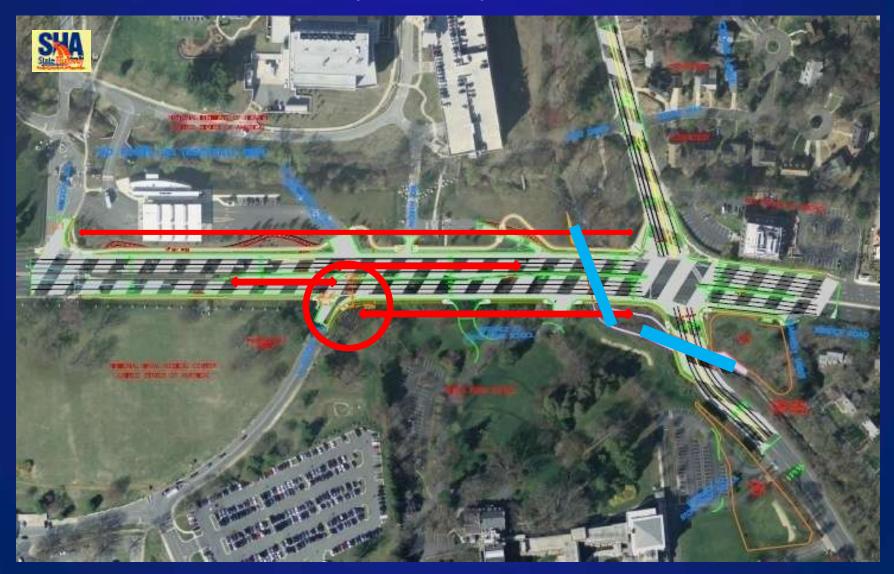
BRAC
Transportation Investment Priorities

Tier	Intersection / Project	Phases	Federal Cost	State Cost	County Cost	Undetermined source	Total Cost
1	Md 355 @ Cedar Lane	1 and 2		\$ 25,000,000			\$25,000,000
1	Md 185 @ Jones Bridge Road	1		\$ 4,000,000			\$4,000,000
	emercy and encountry interest and on						7 7 7 7 7
1	Cedar Lane, Md 355, Jones Bridge Rd.		\$750,000		\$5,000,000		\$5,750,000
	and signing	1					
	Preliminary engineering and						
1	Environmental Assessment for Multi-	N/A			\$300,000		\$300,000
	modal Underpass from Metro Station to	14075			400,000		φοσο,σσσ
1	Md 355 @ Jones Bridge Road	1A				See note Tier 1.	
_	Total Her I	IA	***********	\$28,000,000	221 2001 1000	occitote riei i.	\$39,000,000
	Multi-modal underpass from Metro			420,000,000	00,000,000		
2	Station to NNMC	N/A	\$40,000,000				\$40,000,000
2	Md 355 @ Jones Bridge Road	1B	\$5,000,000				\$5,000,000
2	Md 185 @ Jones Bridge Road	3	\$6,000,000				\$8,000,000
	Md 187 @ Cedar including bikeway from						
2	Charles St. to NIH	1	\$7,000,000				\$7,000,000
	Total Tier 2		\$58,000,000	\$ -			\$58,000,000
Total: (I	mmediate and Intermediate Range)		\$58,750,000	\$29,000,000	\$5,300,000	\$0	\$93,050,000
3	Md 355 @ Cedar	3				\$22,000,000	\$22,000,000
3	Md 355 @ Cedar	4				\$13,000,000	\$13,000,000
3	Md 355 @ Cedar	5				\$15,000,000	\$15,000,000
3	Md 185 @ Jones Bridge Road	2				\$14,000,000	\$14,000,000
	Total Tier 3 (Intermediate and Long Range	e)	\$0	\$0	\$0	\$64,000,000	\$64,000,000
4	Study Possible Direct Access from	N/A				N/A	N/A
	I-495 to NMMC (Very long range)	1975				1071	
4	Study other long range transit solutions.	N/A				N/A	N/A
	See note on Tier 4.						
	Fotal (2009 dollars)						\$157,050,000
NOTES		dina francisco	n an formalism fairte				
	Tier 1. Projects that can be done with exis				incolorum anto d 25 A		
	Phase 1A, at JBR, refers to an evaluation of a dynamic left turn signal that would be implemented if technically feasible.						
	Tier 2. Projects to be done assuming success in getting TIGER grant approvals and DAR funding  Tier 3. Priority for explorer that could be added if additional funding the good TIGER, becomes available.						
	Tier 3. Priority for projects that could be added if additional funding, beyond TIGER, becomes available.						
$\vdash$	Tier 4. Projects to study possible additional solutions including, direct access from I-495; Interchange of Md 355 @ Cedar, bus access improvements, Metro core capacity improvements, etc. Not funded.						
	-	capacity im	provements, etc.	NOL IUNGEO.			
	BRAC Final Tiers 9-25-09						

