

Regional Bus Staging, Layover, and Parking Location Study

presented to

TPB Technical Committee

presented by

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Transportation leadership you can trust.



Study Overview

- **Develop recommendations for regional bus/motorcoach staging, layover and parking within the core areas of D.C. and Arlington**
 - » **Analyze existing conditions and future demand**
 - » **Screen potential bus facility locations and conduct a suitability analysis and evaluation**
 - » **Develop a list of recommended sites for further investigation and advancement**
- **Key issues to address:**
 - » **Commuter bus afternoon staging**
 - » **Mid-day and long-term bus parking**

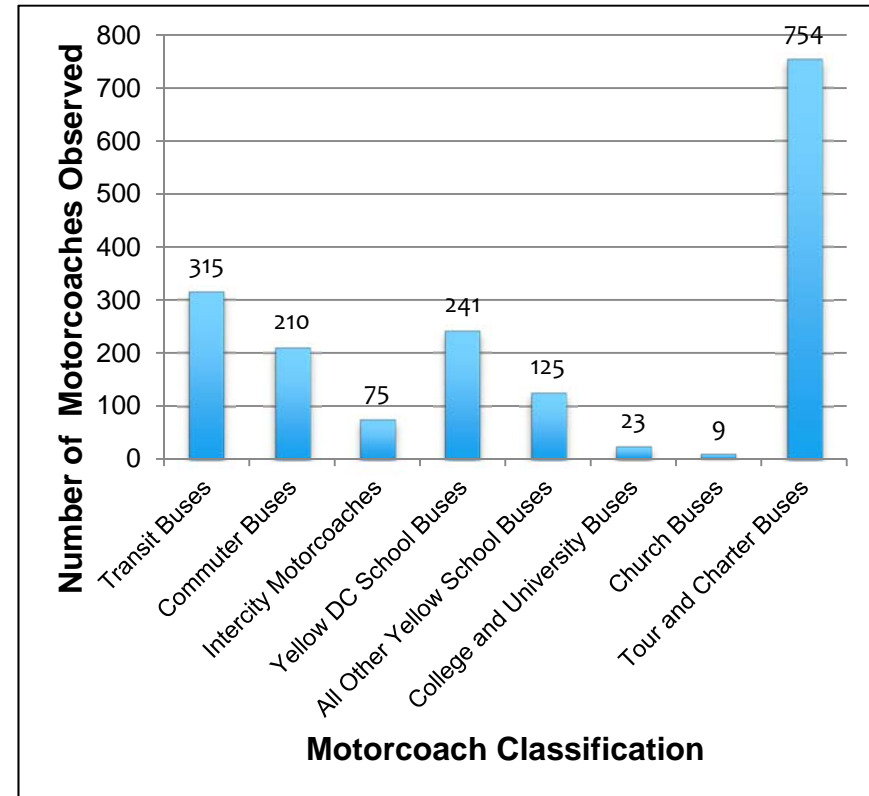
Types of Bus Services in the Core

- Fixed-route transit
- Commuter bus
- Tour/charter
- Intercity
- Sightseeing
- Employee shuttle



