

White Plains Rd

Traffic Calming

Bronx

June
2014



Commissioner Polly Trottenberg New York City Department of Transportation
Office of Research, Implementation & Safety
June 2nd, 2014 to Community Board 11



High Crash Corridor

**Top 10% in
terms of amount
of fatalities and
severe injuries***



*CB 11 Whites Plains Rd between Birchall Ave to E Tremont Ave

White Plains Rd Traffic Calming

Project Area

Safety Issues:
Why White Plains Rd

Solutions



Project Area

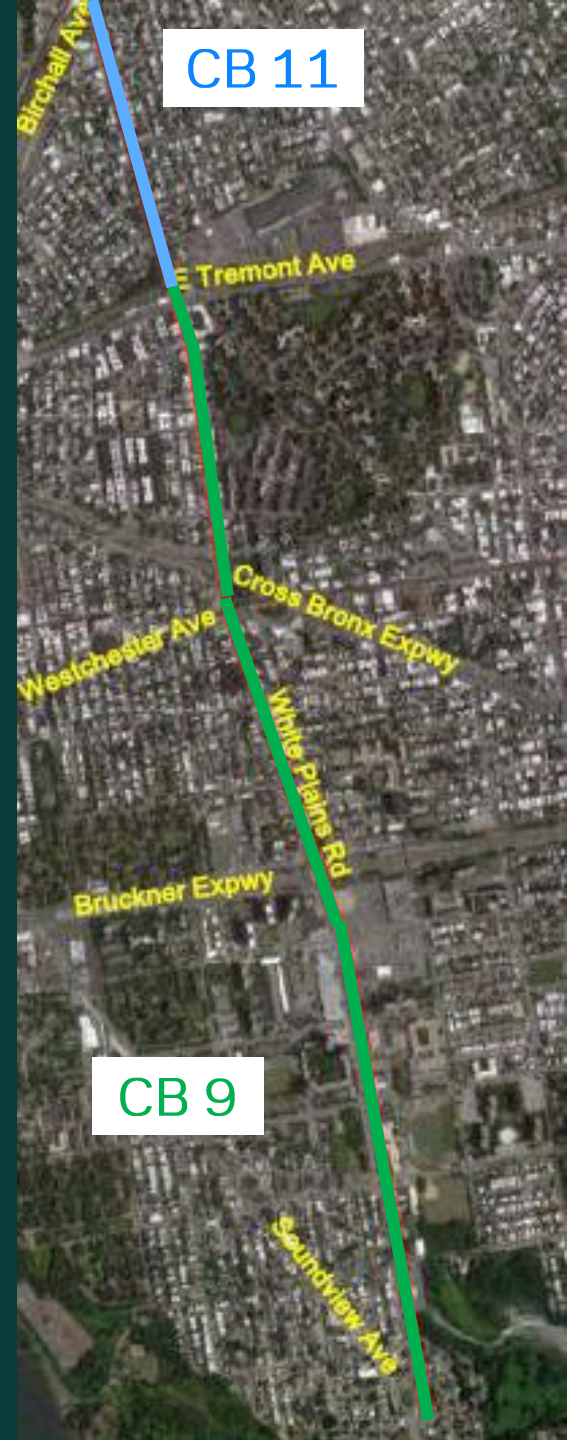
White Plains Rd

CB 11 - Birchall Ave to E Tremont Ave

CB 9 - E Tremont Ave to Soundview Ave

6 lanes (4 travel, 2 parking)

60' wide roadway



Background White Plains Rd

Identified as a High Crash Corridor

Traffic Fatality in CB 11 in 2007

Prioritizing safety by addressing High
Crash Roads



Safety Issue: Severe Crashes

8

Fatalities*

27

**Fatalities/Severe
Injuries per Mile****

Top 20

**High Pedestrian
Crash Location**

White Plains Rd at Morris Park Ave



Safety Issue: Speeding

48-68%
of Motorists over
Speed Limit*



*White Plains Rd Corridor

Safety Issue: Weaving & Sideswipe Crashes

22%
Crashes
Sideswipes



Safety Issue: Narrow Lanes

8.5'

