total Future without TDM Plan		
		AM	PM School	PM Commuter	AM	PM School	PM Commuter
6. Ellicott Street/Wisconsin Avenue							
EBLTR	45'/420'	178	138	137	510	225	142
WBLTR	40'/365'	123	75	58	271	82	59
NBLTR	100'	87	457	394	86	462	391
SBLTR	140'	202	210	204	212	209	198
7. Ellicott Street/41st Street*							
EBLTR	215'/370'	8	8	-	8	10	-
WBLTR	145'	3	3	-	0	3	-
NBLTR	145'/385'	15	13	-	15	13	-
SBLTR	160'	13	8	-	20	10	-
8. Wisconsin Avenue/42nd Street							
EBLR	250'	187	56	41	217	69	40
NBT	280'	0	0	0	0	0	0
SBT	110'	0	0	0	0	0	0
9. River Road/43rd Street/Davenport Street							
EBLTR	295'	2	1	3	9	2	4
WBLTR	250'/375'	9	2	3	9	6	3
NBLTR	525'	1	1	0	2	1	1
SBLTR	335'	4	2	2	3	1	2
10. Davenport Street/42nd Street							
EBLR	165'	58	20	12	74	21	9
NBLT	220'/340'	19	7	5	33	8	4
SBTR	250'/375'	0	0	0	0	0	0
11. Davenport Street/Wisconsin Avenue							
EBLTR	30'	5	5	7	5	5	7
WBLTR	195'	166	68	77	161	65	76
NBLTR	310'	51	136	80	55	148	83
SBLTR	55'/265'	76	88	104	107	91	105

† All distances measured to nearest intersection or end of turn lane, as appropriate. Where two storage lengths are given, the first is the distance to the driveway; the second is the distance to the nearest intersection.

* Since the proposed project is anticipated to generate fewer trips during the PM commuter peak hour than when the Safeway was in operation, the study area for the PM commuter peak hour was reduced. Therefore, queues are not provided for the PM commuter peak hour for these intersections.

Table 19 (continued)
95th Percentile Queue Summary (in feet)

Lane Group	Available Storage†	Background Conditions			Total Future without TDM		
		AM	PM School	PM Commuter	AM	PM School	PM Commuter
12. Chesapeake Street/43rd Street							
EBTR	285'	0	0	0	0	0	0
WBLT	325'	0	3	0	2	3	1
NBLR	120'/430'	3	5	4	8	5	4
SBLTR	490'	13	6	8	15	6	9
13. Chesapeake Street/River Road							
EBLTR	285'	70	74	70	120	84	77
WBLTR	325'	56	88	87	75	103	93
NBLTR	445'	58	66	101	54	78	105
SBLT	490'	304	80	91	263	86	88
14. Chesapeake Street/42nd Street							
EBLTR	330'	25	8	5	15	13	5
WBLTR	120'/275'	8	5	10	35	15	13
NBLTR	300'	28	23	20	68	20	18
SBLTR	120'/765'	55	33	35	78	40	35
15. Chesapeake Street/Wisconsin Avenue							
EBLR	275'	32	9	9	74	21	15
NBLT	460'	4	3	6	10	4	6
SBTR	340'	0	0	0	0	0	0
16. River Road/42nd Street							
EBLTR	470'	1	24	4	1	24	6
WBLTR	75'	70	112	155	77	115	156
NBLTR	25'	149	159	182	207	183	172
SBLTR	300'	230	167	146	294	167	133
17. Brandywine Street/42nd Street							
EBLTR	75'/435'	5	3	3	5	5	3
NBLTR	260'	23	28	33	35	30	33
SBLTR	35'	43	40	33	63	40	30

† All distances measured to nearest intersection or end of turn lane, as appropriate. Where two storage lengths are given, the first is the distance to the driveway; the second is the distance to the nearest intersection.

* Since the proposed project is anticipated to generate fewer trips during the PM commuter peak hour than when the Safeway was in operation, the study area for the PM commuter peak hour was reduced. Therefore, queues are not provided for the PM commuter peak hour for these intersections.

Table 19 (continued)
95th Percentile Queue Summary (in feet)

Lane Group	Available Storage†	Background Conditions			Total Future without TDM		
		AM	PM School	PM Commuter	AM	PM School	PM Commuter
18. Brandywine Street/River Road							
EBL	20’	0	0	1	0	0	1
EBR	35’	8	7	6	8	7	6
WBLR	240’	28	47	79	34	48	79
NBT	255'/410’	0	0	0	0	0	0
SBT	50’	0	0	0	0	0	0
19. Brandywine Street/Wisconsin Avenue							
WBLTR	20'/380’	172	132	156	162	130	155
NBL	100’	90	34	194	179	45	208
NBTR	95’/215’	87	54	50	75	53	50
SBL	50’	96	69	121	118	90	134
SBLTR	435’	490	370	412	514	384	413
20. River Road/Wisconsin Avenue							
EBLR	420'	377	127	244	356	127	240
NBTR	70'	54	50	23	59	52	21
SBTR	215'	20	19	18	20	18	18
21. Albemarle Street/42nd Street							
EBLTR	95'	174	80	96	172	79	95
WBLTR	125'/575'	68	52	82	58	48	73
NBLTR	515'	132	119	109	184	136	110
SBLTR	260'	148	128	134	180	127	128
22. Albemarle Street/Wisconsin Avenue							
EBL	575'	110	58	64	95	56	64
EBTR	575'	313	110	128	297	102	118
WBLT	150'	307	165	274	271	153	249
WBR	150'	9	8	0	36	14	5
NBTR	465'	396	441	386	418	441	383
SBTR	145'	50	33	7	49	35	6
23. River Road/New Site Driveway							
WBLR	240’	-	-	-	7	5	5
NBTR	290’	-	-	-	0	0	0
SBLT	170’	-	-	-	10	2	2

† All distances measured to nearest intersection or end of turn lane, as appropriate. Where two storage lengths are given, the first is the distance to the driveway; the second is the distance to the nearest intersection.

* Since the proposed project is anticipated to generate fewer trips during the PM commuter peak hour than when the Safeway was in operation, the study area for the PM commuter peak hour was reduced. Therefore, queues are not provided for the PM commuter peak hour for these intersections.

By comparing total future queues to background queues, the impact of the proposed development can be identified. In accordance with DDOT methodology, an impact is defined as an increase in the 95th percentile queue of more than 150 feet.

As shown in Table 19, the 95th percentile queue on the eastbound approach at the Wisconsin Avenue/Ellicott Street intersection is projected to increase by more than 150 feet during the AM and PM School peak hours.

IMPROVEMENT ANALYSIS

In order to mitigate the level of service and queue impacts identified above, a two-tiered improvement analysis was undertaken. First, trip reductions associated with implementation of a TDM plan were evaluated. Second, operational and geometric improvements were evaluated at locations where the reduction associated with the TDM plan did not fully mitigate the impact of the proposed redevelopment.

Additionally, in speaking with members of the community and DDOT, the School understands the current configuration of the Wisconsin Avenue/Ellicott Street/42nd Street intersection has contributed to speeding and safety concerns on 42nd Street. The southbound-only portion of 42nd Street (referred to as the "slip lane") can serve as an alternate route for southbound traffic on Wisconsin Avenue. Traffic "turning" right from Wisconsin Avenue onto 42nd Street can do so without having to slow down as they would for a typical 90-degree right turn. As a result, the slip lane presents safety concerns that have been mentioned anecdotally by the community as well as by DDOT.

Therefore, as requested by the community and as suggested by DDOT, the School has agreed to close the slip lane. At a minimum, this would include the installation of curb at Ellicott Street/Wisconsin Avenue. Conceptual drawings for the closure of the slip lane are shown on Figures 22A and 22B.

The improvement analyses discussed herein also include the closure of the 42nd Street slip lane.

TRANSPORTATION MANAGEMENT PLAN

To help facilitate ingress to, egress from, and the flow of traffic on campus and to reduce the impact of the proposed development, the School will implement a Transportation Management Plan that will consist of a Transportation Demand Management (TDM) Plan, an Operations Management Plan, and a Monitoring Plan. Each plan is summarized below:

Transportation Demand Management

Overview

Traffic and parking congestion can be solved in one of two ways: 1) increase supply or 2) decrease demand. Increasing supply requires building new roads, widening existing roads, building more parking spaces, or operating additional transit service. These solutions are often infeasible in constrained conditions in urban environments and, where feasible, can be expensive, time consuming, and in many instances, unacceptable to businesses, government agencies, and/or the general public. The demand for travel and parking can be influenced by Transportation Demand Management (TDM) plans. Typical TDM measures include incentives to use transit or other non-auto modes of transportation, bicycle and pedestrian amenities, parking management, alternative work schedules, telecommuting, and better management of existing resources. TDM plans are most effective when tailored to a specific project or user group.

To determine an appropriate reduction that is both meaningful, in terms of reducing the school's impacts, and achievable, trip characteristic information from other private schools in the District were evaluated. This information is presented below in Table 20.

Based on this information, GDS has opportunities to improve its Average Vehicle Occupancy (AVO). Additional reductions can also be realized due to the natural synergy of the site, which will allow families with students in multiple divisions to drop-off/pick-up at one campus as opposed to two campuses. Based on information provided by the School, approximately 10 percent of Lower/Middle School families also have children in the High School.

The School also has opportunities to improve its mode split for faculty/staff and students. This is especially true for faculty/staff located at the Lower/Middle School, which is not proximate to a Metrorail station. It is expected the faculty/staff mode splits would improve to be more consistent with the existing mode splits for the High School.

Although GDS student non-auto mode splits generally are in line with the other schools shown in Table 20, the School has developed a strategy that will enable them to increase the non-auto mode split and increase carpooling during the AM peak hour when school traffic generally coincides with the AM commuter peak hour. The target range for transit usage is nine percent to 18 percent (the current transit percentage is 6.2 percent) and the target range for carpooling is 1.4 students per vehicle to 1.6 students per vehicle (the current average vehicle occupancy is 1.34 students per vehicle for the Lower/Middle School and 1.17 students per vehicle for the High School during the AM peak hour). Existing mode splits and proposed ranges for the consolidated campus are summarized in Table 21.

Table 20
Summary of Private School Information

	Grades	# of Students	Non-Auto Mode Split	Average Vehicle Occupancy (AVO)
Sheridan School				
Faculty/Staff	K – 8th	230	30%	1.86
Students			18%	1.36
The British School				
Faculty/Staff	PreK – 12th	491	32%	---
Students			23%	1.7 AM/1.57 PM
Saint Patrick's Episcopal Day School				
Faculty/Staff	PreK – 6th	485	---	---
Students			1.5%	1.6
Maret School				
Faculty/Staff	K – 12th	650	---	---
Students			15.2%	1.39
Sidwell Friends Lower School				
Faculty/Staff	PreK – 4th	300	14%	---
Students			26%	1.19 AM/1.17 PM
Sidwell Friends Upper/Middle School				
Faculty/Staff	8th – 12th	860	22%	---
Students			14%	1.26 AM/1.46 PM
Georgetown Day School*				
Faculty/Staff	PreK – 8th	575	3.5%	---
Students			15.5%	1.34 AM/1.35 PM
Faculty/Staff	9th – 12th	500	19%	---
Students			19.5%	1.17 AM/1.15 PM

* Mode split data taken from a survey conducted by Gorove/Slade in Fall 2015. Average Vehicle Occupancy taken from counts conducted by Wells + Associates in April 2014.

Table 21
Mode Split Comparison

User Group	Walk/Bike	Hopper[1]	Transit[2]	Carpool	Single Occupant Auto
Students					
Existing	6.1%	6.0%	6.2%	20.7%	61%
Proposed	9-11%	NA	9-18%	23-30%	50%
Faculty/Staff					
Existing	6.3%	0%	4.7%	7.8%	81.2%
Proposed	8-10%	NA	6-10%	9-11%	73%

[1] The Hopper currently transports students from the High School Campus to the Lower/Middle School Campus. Under the proposed campus consolidation, the Hopper will no longer be needed.
[2] The proposed transit mode split includes public transit and school buses.

In order to achieve a carpool mode split of 23 to 30 percent, an additional 30 to 107 students who currently travel to school in single occupant vehicles would need to carpool with another family. In order to achieve a transit mode split of nine to 18 percent, another 38 to 141 students who currently travel to school in a single occupant vehicle would need to take transit (either public transportation or private busing).

Prior TDM Requirements

Per DDOT's request, all TDM elements required as part of prior BZA approvals are summarized on Table 22. Based on information available on the Interactive Zoning Information System (IZIS) website, BZA Order Nos. 17868 and 17170 included TDM elements required as part of their approval. Copies of the BZA Orders are included in Appendix L.

Table 22
Prior TDM elements

Order No.	Condition No.	TDM Element
17868/17170	5	At the beginning of each school year, but in no event later than October 15th, the School shall provide to the ANC and to the District Department of Transportation documentary evidence to demonstrate its enrollment figures and compliance with the terms and conditions of this Order, including the Transportation Management Plan ("TMP") referenced in Condition No. 10 of this Order.
17868/17170	10(a)	The School shall encourage the use of public transportation as the primary means of accessing the School by the faculty, staff, and students.
17868/17170	10(b)	The School shall make available to all students reduced fare Metrorail passes to encourage use of public transportation.
17868/17170	10(c)	No student shall drive a vehicle to School unless there is an on-site parking space for that vehicle.
17868/17170	10(d)	At the beginning of each school year, all students must register their vehicles with the School.
17868/17170	10(e)	The School shall strictly prohibit student from parking on the residential street surround campus during all hours that the School's on-site parking is available for use.
17868/17170	10(f)	School employees will be trained at the beginning of each year to implement and enforce the TMP.
17170	10(g)	School employees shall monitor the streets surrounding the campus for one semester after the opening of the garage to enforce the Transportation Management Program.
17868	10(g)	The School will instruct parents not to park on, or queue on, Chesapeake Street to wait for their children at school drop-off or pick-up times.
17868	10(h)	The School will continue to provide traffic control personnel at the driveway during the school drop-off and pick-up times to facilitate on-campus traffic flow and enforce drop-off and pick-up procedures.
17868	10(i)	The School will encourage carpooling by establishing an online system to help parents identify other families along their travel route by distributing information regarding the location of other families in the area to parents at the start of each academic year.
17868	10(j)	The School will distribute a policy manual to all families prior to the start of the academic year that explains all relevant policies and procedures regarding parking, pick-up, drop-off and penalties for non-compliance. This information shall also be posted on the School's website.
17868	10(k)	Faculty and staff will be encouraged to use mass transit and those living beyond 15 miles will be subsidized in their use of mass transit.
17868	10(l)	The TMP shall become a part of the enrollment contract between the School and parents, by which the parents shall agree to be bound by its fines and punishments.
17170	10(h)	

Proposed Components of TDM Plan

In order to more effectively reduce school-generated traffic volumes, the School's TDM plan will be enhanced to include a "toolbox" of strategies. Every one of these strategies is not intended to be a commitment, rather they are intended to be potential strategies the school can draw upon to achieve the stated trip cap. The School will retain flexibility to choose which strategies to employ and will alter the strategies based on the varying degrees of success in achieving the trip cap. The TDM Plan is intended to be flexible in order to respond to changes in school demographics, technology, transportation services, and various mitigation options available. Accordingly, it is envisioned that over time new approaches in addition to those listed below will be identified and programs developed to respond to these changes. GDS proposes the following strategies as part of their TDM "toolbox":

General Strategies:

1. Designate a TDM coordinator who will be responsible for organizing, marketing, and accomplishing the tasks in the TDM plan and who will act as a liaison with DDOT and the community. The TDM coordinator position may be part of other duties assigned to the individual.

2. Create a transportation section on the school's website with up-to-date information regarding transportation options available to students, parents/guardians, and employees.

3. Install an electronic screen displaying real-time transportation information (i.e., Metrorail and Metrobus arrivals, Capital Bikeshare availability, etc.) in the High School lobby or other common area.

4. Hold quarterly meetings with the community to garner feedback on traffic and parking related issues for the length of the performance monitoring program.

5. Provide a bike maintenance facility and bicycle parking in the garage or other easily accessible area for students and faculty/staff.

6. Make showers and lockers available to students and faculty/staff who jog or bike to school.

7. Provide one 200V electric vehicle charging station in the proposed parking garage.

8. Faculty/staff who drive and live within one mile of GDS or one mile of a red-line Metro station will be charged a premium monthly parking fee. The monthly fee will be reduced for two-person carpools and will be free for three or more person carpools.

9. The updated TDM plan will be incorporated into the student contract. Families who do not comply with the TDM plan will risk the student's loss of privileges at GDS, and families with a record of repeated non-compliance risk the student's expulsion.

Strategies for Students:

Rideshare

1. Provide carpool matching assistance for parents to increase the Average Vehicle Occupancy (AVO) for the school. Assistance programs could include:
   - Creation of an online, interactive map for parents to see what other GDS families live near them and are interested in carpooling, as well as provide contact information.
   - Register with and promote Commuter Connections School Pool Program to assist parents in finding other parents in their neighborhood to form carpools, walking groups, or biking groups.
2. Actively promote carpooling by providing links to the carpool matching website on the School's Homepage and by providing fliers, emails, and/or other informational pieces at least once per semester.
3. Provide priority access to the drop-off/pick-up areas for multi-family carpools to incentivize carpooling.

Transit Provided by GDS

4. Explore private transportation options, including GDS run bus service and/or privately-run transportation services.
5. Include questions regarding busing to gage interest in a potential busing program as part of the annual mode split survey conducted by the School (the survey is discussed in more detail under the Monitoring Plan).

Incentives

6. Provide transit/alternate commute incentives to encourage students to use non-auto modes of transportation to travel to school. Incentives would include:
   - Encourage District of Columbia students to take advantage of the DC One Card, which fully subsidizes Metrobus fares for students commuting to/from school;
   - Provide monthly SmarTrip subsidies to all students who take public transportation; and

- Assist students in obtaining the DC One Card and/or the Student Unlimited Transit Pass.

Outreach and Education

7. Provide outreach and education events to stress the importance of using non-auto modes of transportation and make information more readily available. Outreach and educational events could include:
   - Hold a "Transportation to School" event at the beginning of each school year, stressing the importance of public transportation, carpooling, biking, etc.;
   - Participate in DDOT's Safe Routes to School Program – The program encourages students and their parents to walk and bicycle to school by examining conditions around schools and conducting projects and activities to improve safety and accessibility. The program also provides pedestrian and bicycle safety training in the classroom;
   - Establish inter-class and inter-grade competitions with incentives and prizes for the classes that take transit, walk, and bike the most.
   - Host four Walk to School/Bike to School Days each year;
   - Promote walking/biking in communications with parents.
8. Institute a "transit buddy" system matching older students that take transit, walk, or bike with younger students from families who are interested in this service. Older students using Metrorail will walk with younger students between the station and school. High school students that escort elementary and middle school students will receive training and obtain community service hour for this program.
9. Add bicycle education into the general physical education curriculum.

Strategies for Faculty/Staff:

Rideshare

1. Provide carpool matching assistance for faculty/staff to increase the Average Vehicle Occupancy (AVO) for the school. Assistance programs could include:
   - Creation of an online, interactive map for faculty/staff to see what other GDS employees live near them and are interested in carpooling, as well as provide contact information.
   - Register with Commuter Connections and promote Commuter Connections' Ridematching Service.

Transit Provided by GDS

2. Explore private transportation options, including GDS run bus service and/or privately-run transportation services.
3. Include questions regarding busing to gage interest in a potential busing program as part of the annual mode split survey conducted by the School (the survey is discussed in more detail under the Monitoring Plan).

Incentives

4. Provide transit/alternate commute incentives to encourage faculty/staff to use non-auto modes of transportation to travel to school. Incentives would include:
    a. Provide monthly SmarTrip cards for faculty/staff who take public transportation;
    b. Allow employees to set aside $255/month in pre-tax funds through their paycheck for transit or vanpool expenses;
    c. Enroll in Guaranteed Ride Home, which provides employees who regularly take transit, vanpool, carpool, walk, or bike to work with a reliable ride home when an unexpected emergency arises; and
    d. For faculty/staff who do not drive or take public transit to school, provide annual subsidies to those who bike (maximum tax-free subsidy allowed) OR provide bikeshare or car share memberships.

Outreach and Education

5. Provide training for the faculty/staff at the beginning of each year to implement and enforce the TDM Plan.

Operations Management Plan

In addition to the TDM plan, GDS will implement an Operations Management Plan to ensure that drop-off/pick-up procedures do not adversely impact the surrounding neighborhood. The following are the components of the plan:

1. Establish a clear drop-off/pick-up protocol for parents. Parents/guardians will pick-up students at the time the child in the carpool with the latest dismissal has been dismissed. Parents/guardians will drop-off/pick-up at the designated location for the youngest child in the vehicle. The protocol will be as follows:
    a. Drop-off/pick-up for Pre-Kindergarten through 1st Grade will occur on the Lower School site between the LMS building and the athletic field.
        i. Traffic entering the drop-off/pick-up lane for Pre-K/K students will enter via Davenport Street and exit via the alley to Ellicott Street. Egress from the alley onto Ellicott Street will be right turn only. The driveway will be

open to general traffic only during drop-off/pick-up periods. At all other times, the driveway will be used for additional recreation space.

ii. Classes will begin at 8:05 AM and dismissal will occur at 3:00 PM.

b. Drop-off/pick-up for 2nd through 8th grade students will occur in the new parking garage.

i. Traffic entering the drop-off/pick-up lanes will enter via Davenport Street, pick-up/drop-off in the garage, and exit via the alley to Ellicott Street. Egress from the alley onto Ellicott Street will be right turn only.

ii. Classes will begin at 8:15 AM for 2nd through 6th Grade and 8:05 AM for Middle School students. Dismissal will occur at 3:15 PM for 2nd through 6th grades and at 3:30 PM for 7th and 8th grades.

c. Drop-off/pick-up for High School students will occur in front of the existing High School.

i. Traffic entering the pick-up/drop-off lane will enter via the proposed driveway on River Road and exit via Davenport Street. Students and faculty/staff who drive will be instructed to use the driveway on River Road to enter and exit the site. This will ease traffic congestion on site and make drop-off/pick-up operations more efficient.

ii. Classes will begin at 8:15 AM and dismissal for activities will occur at 2:50 PM. Dismissal for students not participating in activities will occur at 3:15 PM.

d. Parents/guardians will be assigned a drop-off/pick-up location based on the grade of their child(ren) and must use the assigned area. Parents/guardians will be given a color-coded tag. The color will correspond to their assigned drop-off/pick-up location. For parents picking up at the Lower/Middle School, the tag also will have a number, which will correspond to their student(s). The tag must be placed in the windshield of the vehicle picking up the student(s). A member of staff will note the number as the vehicle enters the pick-up line and radio the number back to the school as the vehicles enter campus. Staff at the school then will shepherd the appropriate students to the awaiting vehicles once they stop.

e. Under no circumstances will drop-off/pick-up be permitted on public streets.

f. All parents who must leave their vehicle to drop-off/pick up students during regular drop-off/pick-up times, must park in a designated, on-campus parking space. Parents using the drop-off/pick-up lanes must remain in their vehicles and will drop-off/pick-up their student(s) when they stop in front of the school.

g. Lower/Middle School staff members will be stationed at each drop-off/pick-up location to direct traffic and to assist students in getting to the appropriate vehicle.

h. GDS staff will be stationed along the perimeter to ensure that Ellicott Street, 42nd Street, and 43rd Street are not used for pick-up/drop-off.

Monitoring Plan

To ensure that the TDM and Operations Management plans are functioning as intended, GDS will conduct annual monitoring studies, which will be submitted to DDOT and ANC 3E.

- Elements of the Monitoring Study:
  - The number of vehicle trips generated by the school during the AM peak hour and PM School peak hour will be determined.
    - Traffic counts shall be conducted when GDS, DC Public Schools, and Congress are in session.
    - Counts shall be conducted during the Fall Semester at the driveways to the school on a typical weekday from 7:00 AM to 9:00 AM and from 2:30 PM to 4:30 PM. Counts shall be conducted on days when no adverse weather impacts travel conditions.
    - The number of trips generated by the school shall be determined as follows:
      - AM peak hour shall be determined by selecting the single highest hourly inbound plus outbound volume (for all driveways combined) between 7:00 AM and 9:00 AM.
      - PM School peak hour shall be determined by selecting the single highest hourly inbound plus outbound volume (for all driveways combined) between 2:30 PM and 4:30 PM.
  - A mode split survey (conducted during the Fall Semester) to determine the mode of transportation for students and faculty/staff.
  - A list of TDM measures in effect at the time the study was conducted.
  - The number of students enrolled and faculty/staff employed at the time the study was conducted.
- Trip Generation Goals:
  - GDS will establish a goal of reducing AM peak hour vehicular traffic generated by the school (from what would otherwise be generated without a TDM plan) by 29 percent through implementation of a TDM plan (including the approximate eight percent reduction that is anticipated by virtue of consolidation and relocating the Lower/Middle school to a more transit-rich site). The vehicular trip thresholds are provided in Table 23.
- Sequencing of Monitoring Studies

- The monitoring study shall be conducted during the Fall Semester each year. The study shall be conducted for a minimum of two consecutive years.
- In the event that the actual peak hour vehicle trip generation exceeds the established Vehicle Trip Generation Threshold, GDS shall continue to perform the monitoring until the vehicle trip generation for the site is less than the established Vehicle Trip Generation Goal for two consecutive years. At such time, GDS will perform the monitoring study biennially. If the studies show that the goals continue to be met for two consecutive biennial studies, monitoring may cease. Based on the proposed sequencing, GDS will perform a minimum of four monitoring studies over a minimum of six years.
- GDS must demonstrate, through the monitoring studies, that the Trip Generation Goal is met at an enrollment of 1,075 students. Once GDS has successfully demonstrated that the goal has been met, the student enrollment may be increased by 50 students (to 1,025 students) and the number of faculty/staff may increase to 240 (from an opening day staff count of 220).
- Upon increase of the enrollment to 1,125 students, GDS shall continue with the annual monitoring studies measuring against the Trip Generation Goal. Once GDS demonstrates, through the monitoring studies, that the Trip Generation Goal at an enrollment of 1,125 students has been met, the student enrollment may be increased by an additional 75 students (to 1,200 students) and the number of faculty/staff may increase to 260.
- Upon increase of the enrollment to 1,200 students, GDS shall continue with the annual monitoring studies for a minimum of an additional two years, measuring against the Trip Generation Goal.
- In the event that the actual AM or PM School peak hour vehicle trip generation exceeds the established Vehicle Trip Generation Goal, GDS shall continue to perform the monitoring until the vehicle trip generation for the site is less than the established Vehicle Trip Generation Goal for two consecutive years. At such time, GDS will perform the monitoring study biennially. If the studies show that the goals continue to be met for two consecutive biennial studies, monitoring may cease. Based on the proposed sequencing, GDS will perform a minimum of six monitoring studies over a minimum of eight years, assuming they increase their cap by 125 students in that timeframe. If GDS does not increase their cap within the first six years, they will be required to perform a minimum of four reports in six years and then would be required to resume monitoring reports once they increase their student cap.
- If the peak hour Vehicle Trip Generation Thresholds are not met, GDS will include, in the monitoring study, additional TDM measures to be implemented prior to the next monitoring period. In addition, GDS will meet with DDOT and the ANC to explore, develop, and implement new TDM strategies.

Table 23
Trip Generation – With TDM Plan

Trip Type	AM			PM School		
	In	Out	Total	In	Out	Total
Existing Trips						
Lower/Middle School	339	283	622	126	154	280
High School	294	189	483	80	98	178
Subtotal – All Divisions (1,075 students and 220 faculty/staff)	633	472	1,105	206	252	458
Incremental Increase Associated with Proposed Cap Increase (without TDM)						
Lower/Middle School	31	26	57	11	14	25
High School	37	24	61	10	12	22
Sub-total – All Divisions	68	50	118	21	26	47
Proposed Trips (without TDM)						
Lower/Middle Schools	370	309	679	137	168	305
High School	331	213	544	90	110	200
Subtotal – All Divisions (1,200 students and 260 faculty/staff)	701	522	1,223	227	278	505
Proposed Trips with Consolidation Adjustment						
Lower/Middle Schools	341	284	625	126	155	281
High School	304	196	500	83	101	184
Subtotal – All Divisions (1,200 students and 260 faculty/staff)	645	480	1,125	209	256	465
Proposed Trips (with TDM) [1]						
Lower/Middle School	261	218	479	126	155	281
High School	234	151	385	83	101	184
Subtotal – All Divisions (1,200 students and 260 faculty/staff)	495	369	864	209	256	465
Trip Gen Threshold – All Divisions	***864***			***465***		

The site trip volumes for the Lower/Middle School and the High School with the reduction associated with the TDM plan are shown on Figures 23A-23C and Figures 24A-24C, respectively. The total site trips with the TDM plan in place are shown on Figure 25A-25C.

The number of net, new vehicle trips added to the campus will be the difference between the total number of proposed campus-wide trips (shown on Table 23) and the existing High School trip generation (also shown on Table 23). Since the Safeway was in operation at the time the counts in the study area were conducted, they also would be subtracted to reflect the number

of net, new trips added. As shown on Table 24, the proposed consolidation is expected to add 265 vehicle trips during the AM peak hour and 135 vehicle trips during the PM School peak hour. As described earlier in this report, during the PM Commuter peak hour the number of trips generated by the school is expected to be lower than the number of trips that was generated when the Safeway was in operation.

Table 24
Net New Trips – With TDM Plan

Trip Type	AM			PM School			PM Commuter		
	In	Out	Total	In	Out	Total	In	Out	Total
Proposed Trips	495	369	864	209	256	465	111	154	265
Existing Trips	294	189	483	80	98	178	63	85	148
Net Site Trips	201	180	381	129	158	287	48	69	117
Safeway trips to be Removed[1]	-52	-64	-116	-78	-74	-152	-64	-76	-140
Total Net New Trips	**149**	**116**	**265**	**51**	**84**	**135**	**-16**	**-7**	**-23**

[1] Safeway still was in operation at the time traffic counts were conducted. The trip generation for Safeway was determined based on driveway counts.

A comparison of the trips generated per student/faculty/staff for the consolidated campus with and without the TDM plan are summarized in Table 25.

Table 25
Trip Generation Rate Comparison

Rate	AM			PM School			PM Commuter		
	In	Out	Total	In	Out	Total	In	Out	Total
Trips Generated Per Student (1,200 students)									
Without TDM Plan[†]	0.54	0.40	0.94	0.17	0.21	0.39	0.09	0.13	0.22
With TDM Plan	0.41	0.31	0.72	0.17	0.21	0.39	0.09	0.13	0.22
Trips Generated Per Faculty/Staff (260 faculty/staff)									
Without TDM Plan[†]	2.48	1.85	4.33	0.80	0.98	1.79	0.43	0.59	1.02
With TDM Plan	1.90	1.42	3.32	0.80	0.98	1.79	0.43	0.59	1.02

[†] Includes campus consolidation reduction.

OPERATIONAL IMPROVEMENTS

Capacity Analysis

Capacity analyses were performed at the study intersections using the total future peak hour traffic forecasts with the TDM plan shown on Figures 26A-26C, future lane use and traffic controls shown on Figures 27A-27C, and existing signal timings. Note the total future traffic forecasts and lane use and traffic controls include the closure of the 42nd Street slip lane.

After accounting for the 29 percent reduction in traffic for the AM peak hour as a result of the TDM plan, additional improvements were necessary to offset any remaining impacts associated with the project. Since the TDM plan is intended to reduce trip generation specifically during the AM peak hours, improvements during the PM School and PM Commuter peak hours do not include a 29 percent reduction in traffic. Note that the cycle lengths and offsets are consistent with existing conditions and the proposed timing adjustments follow DDOT guidelines on vehicular and pedestrian interval calculations. Results of the analyses are summarized in Tables 26 and 27 and included in Appendix N. For comparison purposes, background conditions also are provided in Tables 26 and 27.

Table 26
Level of Service Summary with TDM Reduction and Improvements

Lane Group	Background Conditions			Total Future with Improvements		
	AM	PM School	PM Commuter	AM	PM School	PM Commuter
1. Fessenden Street/Wisconsin Avenue*						
EBL	D	C	-	C	C	-
EBTR	D	D	-	D	D	-
WBL	D	D	-	D	D	-
WBTR	D	D	-	D	D	-
NBLTR	B	B	-	B	B	-
SBLTR	B	B	-	B	B	-
Overall	B	B	-	**C**	**B**	**-**
2. Fessenden Street/41st Street*						
EBLTR	B	B	-	B	B	-
WBLTR	B	A	-	B	B	-
NBLTR	A	A	-	B	B	-
SBLTR	B	A	-	B	A	-

† All distances measured to nearest intersection or end of turn lane, as appropriate. Where two storage lengths are given, the first is the distance to the driveway; the second is the distance to the nearest intersection.

* Since the proposed project is anticipated to generate fewer trips during the PM commuter peak hour than when the Safeway was in operation, the study area for the PM commuter peak hour was reduced. Therefore, queues are not provided for the PM commuter peak hour for these intersections.

Table 26 (continued)
Level of Service Summary with TDM Reduction and Improvements

Lane Group	Background Conditions			Total Future with Improvements		
	AM	PM School	PM Commuter	AM	PM School	PM Commuter
3. Ellicott Street/River Road						
EBLTR	D	C	C	D	C	C
WBLTR	C	C	C	C	C	C
NBLTR	A	A	A	A	A	A
SBLTR	A	A	A	A	A	A
4. Ellicott Street/43rd Place						
EBLTR	A	A	A	A	A	A
WBLTR	A	A	A	A	A	A
NBLTR	A	A	A	A	A	A
SBLTR	A	A	A	A	A	A
5. Ellicott Street/Public Alley						
EBLTR	A	A	A	A	A	A
WBLTR	A	A	A	A	A	A
NBLTR	A	A	A	B	A	A
SBLTR	B	B	B	A	B	B
6. Ellicott Street/Wisconsin Avenue						
EBLT	E (59.6)	D	D	D	D	D
EBR				D	D	C
WBLTR	D	D	D	D	D	D
NBLTR	A	B	B	A	B	B
SBLTR	A	B	B	A	B	B
Overall	**B**	**B**	**B**	**B**	**B**	**B**
7. Ellicott Street/41st Street*						
EBLTR	A	A	-	A	A	-
WBLTR	A	A	-	A	A	-
NBLTR	A	A	-	A	A	-
SBLTR	A	A	-	A	A	-
8. Wisconsin Avenue/42nd Street						
EBLR	F (153.8)	D	C	F [360.3]	E [49.9]	D
NBT	A	A	A	A	A	A
SBT	A	A	A	A	A	A

† All distances measured to nearest intersection or end of turn lane, as appropriate. Where two storage lengths are given, the first is the distance to the driveway; the second is the distance to the nearest intersection.

* Since the proposed project is anticipated to generate fewer trips during the PM commuter peak hour than when the Safeway was in operation, the study area for the PM commuter peak hour was reduced. Therefore, queues are not provided for the PM commuter peak hour for these intersections.

Table 26 (continued)
Level of Service Summary with TDM Reduction and Improvements

Lane Group	Background Conditions			Total Future with Improvements		
	AM	PM School	PM Commuter	AM	PM School	PM Commuter
9. River Road/43rd Street/Davenport Street						
EBLTR	C	B	C	C	B	C
WBLTR	C	C	C	C	C	C
NBLTR	A	A	A	A	A	A
SBLTR	A	A	A	A	A	A
10. Davenport Street/42nd Street						
EBLR	C	B	B	B	B	B
NBLT	A	A	A	A	A	A
SBTR	A	A	A	A	A	A
11. Davenport Street/Wisconsin Avenue						
EBLTR	D	D	D	D	D	D
WBLTR	E (70.4)	D	D	E (68.5)	D	D
NBLTR	A	A	A	A	A	A
SBLTR	A	A	A	A	A	A
Overall	**A**	**A**	**A**	**A**	**A**	**A**
12. Chesapeake Street/43rd Street						
EBTR	A	A	A	A	A	A
WBLT	A	A	A	A	A	A
NBLR	A	A	A	A	A	A
SBLTR	B	B	B	B	B	B
13. Chesapeake Street/River Road						
EBLTR	C	C	C	C	D	C
WBLTR	C	D	C	C	D	C
NBLTR	A	A	A	A	A	A
SBLT	B	A	A	B	A	A
Overall	**B**	**B**	**B**	**B**	**B**	**B**
14. Chesapeake Street/42nd Street						
EBLTR	B	A	A	A	A	A
WBLTR	A	A	A	B	A	A
NBLTR	A	A	A	B	A	A
SBLTR	B	A	A	B	A	A

† All distances measured to nearest intersection or end of turn lane, as appropriate. Where two storage lengths are given, the first is the distance to the driveway; the second is the distance to the nearest intersection.