DC Motorcoach Counts

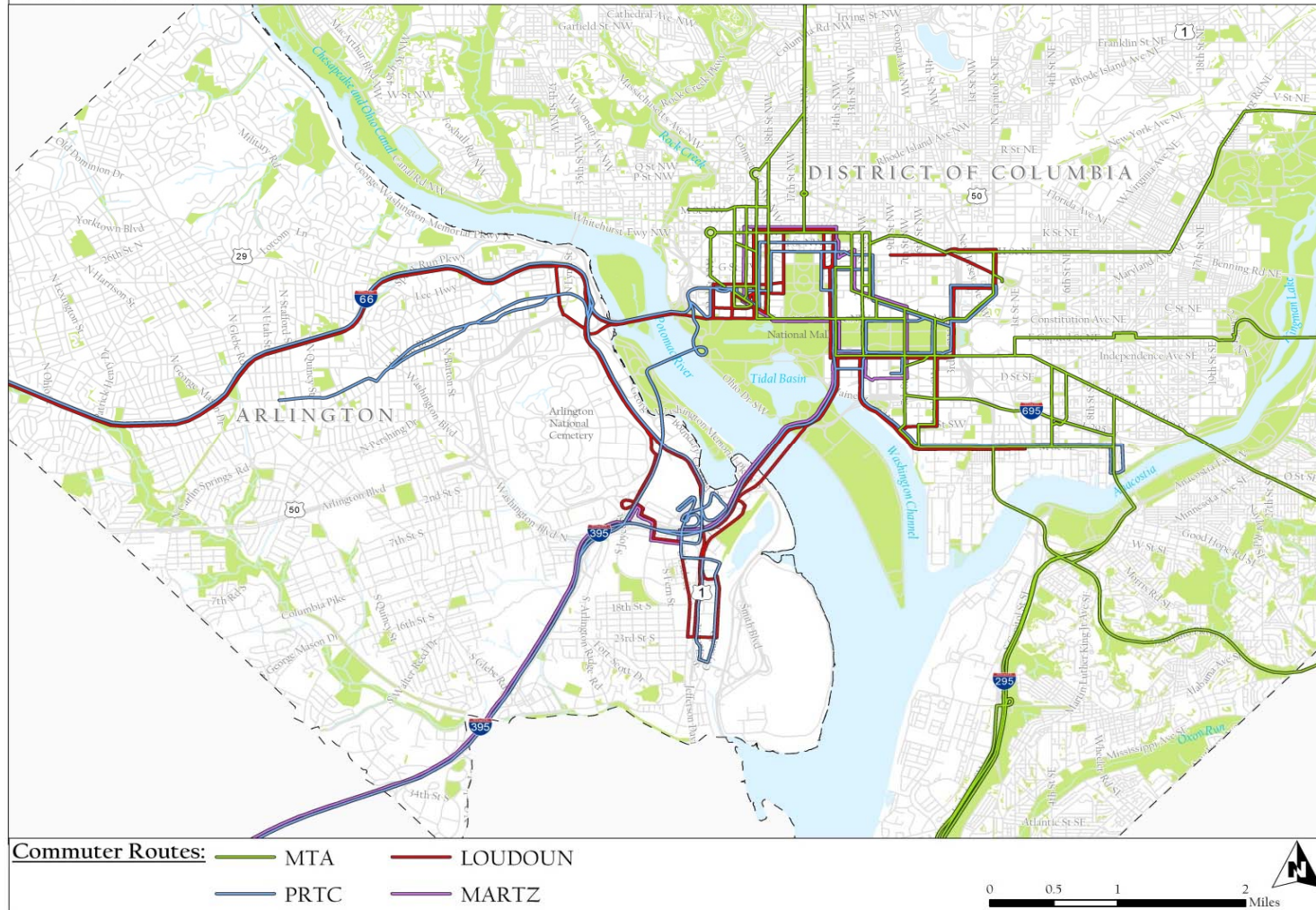
- **1,900 motorcoaches observed**
Approximately 1,100 of the observed motorcoaches require parking (611 spaces capacity in the city)
- **The three key entry points with the highest volume of motorcoaches**
 - » Kenilworth Avenue (I-295) (305 motorcoaches),
 - » Theodore Roosevelt Bridge (258 motorcoaches), and
 - » 14th Street Bridge (245 motorcoaches)