**Substandard
Lanes**

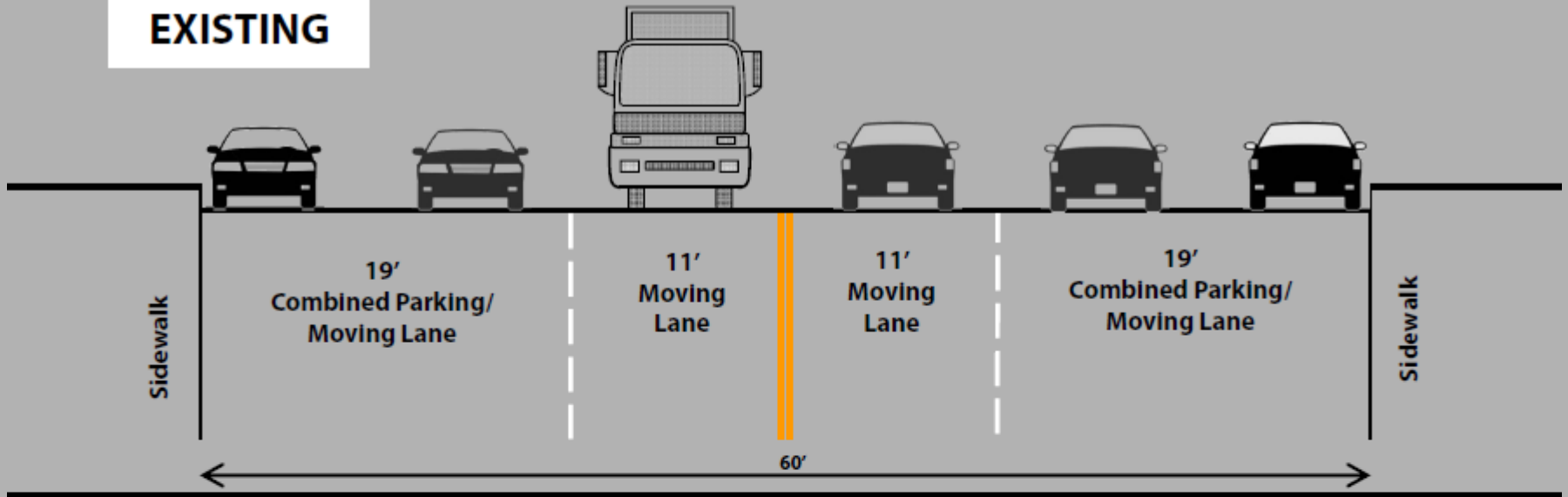
10-11'