* Since the proposed project is anticipated to generate fewer trips during the PM commuter peak hour than when the Safeway was in operation, the study area for the PM commuter peak hour was reduced. Therefore, queues are not provided for the PM commuter peak hour for these intersections.

Table 26 (continued)
Level of Service Summary with TDM Reduction and Improvements

Lane Group	Background Conditions			Total Future with Improvements		
	AM	PM School	PM Commuter	AM	PM School	PM Commuter
15. Chesapeake Street/Wisconsin Avenue						
EBLR	B	B	B	C	C	B
NBLT	A	A	A	A	A	A
SBTR	A	A	A	A	A	A
16. River Road/42nd Street						
EBLTR	A	A	A	A	A	A
WBLTR	A	B	B	A	B	B
NBLTR	C	C	C	D	D	C
SBLTR	D	C	C	D	C	C
Overall	**B**	**B**	**B**	**B**	**C**	**B**
17. Brandywine Street/42nd Street						
EBLTR	A	A	A	A	A	A
NBLTR	A	A	A	A	A	A
SBLTR	A	A	A	B	A	A
18. Brandywine Street/River Road						
EBL	C	C	C	C	C	C
EBR	B	B	B	B	B	B
WBLR	B	B	C	B	B	C
NBT	A	A	A	A	A	A
SBT	A	A	A	A	A	A
19. Brandywine Street/Wisconsin Avenue						
WBLTR	E (63.9)	D	D	E (60.9)	D	D
NBL	B	A	B	C	A	B
NBTR	A	A	A	B	A	A
SBL	D	D	E (58.6)	D	D	E (62.9)
SBLTR	C	C	C	C	C	C
Overall	**C**	**B**	**B**	**C**	**C**	B
20. River Road/Wisconsin Avenue						
EBLR	E (69.8)	D	D	E (63.6)	D	D
NBTR	A	A	A	A	A	A
SBTR	A	A	A	A	A	A
Overall	**B**	**A**	**A**	**B**	**A**	**A**

† All distances measured to nearest intersection or end of turn lane, as appropriate. Where two storage lengths are given, the first is the distance to the driveway; the second is the distance to the nearest intersection.

* Since the proposed project is anticipated to generate fewer trips during the PM commuter peak hour than when the Safeway was in operation, the study area for the PM commuter peak hour was reduced. Therefore, queues are not provided for the PM commuter peak hour for these intersections.

Table 26 (continued)
Level of Service Summary with TDM Reduction and Improvements

Lane Group	Background Conditions			Total Future with Improvements		
	AM	PM School	PM Commuter	AM	PM School	PM Commuter
21. Albemarle Street/42nd Street						
EBLTR	C	B	B	C	B	B
WBLTR	B	B	B	B	B	B
NBLTR	B	B	B	C	B	B
SBLTR	B	B	C	B	B	B
Overall	**B**	**B**	**B**	**B**	**B**	**B**
22. Albemarle Street/Wisconsin Avenue						
EBL	E (65.4)	D	D	E (64.4)	D	D
EBTR	D	C	C	D	C	C
WBLT	E (72.8)	D	D	E (64.6)	D	D
WBR	D	D	D	D	D	D
NBTR	C	C	C	C	C	C
SBTR	A	A	A	A	A	A
Overall	**C**	**C**	**C**	**C**	**C**	**C**
23. River Road/New Site Driveway						
WBLR	-	-	-	B	B	B
NBTR	-	-	-	A	A	A
SBLT	-	-	-	A	A	A

† All distances measured to nearest intersection or end of turn lane, as appropriate. Where two storage lengths are given, the first is the distance to the driveway; the second is the distance to the nearest intersection.

* Since the proposed project is anticipated to generate fewer trips during the PM commuter peak hour than when the Safeway was in operation, the study area for the PM commuter peak hour was reduced. Therefore, queues are not provided for the PM commuter peak hour for these intersections.

Table 27
95th Percentile Queue Summary (in feet) with TDM Reduction and Improvements

Lane Group	Available Storage†	Background Conditions			Total Future with Improvements		
		AM	PM School	PM Commuter	AM	PM School	PM Commuter
1. Fessenden Street/Wisconsin Avenue							
EBL	90'	34	48	-	32	48	-
EBTR	85'/250'	109	113	-	103	113	-
WBL	90'	237	104	-	286	121	-
WBTR	40'/90'	240	180	-	229	180	-
NBLTR	270'	250	273	-	284	278	-
SBLTR	185'/410'	226	245	-	243	238	-
2. Fessenden Street/41st Street							
EBLTR	425'	30	38	-	40	48	-
WBLTR	225'	48	35	-	68	40	-
NBLTR	125'/250'	15	20	-	23	28	-
SBLTR	120'/380'	30	10	-	43	15	-
3. Ellicott Street/River Road							
EBLTR	30'/450'	32	17	11	20	12	10
WBLTR	80'	28	26	22	25	25	18
NBLTR	100'	1	0	1	1	0	1
SBTR	200'/590'	1	1	0	0	0	0
4. Ellicott Street/43rd Place							
EBLTR	285'	8	5	5	5	5	5
WBLTR	285'	5	10	8	3	13	5
NBLTR	90'/375'	10	3	5	5	3	5
SBLTR	90'/445'	0	3	3	0	3	3
5. Ellicott Street/Public Alley							
EBLTR	245'	0	0	0	0	0	0
WBLTR	70'/145'	1	2	1	0	0	0
NBLTR	45'	8	8	8	27	12	5
SBLTR	90'	0	1	1	0	1	1
6. Ellicott Street/Wisconsin Avenue							
EBLTR	45'/420'	178	138	137	128	126	94
WBLTR	40'/365'	123	75	58	146	29	24
NBLTR	100'	87	457	394	145	81	59
SBLTR	140'	202	210	204	84	458	385

† All distances measured to nearest intersection or end of turn lane, as appropriate. Where two storage lengths are given, the first is the distance to the driveway; the second is the distance to the nearest intersection.

* Since the proposed project is anticipated to generate fewer trips during the PM commuter peak hour than when the Safeway was in operation, the study area for the PM commuter peak hour was reduced. Therefore, queues are not provided for the PM commuter peak hour for these intersections.

Table 27 (continued)
95th Percentile Queue Summary (in feet) with TDM Reduction and Improvements

Lane Group	Available Storage†	Background Conditions			Total Future with Improvements		
		AM	PM School	PM Commuter	AM	PM School	PM Commuter
7. Ellicott Street/41st Street							
EBLTR	215'/370'	8	8	-	8	10	-
WBLTR	145'	3	3	-	0	3	-
NBLTR	145'/385'	15	13	-	13	13	-
SBLTR	160'	13	8	-	18	10	-
8. Wisconsin Avenue/42nd Street							
EBLR	250'	187	56	41	230	86	45
NBT	280'	0	0	0	0	0	0
SBT	110'	0	0	0	0	0	0
9. River Road/43rd Street/Davenport Street							
EBLTR	295'	2	1	3	7	2	4
WBLTR	250'/375'	9	2	3	9	6	3
NBLTR	525'	1	1	0	2	1	1
SBLTR	335'	4	2	2	3	1	2
10. Davenport Street/42nd Street							
EBLR	165'	58	20	12	35	21	9
NBLT	220'/340'	19	7	5	22	8	4
SBTR	252'/375'	0	0	0	0	0	0
11. Davenport Street/Wisconsin Avenue							
EBLTR	30'	5	5	7	5	5	7
WBLTR	196'	166	68	77	161	65	76
NBLTR	313'	51	136	80	55	147	83
SBLTR	55'/265'	76	88	104	115	109	116
12. Chesapeake Street/43rd Street							
EBTR	285'	0	0	0	0	0	0
WBLT	325'	0	3	0	2	3	1
NBLR	120'/430'	3	5	4	7	5	4
SBLTR	490'	13	6	8	15	6	9
13. Chesapeake Street/River Road							
EBLTR	285'	70	74	70	105	84	77
WBLTR	325'	56	88	87	65	103	93
NBLTR	445'	58	66	101	55	78	105
SBLT	490'	304	80	91	263	86	88

† All distances measured to nearest intersection or end of turn lane, as appropriate. Where two storage lengths are given, the first is the distance to the driveway; the second is the distance to the nearest intersection.

* Since the proposed project is anticipated to generate fewer trips during the PM commuter peak hour than when the Safeway was in operation, the study area for the PM commuter peak hour was reduced. Therefore, queues are not provided for the PM commuter peak hour for these intersections.

Table 27 (continued)
95th Percentile Queue Summary (in feet) with TDM Reduction and Improvements

Lane Group	Available Storage†	Background Conditions			Total Future with Improvements		
		AM	PM School	PM Commuter	AM	PM School	PM Commuter
14. Chesapeake Street/42nd Street							
EBLTR	330'	25	8	5	13	13	5
WBLTR	120'/275'	8	5	10	28	15	13
NBLTR	300'	28	23	20	45	20	18
SBLTR	120'/765'	55	33	35	53	40	35
15. Chesapeake Street/Wisconsin Avenue							
EBLR	275'	32	9	9	57	22	15
NBLT	460'	4	3	6	9	5	7
SBTR	340'	0	0	0	0	0	0
16. River Road/42nd Street							
EBLTR	470'	1	24	4	1	24	6
WBLTR	75'	70	112	155	73	115	156
NBLTR	25'	149	159	182	173	183	172
SBLTR	300'	230	167	146	235	167	133
17. Brandywine Street/42nd Street							
EBLTR	75'/435'	5	3	3	5	5	3
NBLTR	260'	23	28	33	28	30	33
SBLTR	35'	43	40	33	50	40	30
18. Brandywine Street/River Road							
EBL	20'	0	0	1	0	0	1
EBR	35'	8	7	6	8	7	6
WBLR	240'	28	47	79	31	48	79
NBT	255'/410'	0	0	0	0	0	0
SBT	50'	0	0	0	0	0	0
19. Brandywine Street/Wisconsin Avenue							
WBLTR	20'/380'	172	132	156	162	130	155
NBL	100'	90	34	194	130	45	208
NBTR	95'/215'	87	54	50	90	53	50
SBL	50'	96	69	121	114	90	135
SBLTR	435'	490	370	412	506	383	413

† All distances measured to nearest intersection or end of turn lane, as appropriate. Where two storage lengths are given, the first is the distance to the driveway; the second is the distance to the nearest intersection.

* Since the proposed project is anticipated to generate fewer trips during the PM commuter peak hour than when the Safeway was in operation, the study area for the PM commuter peak hour was reduced. Therefore, queues are not provided for the PM commuter peak hour for these intersections.

Table 27 (continued)
95th Percentile Queue Summary (in feet) with TDM Reduction and Improvements

Lane Group	Available Storage†	Background Conditions			Total Future with Improvements		
		AM	PM School	PM Commuter	AM	PM School	PM Commuter
20. River Road/Wisconsin Avenue							
EBLR	420'	377	127	244	355	127	240
NBTR	70'	54	50	23	54	52	22
SBTR	215'	20	19	18	20	18	18
21. Albemarle Street/42nd Street							
EBLTR	95'	174	80	96	172	79	95
WBLTR	125'/575'	68	52	82	58	48	73
NBLTR	515'	132	119	109	163	136	110
SBLTR	260'	148	128	134	156	127	128
22. Albemarle Street/Wisconsin Avenue							
EBL	575'	110	58	64	102	56	64
EBTR	575'	313	110	128	295	102	118
WBLT	150'	307	165	274	271	153	249
WBR	150'	9	8	0	29	14	5
NBTR	465'	396	441	386	408	441	383
SBTR	145'	50	33	7	49	35	6
23. River Road/New Site Driveway							
WBLR	240’	-	-	-	5	5	5
NBTR	290’	-	-	-	0	0	0
SBLT	170	-	-	-	8	2	2

† All distances measured to nearest intersection or end of turn lane, as appropriate. Where two storage lengths are given, the first is the distance to the driveway; the second is the distance to the nearest intersection.
* Since the proposed project is anticipated to generate fewer trips during the PM commuter peak hour than when the Safeway was in operation, the study area for the PM commuter peak hour was reduced. Therefore, queues are not provided for the PM commuter peak hour for these intersections.

Intersection Improvements

Fessenden Street/Wisconsin Avenue

During the AM peak hour, the westbound left is projected to drop from a LOS D to a LOS E. In order to mitigate the impact of the school, the following minor timing adjustments are recommended to mitigate the impact of the development:

- During the AM peak, shift four seconds of green time from the northbound/southbound phase (phases 2 and 6) to the eastbound/westbound phase (phases 4 and 8).

Ellicott Street/Wisconsin Avenue

During the AM peak hour, the eastbound and westbound approaches are projected to drop to a LOS F. During the PM School peak hour, the eastbound approach is projected to drop from a LOS D to a LOS E. In order the mitigate the impact of the school, an eastbound right turn lane is recommended. This right turn lane would be approximately 140 feet and extend from the intersection to the public alley. Two metered spaces on the south side of Ellicott Street would be removed in order to accommodate the proposed right turn lane.

Wisconsin Avenue/42nd Street

During the PM School peak hour, the eastbound approach drops from a LOS D to a LOS E. Note the closure of the 42nd Street slip lane does contribute to the drop in level of service and increase in delay on this approach. The addition of separate left and right turn lanes was explored, but this improvement did not improve the level of service. Signalization was not considered due to the close proximity of the traffic signal at the Wisconsin Avenue/Ellicott Street intersection. Therefore, no improvements are recommended at this intersection.

CONCLUSIONS AND RECOMMENDATIONS

The conclusions and recommendations of this preliminary traffic study are as follows:

1. Currently, the GDS Davenport Campus generates 483 AM peak hour vehicle trips, 178 PM School peak hour vehicle trips, and 148 PM commuter peak hour vehicle trips.
2. The current Lower/Middle School on MacArthur Boulevard generates 622 AM peak hour vehicle trips, 280 PM school peak hour vehicle trips, and 111 PM commuter peak hour vehicle trips.
3. The proposed increase in student cap from 1,075 to 1,200 students and the proposed increase in faculty/staff cap from 220 to 260 employees would result in an anticipated 118 AM peak hour vehicle trips, 47 PM school peak hour vehicle trips, and 29 PM commuter peak hour vehicle trips.
4. As a result of the consolidation and with the relocation of the Lower/Middle School to a more transit-rich site, the number of vehicle trips is anticipated to decrease by eight percent (i.e. by 98 trips during the AM peak hour, 40 trips during the PM school peak hour, and 23 trips during the commuter peak hour).
5. During the PM commuter peak hour, the volume of traffic generated by the proposed project is expected to be less than the volume of traffic generated by the High School and Safeway, when the Safeway was in operation.
6. As part of the proposed redevelopment of the Safeway site, a new curb cut on Davenport will be constructed in place of the existing Safeway curb cut on Davenport Street. The existing curb cut on 42nd Street will be closed, and the public alley on Ellicott Street will be used primarily for egress from the site (small delivery/service vehicles will enter and exit via the alley).
7. A new curb cut is proposed on River Road to provide a second point of access to the High School garage. Based on the minimum gap, queueing, and turn pocket analyses conduct, the garage will operate as Right-In/Right-Out/Left-In and will not include a turn pocket for southbound traffic turning left into the garage.
8. High School drop-off/pick-up will occur on the south side of Davenport Street. Lower/Middle School drop-off/pick-up will occur in the new garage and adjacent to the west side of the school for Pre-Kindergarten through 1st Grade. Egress onto Ellicott Street will be right turn only.
9. The School will close vehicular access to the existing 42nd Street slip lane to promote safety and slow southbound traffic on 42nd Street.
10. To mitigate the impact of the proposed development and to promote safety within the study area, the following are recommended:

- Implement a robust Transportation Demand Management Plan, as outlined herein, with the goal of reducing AM peak hour vehicular traffic by 29 percent across all divisions.
- Conduct monitoring studies, as outlined herein, to ensure that TDM goals are met.
- Implement an Operations Management Plan, as outlined herein, to ensure that drop-off/pick-up operations are accommodated within the designated areas and do not adversely impact the adjacent public streets.
- Restripe the eastbound approach of the Ellicott Street/Wisconsin Avenue intersection to provide an exclusive right turn lane.
- Modify traffic signal timings at the Fessenden Street/Wisconsin Avenue and Ellicott Street/Wisconsin Avenue intersections to better accommodate the anticipated traffic volumes.
- Employ a traffic control personnel on-site to help facilitate drop-off/pick-up activities to promote safe and efficient flow of traffic. Also employ a traffic control officer at the Ellicott Street/Alley intersection to ensure all traffic exiting during drop-off/pick-up turns right onto Ellicott Street.

11. With the implementation of the recommendations indicated above, the proposed increase in enrollment cap from 500 to 1,200 students (which includes the 575 students currently enrolled at the Lower School plus an additional 125 students across the three divisions) in conjunction with the redevelopment of the Safeway site to accommodate the GDS Lower/Middle School will have only minor impacts on the study area.

O:\Projects\7001 - 7500\7153 Georgetown Day School BZA Application\Documents\CTR\7153 CTR.docx

FIGURES

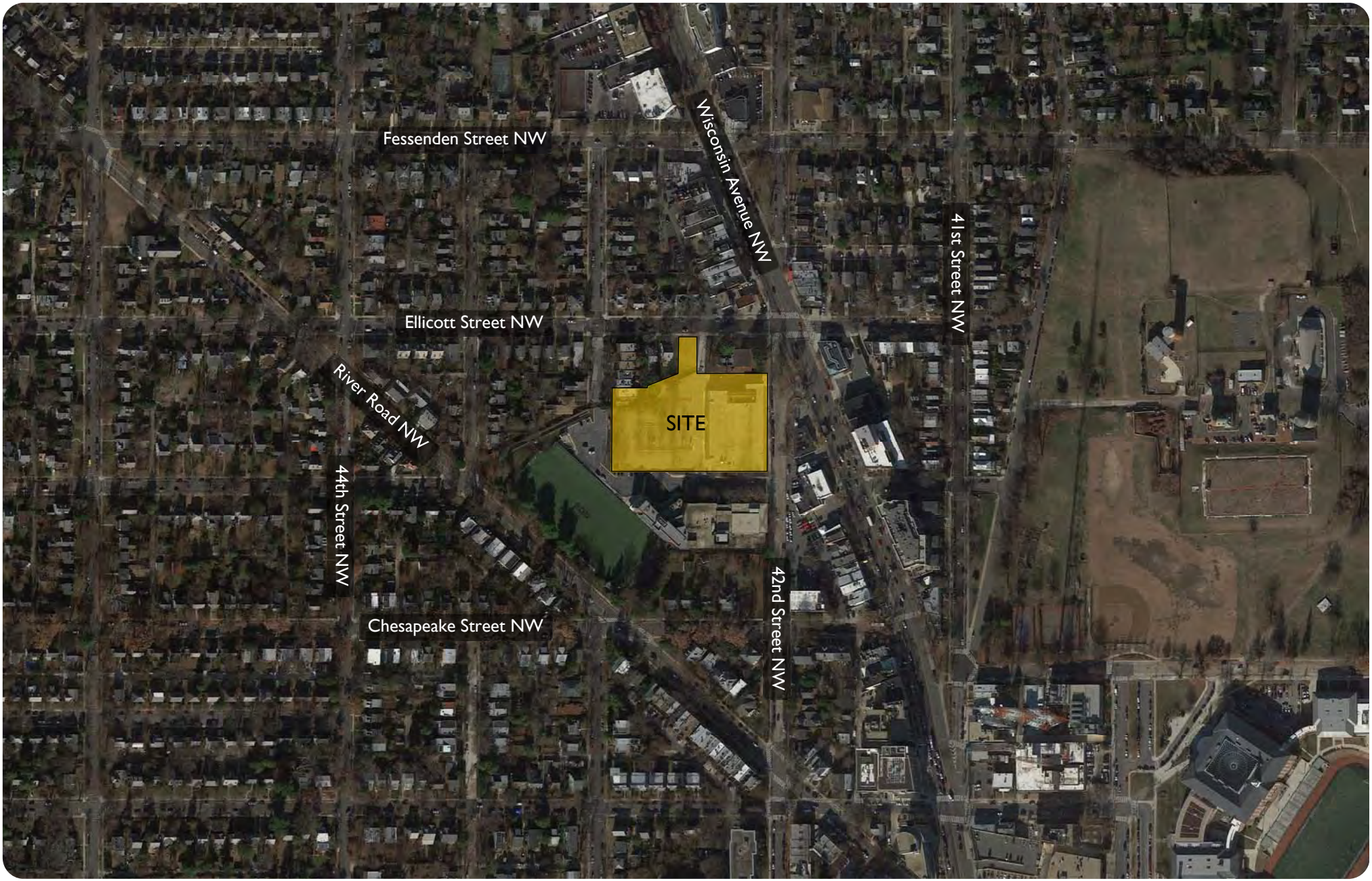


Figure 1
Site Location Map

Georgetown Day School
Washington, DC

NORTH

Figure 2
Site Plan

Georgetown Day School
Washington, DC

Source: Gensler
Date: August 4, 2017

NORTH

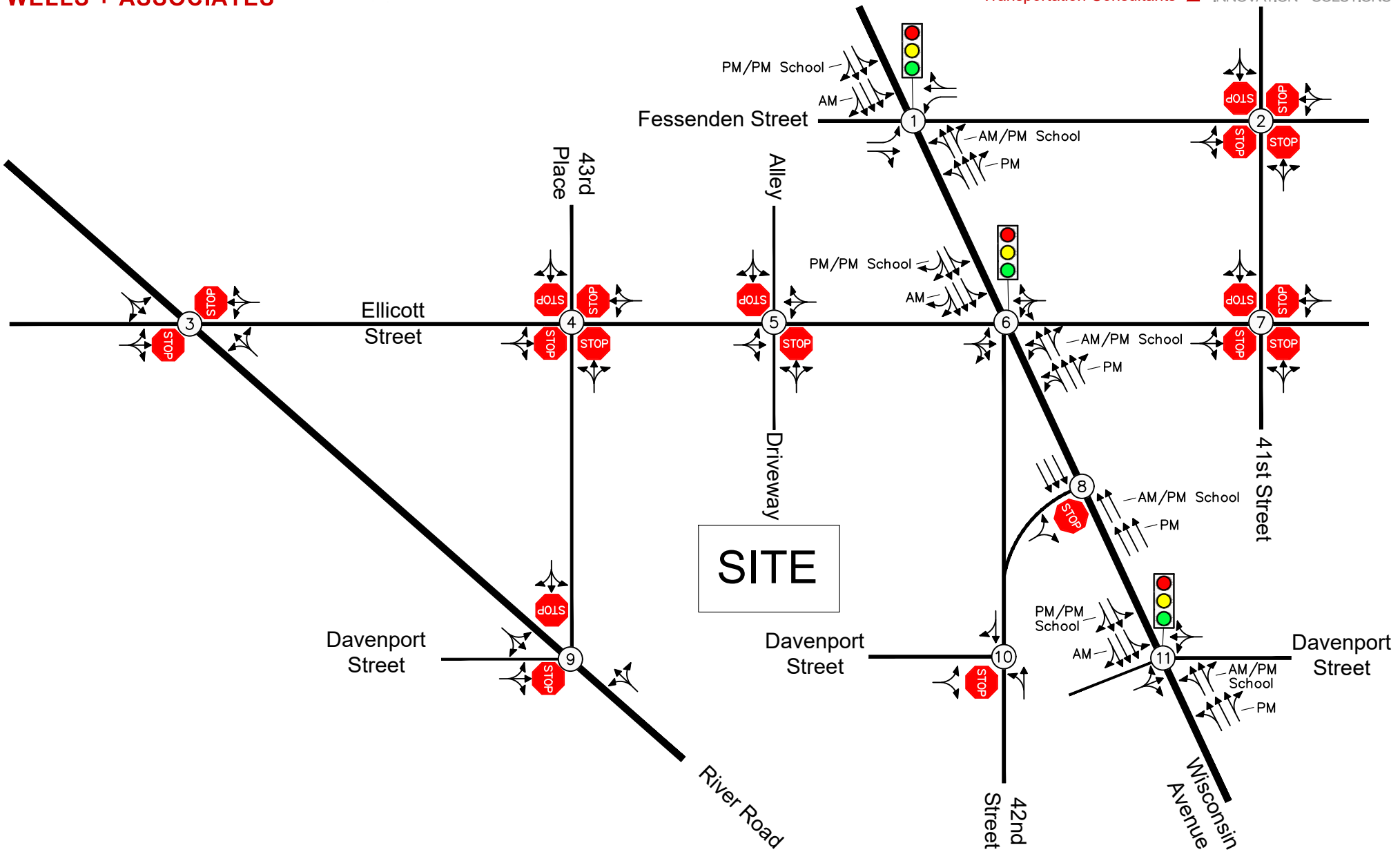


Figure 3A
Existing Lane Use and Traffic Control

Georgetown Day School
Washington, DC

← Represents One Travel Lane
Signalized Intersection
STOP Stop Sign

NORTH

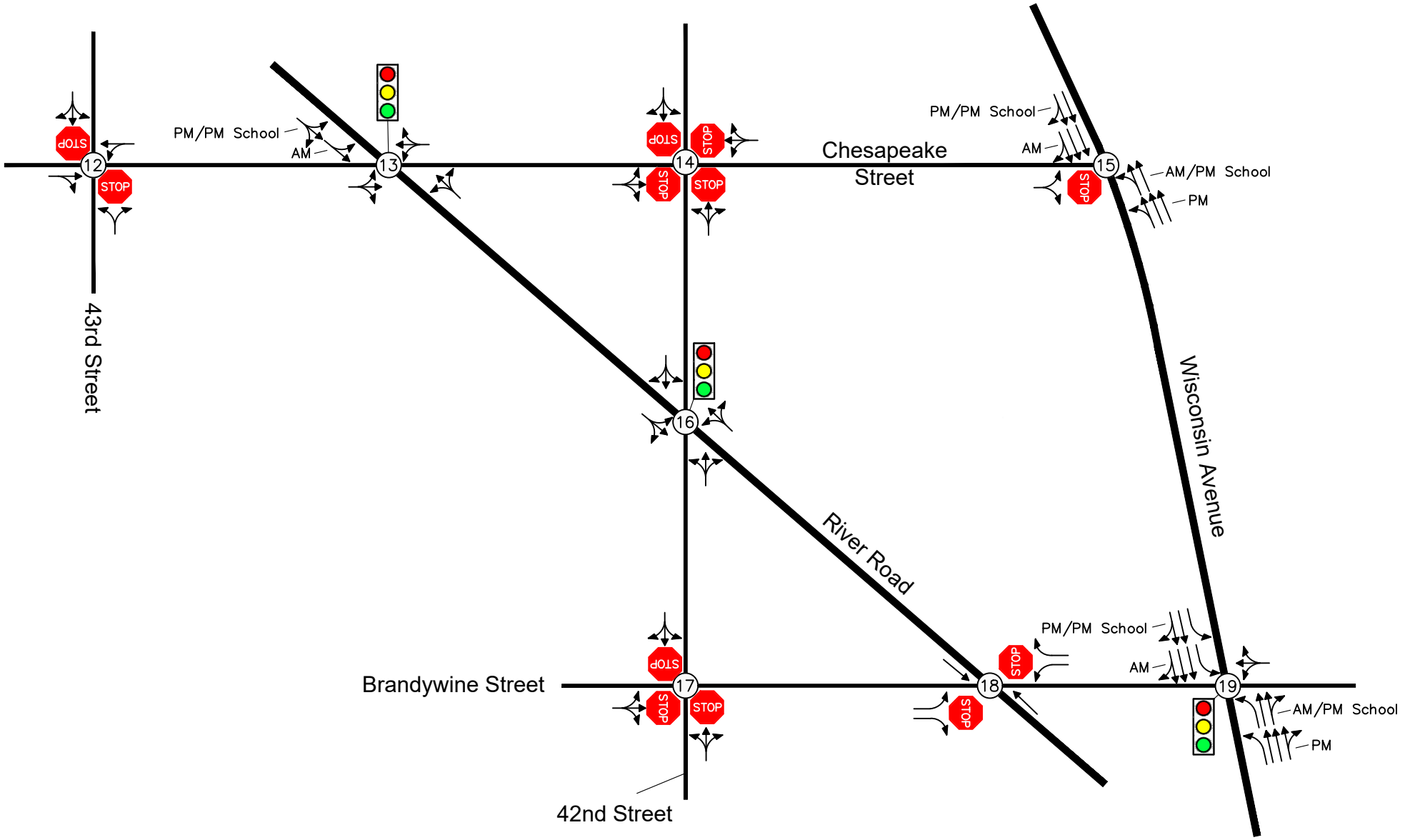


Figure 3B
Existing Lane Use and Traffic Control

Georgetown Day School
Washington, DC

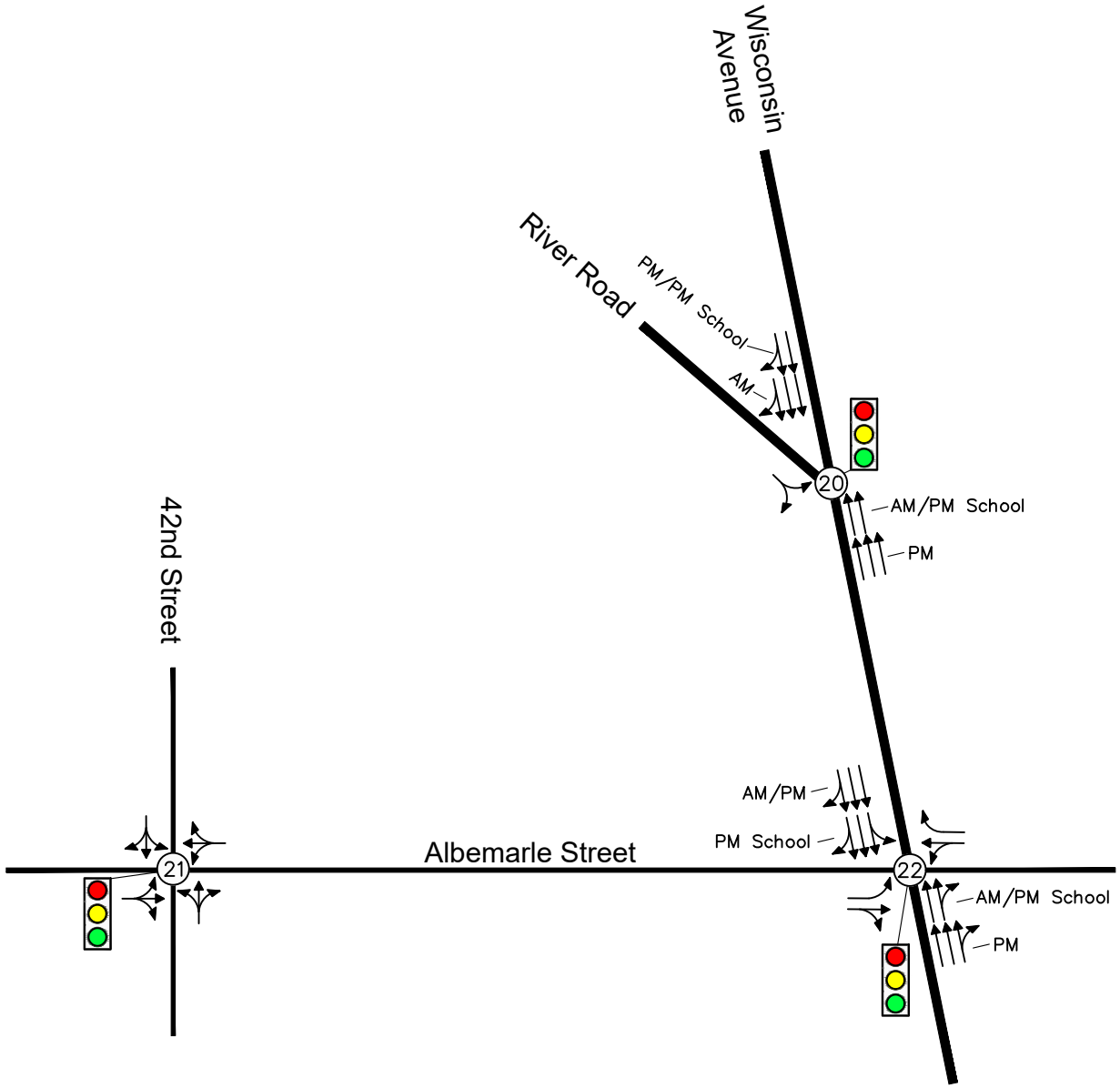
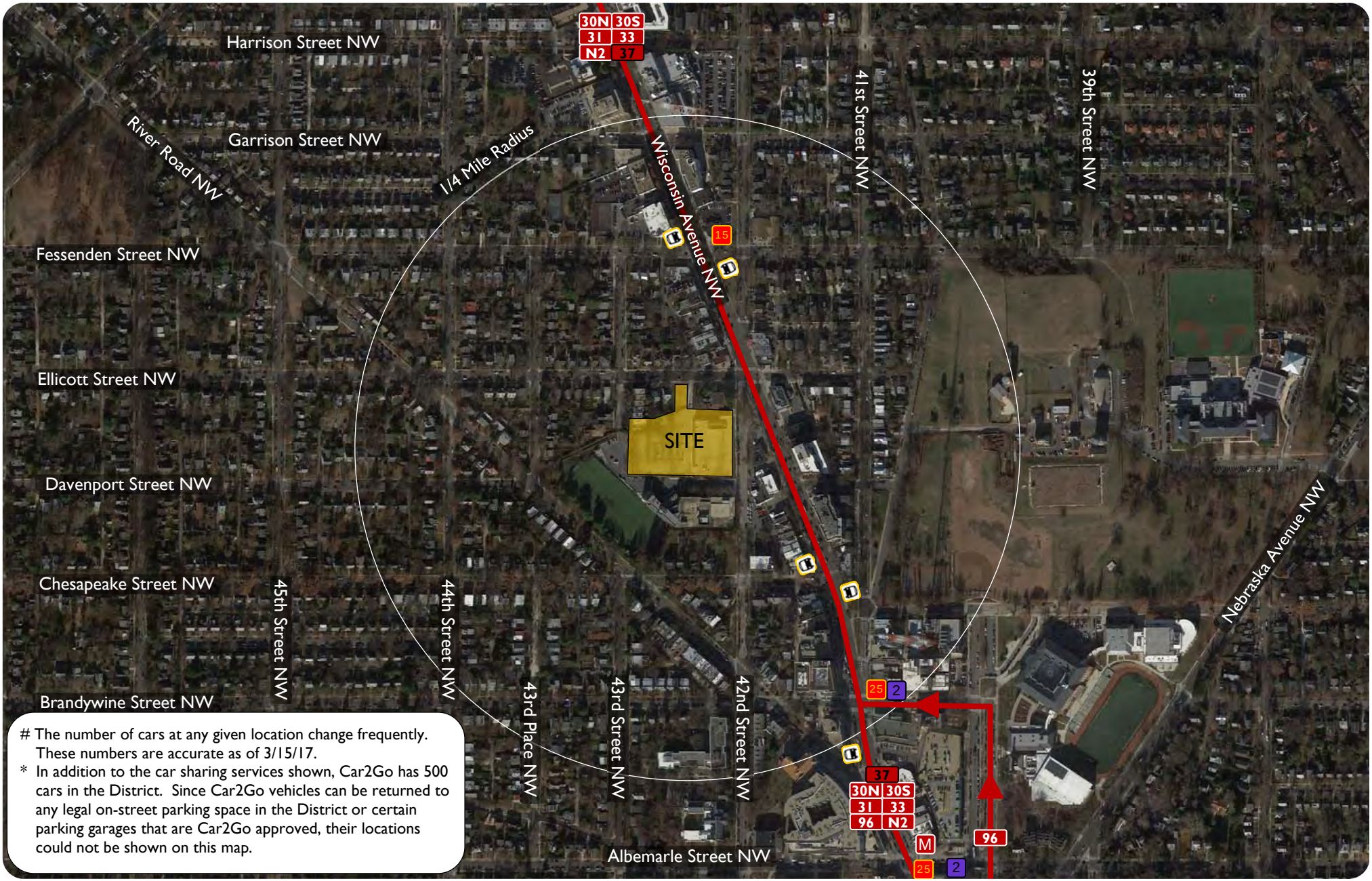


Figure 3C
Existing Lane Use and Traffic Control

Georgetown Day School
Washington, DC

Represents One Travel Lane
Signalized Intersection
Stop Sign

NORTH



The number of cars at any given location change frequently. These numbers are accurate as of 3/15/17.