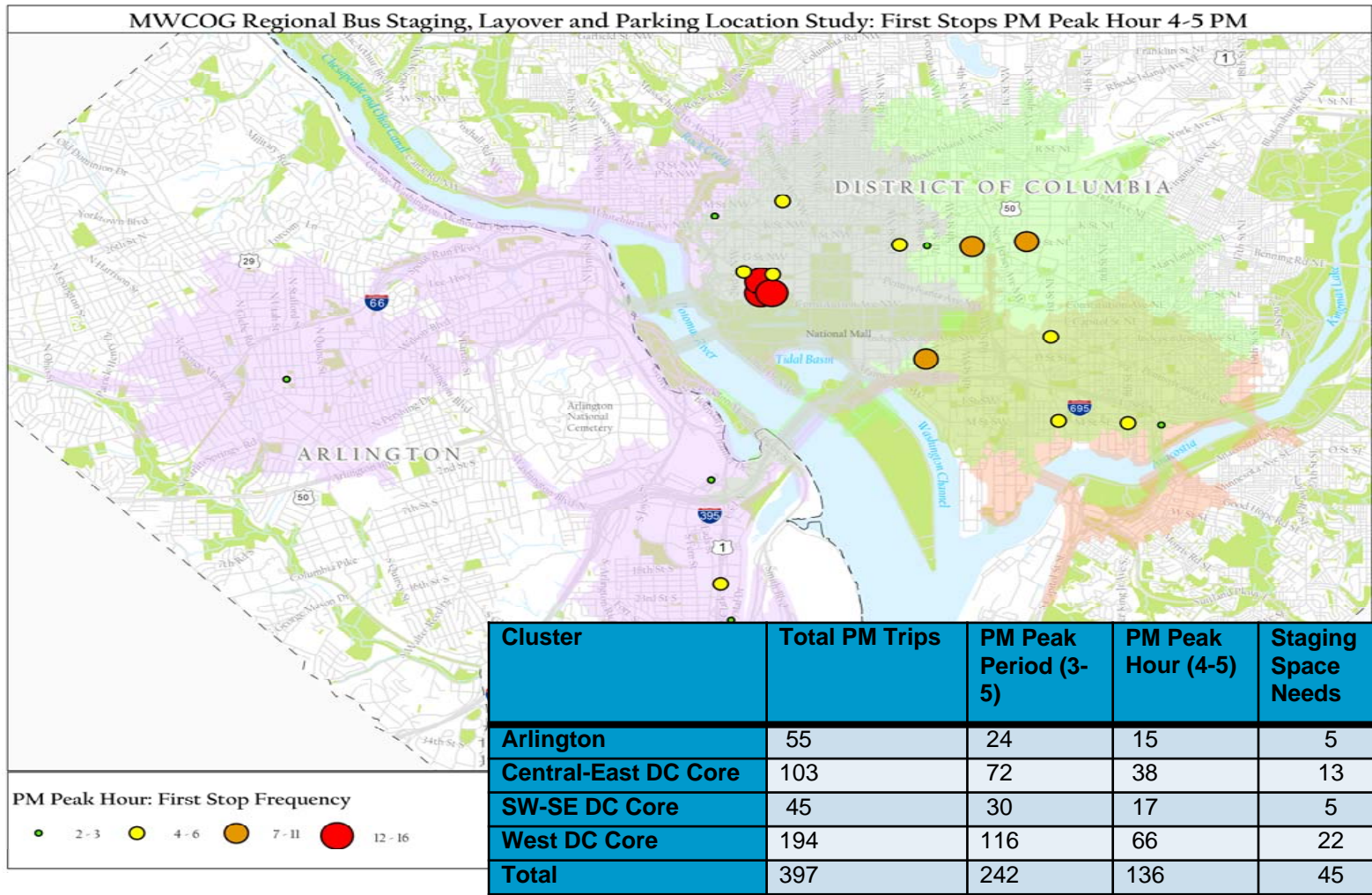
Source: District of Columbia Motorcoach Volume Data, DDOT (2012)