Standard

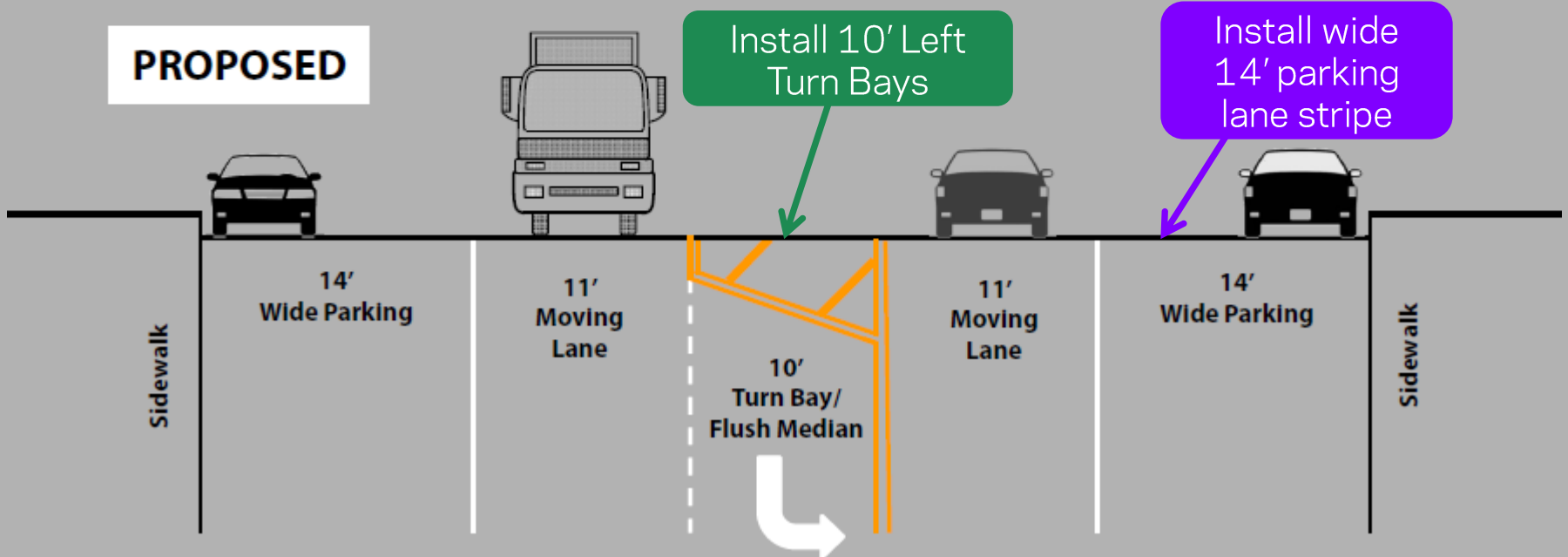


Solutions: Traffic Calming

EXISTING



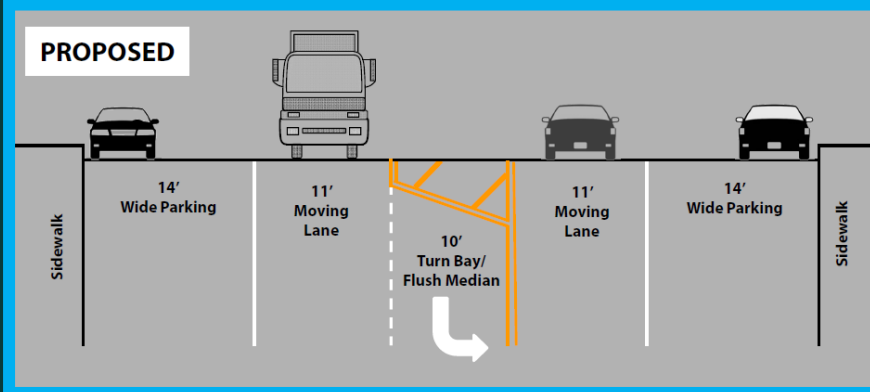
PROPOSED



Solutions: Traffic Calming

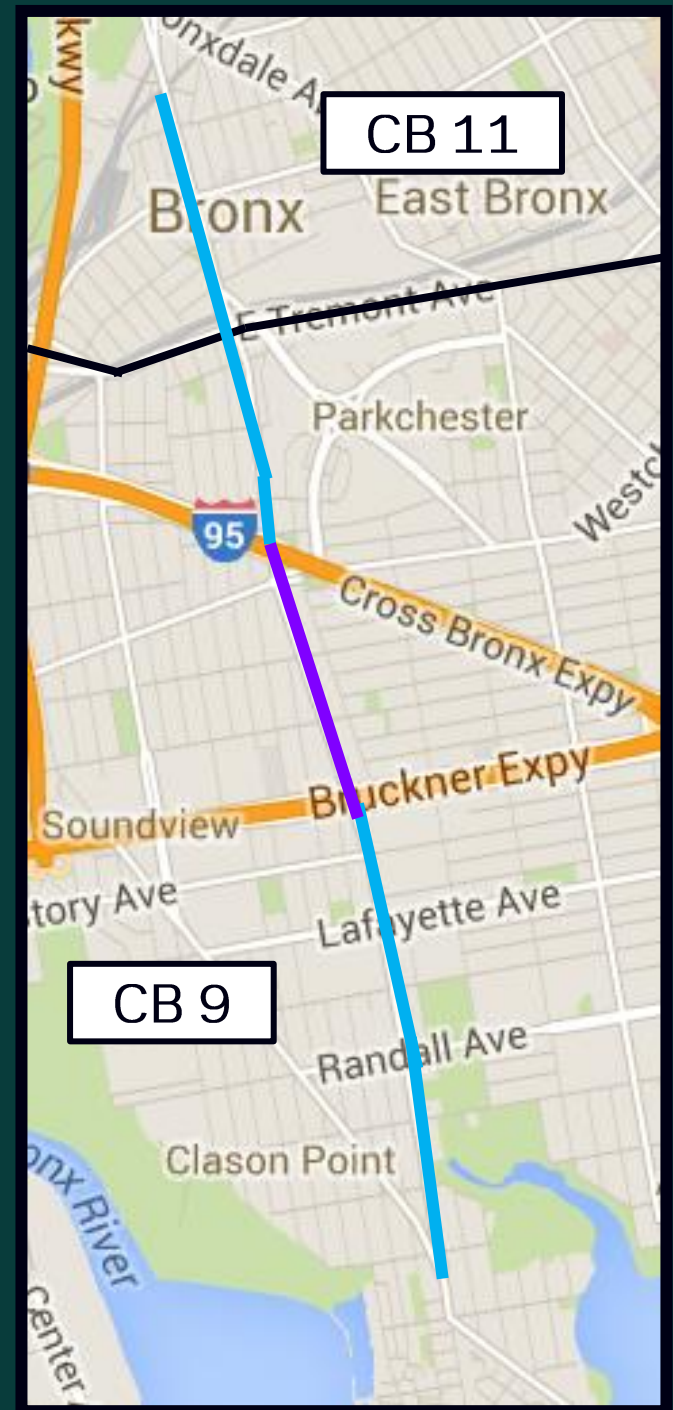
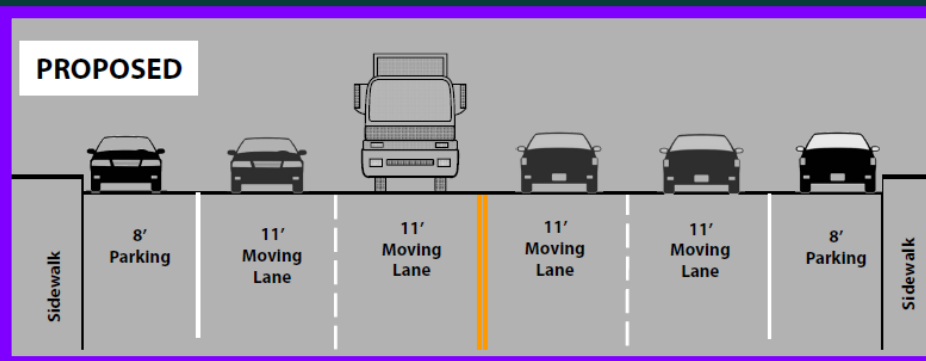
3 Lanes

Birchall Ave to Cross Bronx Expy Bruckner Expy to Soundview Ave