* In addition to the car sharing services shown, Car2Go has 500 cars in the District. Since Car2Go vehicles can be returned to any legal on-street parking space in the District or certain parking garages that are Car2Go approved, their locations could not be shown on this map.

Figure 4
Multi-Modal Transportation Network

Georgetown Day School
Washington, DC

XX Metrobus Route
XX MetroExtra Route
M Tenleytown-AU Metrorail Station (Red Line)
Bus Stop

Capital Bikeshare Locations (Number of Docks)
Zipcar Locations (Number of Zipcars)

NORTH

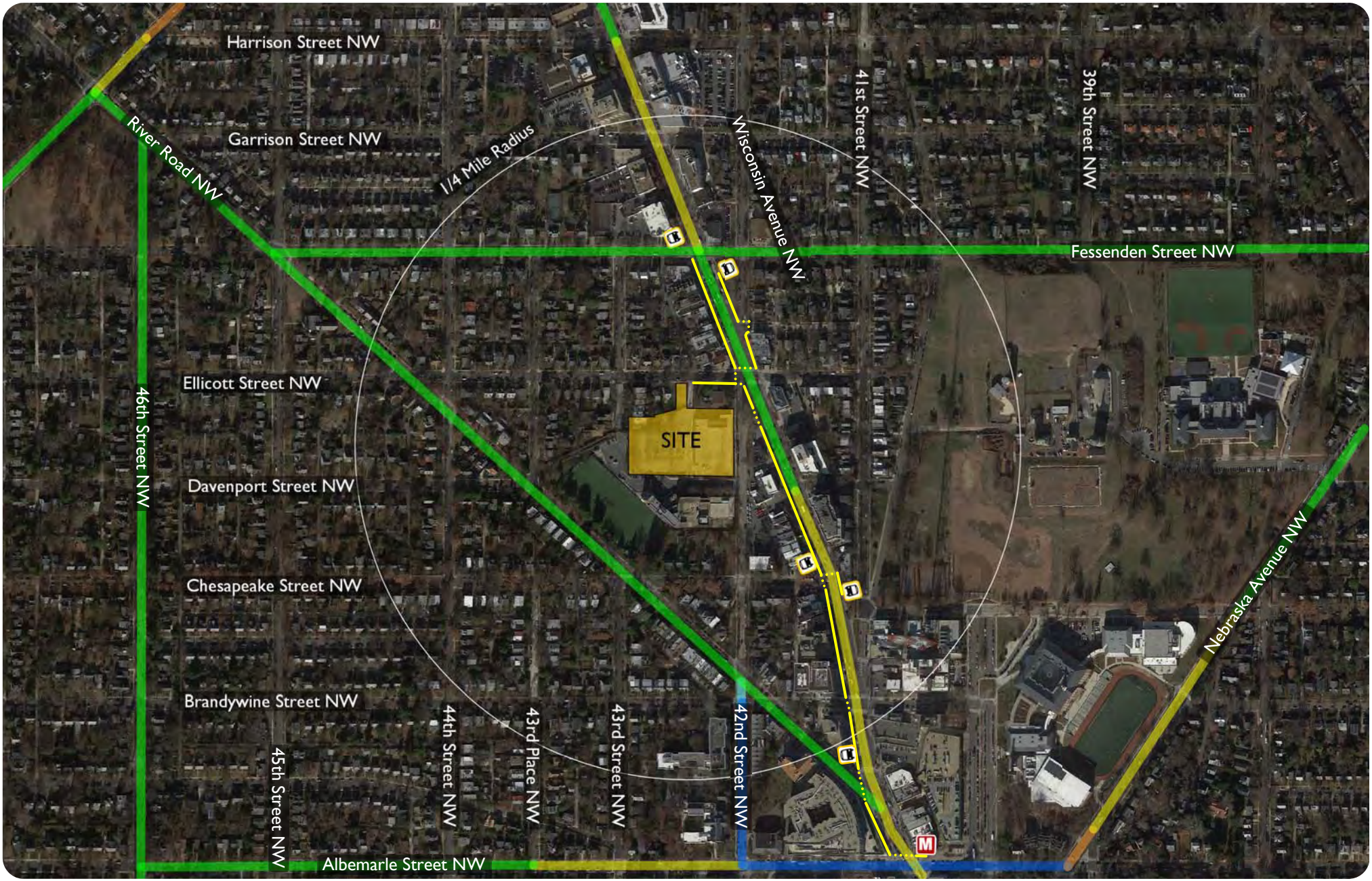


Figure 5
One Quarter Mile Walk Shed

Georgetown Day School
Washington, DC

Likely walking route to/from transit stops:
Sidewalk · · · Crosswalk
M Tenleytown-AU Metrorail Station (Red Line)
Bus Stop

High Pedestrian Activity and Deficiency
Low Pedestrian Activity and Deficiency

NORTH

Figure 6
Qualitative Pedestrian Analysis

Georgetown Day School
Washington, DC

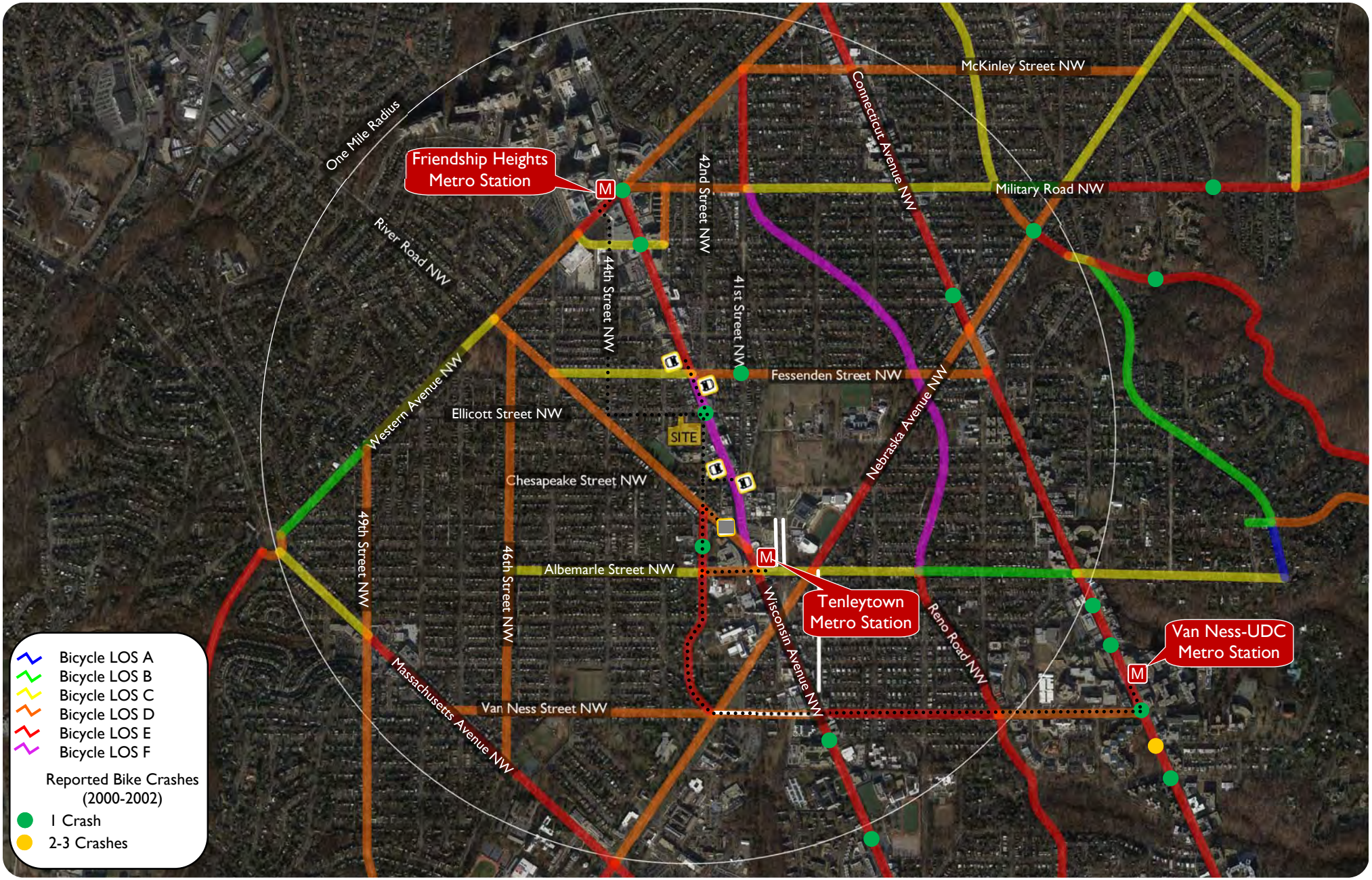


Figure 7
One Mile Bike Shed

Georgetown Day School
Washington, DC

Dedicated Bike Lane
Likely Bike Routes to/from Transit Stops
Metrorail Station (Red Line)
Bus Stop

NORTH

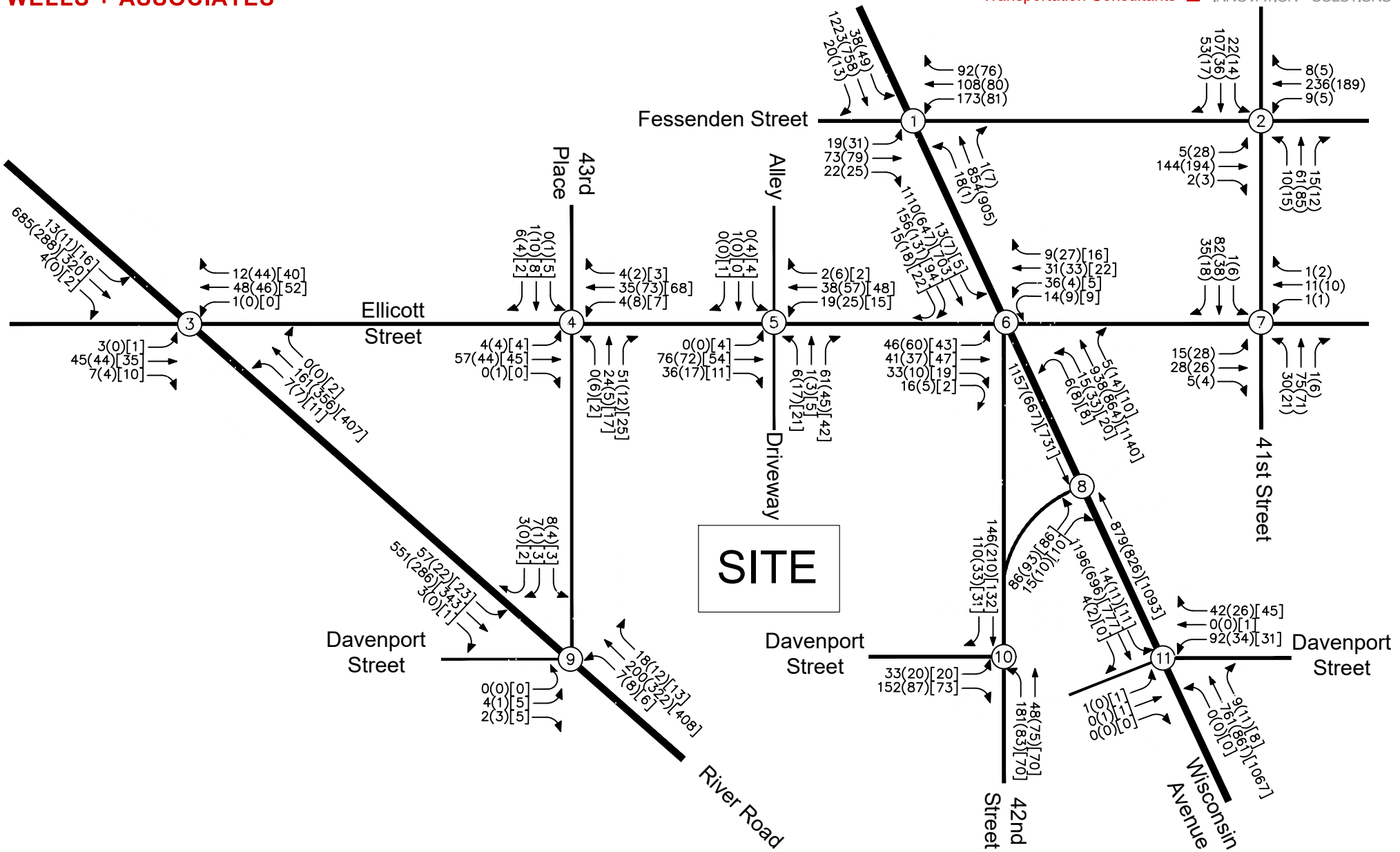


Figure 8A
Existing Peak Hour Traffic Volumes

Georgetown Day School
Washington, DC

AM Peak Hour
PM School Peak Hour
PM Peak Hour
000 (000) [000]

NORTH

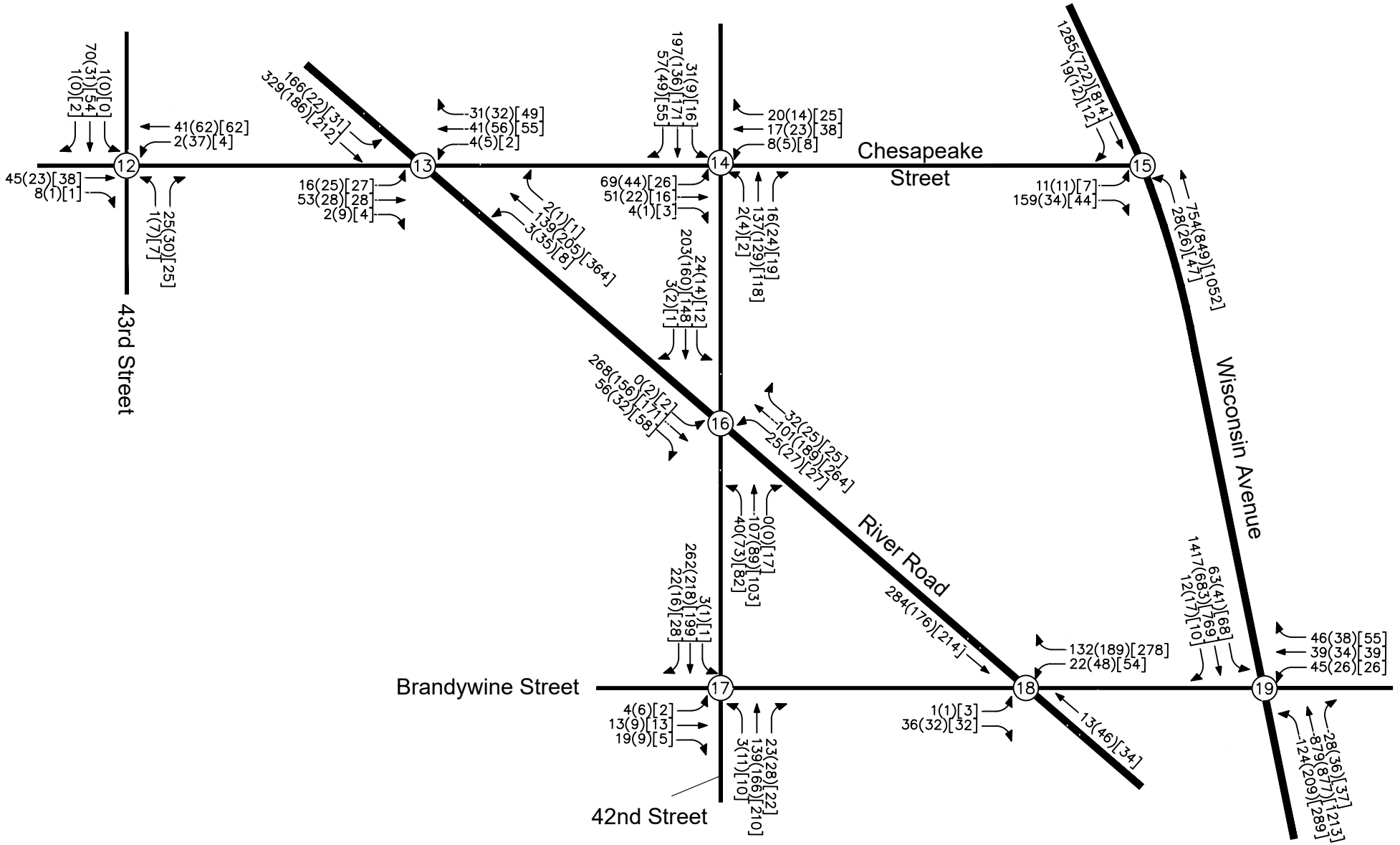


Figure 8B
Existing Peak Hour Traffic Volumes

Georgetown Day School
Washington, DC

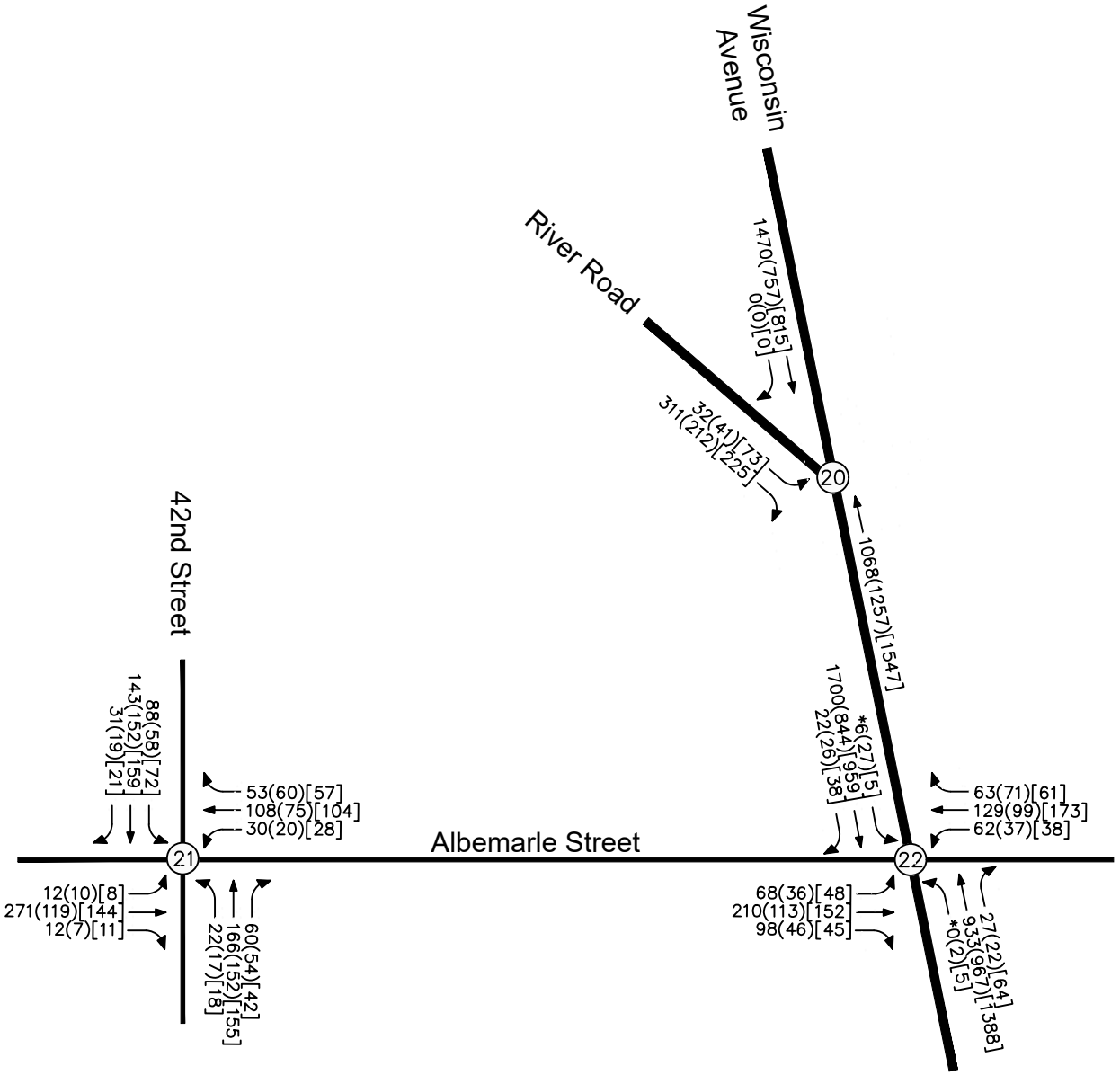


Figure 8C
Existing Peak Hour Traffic Volumes

Georgetown Day School
Washington, DC

*Movements prohibited during AM and PM peak hours.

AM Peak Hour 000
PM School Peak Hour (000)
PM Peak Hour [000]

NORTH

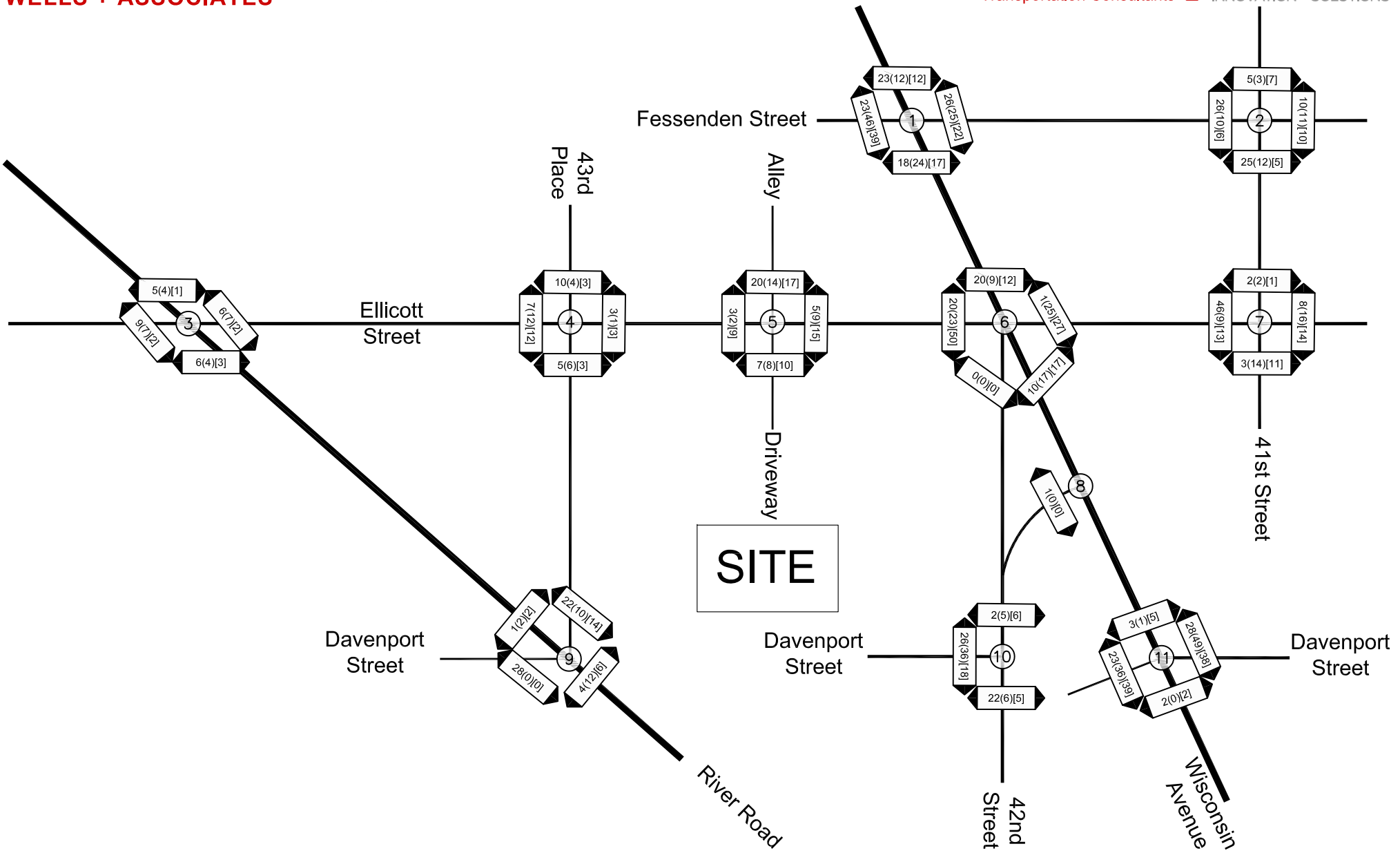


Figure 9A
Pedestrian Volumes

Georgetown Day School
Washington, DC

AM Peak Hour
PM School Peak Hour
PM Peak Hour
000 (000) [000]

NORTH

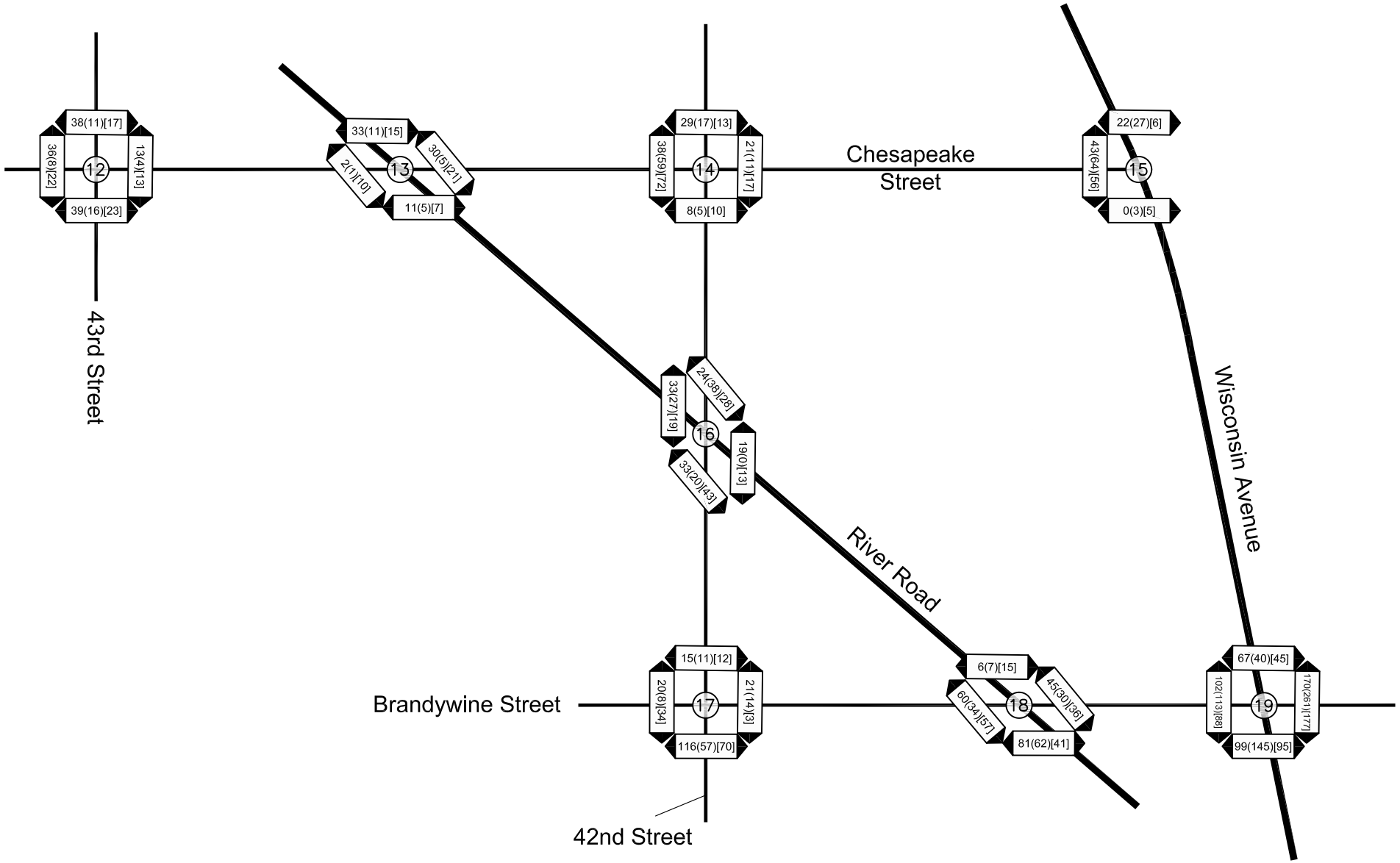


Figure 9B
Pedestrian Volumes

Georgetown Day School
Washington, DC

AM Peak Hour
PM School Peak Hour
PM Peak Hour
000 (000) [000]

NORTH

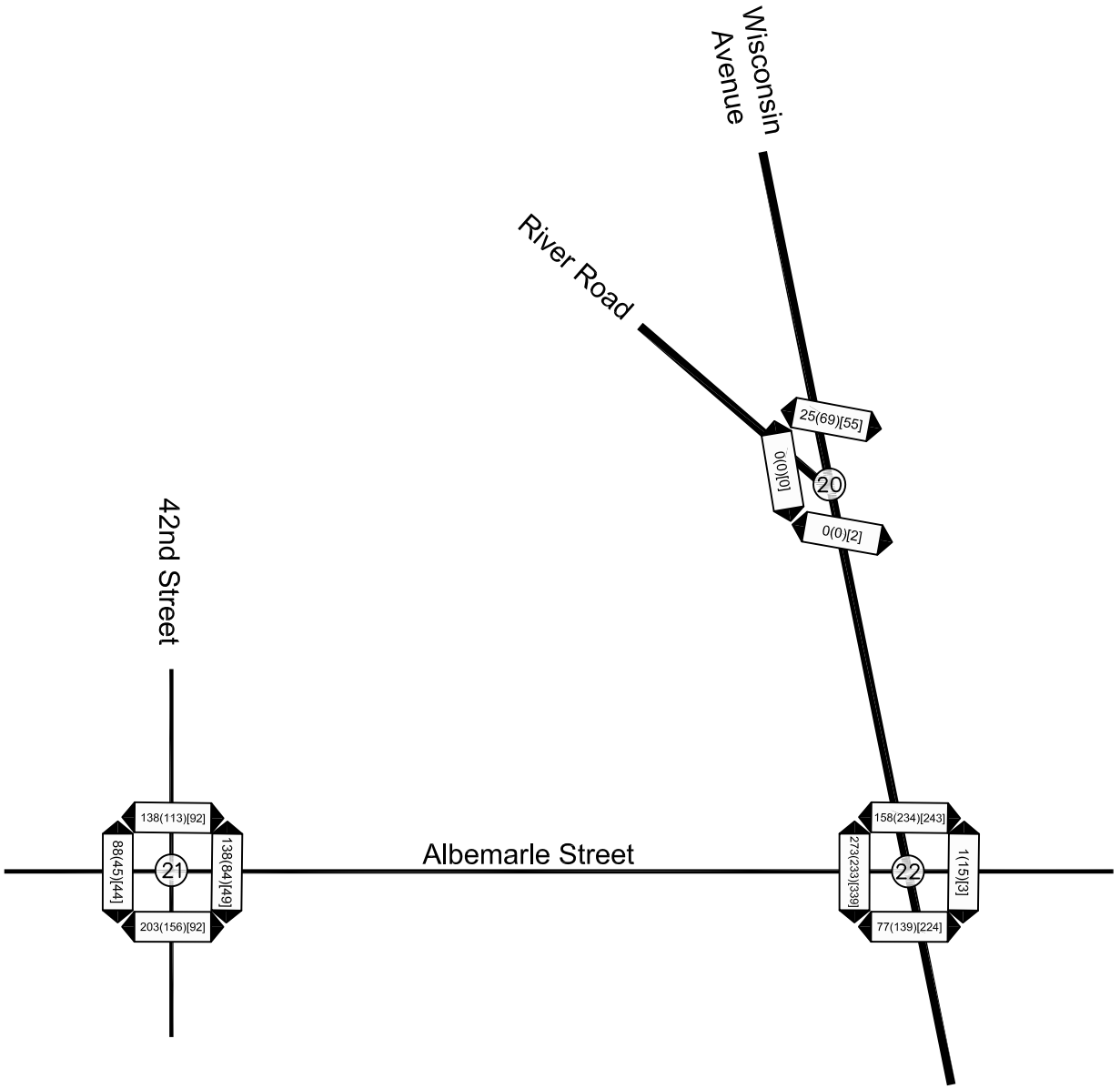


Figure 9C
Pedestrian Volumes

Georgetown Day School
Washington, DC

*Movements prohibited

AM Peak Hour
PM School Peak Hour
PM Peak Hour
000 (000) [000]