Existing Commuter Bus Routes

EXISTING COMMUTER BUS SERVICE



Commuter Bus Stops – PM Peak Hour Frequency at First Stop Locations



Tour/Charter Bus – Existing & Future Parking

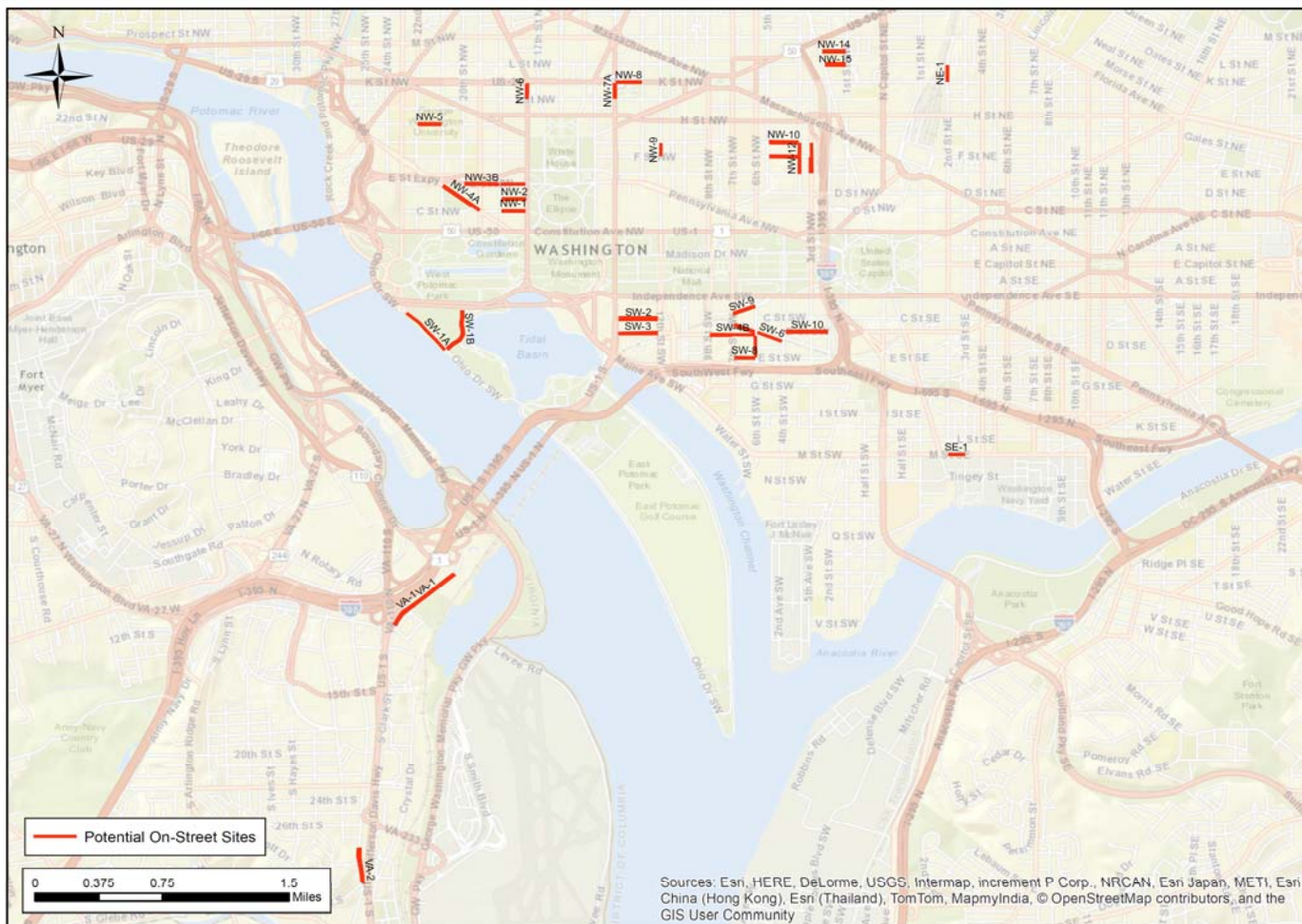


- Existing parking demand of roughly 900 buses per day (DC Motorcoach Action Plan)
- Over 900 existing bus parking spaces, but most not close to largest tour/charter bus destination – National Mall
- Future growth in visitors to core attractions expected to increase demand to roughly 1,100 buses per day