4 Lanes

Cross Bronx Expy to Bruckner Expy



Evaluation of Lane Removal CB 11 Area

Congested Lane



- 700 vehicles per hour or above

Existing (2 lanes)

- Maximum 296 vehicles per lane

Proposal (1 lane + left turn bays)

- Maximum 591 vehicles per lane

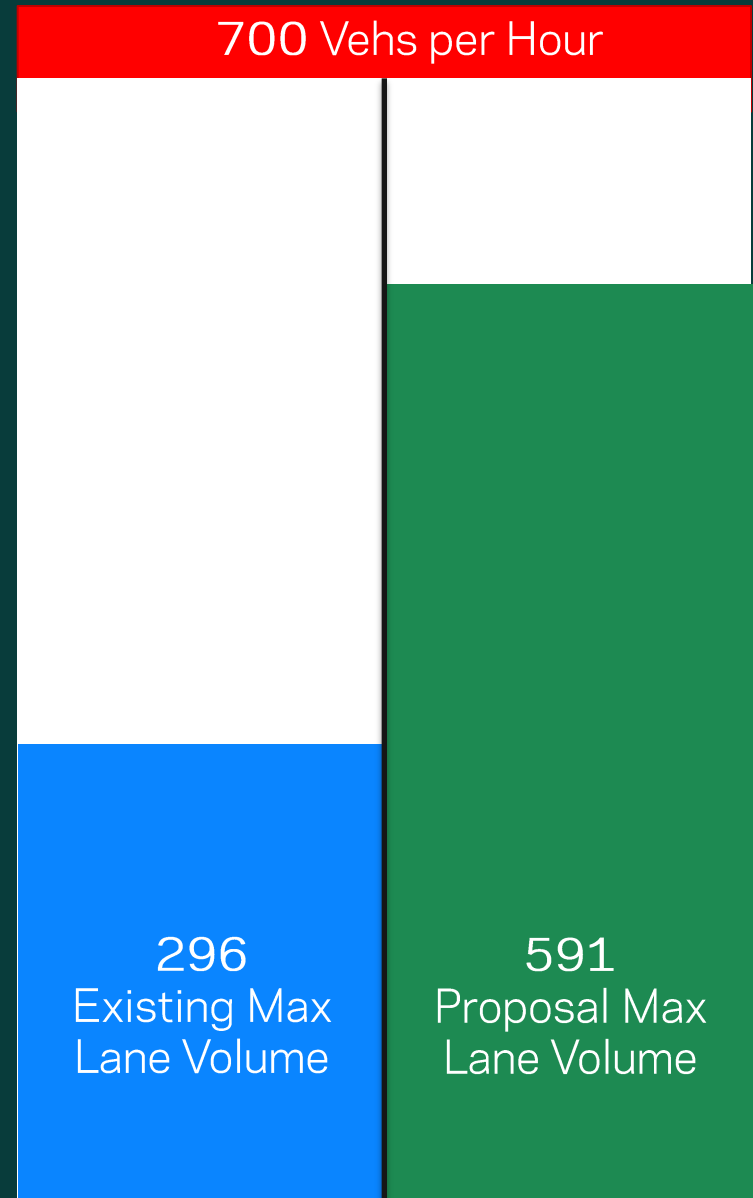
Maximum Recorded Peak Volume (AM & PM)