NORTH

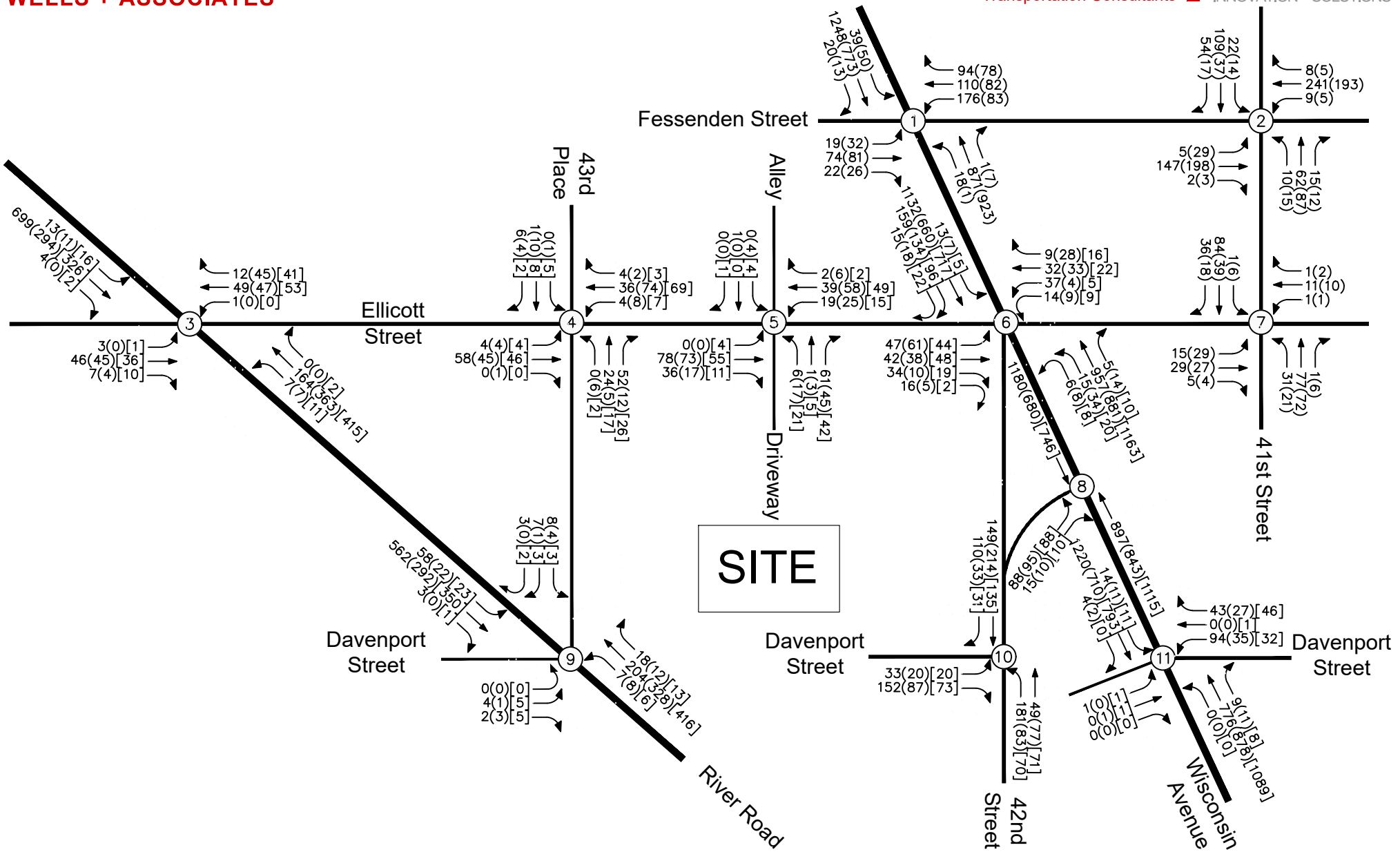


Figure 10A
2021 Traffic Forecasts with Regional Growth

Georgetown Day School
Washington, DC

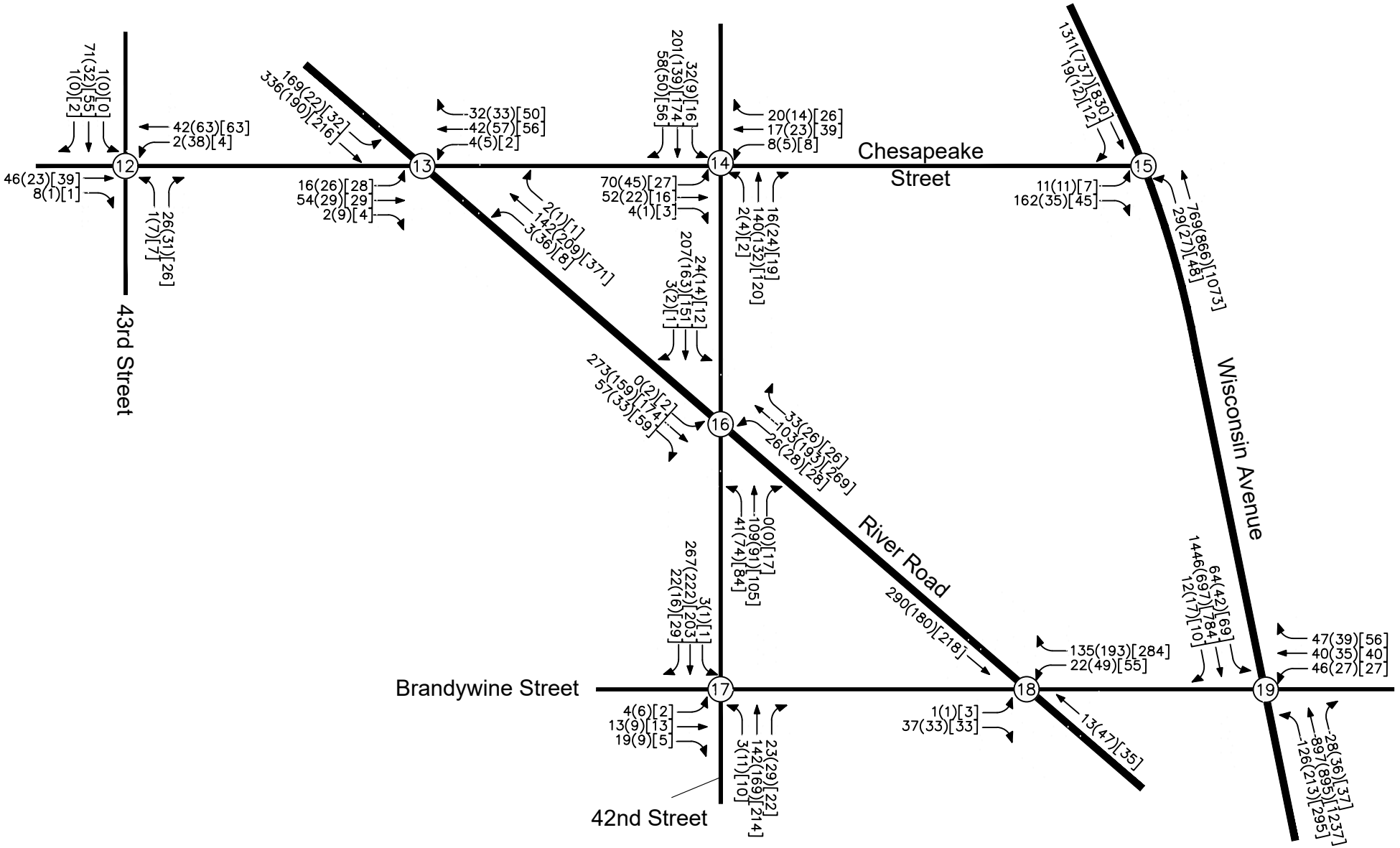


Figure 10B
2021 Traffic Forecasts with Regional Growth

Georgetown Day School
Washington, DC

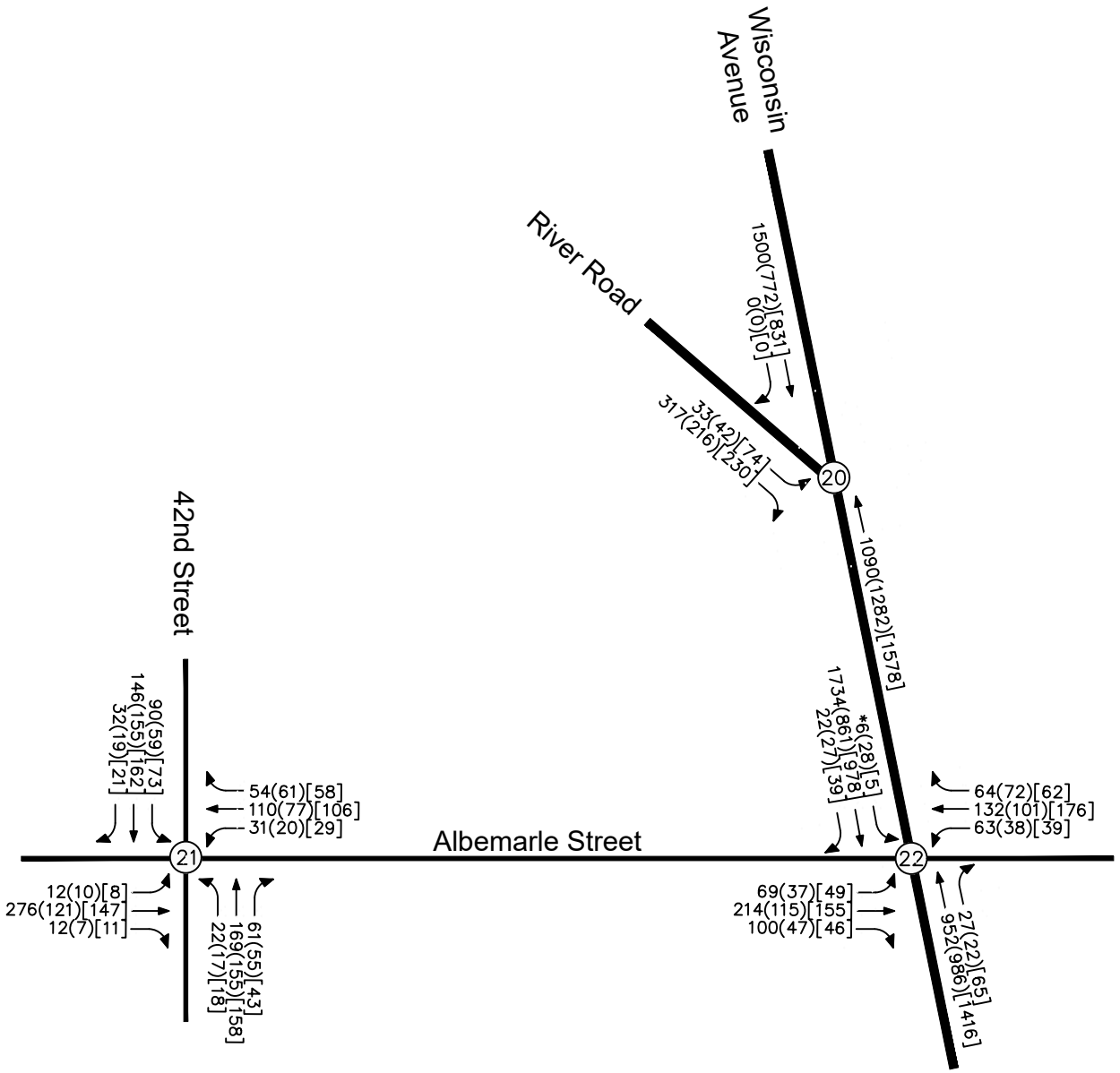


Figure 10C
2021 Traffic Forecasts with Regional Growth

Georgetown Day School
Washington, DC

*Movements prohibited during AM and PM peak hours.

AM Peak Hour 000 | PM School Peak Hour (000) | PM Peak Hour [000]

NORTH

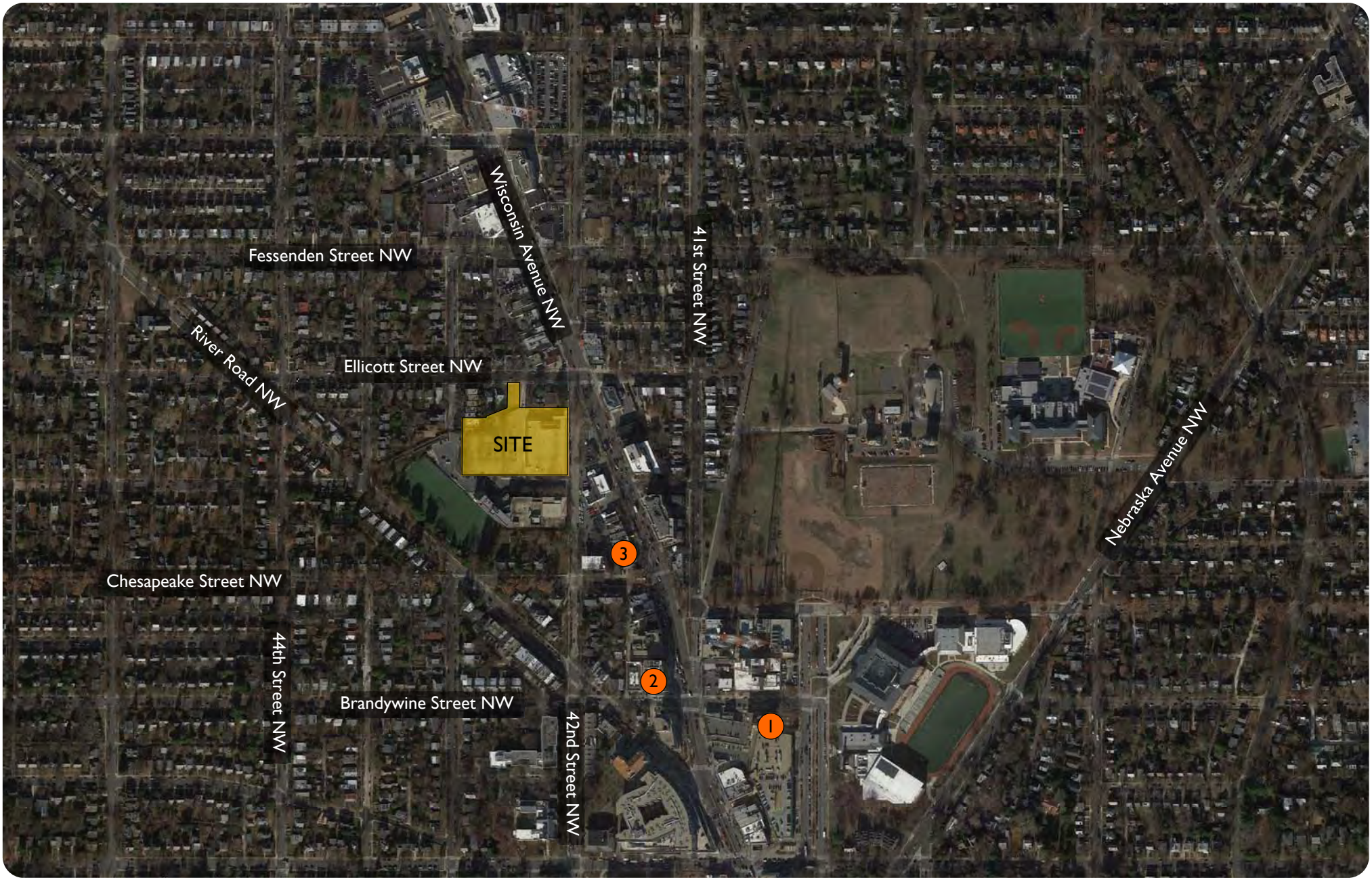


Figure 11
Pipeline Locations

Georgetown Day School
Washington, DC

1 4000 Brandywine Street
2 4600 Wisconsin Avenue (Tenley View)
3 4700 Wisconsin Avenue

NORTH

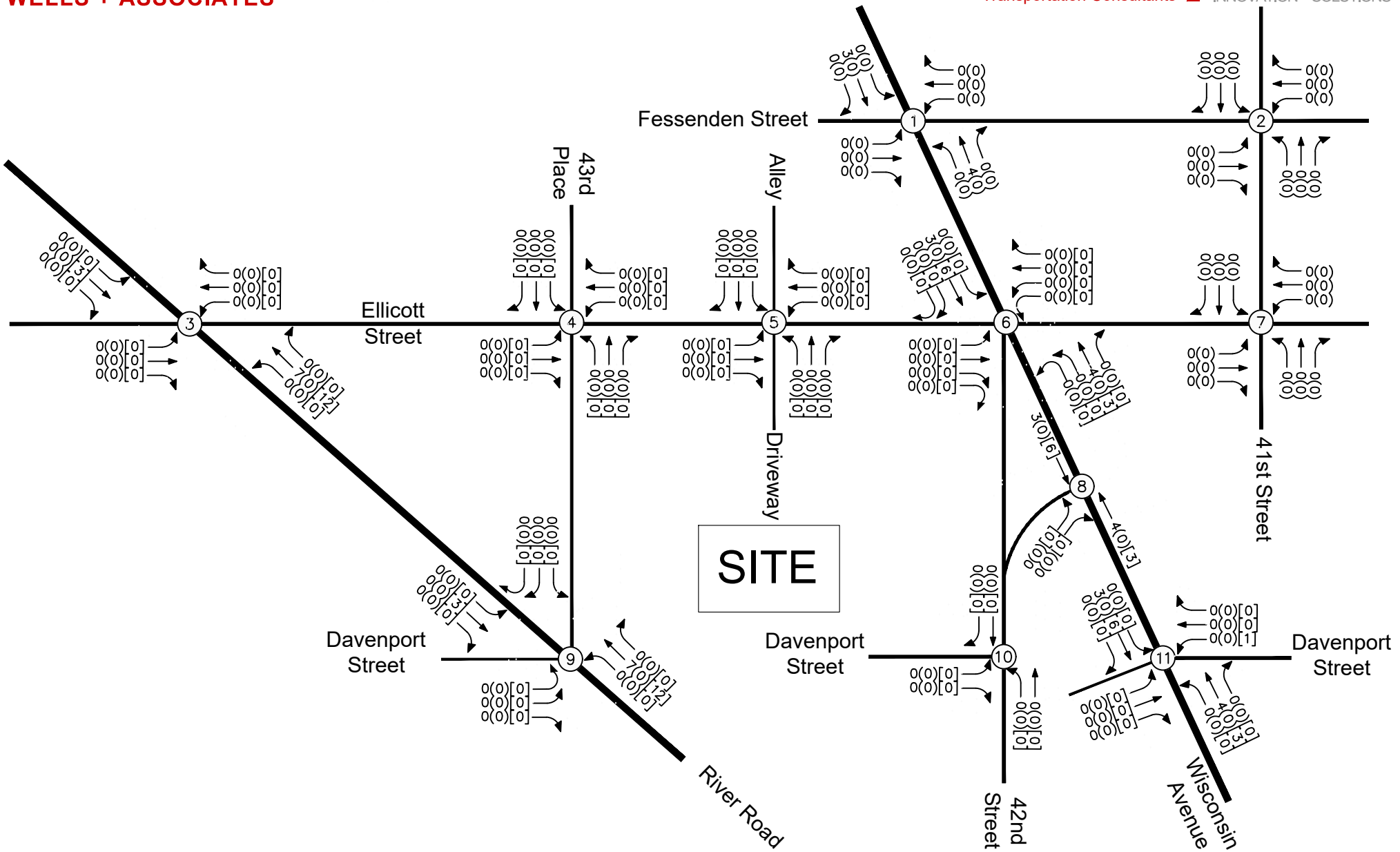


Figure 12A
Pipeline Site Trips

Georgetown Day School
Washington, DC

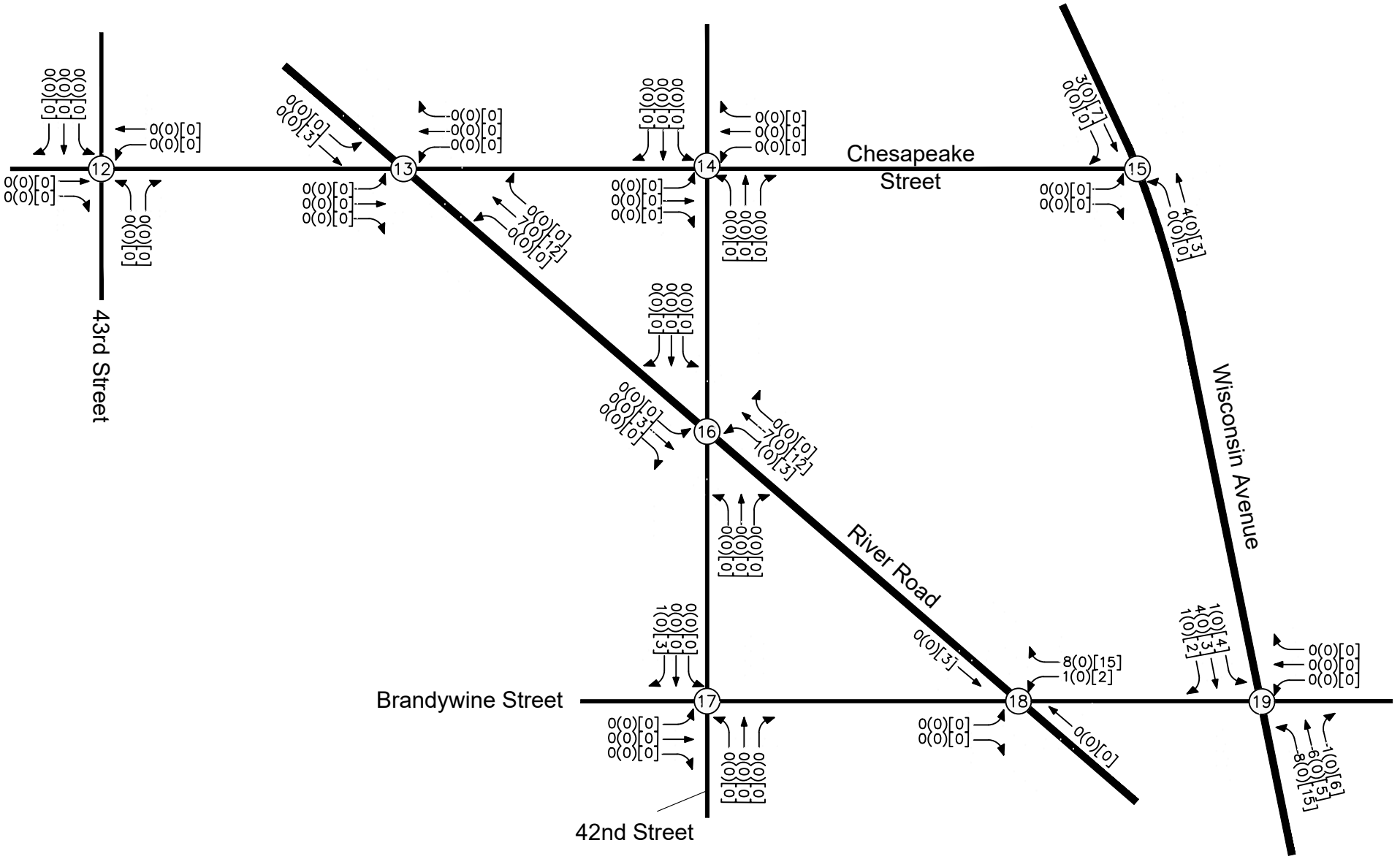


Figure 12B
Pipeline Site Trips

Georgetown Day School
Washington, DC

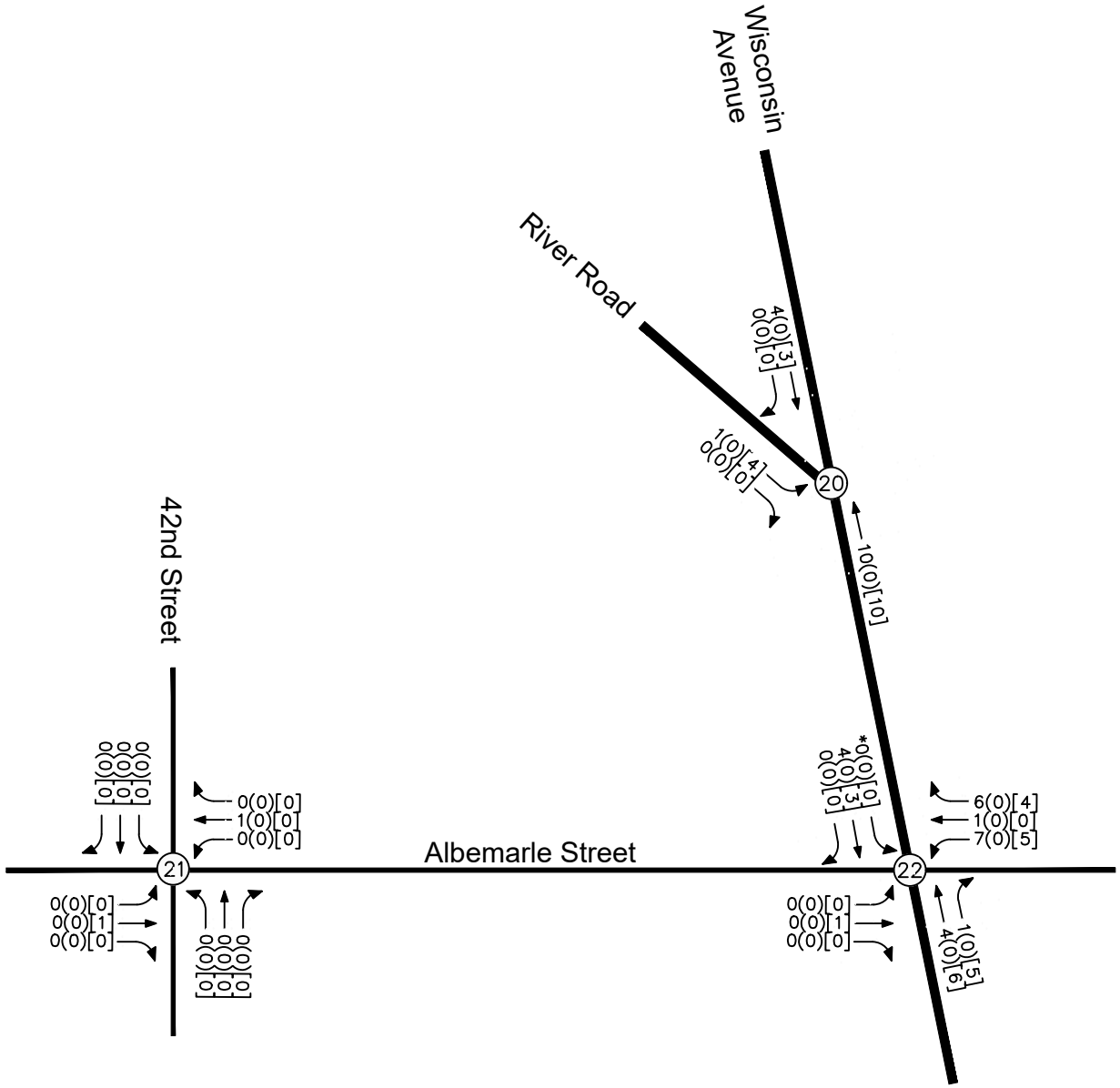


Figure 12C Pipeline
Site Trips

Georgetown Day School
Washington, DC

*Movements prohibited during AM and PM peak hours.

AM Peak Hour
PM School Peak Hour
PM Peak Hour
000 (000) [000]

NORTH

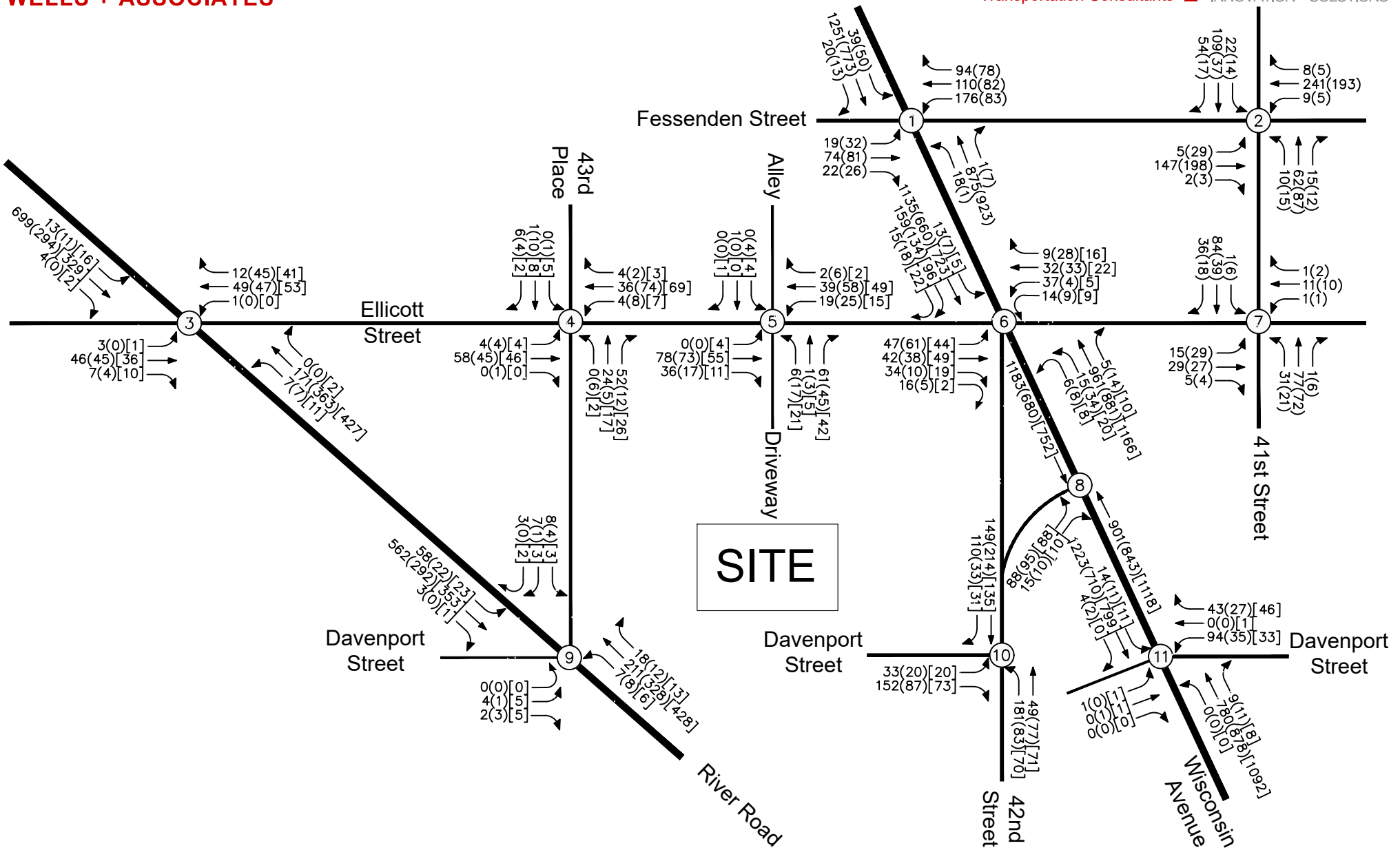


Figure 13A
2021 Background Traffic Forecasts

Georgetown Day School
Washington, DC

AM Peak Hour
PM School Peak Hour
PM Peak Hour
000 (000) [000]

NORTH

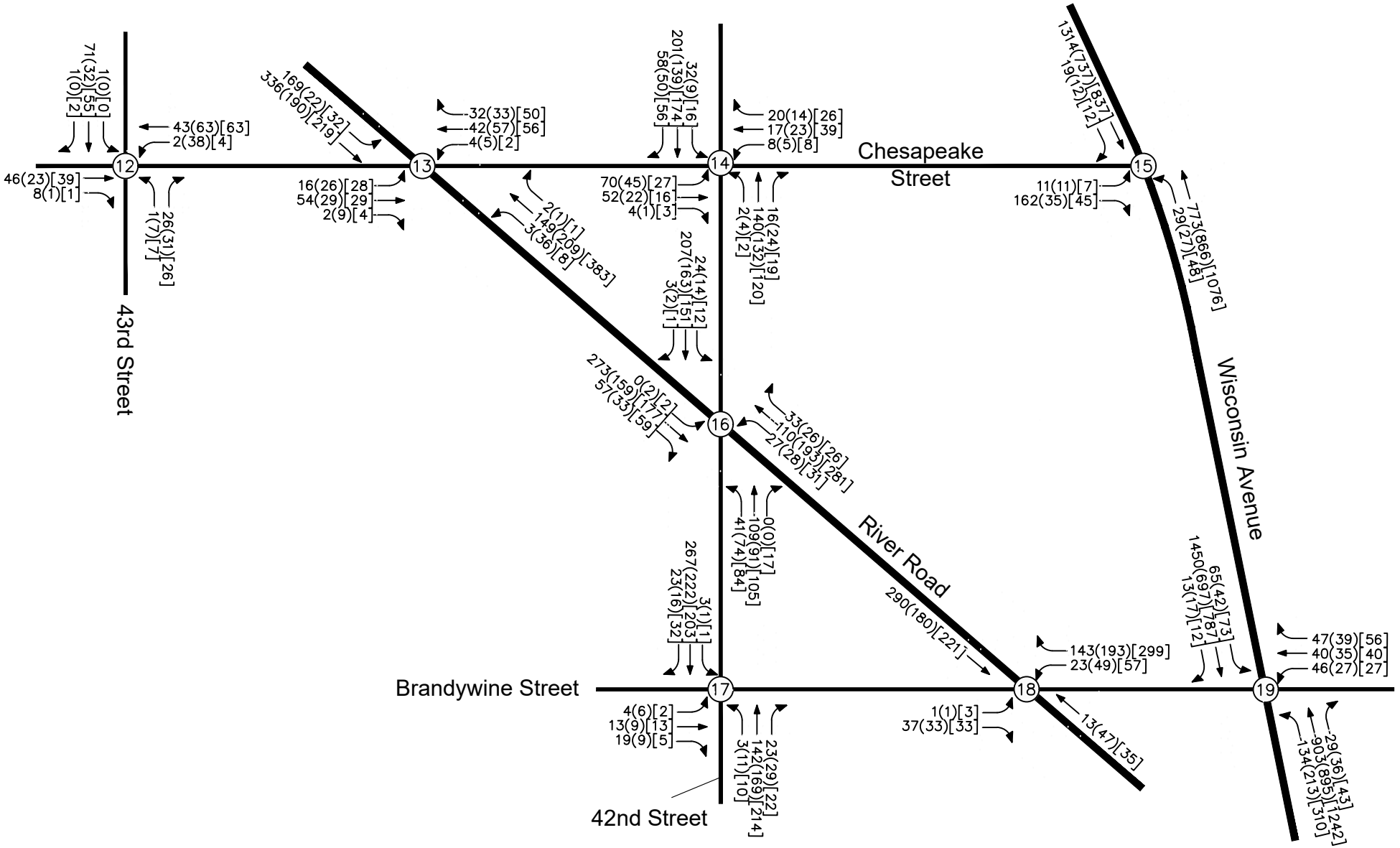


Figure 13B
2021 Background Traffic Forecasts

Georgetown Day School
Washington, DC

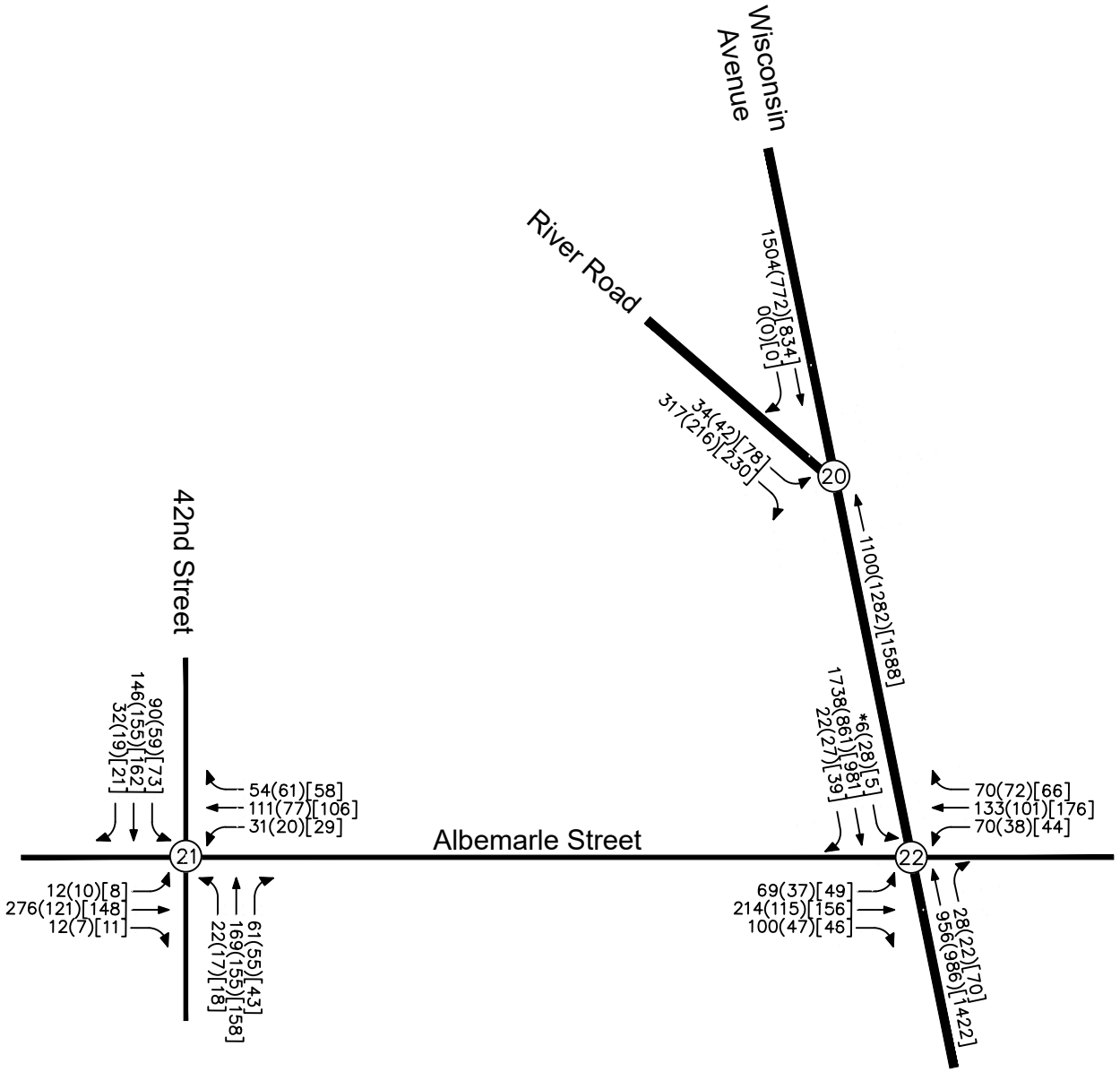


Figure 13C
2021 Background Traffic Forecasts

Georgetown Day School
Washington, DC

*Movements prohibited during AM and PM peak hours.