# Tier 1: MD 355 at Cedar Lane (Phase 1 & 2) (\$25 M)



# Tier 1: MD 355 at Cedar Lane (Phase 1 & 2) (\$25 M)



#### Tier 1 SHA Contracts

### MD 355 at Cedar Lane (Phases 1 & 2), in the year 2011, proposed modifications are projected to:

- Reduce vehicle delay by 36% during the AM peak period from 136 sec/veh to 87 sec/veh
- Reduce vehicle delay by 46% during the PM peak period from 168 sec/veh to 90 sec/veh
- Improve the volume-to-capacity ratio during the AM peak period by 17% from 1.35 to 1.12
- Improve the volume-to-capacity ratio during the PM peak period by 16% from 1.43 to 1.20
- The proposed improvements at MD 355 and Cedar Lane would be expected to provide operations as-good or better than pre-BRAC conditions through the year 2022, despite the additional traffic generated from the BRAC action and other local developments.

# Tier 1 SHA Contracts MD 355 at Cedar Lane (Phases 1 & 2) Schedule:

Begin R/W Acquisitions: March 2010

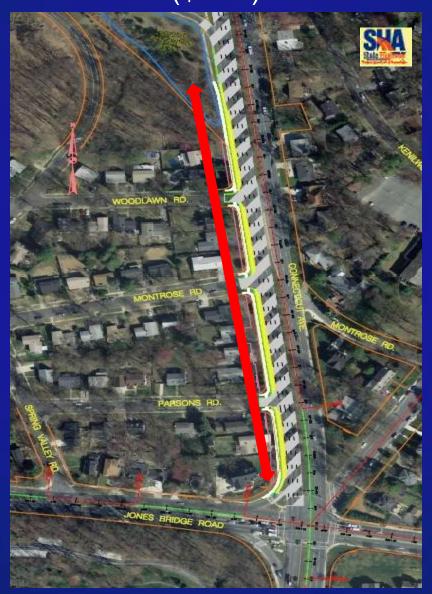
Advertise: April 2011

Begin Construction: June 2011

Complete Construction: Fall 2012

Tier 1: MD 185 at Jones Bridge Road (Phase 1)

(\$4 M)



#### Tier 1 SHA Contracts

### MD 185 at Jones Bridge Road (Phases 1), in the year 2011, proposed modifications are projected to:

- Reduce vehicle delay by 41% during the AM peak period from 146 sec/veh to 86 sec/veh
- Reduce vehicle delay by 2% during the PM peak period from 194 sec/veh to 190 sec/veh
- Improve the volume-to-capacity ratio during the AM peak period by 19% from 1.29 to 1.05
- Improve the volume-to-capacity ratio during the PM peak period by 0% from 1.40 to 1.40
- The proposed improvements at MD 185 and Jones Bridge Road would be expected to provide operations as-good or better than pre-BRAC conditions through the year 2018 during the am peak period, despite the additional traffic generated from the BRAC action and other local developments.