On-Street/Staging Site Evaluation Criteria

Criteria	5 (High)	4	3	2	1 (Low)	Weight
1. Site Size	> 10 buses > 600 ft	7-10 buses 420-600 ft	3-7 buses 180-420 ft	1-3 buses 60-180 ft	< 1 bus < 60 ft	5%
2. Site Land Use	Surface parking	Public ROW		Developed/ vacant	Undeveloped/ park	20%
3. Site Availability	Existing metered parking		Striped shoulders		Travel lanes	20%
4. Travel Time to First Stop	< 5 minutes	5-7 minutes	7-10 minutes	10-15 minutes	> 15 minutes	40%
5. Site Connectivity/ Ease of Access	Convenient (< 5 min from freeway, minimal intersections and turns)		Challenging (5-10 min. from fwy, some ints/ turns)		Difficult (>10 min from fwy, many ints/turns)	15%

On-Street Sites under Final Consideration for Commuter Bus Staging



On-Street Site Implementation Options

- **Traditional Street Parking**
- **Parking in Tour Bus Zones**
- **Parking in Food Truck Zones**
- **Parking along National Park Service roadways**

Recommended On-Street Sites

Site Number	Neighborhood	Site	Weighted Ranking
NW-3B	Foggy Bottom	E St NW between 18 th & 20 th St NW, Eastbound	5.0
NW-3A	Foggy Bottom	E St NW between 17 th & 18 th St NW, Eastbound	5.0
NW-4A	Foggy Bottom	Along Virginia Avenue NW between 19 th & 21 st St NW	5.0
NW-4B	Foggy Bottom	Along Virginia Avenue NW between 20 th & 21 st St NW	4.9
NW-1	Foggy Bottom	C St NW between 17 th & 18 th St NW, Westbound	4.8
NW-2	Foggy Bottom	D St NW between 17 th & 18 th St NW	4.8
SW-7	L'Enfant	6 th St SW between E & D St SW, Southbound	4.1
SW-2	Engraving	C St SW between 12 th & 14 th St SW	4.0
SW-3	Engraving	D St SW between 12 th & 14 th St SW	4.0
SW-4A	Engraving	D St SW between 7 th & 9 th St SW, Eastbound	3.9
SW-4B	Engraving	D St SW between 6 th & 9 th St SW, Westbound	3.9
SW-8	L'Enfant	E St between 6 th & 7 th St SW	3.9
SW-5	Engraving	Virginia Ave SW WB between 6 th & 7 th St SW	3.9
SW-6	Engraving	Virginia Ave SW WB between 4 th & 6 th St SW, Westbound	3.9
NW-3B	Foggy Bottom	E St NW between 18 th & 20 th St NW, Eastbound	5.0