AM Peak Hour 000 | PM School Peak Hour (000) | PM Peak Hour [000]

NORTH

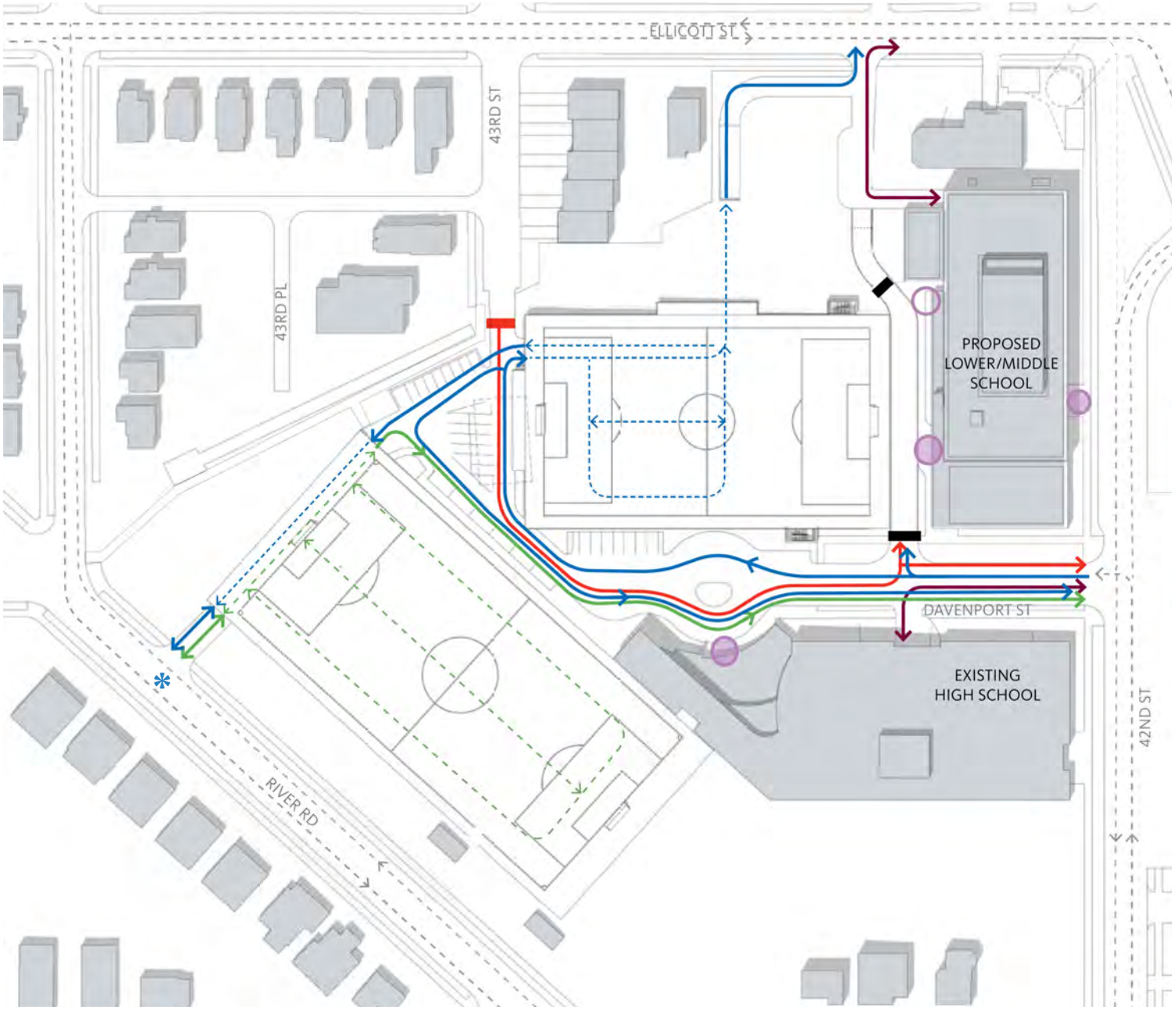


Figure 14A
Site Circulation - Vehicular

Georgetown Day School
Washington, DC

Source: Gensler
Date: June 20, 2017

NORTH

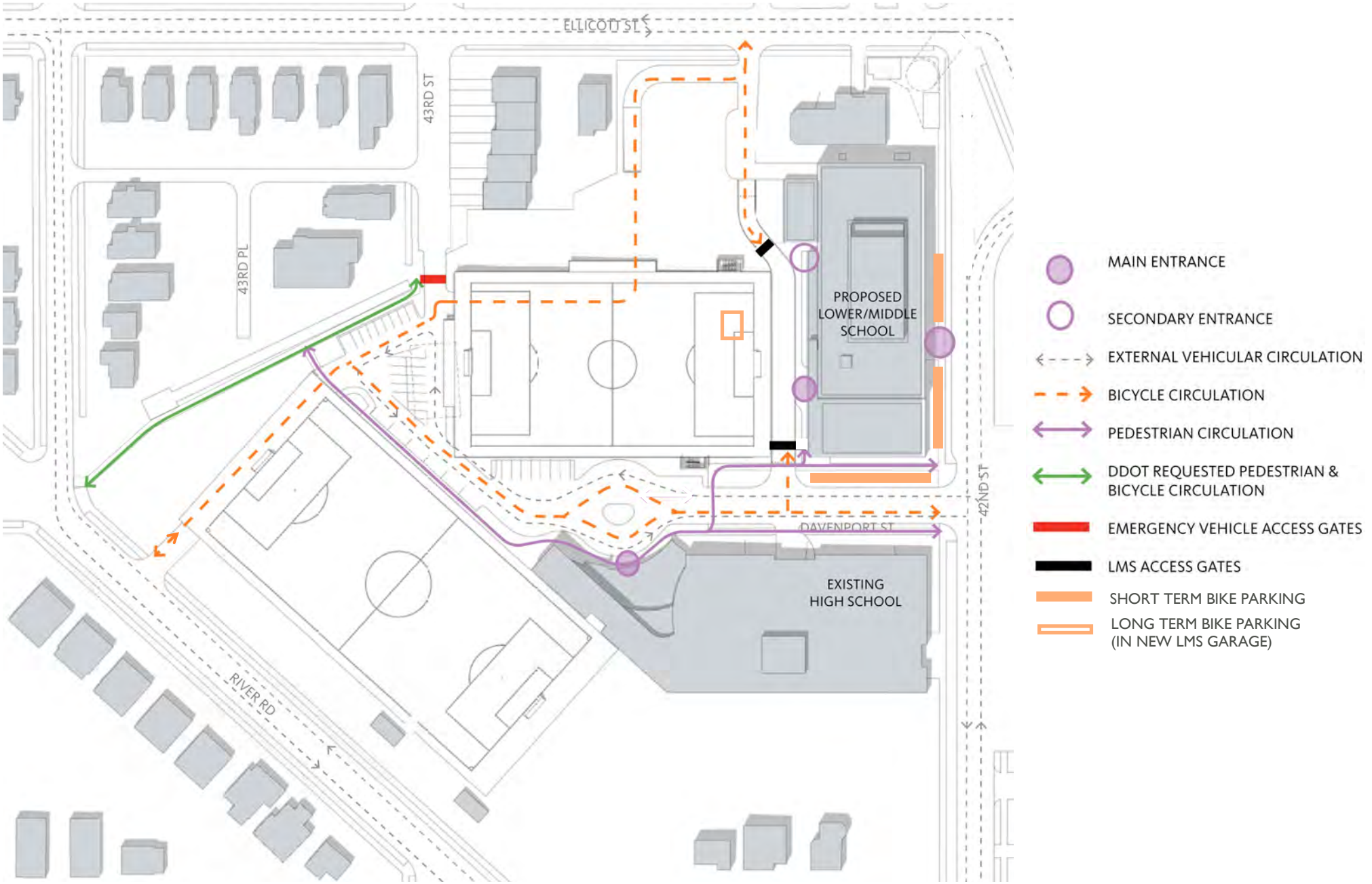


Figure 14B
Site Circulation - Bicycle and Pedestrian

Source: Gensler
Date: June 20, 2017

NORTH

Georgetown Day School
Washington, DC

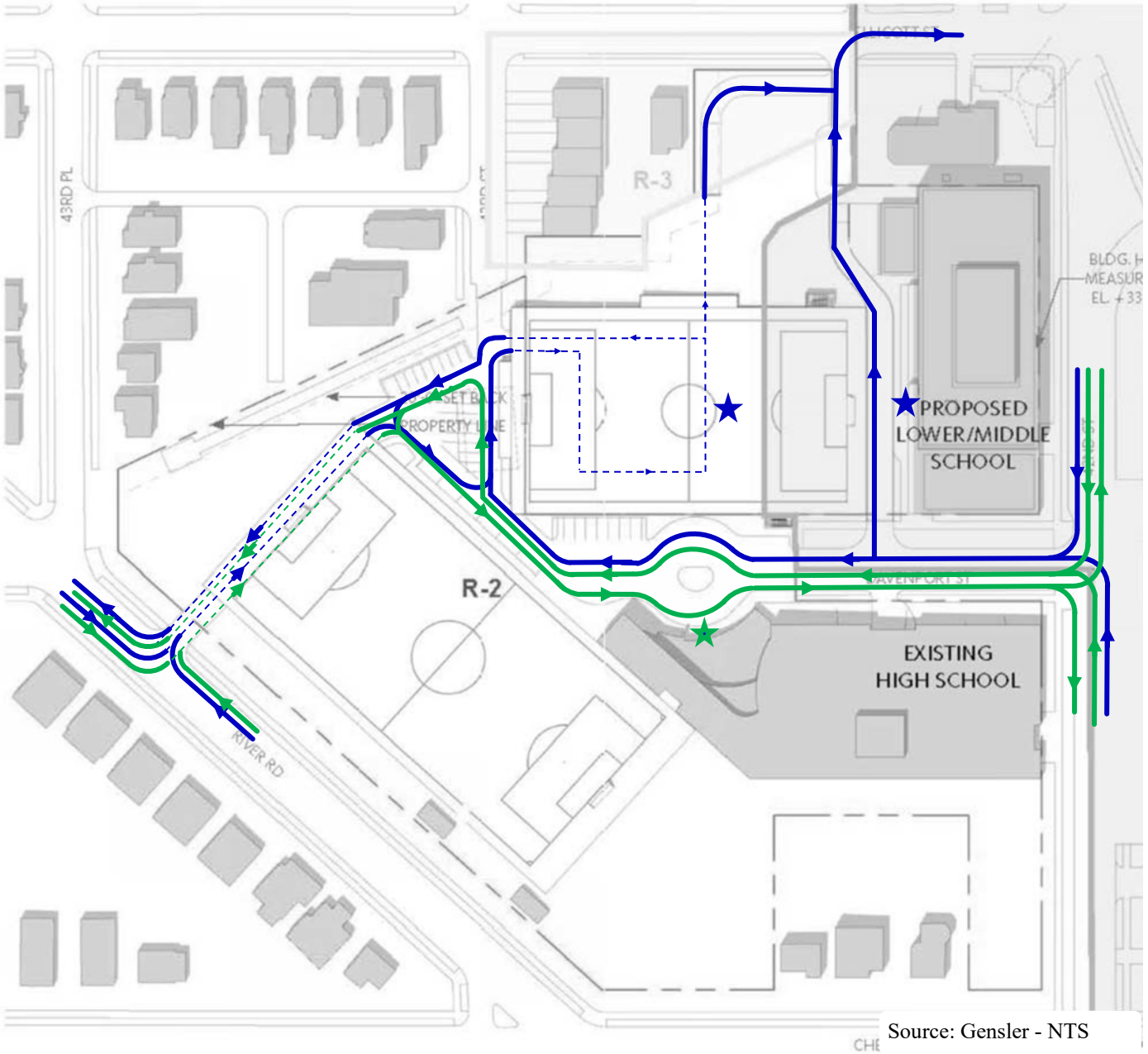


Figure 15A
Drop-off Circulation (AM Peak)

Georgetown Day School
Washington, DC

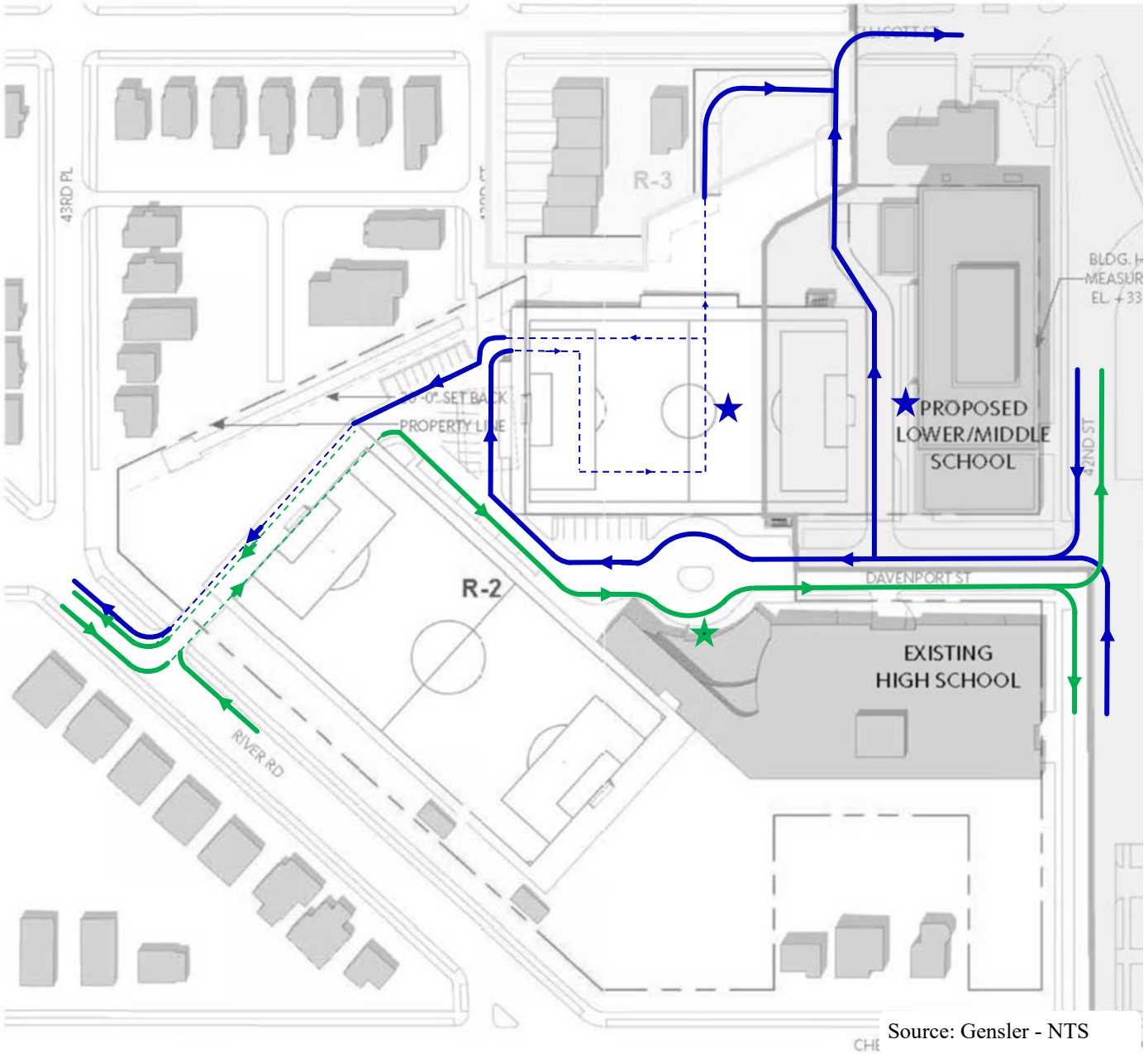


Figure 15B
Pick-up Circulation (PM School Peak)

Georgetown Day School
Washington, DC

NORTH

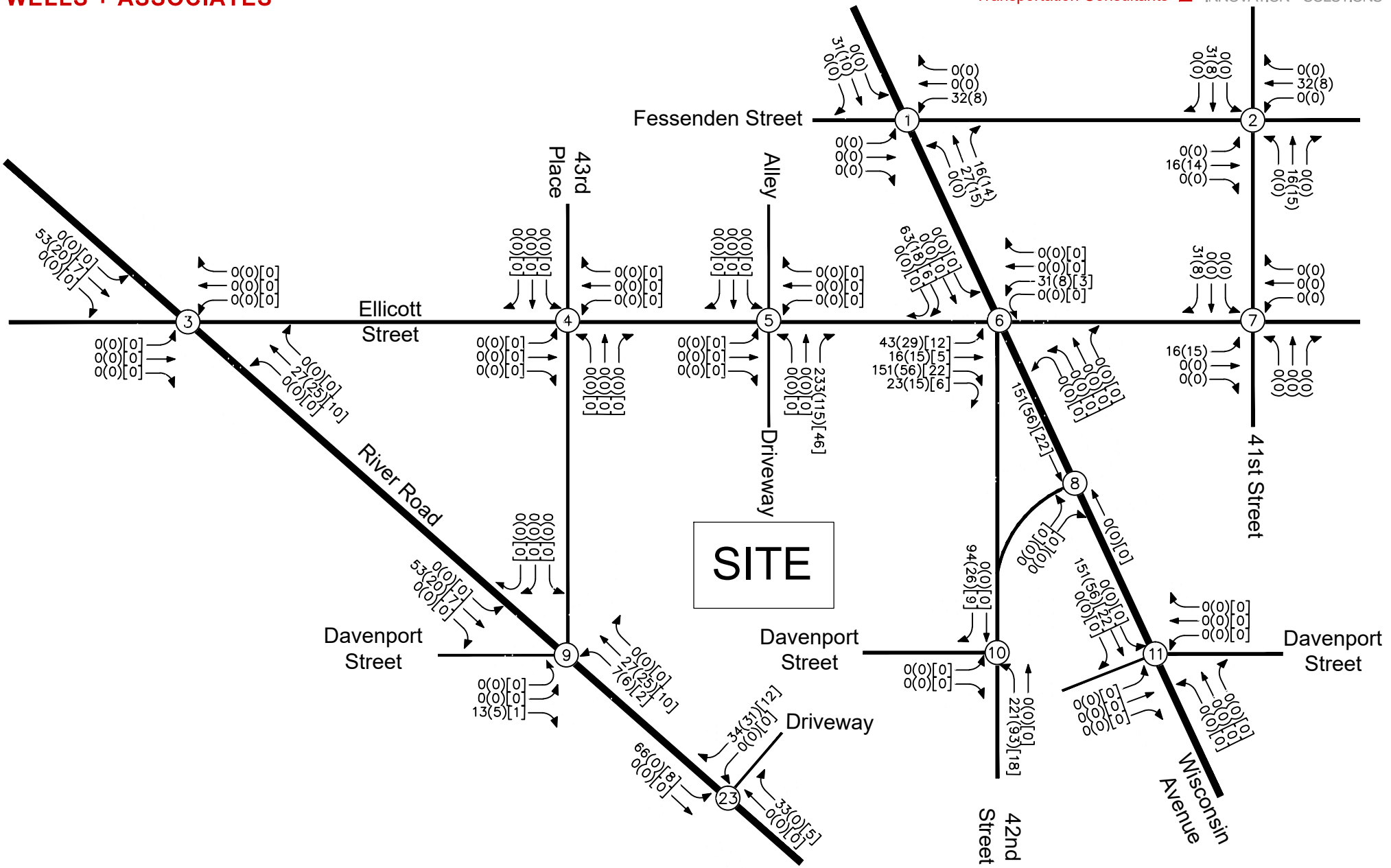


Figure 16A
Lower/Middle School Site Trips

Georgetown Day School
Washington, DC

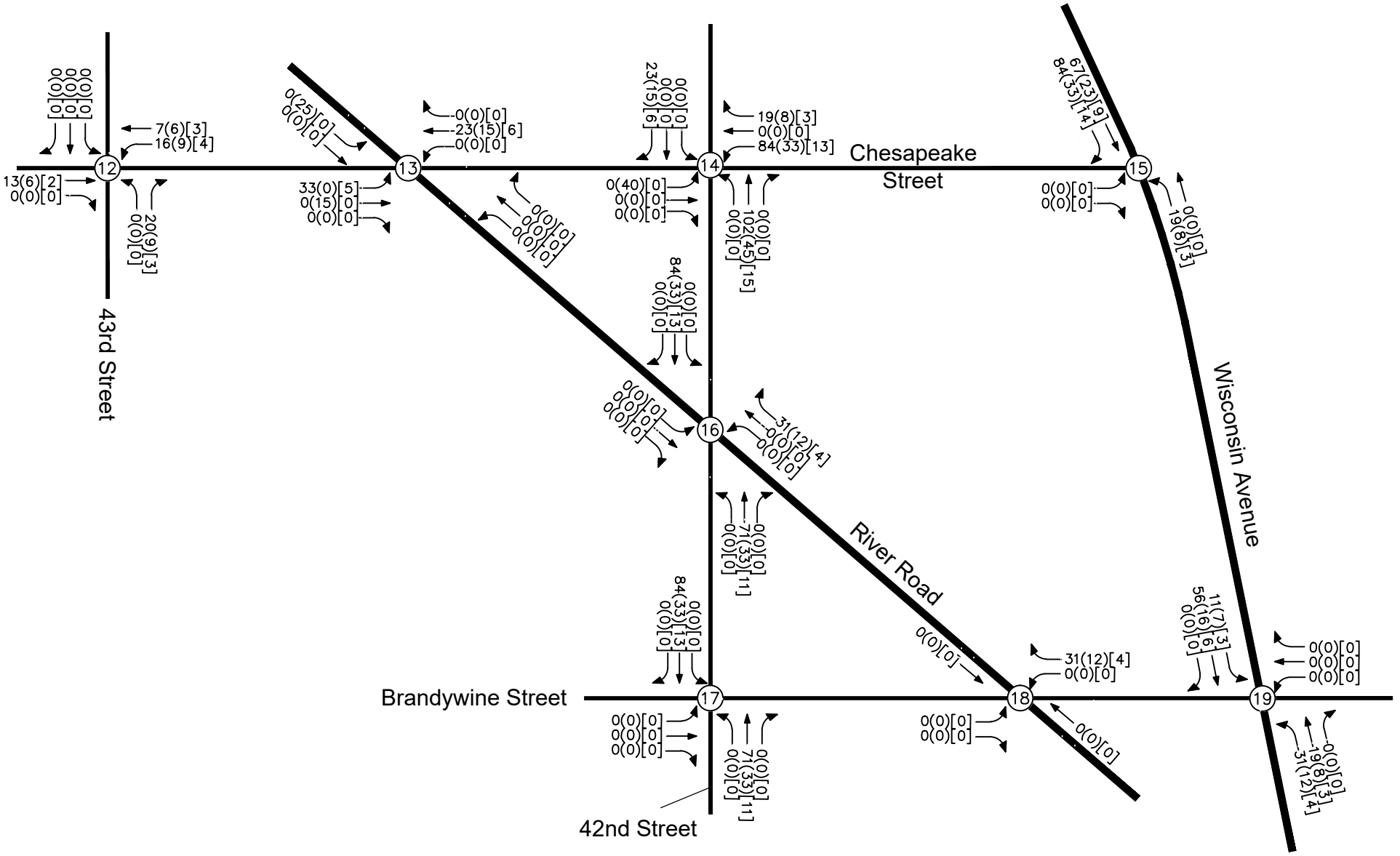


Figure 16B
Lower/Middle School Site Trips

Georgetown Day School
Washington, DC

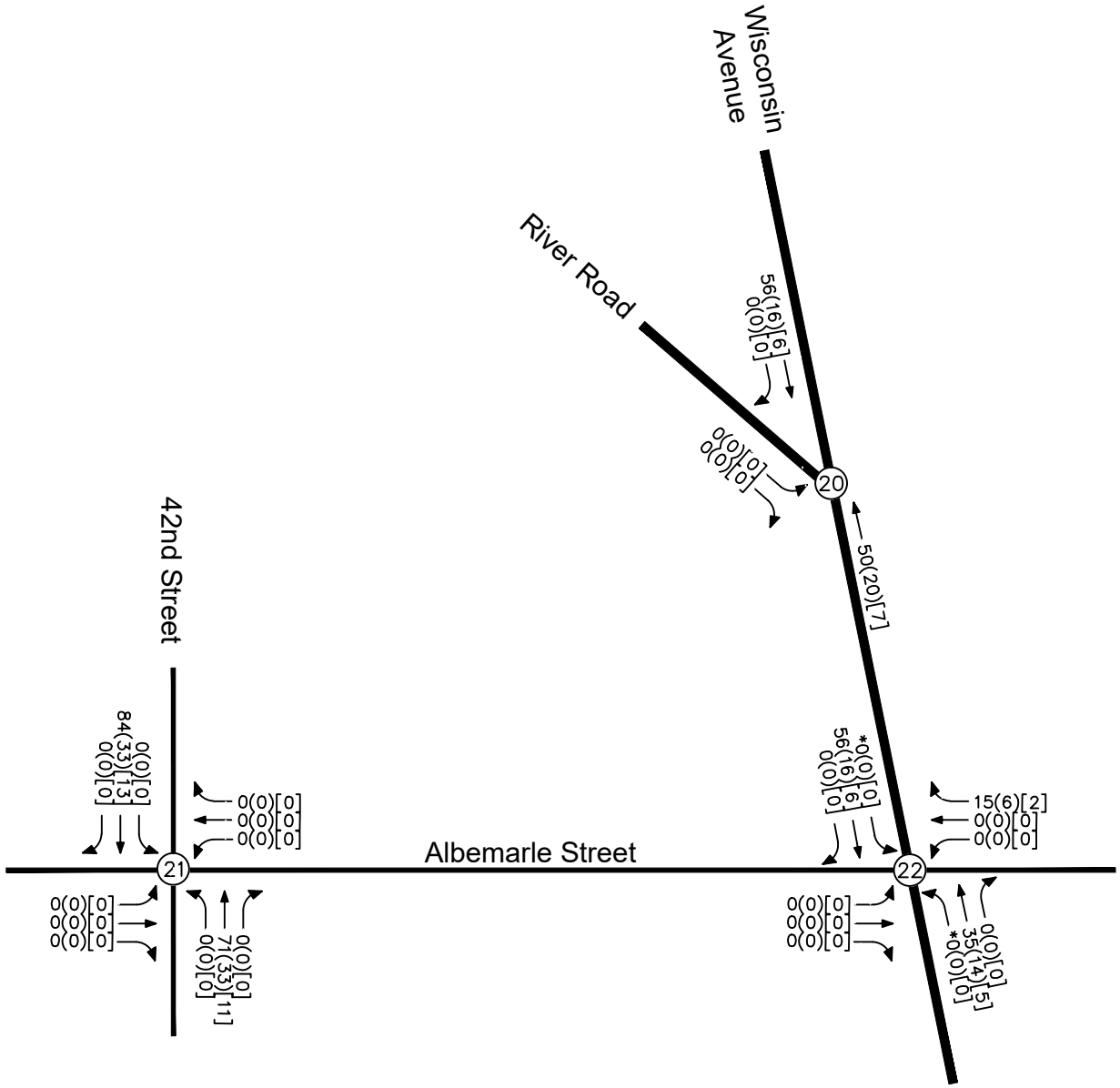


Figure 16C
Lower/Middle School Site Trips

Georgetown Day School
Washington, DC

*Movements prohibited during AM and PM peak hours.

AM Peak Hour 000 | PM School Peak Hour (000) | PM Peak Hour [000]

NORTH

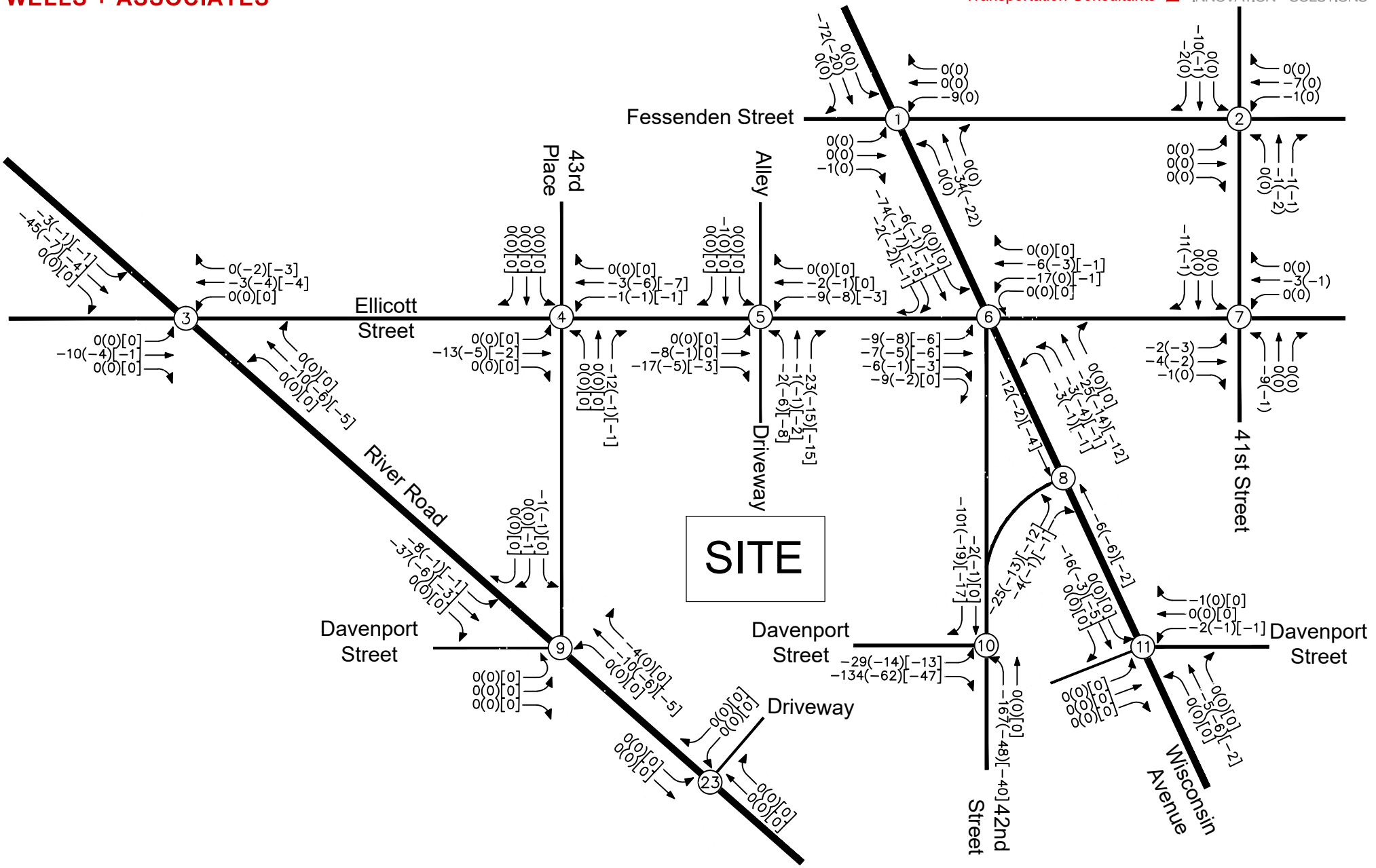


Figure 17A
Removal of Existing High School Site Trips

Georgetown Day School
Washington, DC

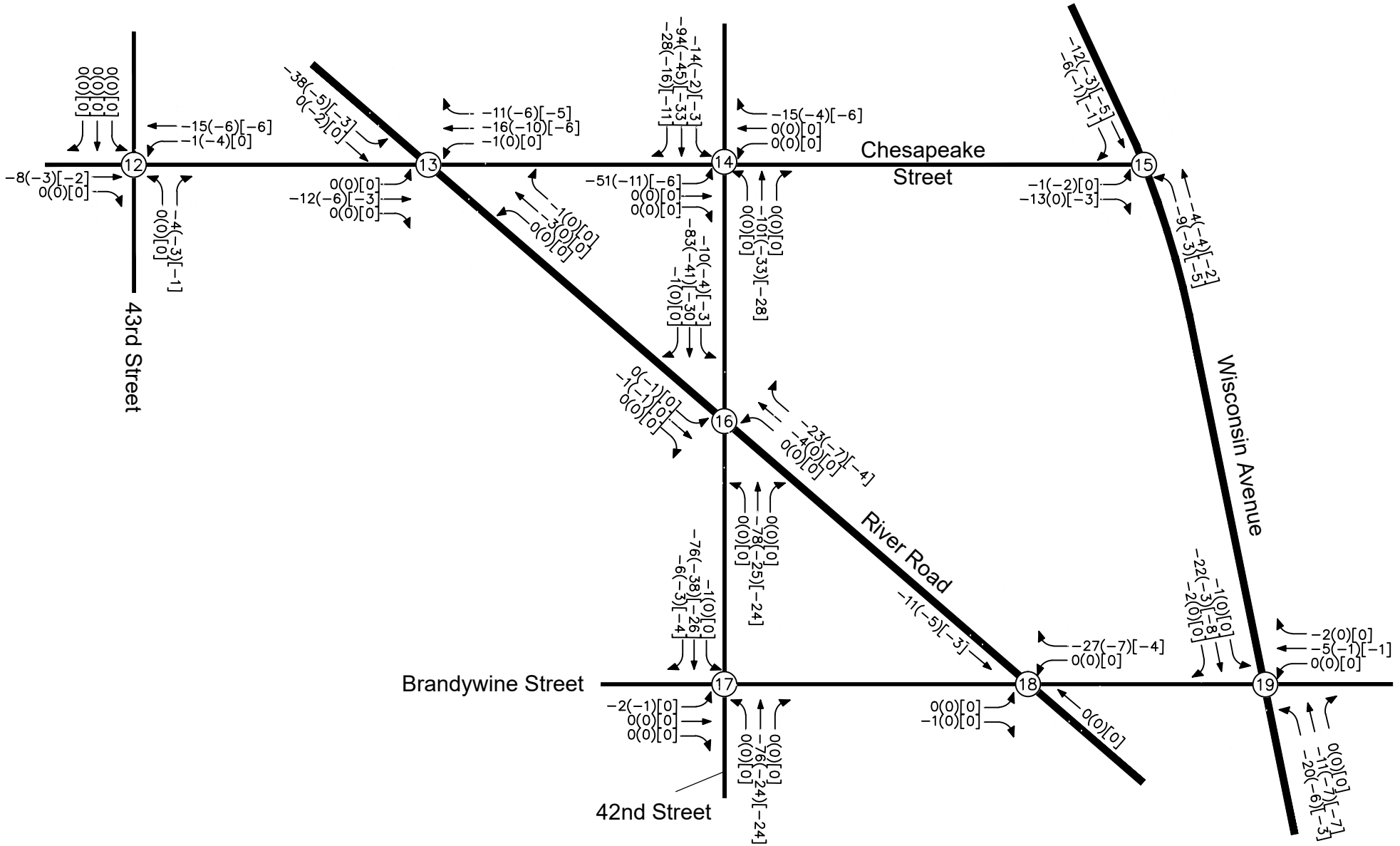


Figure 17B
Removal of Existing High School Site Trips

Georgetown Day School
Washington, DC

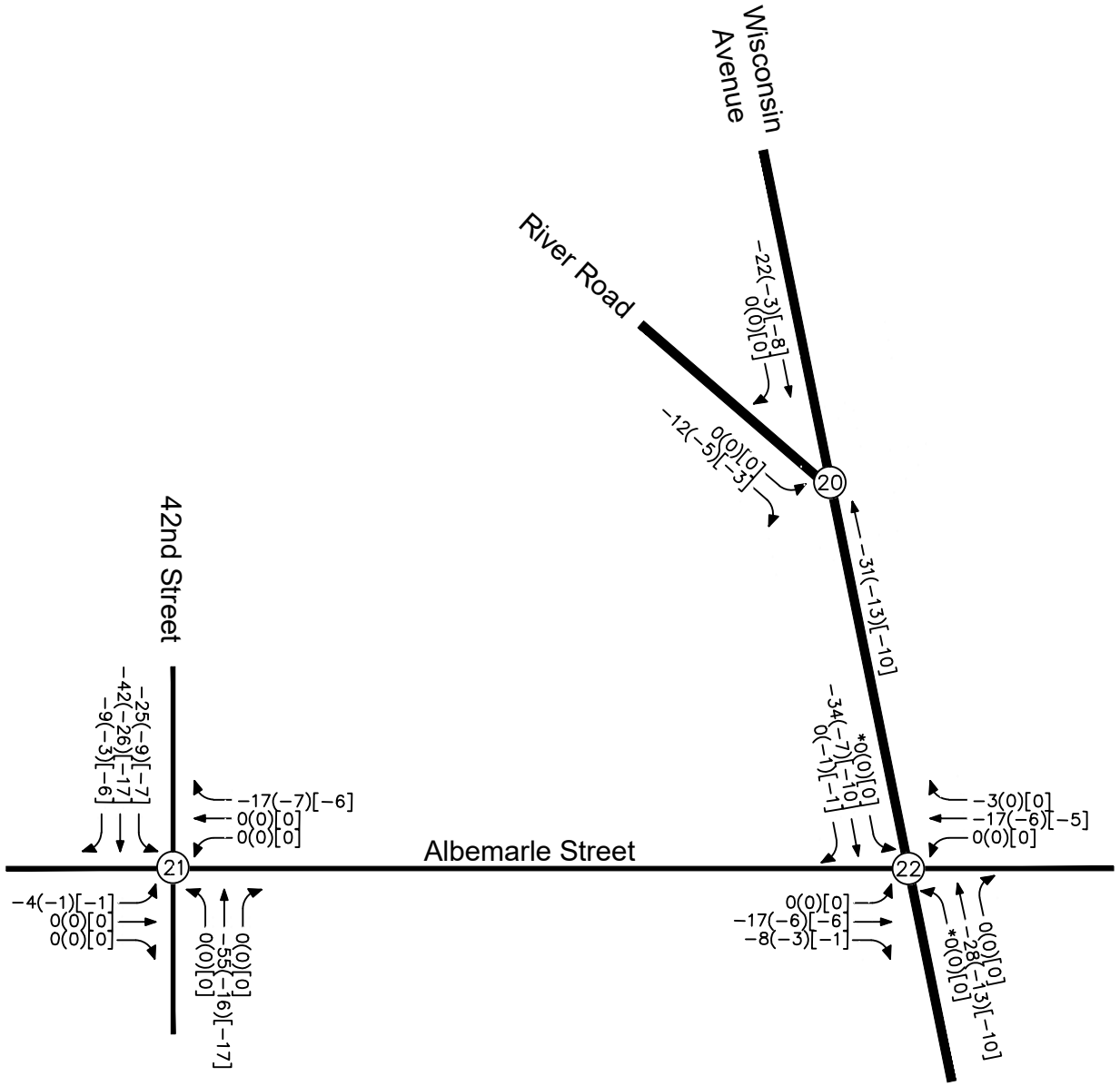


Figure 17C
Removal of Existing High School Site Trips

Georgetown Day School
Washington, DC

*Movements prohibited during AM and PM peak hours.