### Tier 1 SHA Contracts

#### MD 185 at Jones Bridge Road (Phase 1) Schedule:

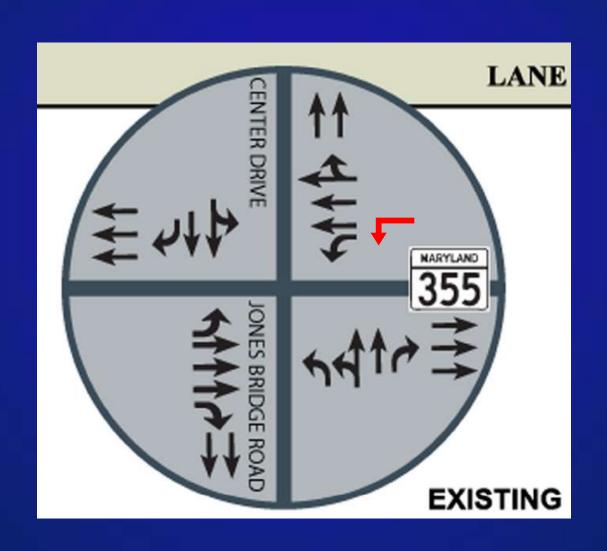
Begin R/W Acquisitions: February 2010

Advertise: August 2010

Begin Construction: November 2010

Complete Construction: Fall 2011

# Tier 1: MD 355 at Jones Bridge Road (Phase 1A) Dynamic Lane Control



#### Tier 1 SHA Contracts

# MD 355 at Jones Bridge Road Dynamic Lane Controls (Phases 1A), in the year 2011, proposed modifications are projected to:

- Reduce vehicle delay by 51% during the PM peak period from 105 sec/veh to 52 sec/veh
- Improve the volume-to-capacity ratio during the PM peak period by 12% from 1.18 to 1.04
- The proposed improvements at MD 355 and Jones Bridge Road would be expected to provide operations as-good or better than pre-BRAC conditions through the year 2016 during the pm peak period, despite the additional traffic generated from the BRAC action and other local developments

Note: The Tier 1 improvements at this location do not change the existing operations during the AM peak period.

#### Tier 1 – Network Benefits

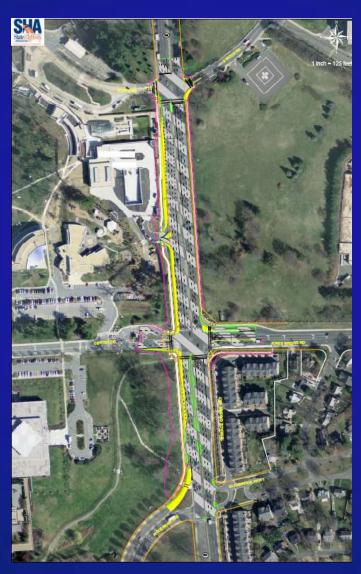
### The proposed Tier 1 modifications are projected to result in the following network benefits:

- Reduce emissions of carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), and volatile oxygen compounds (VOC) by 34% during the AM peak hour and by 11% during the PM peak hour compared to the No-Build condition
- Reduce fuel consumption by over 800 gallons each day during the peak hours, compared to the No-Build condition
- At \$2.50 per gallon, this reduction in fuel consumption equates to a total user cost savings of approximately \$1.3 million per year