Recommended On-Street Sites

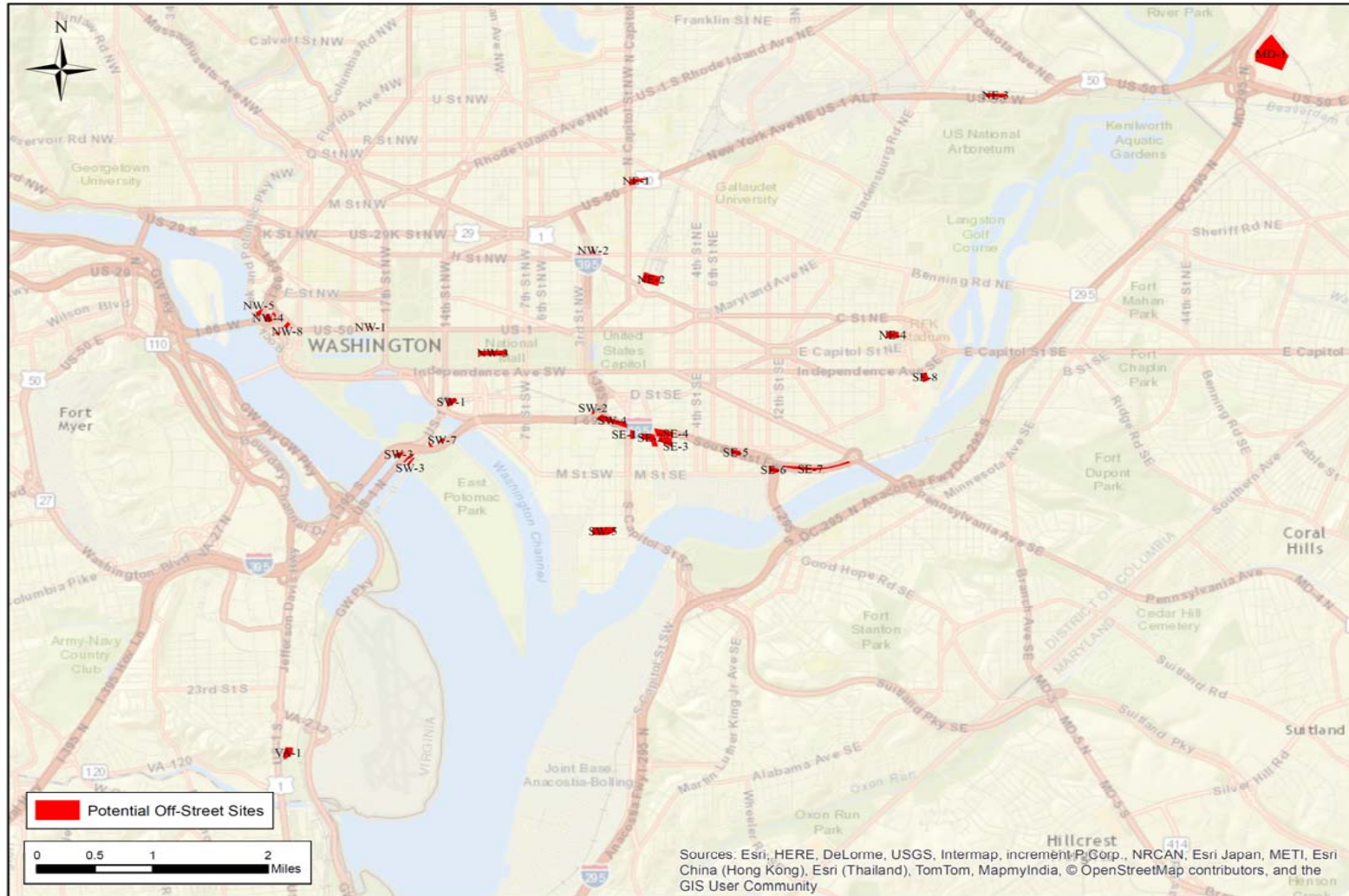
Estimated Planning-Level Annual Costs

Site Number	Neighborhood	Site	Weighted Ranking	Length of Space	Parking Zone	Bus Spaces ¹⁶	Estimated Annual Costs ¹⁵		
							11.5 hours/day	6 hours/day	3 hours/day
NW-3B	Foggy Bottom	E St NW between 18 th & 20 th St NW, Eastbound	5.0	800 ft	Premium	13	\$304,200	\$158,713	\$79,357
NW-3A	Foggy Bottom	E St NW between 17 th & 18 th St NW, Eastbound	5.0	575 ft	Premium	9	\$210,600	\$109,878	\$54,939
NW-4A	Foggy Bottom	Along Virginia Avenue NW between 19 th & 21 st St NW	5.0	800 ft	Premium	13	\$304,200	\$158,713	\$79,357
NW-4B	Foggy Bottom	Along Virginia Avenue NW between 20 th & 21 st St NW	4.9	400 ft	Premium	6	\$140,400	\$73,252	\$36,626
NW-1	Foggy Bottom	C St NW between 17 th & 18 th St NW, Westbound	4.8	575 ft	Premium	9	\$210,600	\$109,878	\$54,939
NW-2	Foggy Bottom	D St NW between 17 th & 18 th St NW	4.8	575 ft	Premium	9	\$210,600	\$109,878	\$54,939
SW-7	L'Enfant	6 th St SW between E & D St SW, Southbound	4.1	475 ft	Premium	7	\$163,800	\$85,461	\$42,730
SW-2	Engraving	C St SW between 12 th & 14 th St SW	4.0	950 ft	Premium	15	\$351,000	\$183,130	\$91,565
SW-3	Engraving	D St SW between 12 th & 14 th St SW	4.0	950 ft	Premium	15	\$351,000	\$183,130	\$91,565
SW-4A	Engraving	D St SW between 7 th & 9 th St SW, Eastbound	3.9	750 ft	Premium	12	\$280,800	\$146,504	\$73,252
SW-4B	Engraving	D St SW between 6 th & 9 th St SW, Westbound	3.9	1,000 ft	Premium	16	\$374,400	\$195,339	\$97,670
SW-8	L'Enfant	E St between 6 th & 7 th St SW	3.9	1,150 ft	Premium	9	\$210,600	\$109,878	\$54,939
SW-5	Engraving	Virginia Ave SW WB between 6 th & 7 th St SW	3.9	500 ft	Premium	7	\$163,800	\$85,461	\$42,730
SW-6	Engraving	Virginia Ave SW WB between 4 th & 6 th St SW, Westbound	3.9	475 ft	Premium	8	\$187,200	\$97,670	\$48,835

Off-Street/Parking Site Evaluation Criteria

Criteria	5 (High)	4	3	2	1 (Low)	Weight
1. Site Size	> 150 buses > 3 acres	100-150 buses 2 – 3 acres	50-100 buses 1 – 2 acres	25-50 buses 0.5 – 1 acre	< 25 buses < 0.5 acre	25%