AM Peak Hour
PM School Peak Hour
PM Peak Hour
000 (000) [000]

NORTH

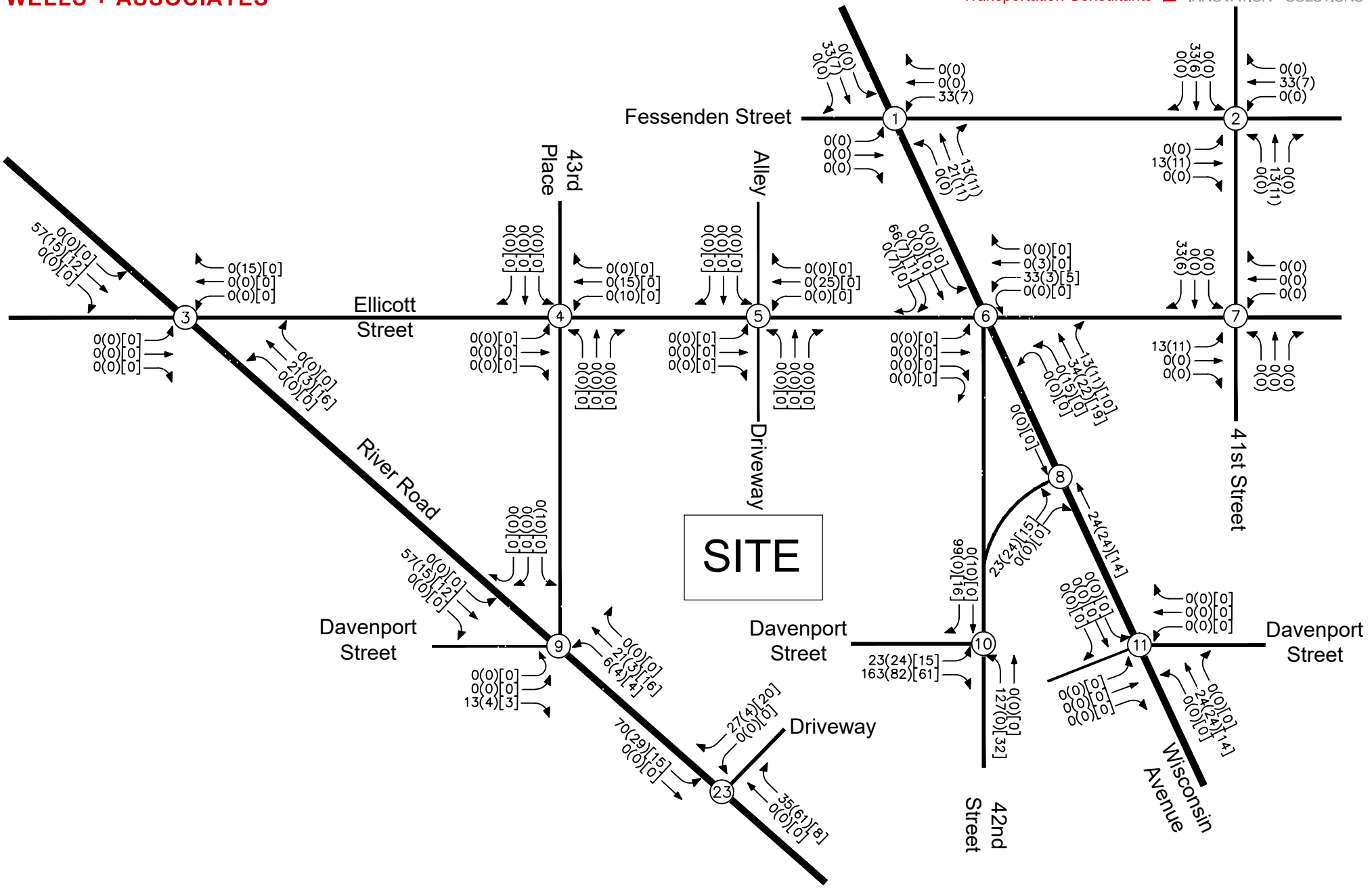


Figure 18A
New/Rerouted High School Site Trips

Georgetown Day School
Washington, DC

Note: A portion of the existing outbound High School trips were rerouted to the new driveway. Those rerouted trips are reflected on this graphic.

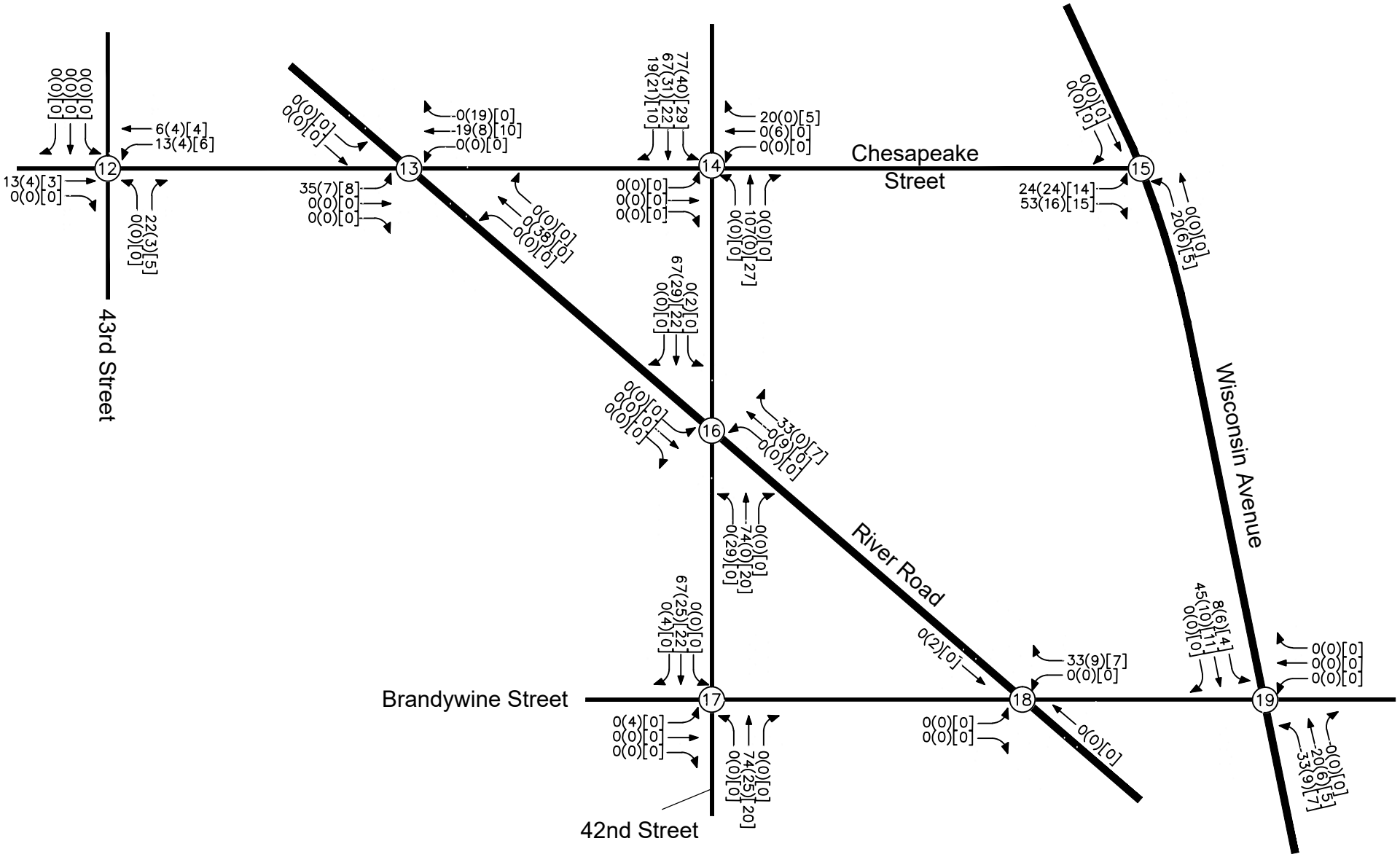


Figure 18B
New/Rerouted High School Site Trips

Georgetown Day School
Washington, DC

Note: A portion of the existing outbound High School trips were rerouted to the new driveway. Those rerouted trips are reflected on this graphic.

AM Peak Hour
PM School Peak Hour
PM Peak Hour
000 (000) [000]

NORTH

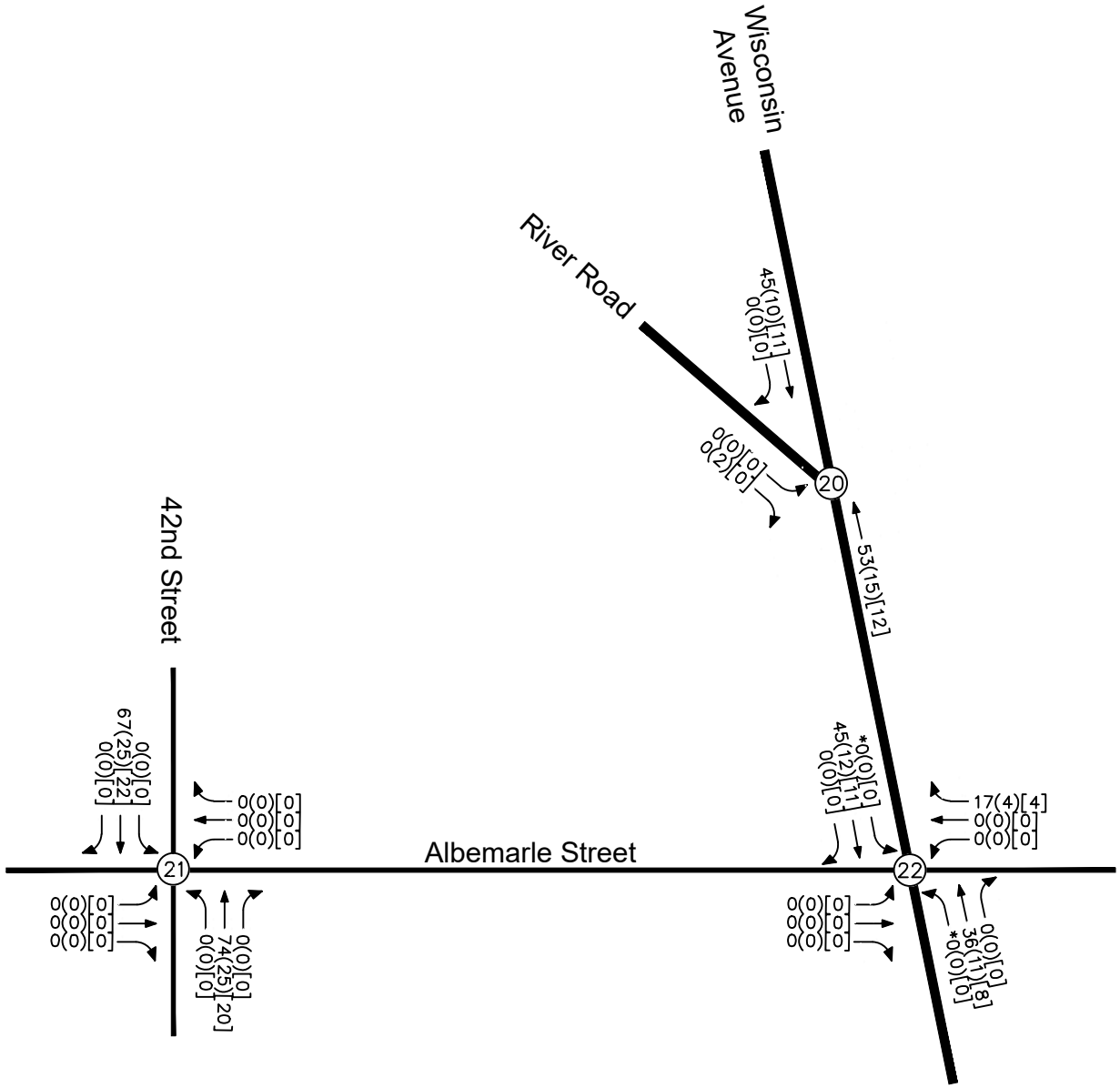


Figure 18C
New/Rerouted High School Site Trips

Georgetown Day School
Washington, DC

*Movements prohibited during AM and PM peak hours.

Note: A portion of the existing outbound High School trips were rerouted to the new driveway. Those rerouted trips are reflected on this graphic.

AM Peak Hour
PM School Peak Hour
PM Peak Hour
000 (000) [000]

NORTH

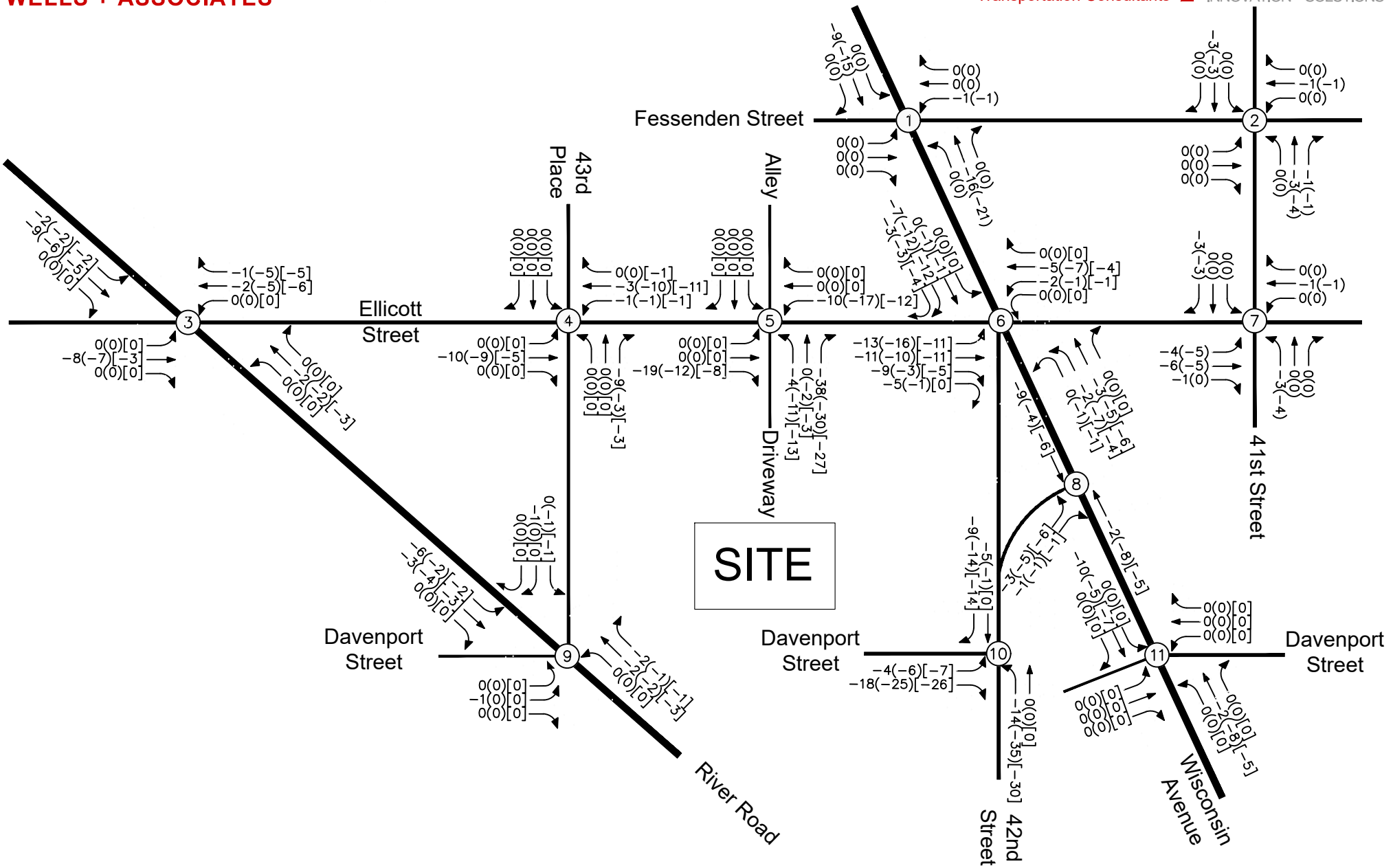


Figure 19A
Removal of Safeway Site Trips

Georgetown Day School
Washington, DC

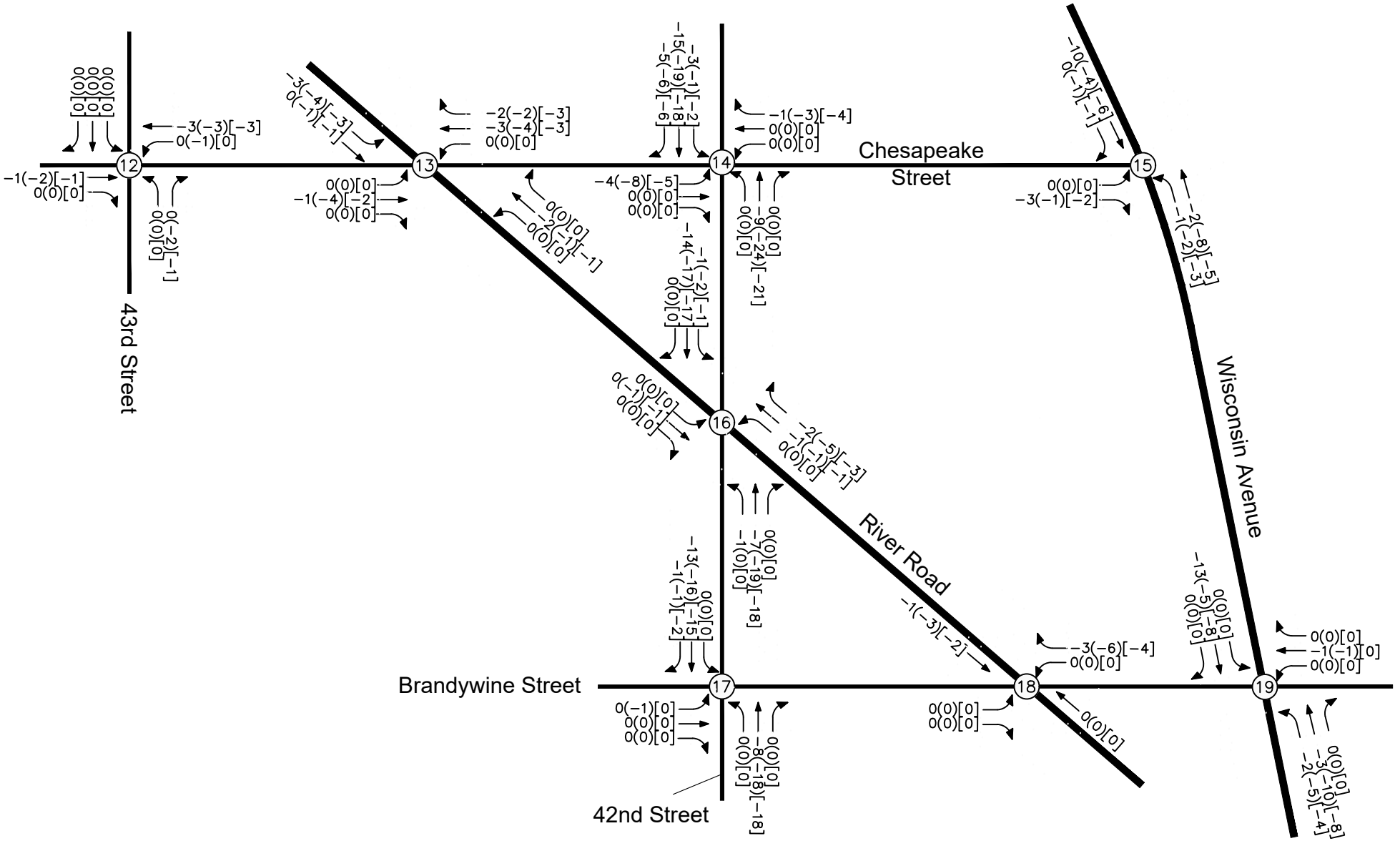


Figure 19B
Removal of Safeway Site Trips

Georgetown Day School
Washington, DC

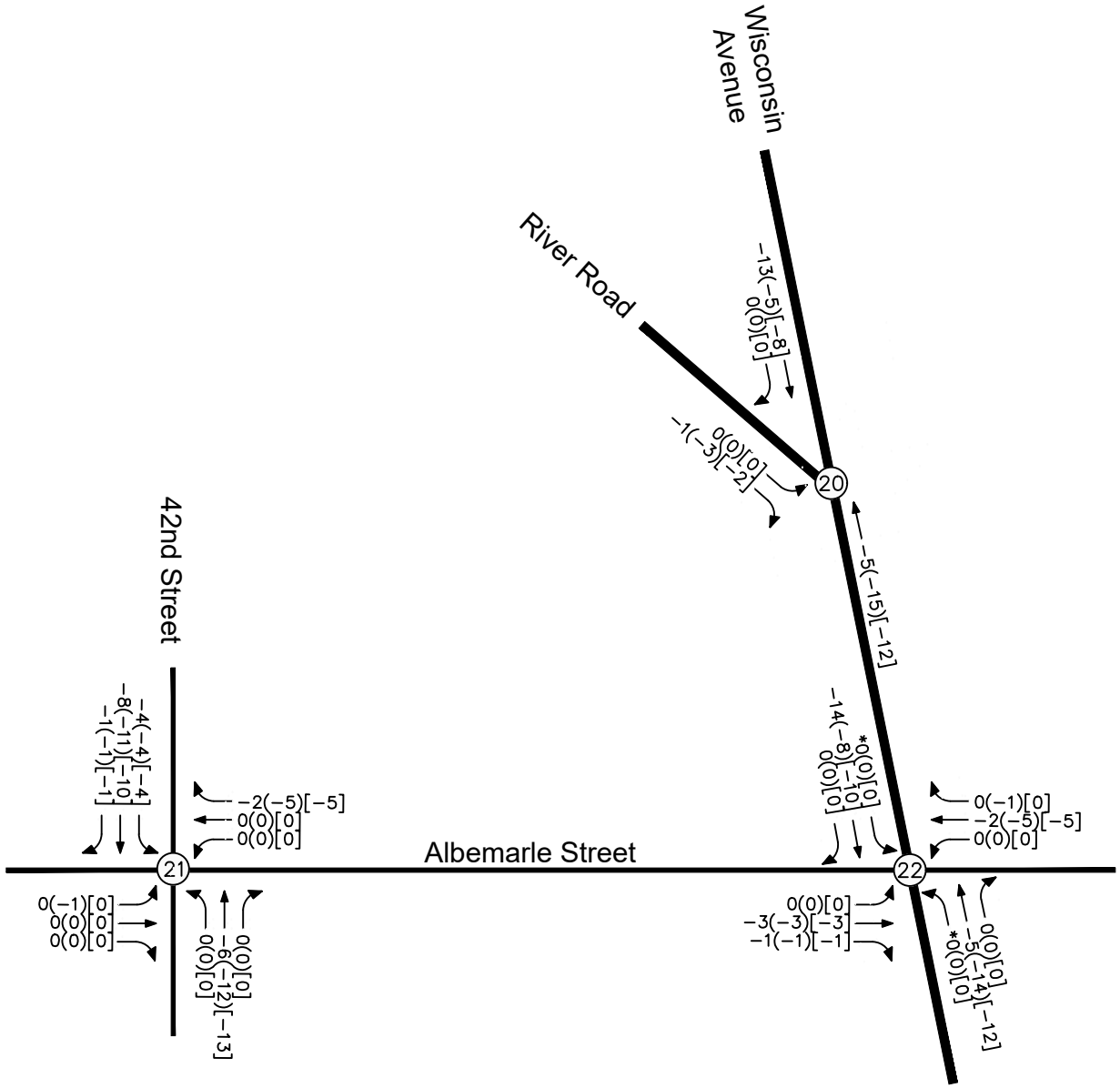


Figure 19C
Removal of Safeway Site Trips

Georgetown Day School
Washington, DC

*Movements prohibited during AM and PM peak hours.

AM Peak Hour 000 (PM School Peak Hour) [PM Peak Hour]

NORTH

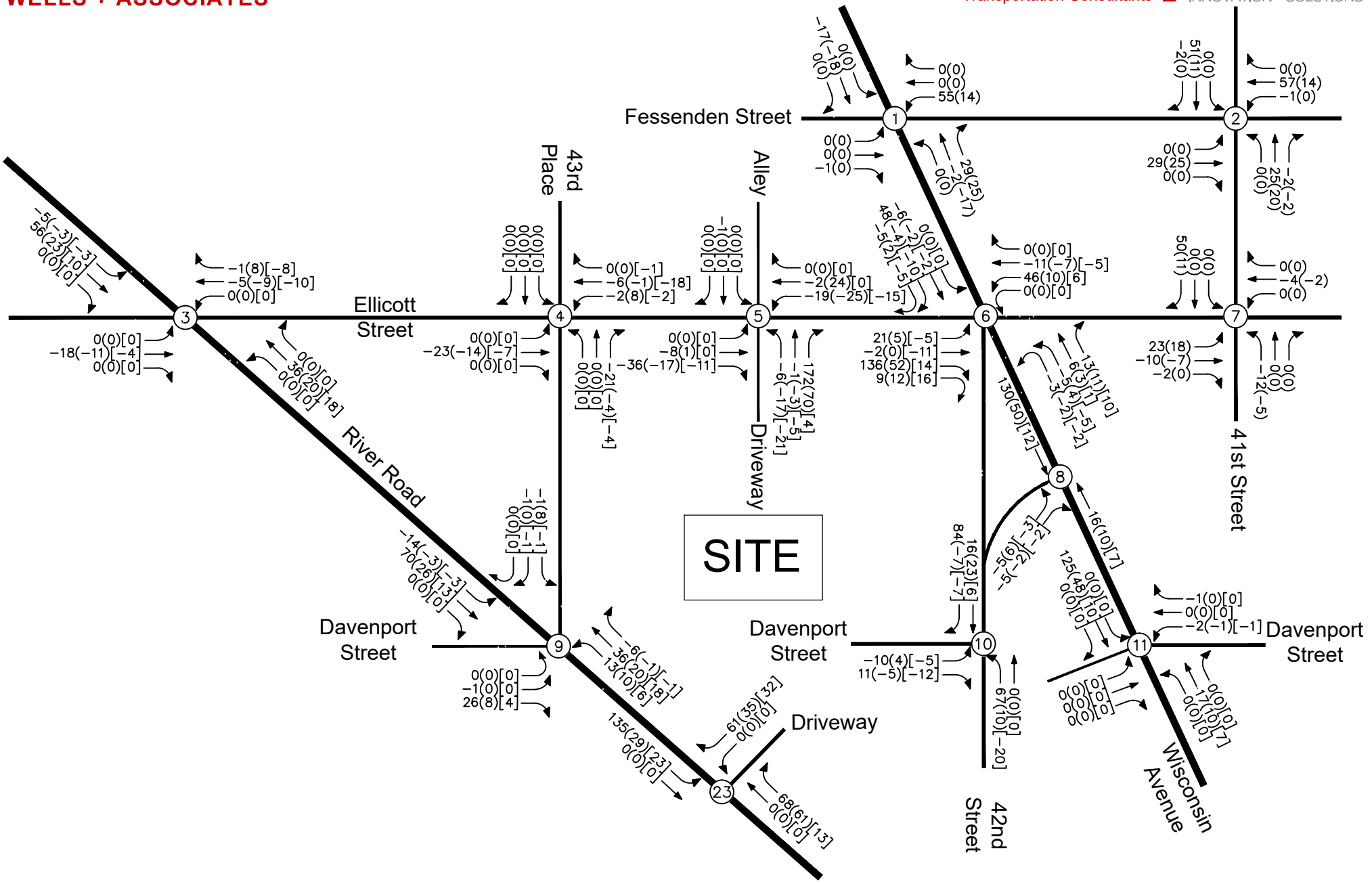


Figure 20A
Total New Site Trips

Georgetown Day School
Washington, DC

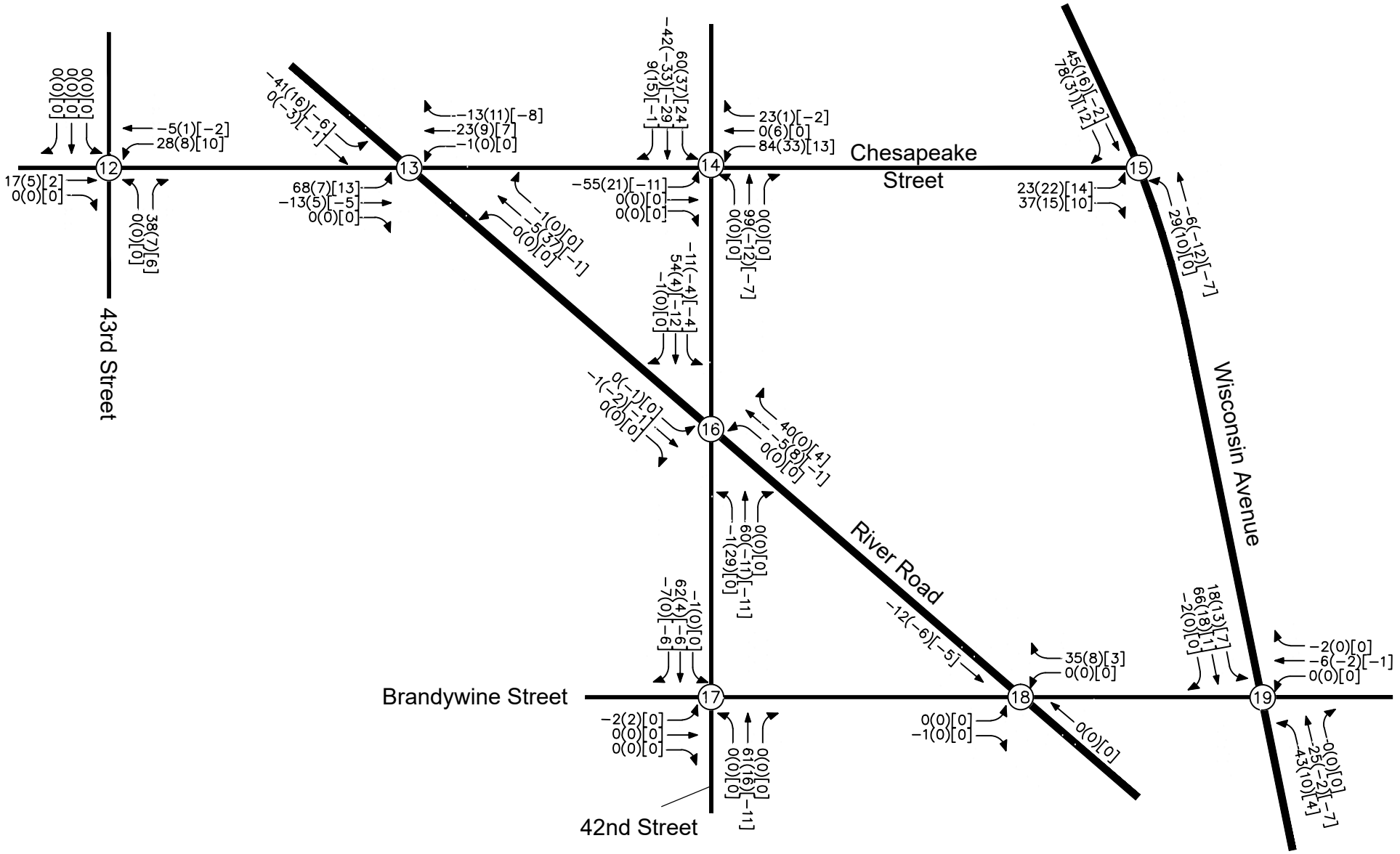


Figure 20B
Total New Site Trips

Georgetown Day School
Washington, DC

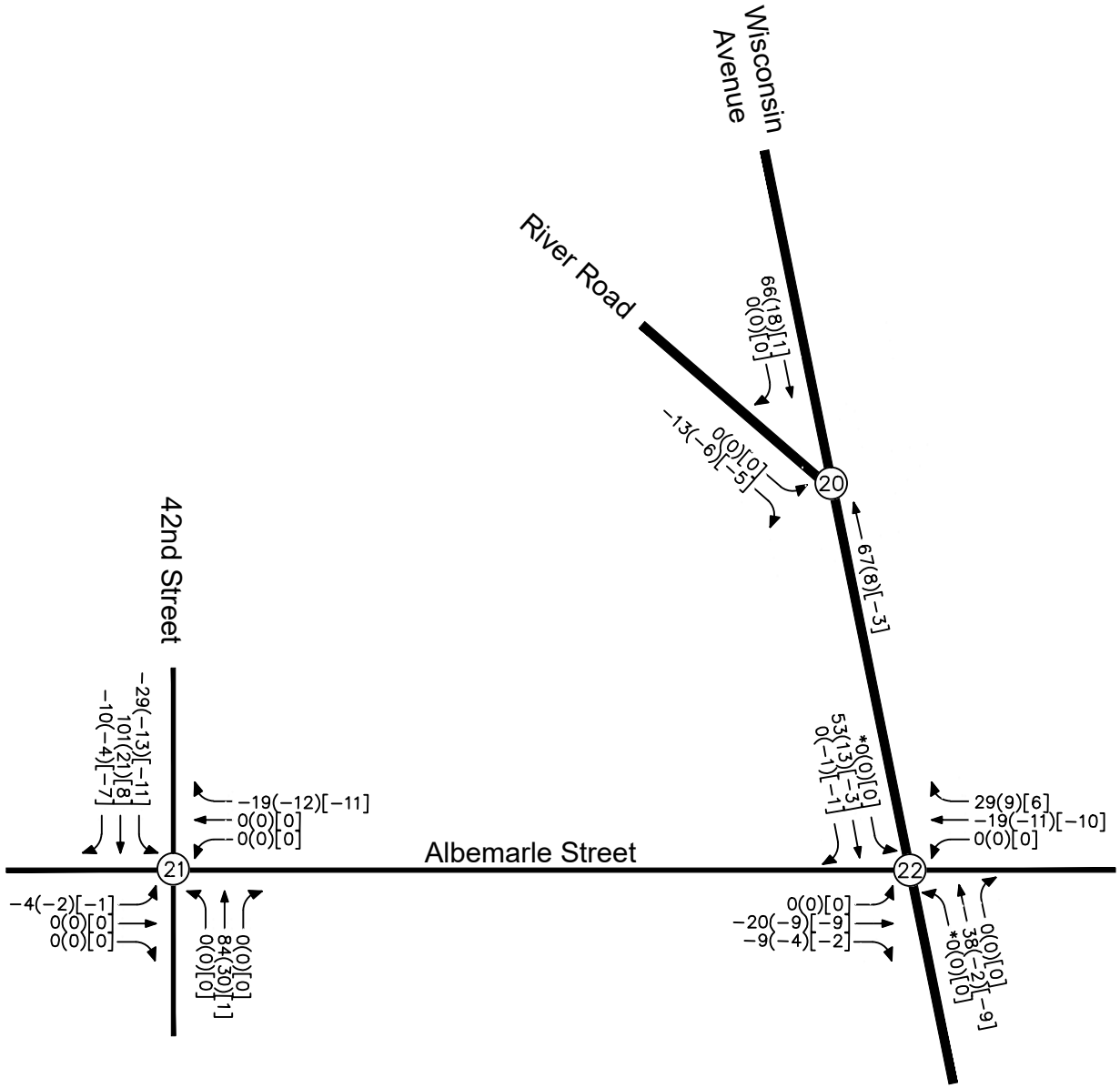


Figure 20C
Total New Site Trips

Georgetown Day School
Washington, DC

*Movements prohibited during AM and PM peak hours.