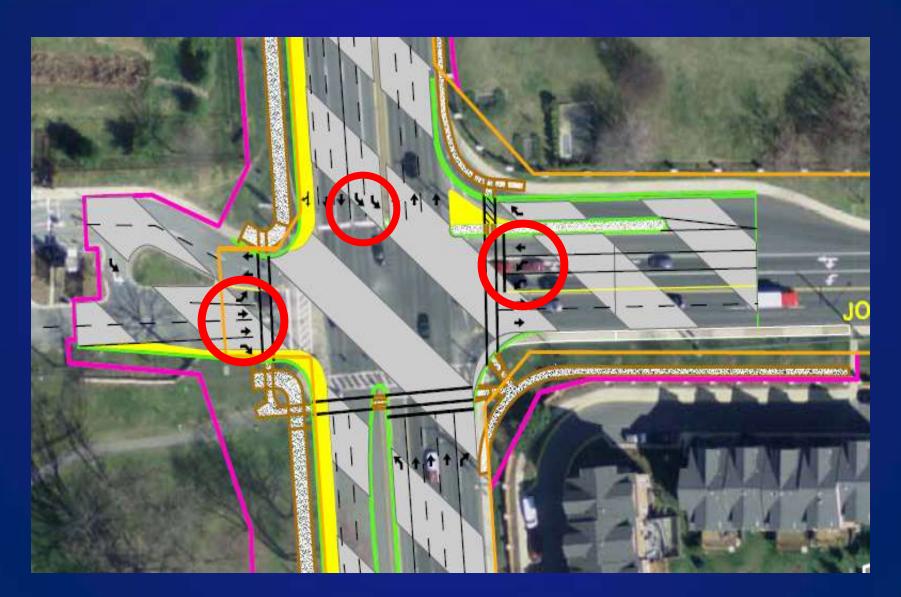
BRAC Transportation Investment Priorities

Tier	Intersection / Project	Phases	Federal Cost	State Cost	County Cost	Undetermined source	Total Cost
1	Md 355 @ Cedar Lane	1 and 2		\$ 25,000,000			\$25,000,000
1	Md 185 @ Jones Bridge Road	1		\$ 4,000,000			\$4,000,000
	Bikeway and Sidewalk Improvements on						
1	Cedar Lane, Md 355, Jones Bridge Rd.		\$750,000		\$5,000,000		\$5,750,000
	and signing	1					
	Preliminary engineering and						
1	Environmental Assessment for Multi-	N/A			\$300.000		\$300.000
'	modal Underpass from Metro Station to	N/A			\$300,000		\$300,000
	NNMC						
1	Md 355 @ Jones Bridge Road	1A				See note Tier 1.	
	Total Tier 1		\$750,000	\$29,000,000	\$5,300,000		\$35,050,000
2	Multi-modal underpass from Metro	N/A	\$40,000,000				\$40,000,000
	Station to NINIMO						
2	Md 355 @ Jones Bridge Road	1B	\$5,000,000				\$5,000,000
2	Md 185 @ Jones Bridge Road	3	\$6,000,000				\$8,000,000
2	Md 187 @ Cedar including bikeway from						
	Charles St. to NIH	1	\$7,000,000				\$7,000,000
Total: (I	mmediate and Intermediate Range)		\$58,750,000	\$29,000,000	\$5,300,000	\$0	\$93,050,000
3	Md 355 @ Cedar	3				\$22,000,000	\$22,000,000
3	Md 355 @ Cedar	4				\$13,000,000	\$13,000,000
3	Md 355 @ Cedar	5				\$15,000,000	\$15,000,000
3	Md 185 @ Jones Bridge Road	2				\$14,000,000	\$14,000,000
	Total Tier 3 (Intermediate and Long Range	e)	\$0	\$0	\$0	\$64,000,000	\$64,000,000
4	Study Possible Direct Access from	N/A				N/A	N/A
_	I-495 to NMMC (Very long range)	1900				IVA	1107
4	Study other long range transit solutions.	N/A				N/A	N/A
-	See note on Tier 4.	IN/A				IVA	IVA
	Total (2009 dollars)						\$157,050,000
NOTES							
	Tier 1. Projects that can be done with exis						
	Phase 1A, at JBR, refers to an evaluati					echnically feasible.	
	Tier 2. Projects to be done assuming success in getting TIGER grant approvals and DAR funding						
	Tier 3. Priority for projects that could be added if additional funding, beyond TIGER, becomes available.						
	Tier 4. Projects to study possible additional solutions including, direct access from I-495; Interchange of Md 355 @ Cedar,						
	bus access improvements, Metro core	capacity im	provements, etc.	Not funded.			
1	BRAC Final Tiers 9-25-09	l				1 1	I