Example Intersection:

White Plains Rd at Morris Park Ave*

Existing: 27 seconds delay

Proposal: 32 seconds delay



*Intersection Typical of Route Highest Peak Volume AM 8-9

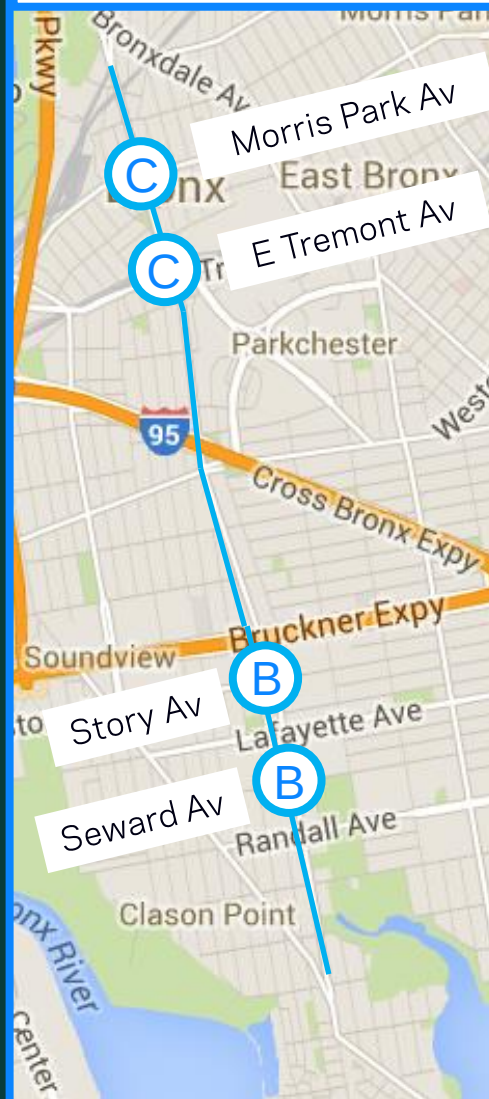
Solutions: Avoids Adverse Traffic Impacts