AM Peak Hour
PM School Peak Hour
PM Peak Hour
000 (000) [000]

NORTH

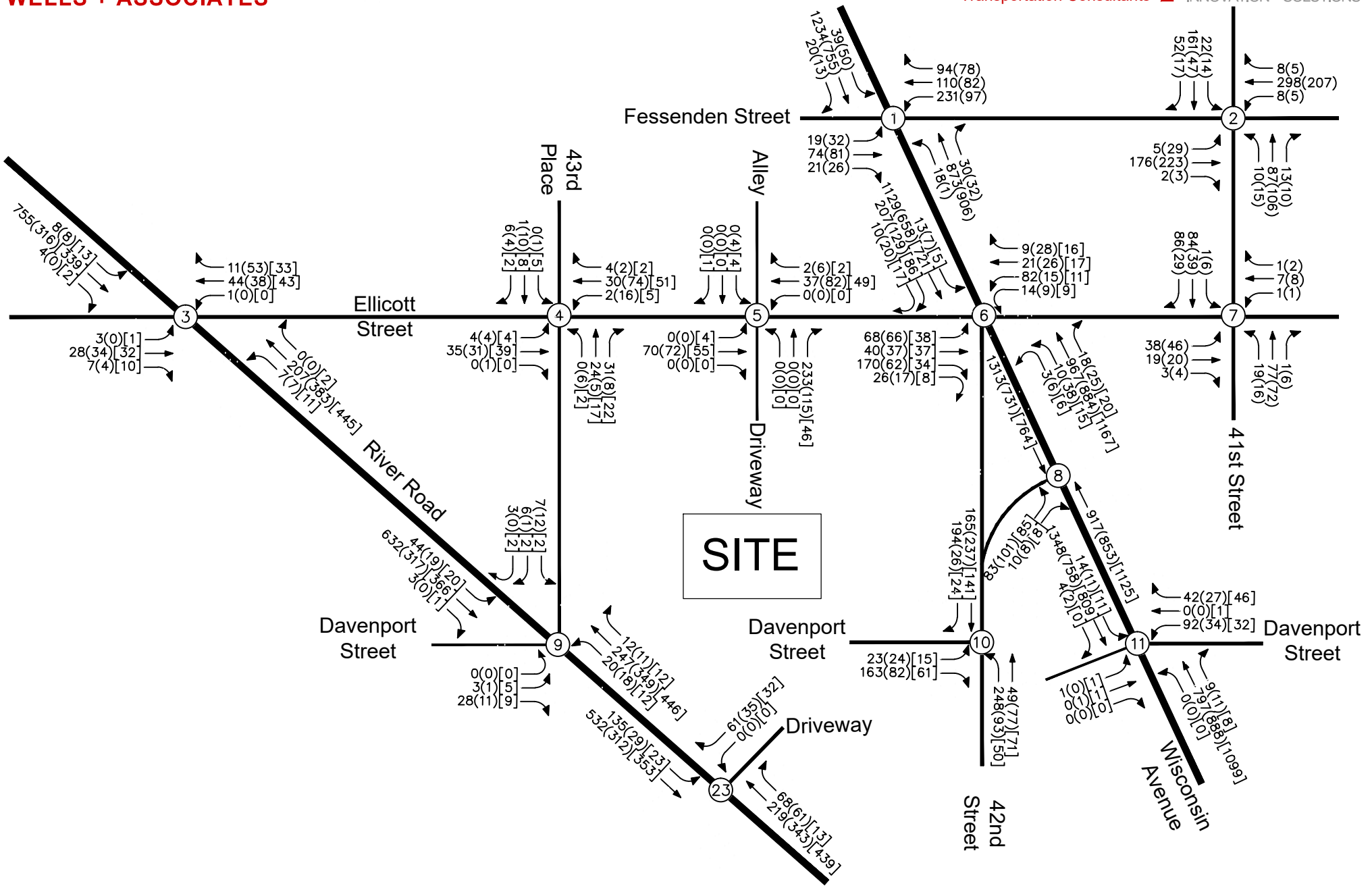


Figure 21A
2021 Total Future Traffic Forecasts

Georgetown Day School
Washington, DC

AM Peak Hour
PM School Peak Hour
PM Peak Hour
000 (000) [000]

NORTH

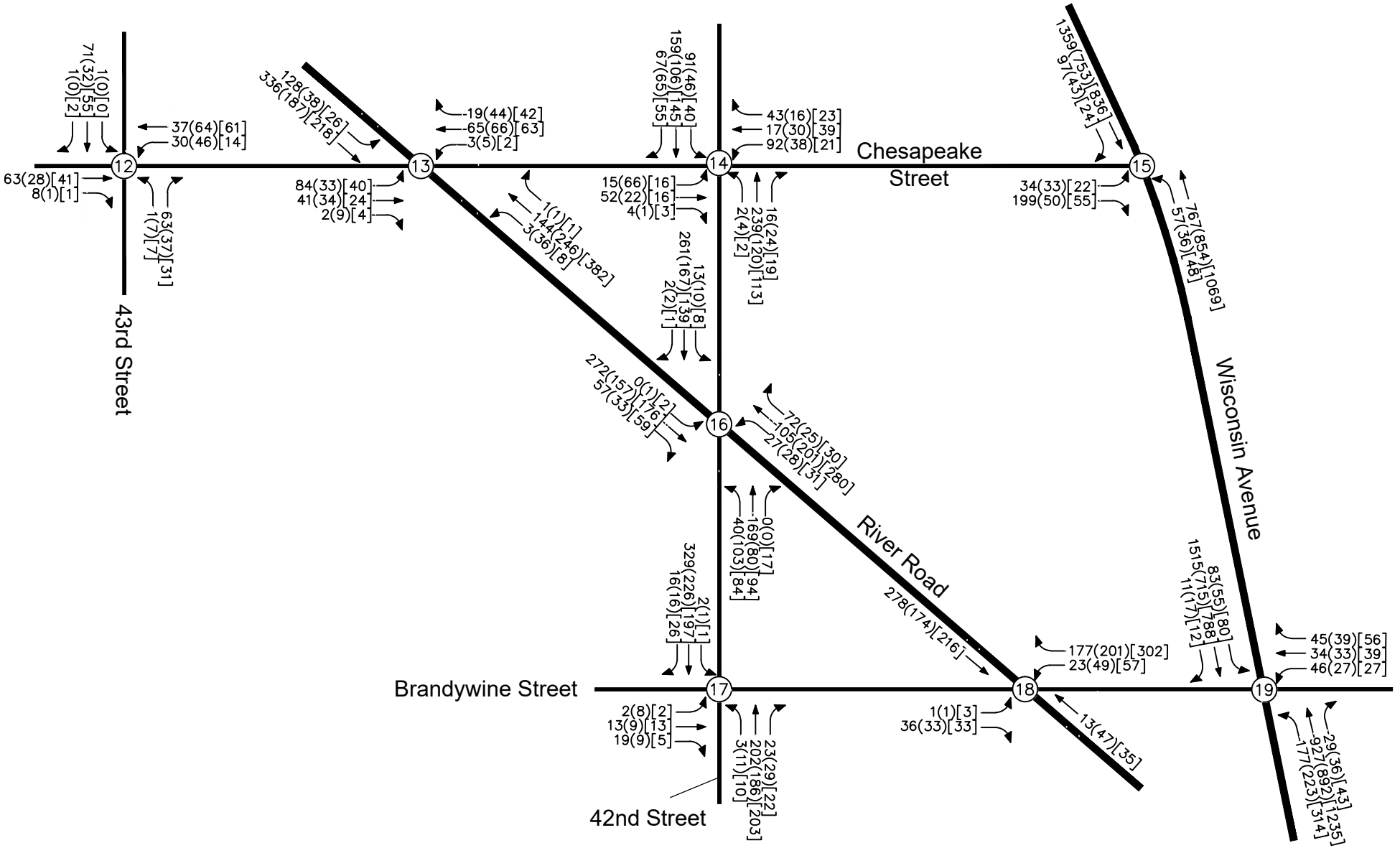


Figure 21B
2021 Total Future Traffic Forecasts

Georgetown Day School
Washington, DC

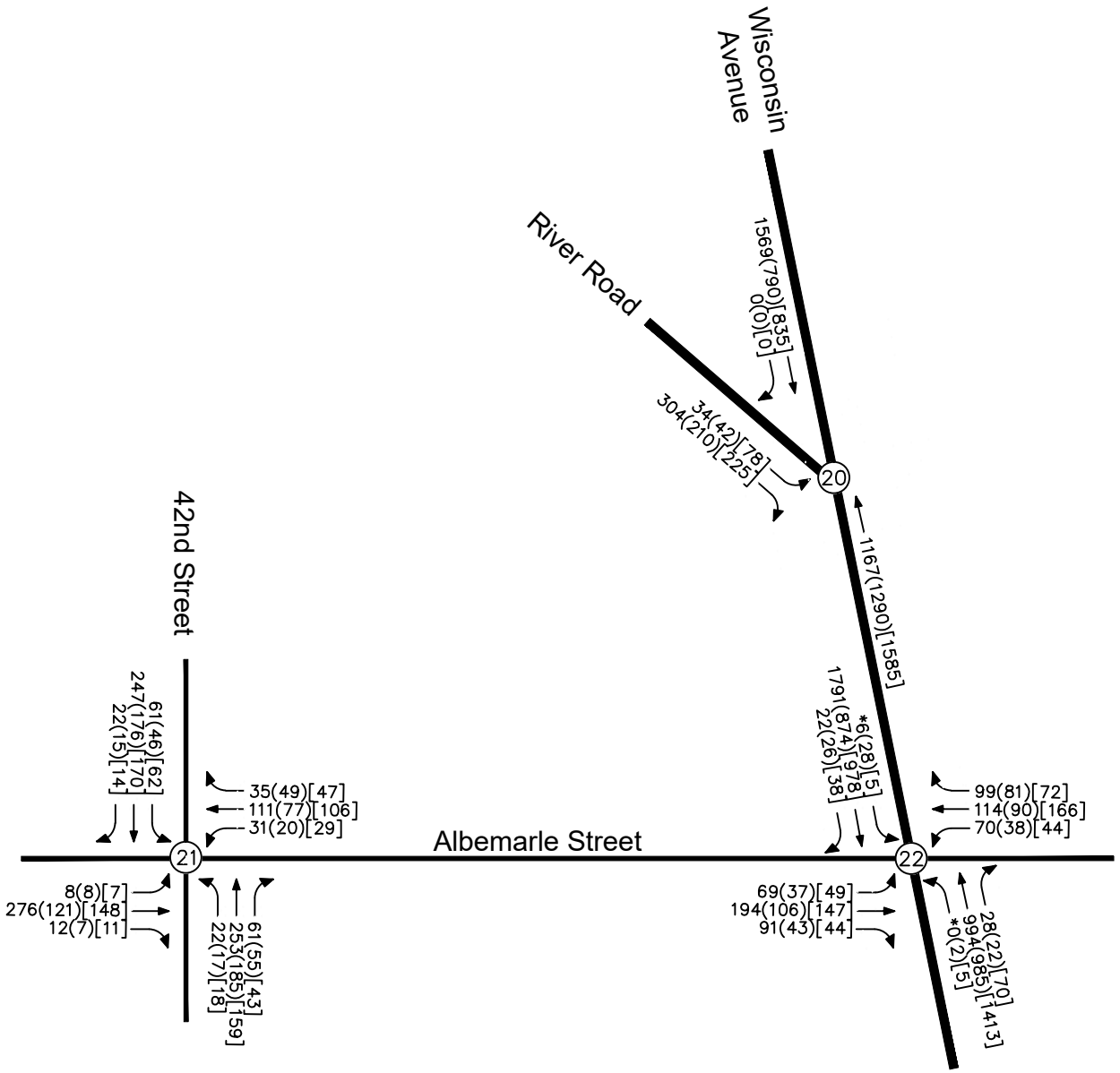


Figure 21C
2021 Total Future Traffic Forecasts

Georgetown Day School
Washington, DC

*Movements prohibited during AM and PM peak hours.

AM Peak Hour
PM School Peak Hour
PM Peak Hour
000 (000) [000]

NORTH

Install New ADA Ramp
Remove Existing ADA Ramp
Install Sidewalk
Install Concrete Pavement
Install Vertical Curb

Install Bollards
Widen Roadway (approximately 2')
Install Vertical Curb
X X Eradicate Pavement Markings
Install Double Yellow Line
Install New ADA Ramp

Figure 22
Conceptual Drawings for Slip Lane Closure

Georgetown Day School
Washington, DC

NORTH

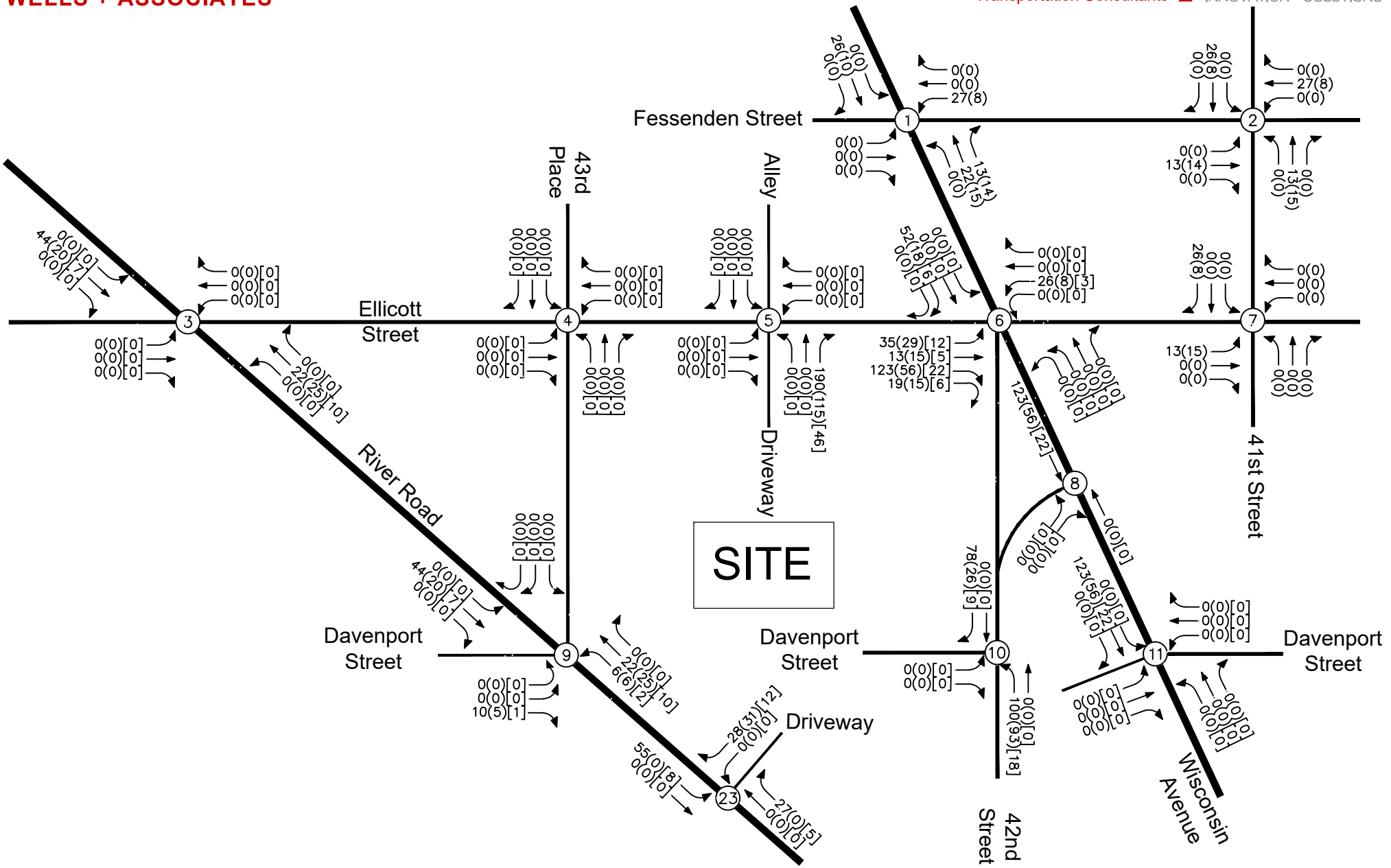


Figure 23A
Lower/Middle School Site Trips with TDM Plan

Georgetown Day School
Washington, DC

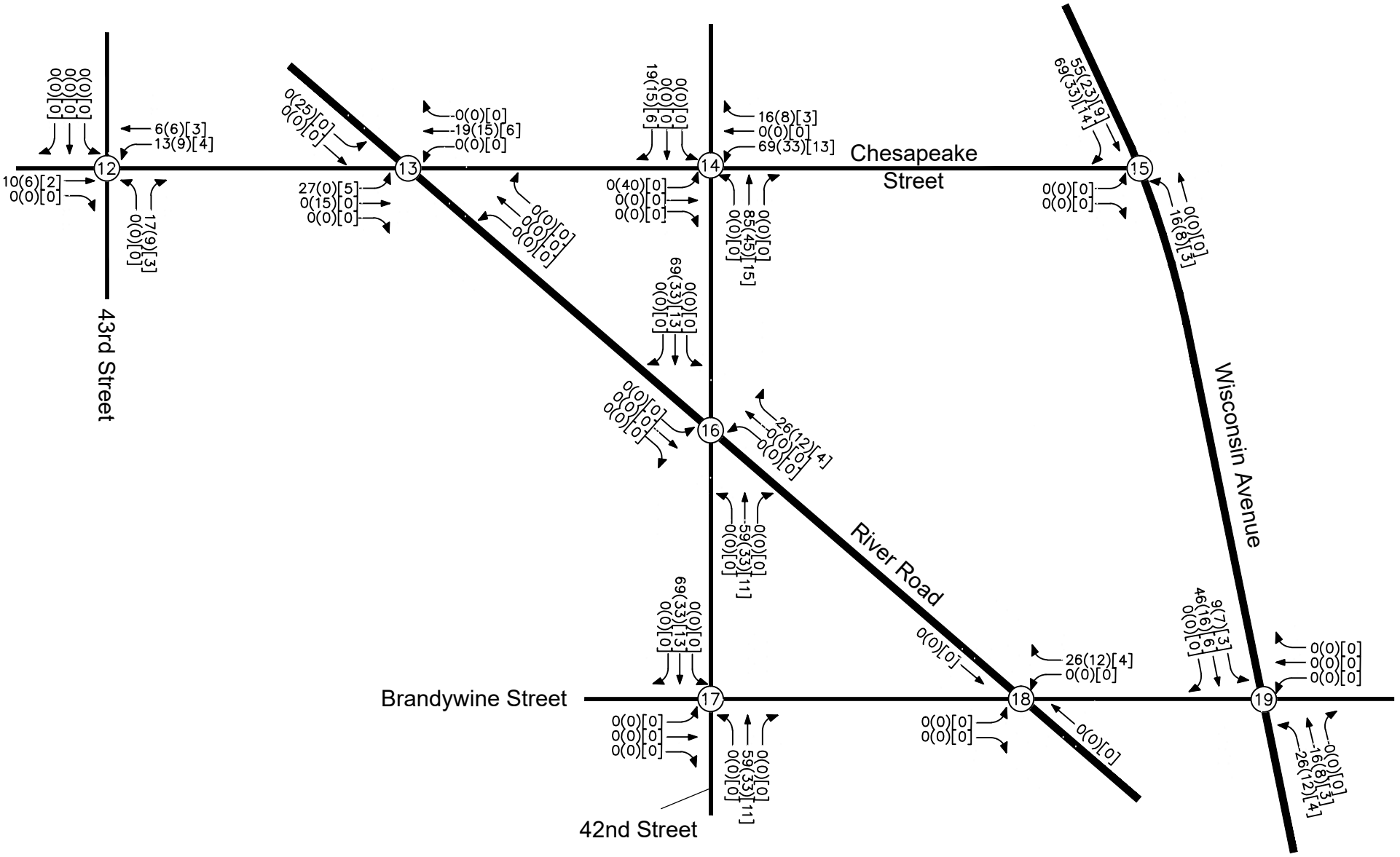


Figure 23B
Lower/Middle School Site Trips with TDM Plan

Georgetown Day School
Washington, DC

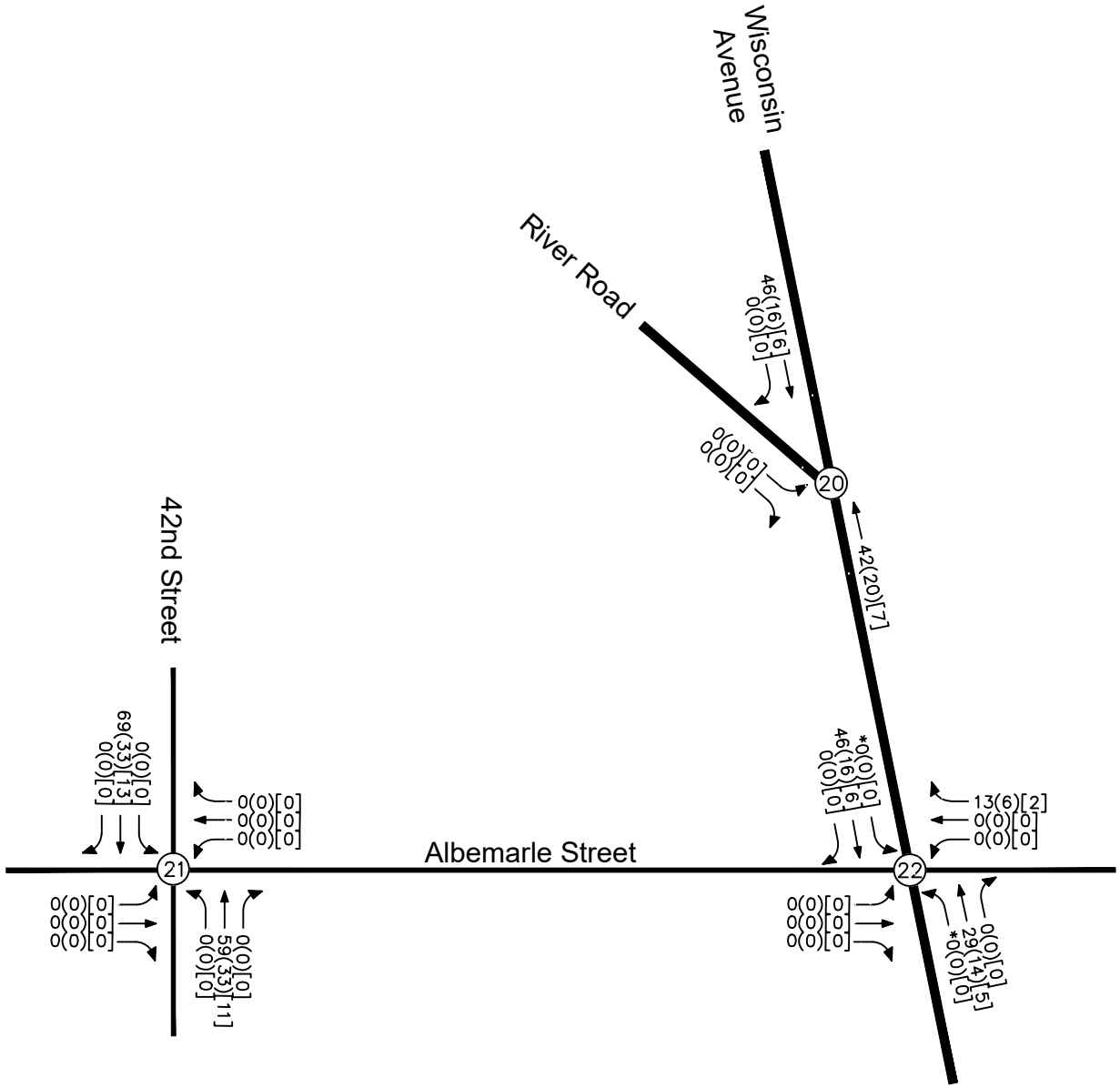


Figure 23C
Lower/Middle School Site Trips with TDM Plan

Georgetown Day School
Washington, DC

*Movements prohibited during AM and PM peak hours.

AM Peak Hour 000 | PM School Peak Hour (000) | PM Peak Hour [000]

NORTH

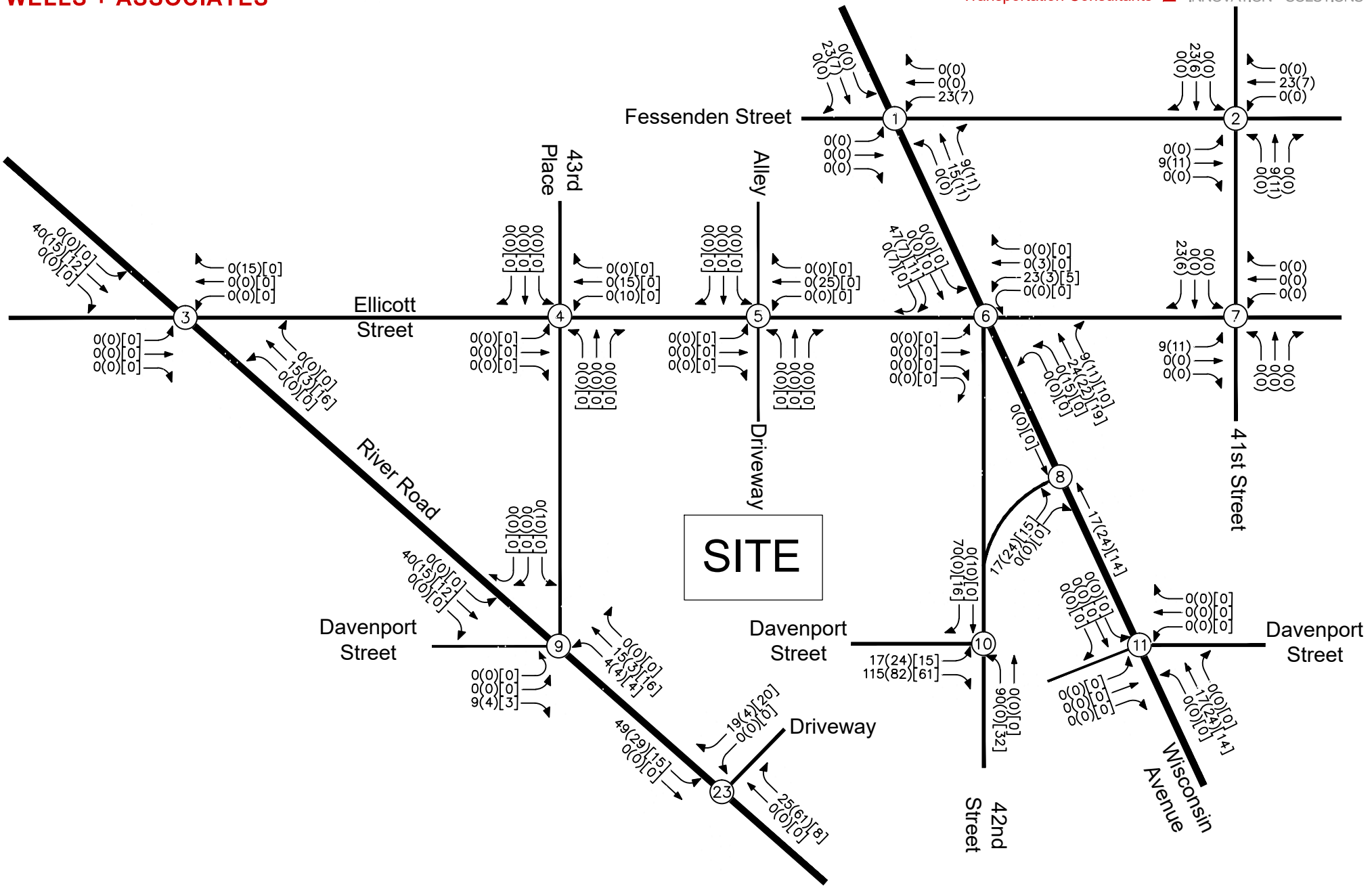


Figure 24A
New/Rerouted High School Site Trips with TDM Plan

Georgetown Day School
Washington, DC

Note: A portion of the existing outbound High School trips were rerouted to the new driveway. Those rerouted trips are reflected on this graphic.

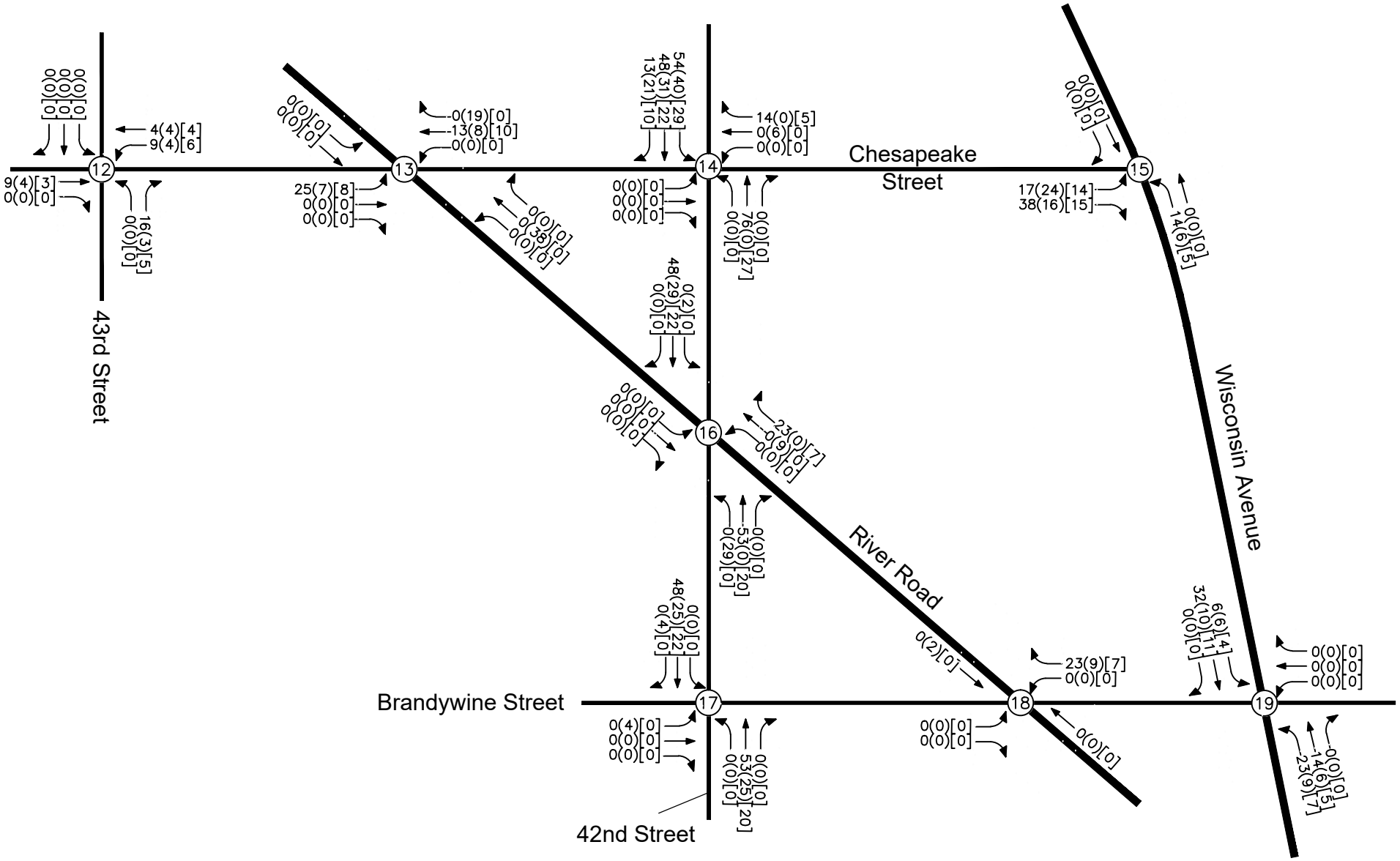


Figure 24B
New/Rerouted High School Site Trips with TDM Plan

Georgetown Day School
Washington, DC

Note: A portion of the existing outbound High School trips were rerouted to the new driveway. Those rerouted trips are reflected on this graphic.

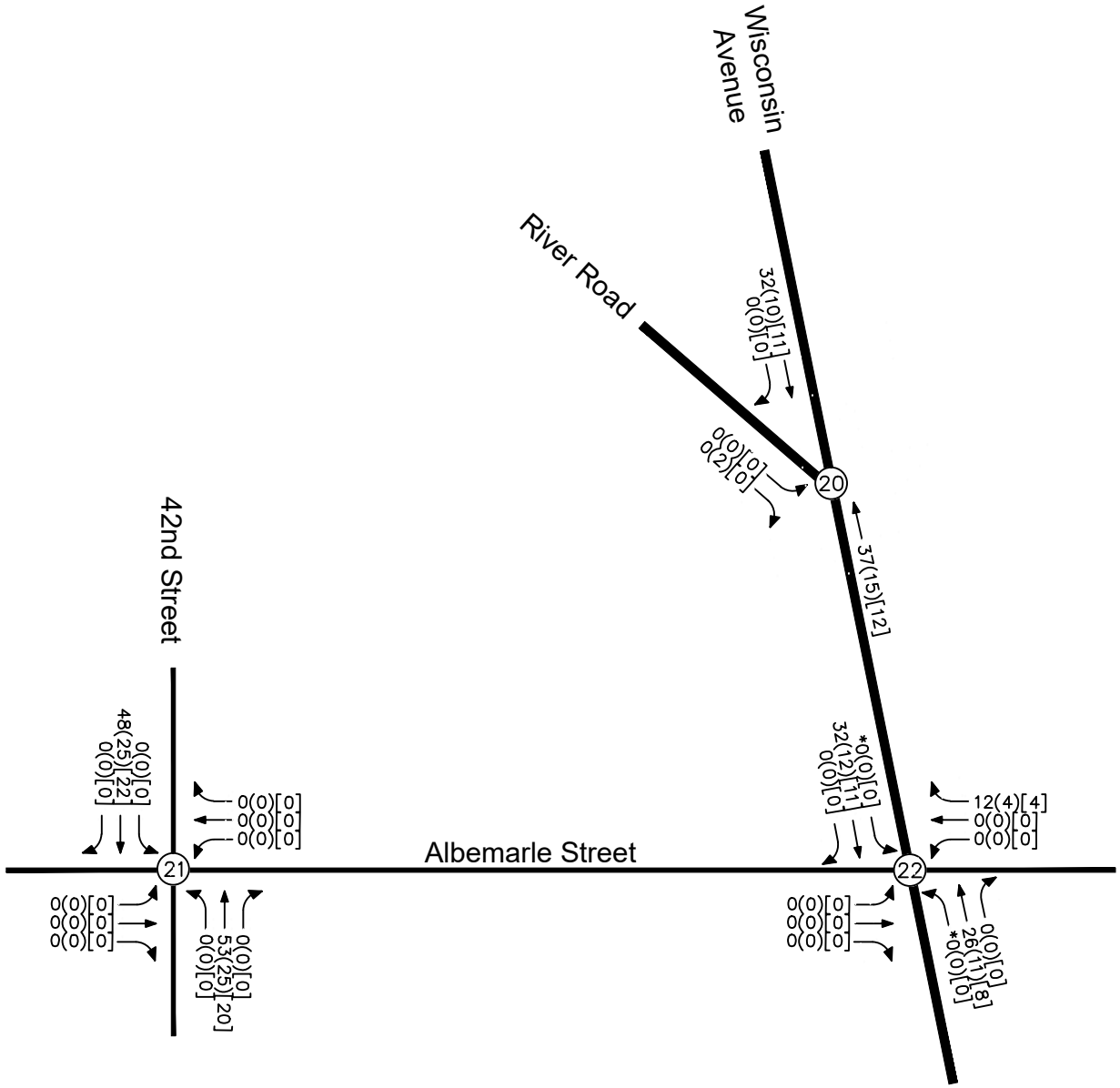


Figure 24C
New/Rerouted High School Site Trips with TDM Plan

Georgetown Day School
Washington, DC

*Movements prohibited during AM and PM peak hours.