# Tier 2: MD 355 at Jones Bridge Road (\$5 M)



# Tier 2: MD 355 at Jones Bridge Road (\$5 M)



### Tier 2 SHA Contracts

### MD 355 at Jones Bridge Road, in the year 2011, proposed modifications are projected to:

- Reduce vehicle delay by 36% during the AM peak period from 57 sec/veh to 37 sec/veh
- Reduce vehicle delay by 53% during the PM peak period from 105 sec/veh to 49 sec/veh
- Improve the volume-to-capacity ratio during the AM peak period by 17% from 0.95 to 0.79
- Improve the volume-to-capacity ratio during the PM peak period by 18% from 1.18 to 0.97
- The proposed improvements at MD 355 and Jones Bridge Road would be expected to provide operations as-good or better than pre-BRAC conditions through the year 2024, despite the additional traffic generated from the BRAC action and other local developments.

Tier 2: MD 185 at Jones Bridge Road (Phase 3) (\$6 M)

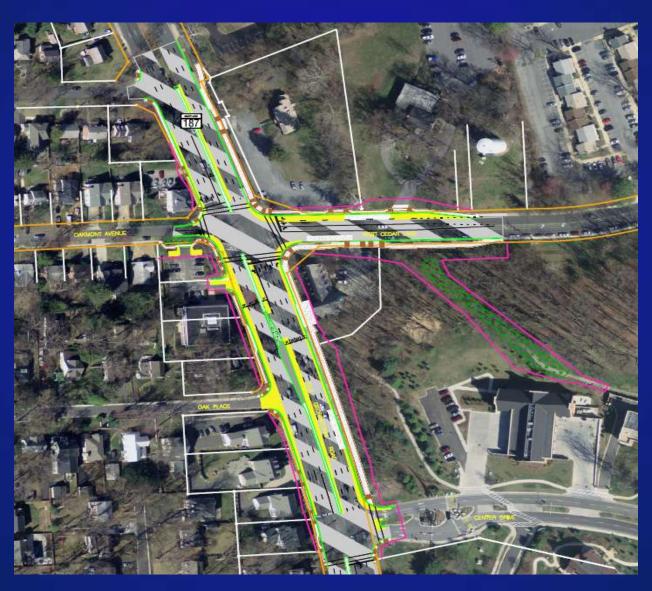


### Tier 2 SHA Contracts

### MD 185 at Jones Bridge Road (Phase 3), in the year 2011, proposed modifications are projected to:

- Reduce vehicle delay by 42% during the AM peak period from 146 sec/veh to 85 sec/veh
- Reduce vehicle delay by 24% during the PM peak period from 194 sec/veh to 148 sec/veh
- Improve the volume-to-capacity ratio during the AM peak period by 19% from 1.29 to 1.05
- Improve the volume-to-capacity ratio during the PM peak period by 13% from 1.40 to 1.22
- These proposed improvements at MD 185 and Jones Bridge Road would be expected to provide operations as-good or better than pre-BRAC conditions through the year 2018 during all peak periods, despite the additional traffic generated from the BRAC action and other local developments.

# Tier 2: MD 187 at Cedar Lane (\$7 M)



# Tier 2: MD 187 at Cedar Lane (\$7 M)



#### Tier 2 SHA Contracts

### MD 187 at Cedar Lane, in the year 2011, proposed modifications are projected to:

- Reduce vehicle delay by 12% during the AM peak period from 31 sec/veh to 27 sec/veh
- Reduce vehicle delay by 53% during the PM peak period from 83 sec/veh to 39 sec/veh
- Improve the volume-to-capacity ratio during the AM peak period by 9% from 0.87 to 0.79
- Improve the volume-to-capacity ratio during the PM peak period by 26% from 1.15 to 0.85
- These proposed improvements at MD 187 and Cedar Lane would be expected to provide LOS E or better operations through the year 2027, despite the additional traffic generated from the BRAC action and other local developments.