Peak
8-9 AM

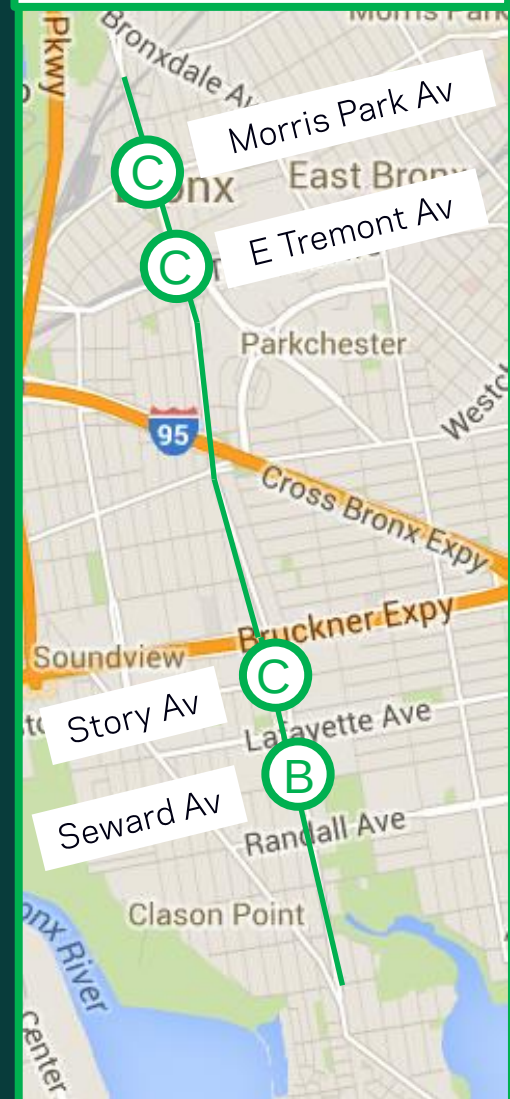
Minor Change
Traffic Level of Service

Story Ave
B to C- 3 Seconds
(Outside of CB 11)