2. Site Land Use	Surface parking	Public ROW		Developed/ vacant	Undeveloped/ park	10%
3. Adjacent Land Use	Surface parking	Public ROW		Developed/ vacant	Undeveloped/ park	10%
4. Site Availability	Public land – clear title, recent survey, definitely available	Public land – clear title, recent survey, possible available	Private land – clear title, recent survey, possibly available	Private land – uncertain title/ boundaries; multiple owners	Private land – clear or unclear title, private owner/seller not interested	25%
5. Planned Development	No		Maybe		Yes	10%
6. Travel Time to National Mall	< 5 minutes	5-7 minutes	7-10 minutes	10-15 minutes	> 15 minutes	20%

Off-Street Sites under Final Consideration for Mid-Day/Long-Term Parking



Off-Street Implementation Options

- **Off-Street Surface Parking**
- **Off-Street Structured Parking**
- **Off-Street Underground Parking**
- **National Park Service lots**
- **Lots owned by private individuals/companies**

Recommended Off-Street Sites

Site Number	Neighborhood	Site	Weighted Ranking
SE-2	South Capitol	Lot W of New Jersey Ave SE at Southeast Freeway	4.2
SE-3	South Capitol	Parking under Southeast Freeway between 2nd St to NJ Ave SE	4.0
SW-6	Navy Yard	Buzzard Point, bounded by T, V, 1 st and 2 nd St	3.7
NW-3	National Mall	National Mall Underground Garage	3.5
SW-5	Navy Yard	Buzzard Point, along Potomac Ave SW	3.5
MD-1	Cheverly	Industrial lots near US 50 & Kenilworth	3.3
NE-4	RFK	RFK Stadium Parking Lot along Constitution Ave NE	3.3
SE-4	South Capitol	Parking under SE Freeway between 8th St SE to 7th St SE	3.3
NE-2	NoMa	Union Station Parking Garage	3.2
NW-1	Foggy Bottom	Virginia Ave at 18 th Street NW	3.1
SE-1	South Capitol	Vacant Parking Lot under Southeast Freeway East of South Capitol St SW	3.1
SE-7	RFK	RFK Stadium Parking Lot	3.1
NW-4	Kennedy Center	Along Potomac River Fwy and I-66 Intersection	3.1
SW-4	Federal Center	Under Southeast Freeway from South Capitol St SW to 3rd St SW	3.0
NW-2	NoMa	H St NW between New Jersey Ave and 2 nd Ave NW	3.0