#### Tier 2 – Network Benefits

### The proposed Tier 2 modifications are projected to result in the following network benefits:

- Reduce emissions of carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), and volatile oxygen compounds (VOC) by 38% during the AM peak hour and by 18% during the PM peak hour compared to the No-Build condition
- Reduce fuel consumption by over 1,000 gallons each day during the peak hours, compared to the No-Build condition
- At \$2.50 per gallon, this reduction in fuel consumption equates to a total user cost savings of approximately \$1.6 million per year

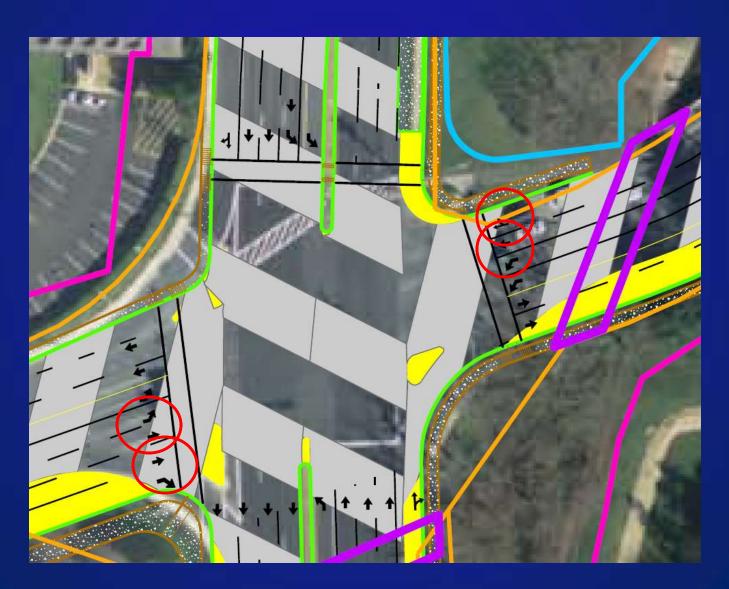
BRAC Transportation Investment Priorities

Tier	Intersection / Project	Phases	Federal Cost	State Cost	County Cost	Undetermined source	Total Cost	
1	Md 355 @ Cedar Lane	1 and 2		\$ 25,000,000			\$25,000,000	
1	Md 185 @ Jones Bridge Road	1		\$ 4,000,000			\$4,000,000	
	Bikeway and Sidewalk Improvements on							
1	Cedar Lane, Md 355, Jones Bridge Rd.		\$750,000		\$5,000,000		\$5,750,000	
	and signing	1						
	Preliminary engineering and							
1	Environmental Assessment for Multi-	N/A			\$300,000		\$300,000	
'	modal Underpass from Metro Station to	N/A			\$300,000		φ300,000	
	NNMC							
1	Md 355 @ Jones Bridge Road	1A				See note Tier 1.		
	Total Tier 1		\$750,000	\$29,000,000	\$5,300,000		\$35,050,000	
2	Multi-modal underpass from Metro	N/A	\$40,000,000				\$40,000,000	
	Station to NNMC	IN/A	\$40,000,000				\$40,000,000	
2	Md 355 @ Jones Bridge Road	1B	\$5,000,000				\$5,000,000	
2	Md 185 @ Jones Bridge Road	з	\$6,000,000				\$6,000,000	
2	Md 187 @ Cedar including bikeway from							
	Charles St. to NIH	1	\$7,000,000				\$7,000,000	
	Total Tier 2		\$58,000,000	\$ -			\$58,000,000	
rotal. (II	minediate and intermediate mange,		400,100,000	920,000,000	90,000,000	Ų.	900,000,000	
3	Md 355 @ Cedar	3				\$22,000,000	\$22,000,000	
3	Md 355 @ Cedar	4				\$13,000,000	\$13,000,000	
3	Md 355 @ Cedar	5				\$15,000,000	\$15,000,000	
3	Md 185 @ Jones Bridge Road	2				\$14,000,000	\$14,000,000	
4	Study Possible Direct Access from	N/A				N/A	N/A	
7	I-495 to NMMC (Very long range)	DV/C				IVA	IVO	
4	Study other long range transit solutions.	N/A				N/A	N/A	
4	See note on Tier 4.	N/A				IWA	INA	
	otal (2009 dollars)						\$157,050,000	
NOTES								
	Tier 1. Projects that can be done with exis	iting funding	g or funding fairly	secured.				
	Phase 1A, at JBR, refers to an evaluation of a dynamic left turn signal that would be implemented if technically feasible.							
	Tier 2. Projects to be done assuming success in getting TIGER grant approvals and DAR funding							
	Tier 3. Priority for projects that could be added if additional funding, beyond TIGER, becomes available.							
	Tier 4. Projects to study possible additional solutions including, direct access from I-495; Interchange of Md 355 @ Cedar,							
	bus access improvements, Metro core	capacity im	provements, etc.	Not funded.				
	BRAC Final Tiers 9-25-09							