Note: A portion of the existing outbound High School trips were rerouted to the new driveway. Those rerouted trips are reflected on this graphic.

AM Peak Hour 000 | PM School Peak Hour (000) | PM Peak Hour [000]

NORTH

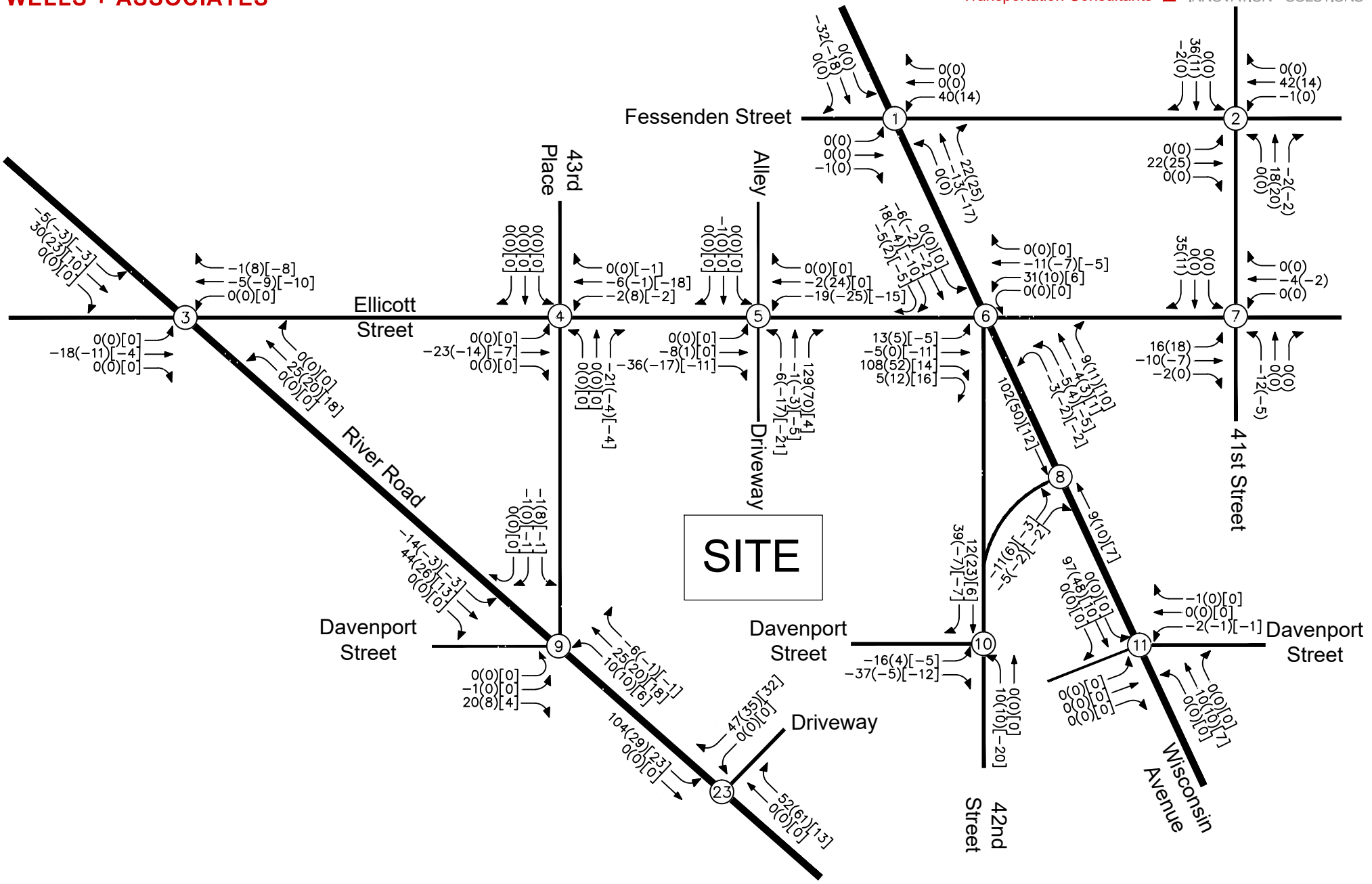


Figure 25A
Total New Site Trips with TDM Plan

Georgetown Day School
Washington, DC

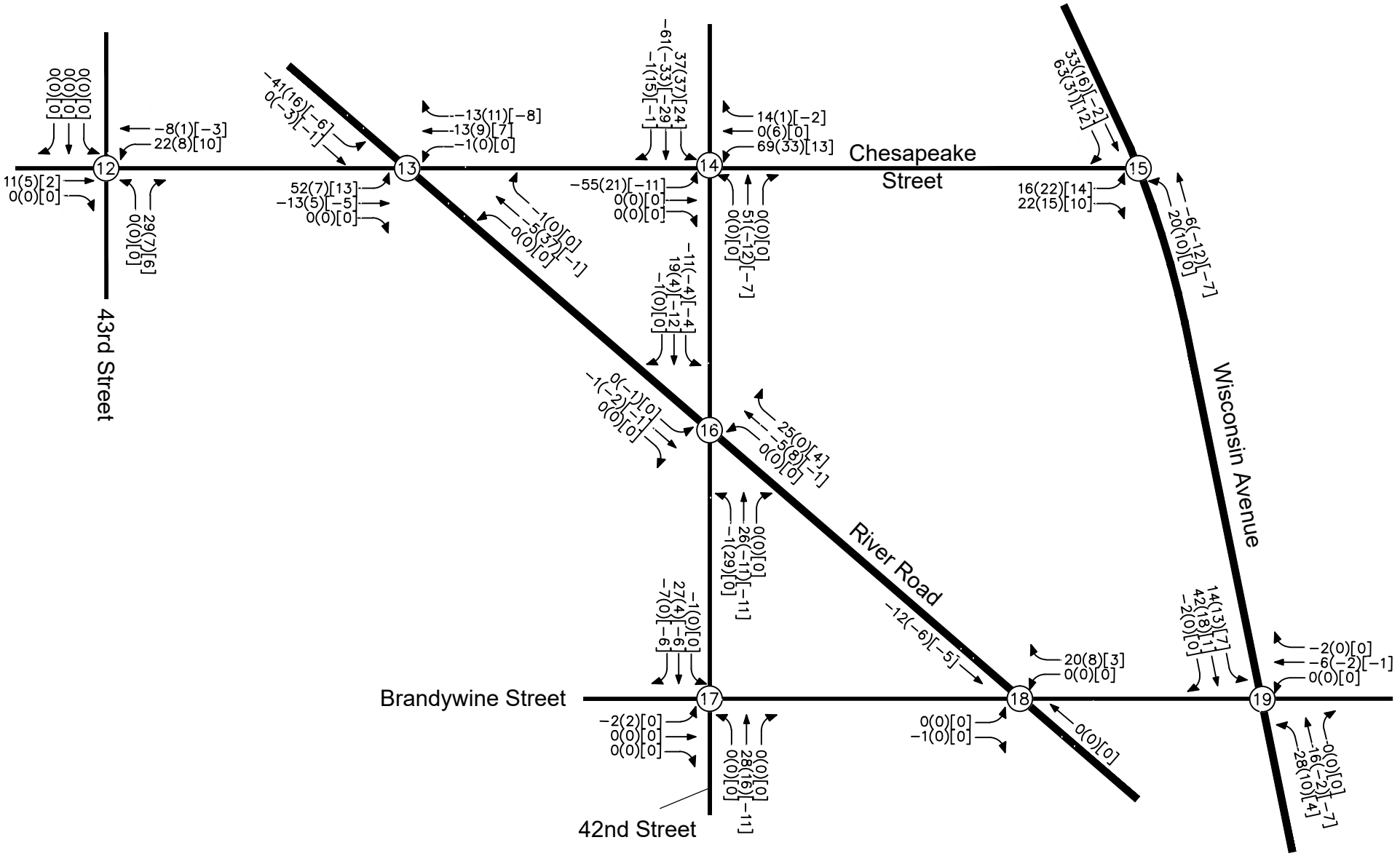


Figure 25B
Total New Site Trips with TDM Plan

Georgetown Day School
Washington, DC

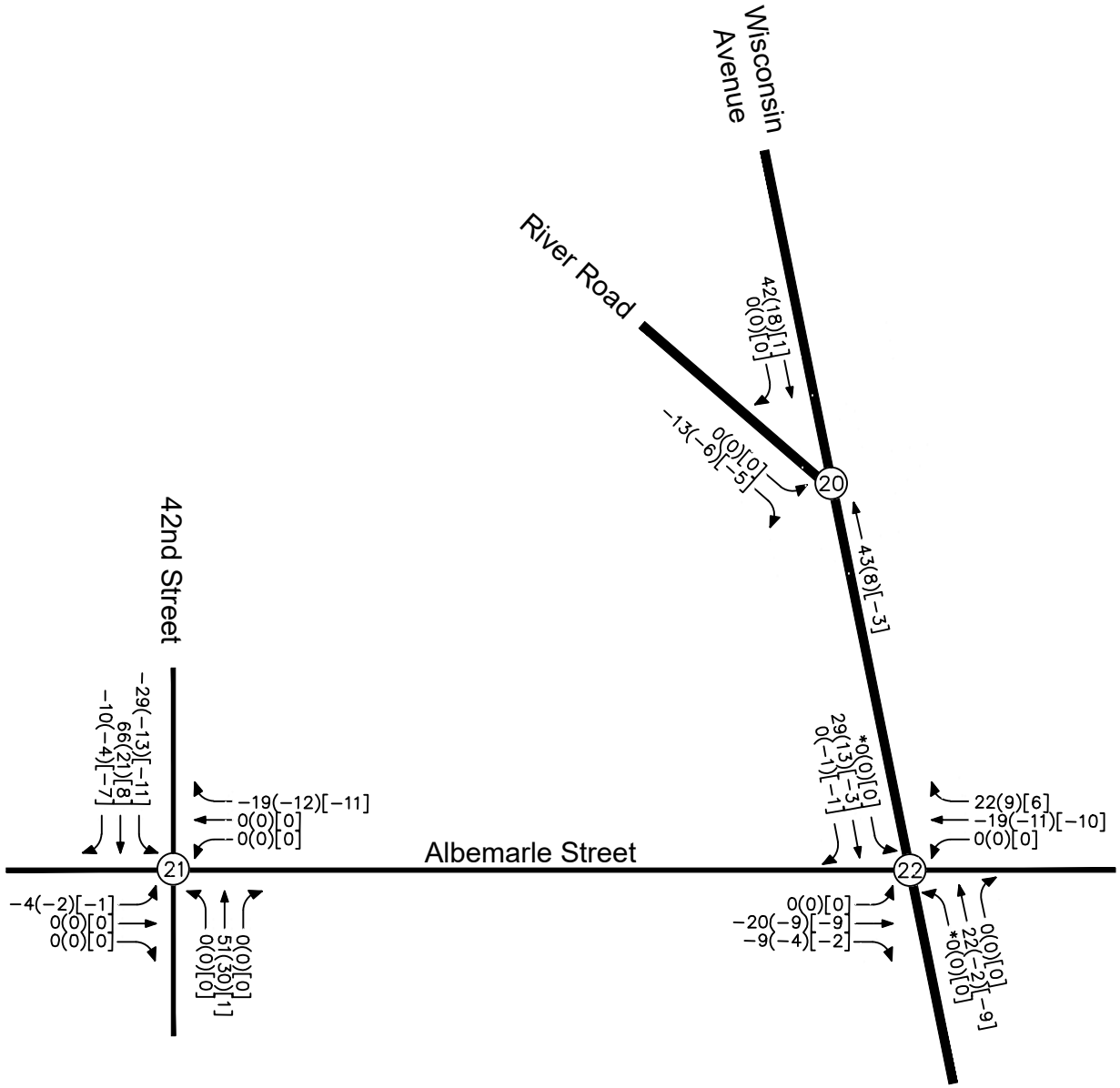


Figure 25C
Total New Site Trips with TDM Plan

Georgetown Day School
Washington, DC

*Movements prohibited during AM and PM peak hours.

AM Peak Hour
PM School Peak Hour
PM Peak Hour
000 (000) [000]

NORTH

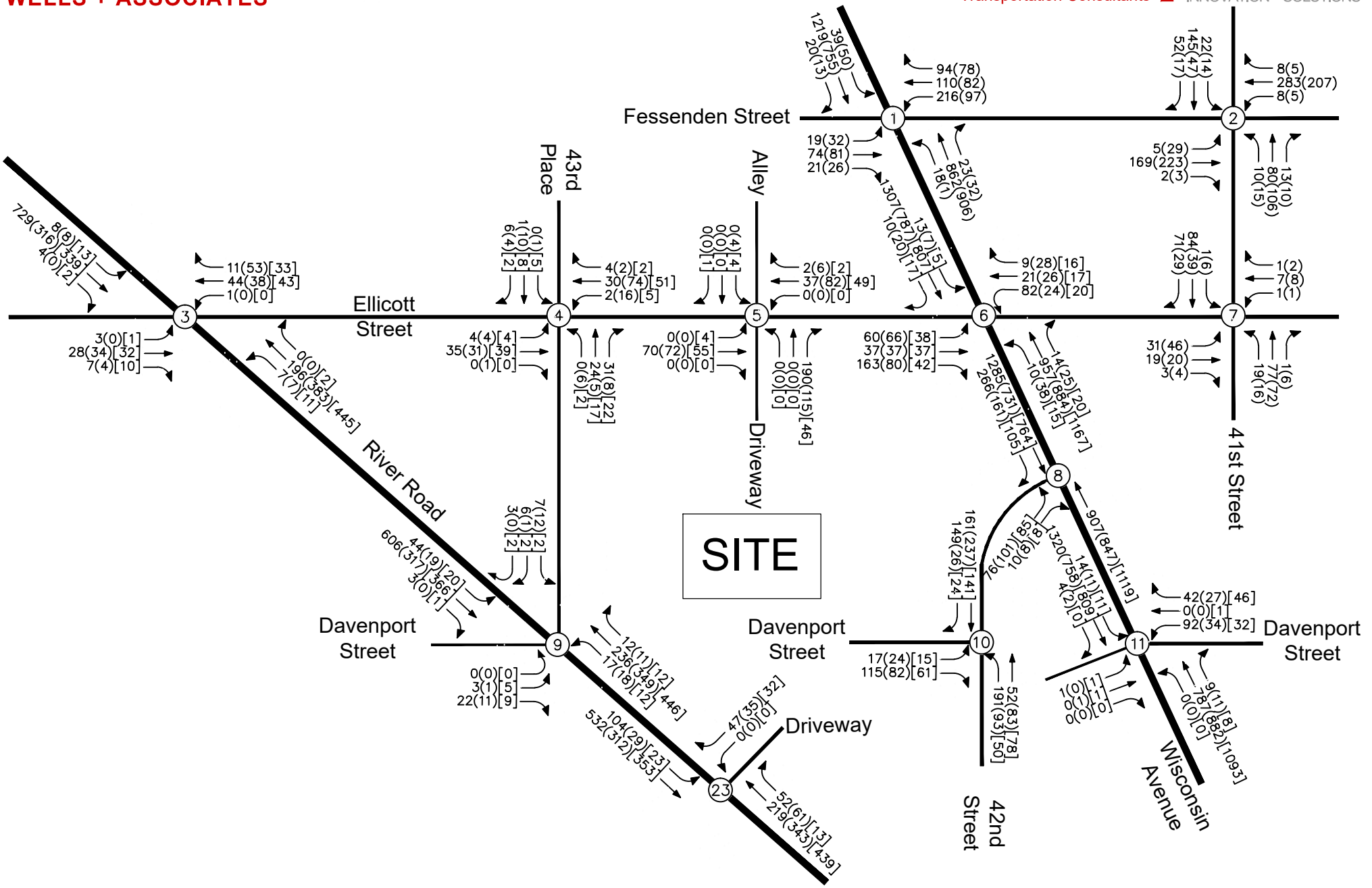


Figure 26A
2021 Total Future Traffic Forecasts with TDM Plan

Georgetown Day School
Washington, DC

AM Peak Hour
PM School Peak Hour
PM Peak Hour
000 (000) [000]

NORTH

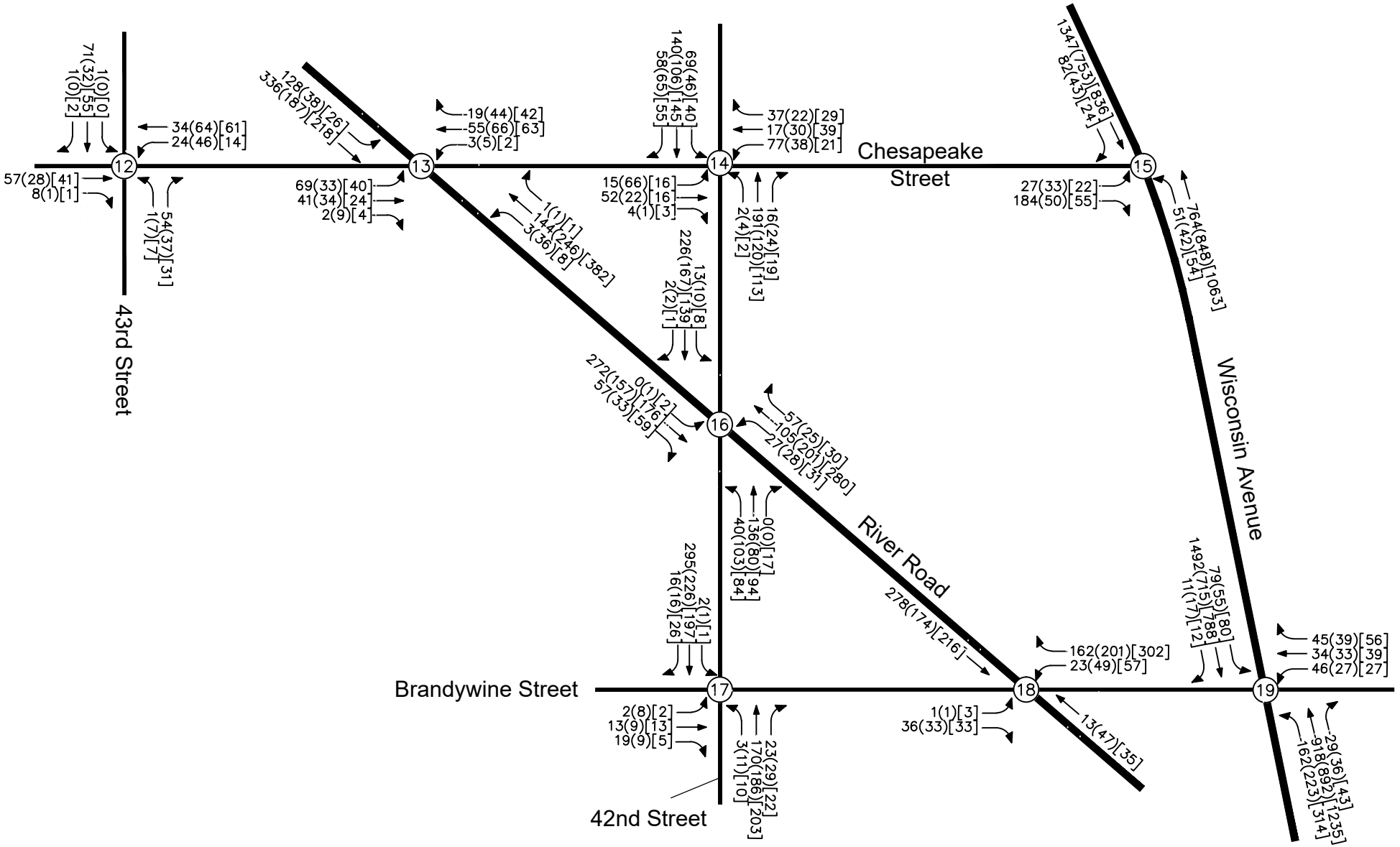


Figure 26B
2021 Total Future Traffic Forecasts with TDM Plan

Georgetown Day School
Washington, DC

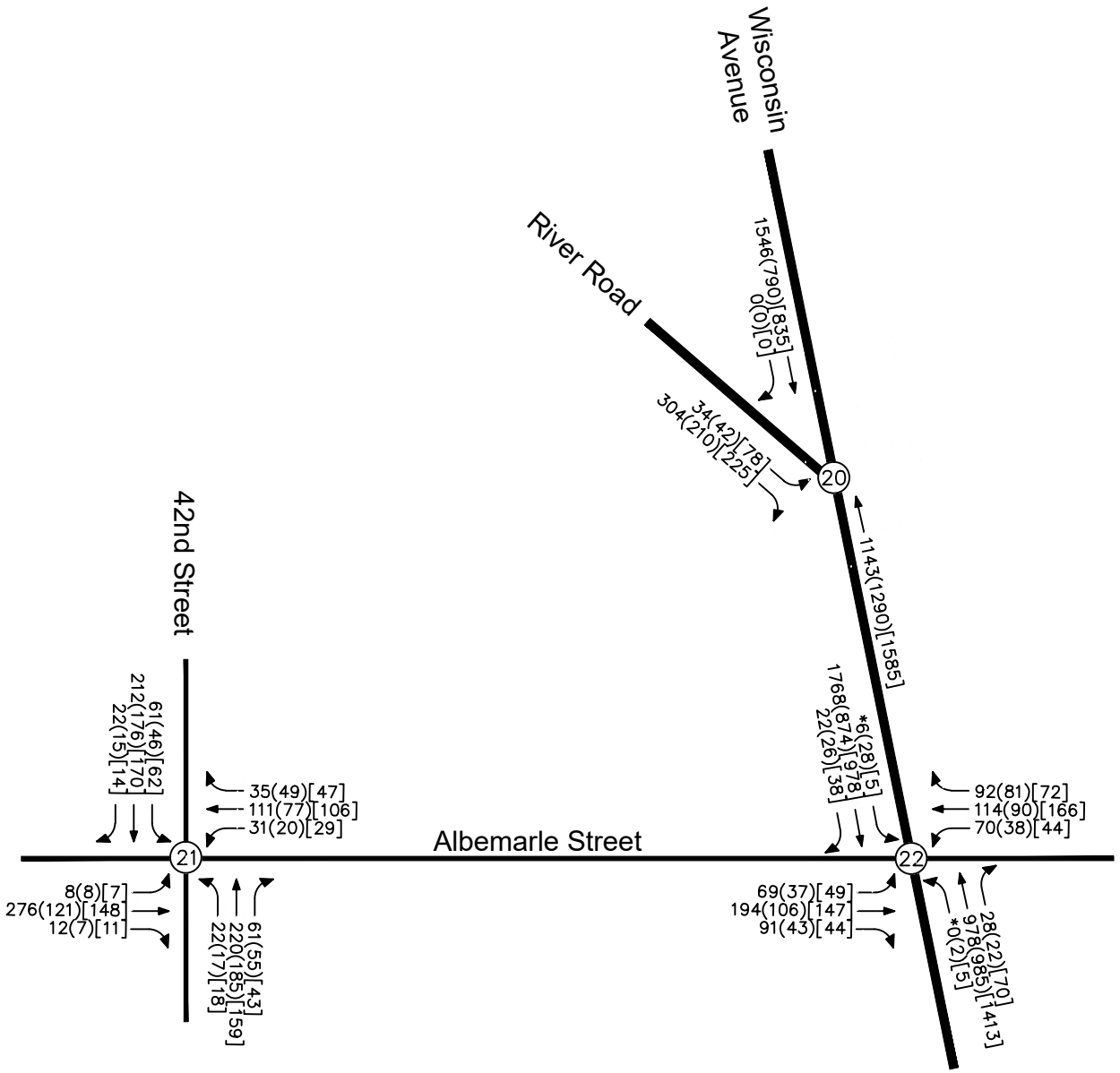


Figure 26C
2021 Total Future Traffic Forecasts with TDM Plan

*Movements prohibited during AM and PM peak hours.

AM Peak Hour 000 | PM School Peak Hour (000) | PM Peak Hour [000]

NORTH

Georgetown Day School
Washington, DC

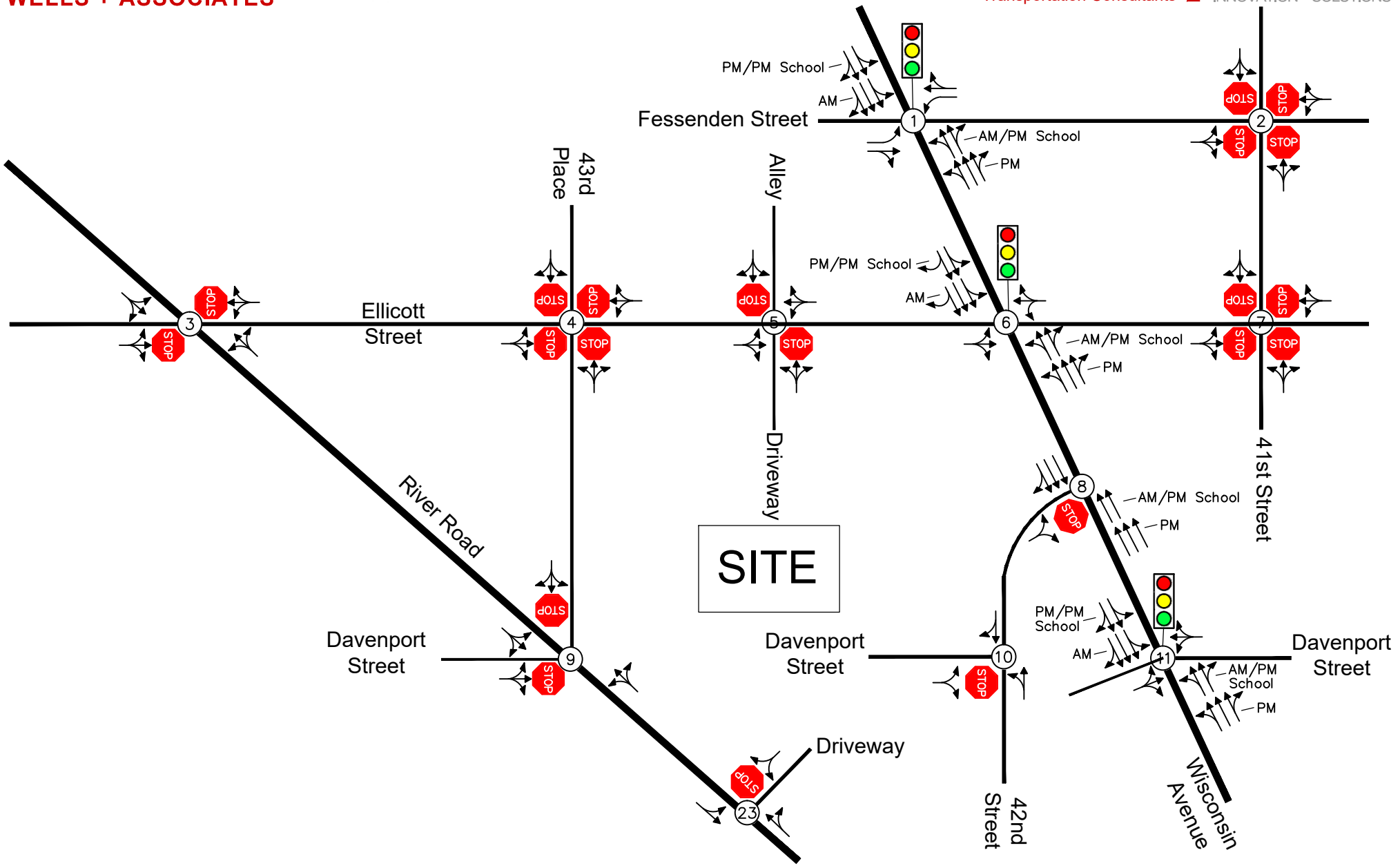


Figure 27A
Future Lane Use and Traffic Control

Georgetown Day School
Washington, DC

Represents One Travel Lane
Signalized Intersection
Stop Sign

NORTH

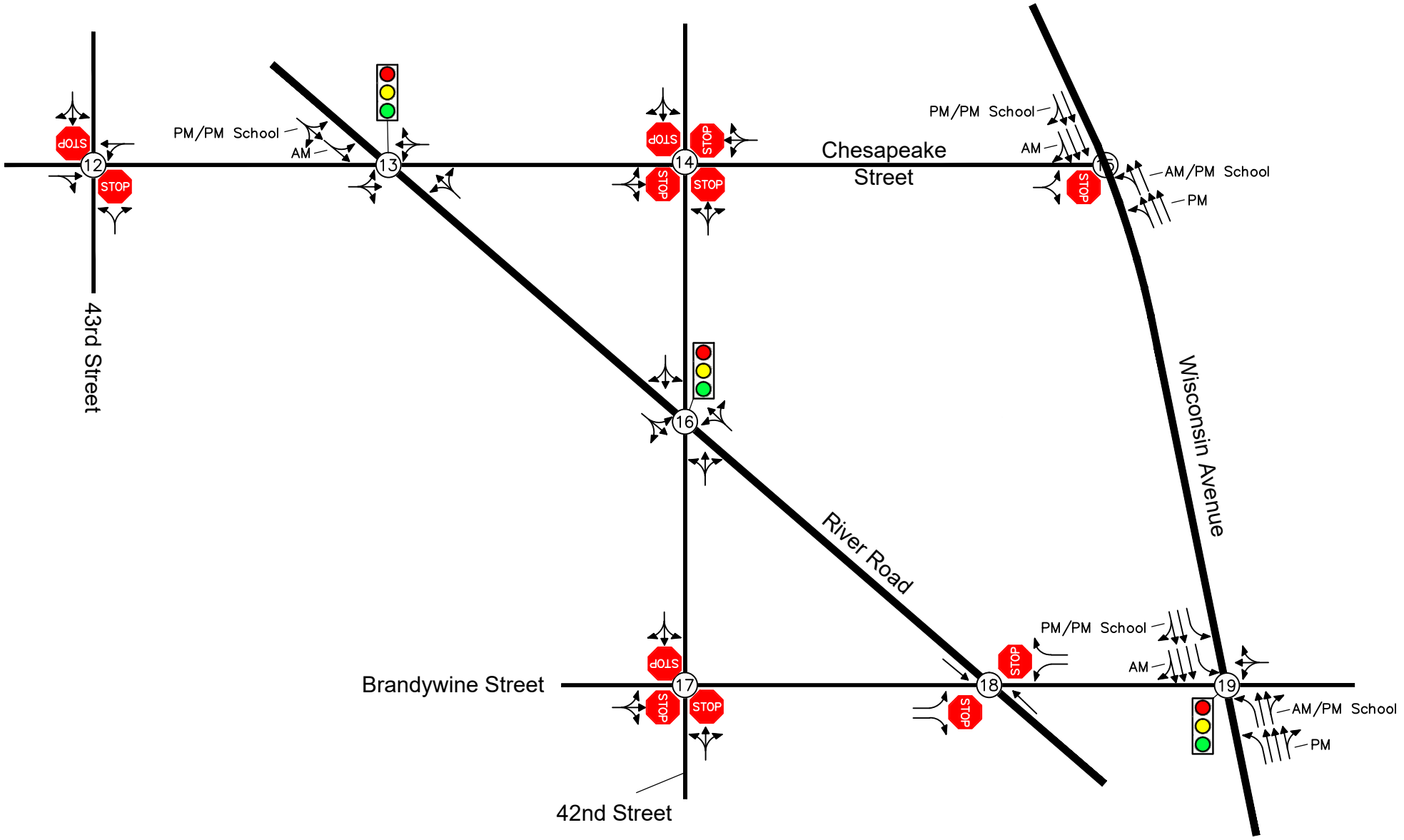


Figure 27B
Future Lane Use and Traffic Control

Georgetown Day School
Washington, DC

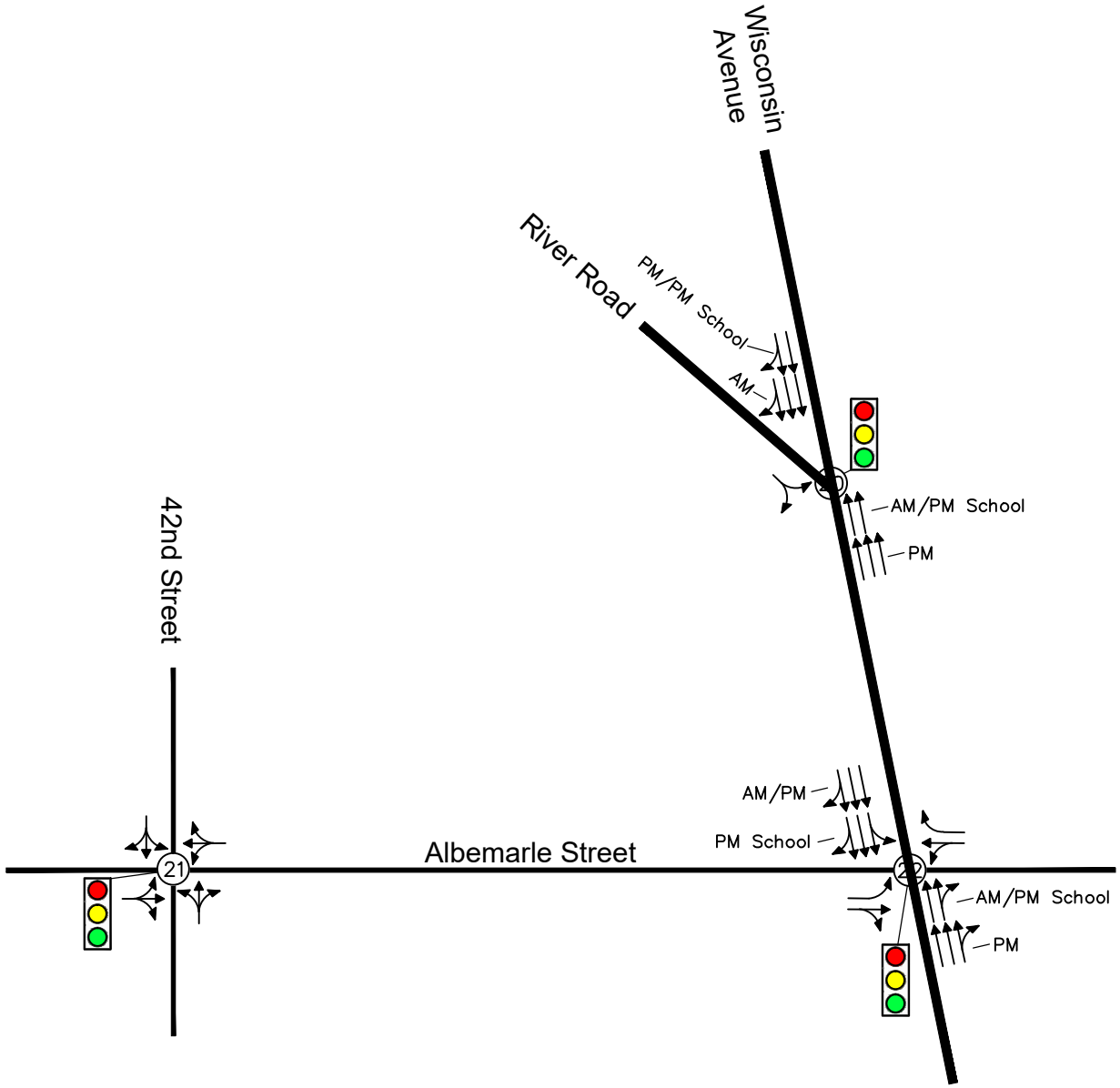


Figure 27C
Future Lane Use and Traffic Control

Georgetown Day School
Washington, DC

Represents One Travel Lane
Signalized Intersection
Stop Sign

NORTH