Recommended Off-Street Sites

Estimated Planning-Level Capital/Construction Costs

Site Number	Neighborhood	Site	Weighted Ranking	Acreage	Land Cost (at \$3 mil/acre) ¹⁷	Potential Bus Spaces: Surface ¹⁸	Potential Bus Spaces: Structure ¹⁹	Construction Cost: Surface ²⁰	Construction Cost: Structure ²¹
SE-2	South Capitol	Lot W of New Jersey Ave SE at Southeast Freeway	4.2	6.1 acres	\$18.3 million	122	488	\$122,000	\$24,400,000
SE-3	South Capitol	Parking under Southeast Freeway between 2nd St to NJ Ave SE	4.0	6.0 acres	\$18 million	120	480	\$120,000	\$24,000,000
SW-6	Navy Yard	Buzzard Point, bounded by T, V, 1 st and 2 nd St	3.7	8.6 acres	\$25.8 million	172	688	\$172,000	\$34,400,000
NW-3	National Mall	National Mall Underground Garage	3.5	8.2 acres	\$24.6 million	n/a	200	n/a	\$200,000,000 ⁺²²
SW-5	Navy Yard	Buzzard Point, along Potomac Ave SW	3.5	9.0 acres	\$27 million	180	720	\$180,000	\$36,000,000
MD-1	Cheverly	Industrial lots near US 50 & Kenilworth	3.3	3.9 acres	\$11.7 million	78	312	\$78,000	\$15,600,000
NE-4	RFK	RFK Stadium Parking Lot along Constitution Ave NE	3.3	4.1 acres	\$12.3 million	82	328	\$82,000	\$16,400,000
SE-4	South Capitol	Parking under Southeast Freeway between 8th St SE to 7th St SE	3.3	2.4 acres	\$7.2 million	48	192	\$48,000	\$9,600,000
NE-2	NOMA	Union Station Parking Garage	3.2	9.0 acres	\$27 million	180	720	\$180,000	\$36,000,000
NW-1	Foggy Bottom	Virginia Ave at 18 th Street NW	3.1	0.2 acres	\$0.6 million	4	16	\$4,000	\$800,000
SE-1	South Capitol	Vacant Parking Lot under Southeast Freeway East of South Capitol St SW	3.1	1.8 acres	\$5.4 million	36	144	\$36,000	\$7,200,000
SE-7	RFK	RFK Stadium Parking Lot	3.1	2.8 acres	\$8.4 million	56	224	\$56,000	\$11,200,000
NW-4	Kennedy Center	Along Potomac River Fwy and I-66	3.1	5.2 acres	\$15.6 million	104	416	\$104,000	\$20,800,000
SW-4	Federal Center	Under Southeast Freeway from South Capitol St SW to 3rd St SW	3.0	8.0 acres	\$24 million	160	640	\$160,000	\$32,000,000
NW-2	NOMA	H St NW between New Jersey Ave and 2 nd Ave NW	3.0	0.8 acres	\$2.4 million	16	64	\$16,000	\$3,200,000

Next Steps

- **Finalize study report**

- **On-Street Staging**
 - » **Further investigation on permitting of shared use locations**
 - » **Review and discussion with DDOT and NPS on the permit process and parking revenue impacts for on-street sites**
 - » **Site approvals and potential agreement(s) on revenue subsidy**

- **Off-Street Parking**
 - » **Detailed real estate scan of the most promising sites to review site ownership and development status**
 - » **Further investigation of the financing and management options for advancing a central bus parking facility**