# Tier 3: MD 355 at Cedar Lane (Phase 3) (\$22 M)



# Tier 3: MD 355 at Cedar Lane (Phase 3) (\$22 M)



# Tier 3: MD 355 at Cedar Lane (Phase 3) (\$22 M)



### Tier 3 SHA Contracts

### MD 355 at Cedar Lane (Phase 3), in the year 2011, proposed modifications are projected to:

- Reduce vehicle delay by 53% during the AM peak period from 136 sec/veh to 63 sec/veh
- Reduce vehicle delay by 61% during the PM peak period from 168 sec/veh to 65 sec/veh
- Improve the volume-to-capacity ratio during the AM peak period by 22% from 1.35 to 1.05
- Improve the volume-to-capacity ratio during the PM peak period by 20% from 1.43 to 1.15
- These proposed improvements at MD 3555 and Cedar Lane would be expected to provide operations as-good or better than pre-BRAC conditions through the year 2027, despite the additional traffic generated from the BRAC action and other local developments.

# Tier 3: MD 355 at Cedar Lane (Phase 4) (\$13 M)



#### Tier 3 SHA Contracts

### MD 355 at Cedar Lane (Phase 4), in the year 2011, proposed modifications are projected to:

- Reduce vehicle delay by 60% during the AM peak period from 136 sec/veh to 55 sec/veh
- Reduce vehicle delay by 67% during the PM peak period from 168 sec/veh to 56 sec/veh
- Improve the volume-to-capacity ratio during the AM peak period by 22% from 1.35 to 1.05
- Improve the volume-to-capacity ratio during the PM peak period by 27% from 1.43 to 1.04
- These proposed improvements at MD 3555 and Cedar Lane would be expected to provide operations as-good or better than pre-BRAC conditions through the year **2029**, despite the additional traffic generated from the BRAC action and other local developments.

# Tier 3: MD 355 at Cedar Lane (Phase 5) (\$15 M)

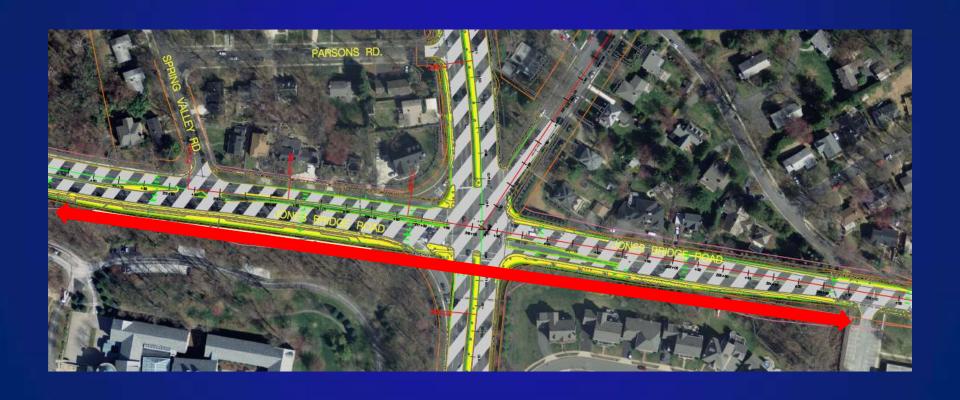


#### Tier 3 SHA Contracts

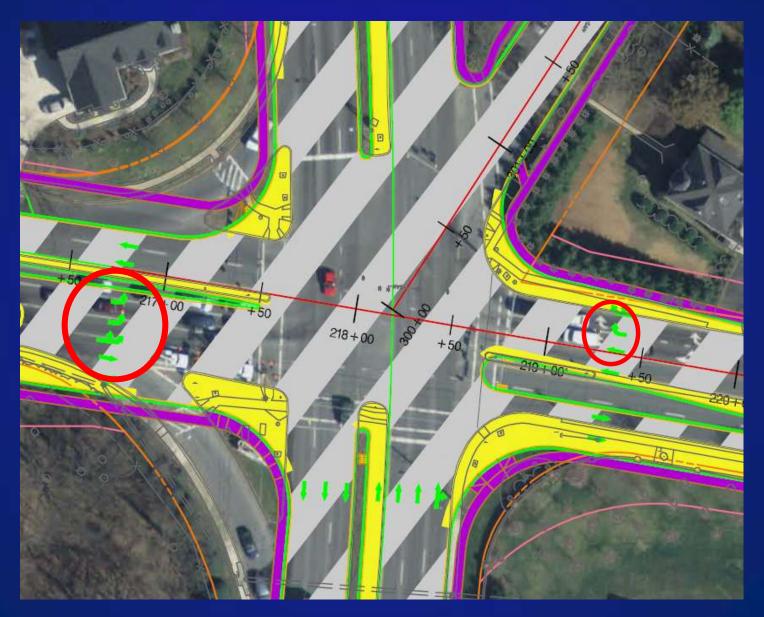
### MD 355 at Cedar Lane (Phase 5), in the year 2011, proposed modifications are projected to:

- Reduce vehicle delay by 60% during the AM peak period from 136 sec/veh to 55 sec/veh (same as Phase 4)
- Reduce vehicle delay by 67% during the PM peak period from 168 sec/veh to 56 sec/veh (same as Phase 4)
- Improve the volume-to-capacity ratio during the AM peak period by 22% from 1.35 to 1.05 (same as Phase 4)
- Improve the volume-to-capacity ratio during the PM peak period by 27% from 1.43 to 1.04 (same as Phase 4)
- Reduce queue lengths on SB MD 355 compared to Phase 4
- These proposed improvements at MD 3555 and Cedar Lane would be expected to provide operations as-good or better than pre-BRAC conditions through the year **2029**, despite the additional traffic generated from the BRAC action and other local developments.

### Tier 3: MD 185 at Jones Bridge Road (Phase 2) (\$14 M)



Tier 3: MD 185 at Jones Bridge Road (Phase 2) (\$14 M)



### Tier 3 SHA Contracts

### MD 185 at Jones Bridge Road (Phase 2), in the year 2011, proposed modifications are projected to:

- Reduce vehicle delay by 48% during the AM peak period from 146 sec/veh to 76 sec/veh
- Reduce vehicle delay by 54% during the PM peak period from 194 sec/veh to 89 sec/veh
- Improve the volume-to-capacity ratio during the AM peak period by 22% from 1.29 to 1.00
- Improve the volume-to-capacity ratio during the PM peak period by 25% from 1.40 to 1.05
- These proposed improvements at MD 185 and Jones Bridge Road would be expected to provide operations as-good or better than pre-BRAC conditions through the year 2024, despite the additional traffic generated from the BRAC action and other local developments.