Level of Service
Existing



Level of Service
Proposed

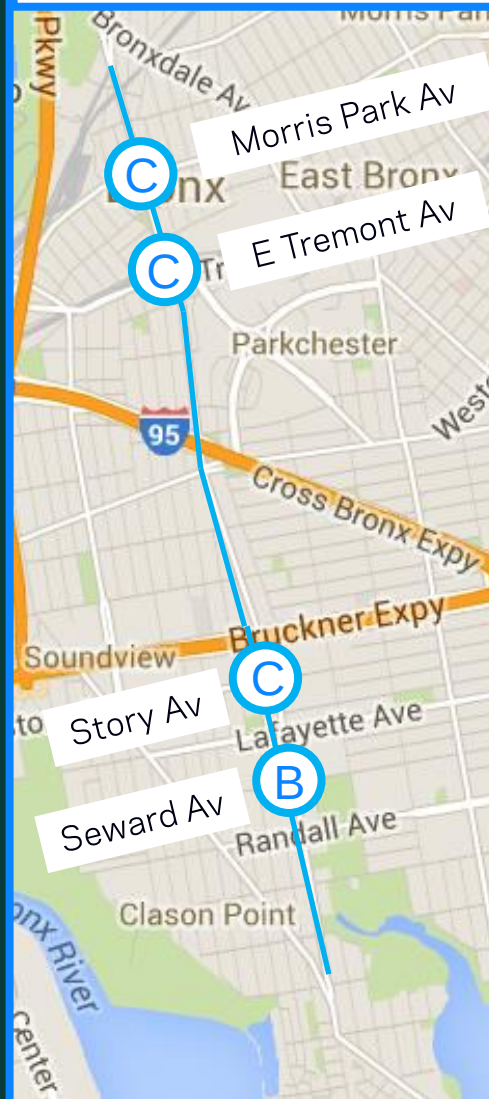


Solutions: Avoids Adverse Traffic Impacts

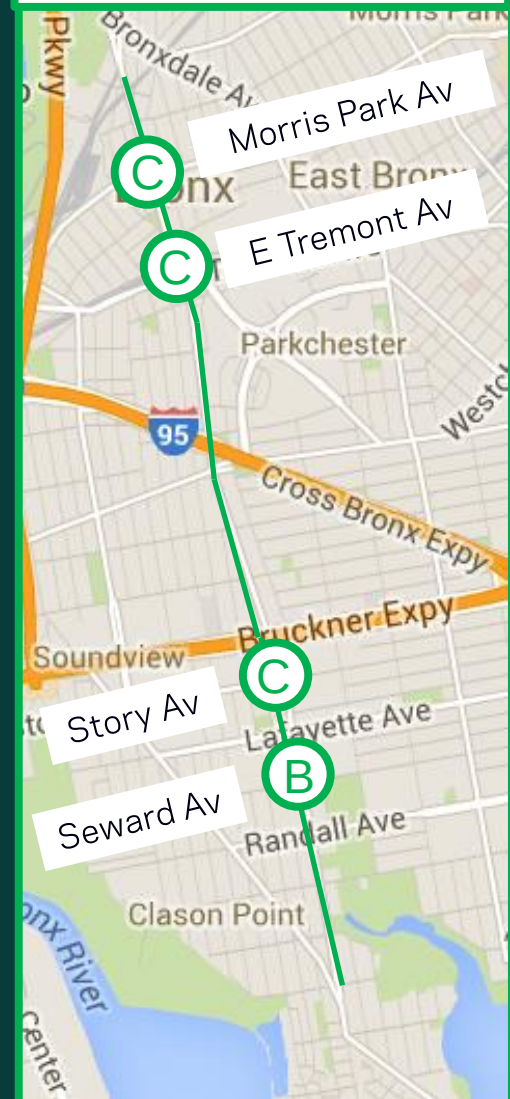
Peak
5-6 PM

**Maintains
Traffic
Level of Service**

Level of Service
Existing



Level of Service
Proposed



Solution: Crashes, Speeding and Sideswipes

Existing



Solution: Crashes, Speeding and Sideswipes

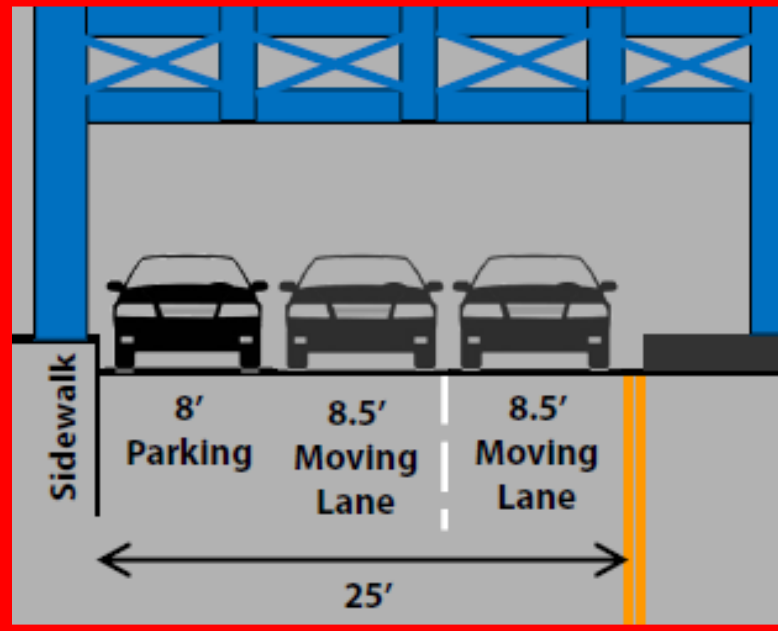
Proposed



Solution: Narrow Lanes

Existing

**Dangerous
Substandard
8.5' Lane Widths**



25'

White Plains Rd

E Tremont Ave

Solution: Narrow Lanes

Proposed

Increase
Lane Width 11'
Improve
Traffic Flow

Provide for
Heavy Right
Turns

165 VPH AM
127 VPH PM

LOW
20 VPH AM
24 VPH PM

White Plains Rd

ONLY
ONLY



E Tremont Ave

E Tremont at White Plains Rd Left Turn Reroute



Proposal Elements & Benefits

Painted Median and Parking Stripe

- Less weaving and better organized traffic
- Safer pedestrian crossings
- Removes excess capacity and reduces ability to speed

Left Turn Bays

- Simpler, safer left turns

Increase Width of Substandard Lanes

(White Plains Rd at E Tremont Ave)

- Improved traffic flow
- Safer distance between cars

Questions?

**Thank
You**

White Plains Road, Bronx from Birchall Ave to O'Brien Ave
Signalized Intersections LOS Comparison Summary- Existing & Build Conditions
AM Peak

NB/SB= Major, White Plains Rd

EB/WB= Minor, Cross Street

Cross street	Intersection Approach ¹	Signal timing splits/offsets	2013 Existing						Build								
			4 lanes						3 lanes (2 through & dedicated LT Bay)								
			Mvmt2	Volume ³	v/c Ratio	Total Delay	Lane grp LOS	Approach LOS	Build Design Description (as relevant in Synchro model)	Mvmt2	Volume ³	v/c Ratio	Total Delay	Lane grp LOS	Approach LOS		
Morris Park Ave	EB	40	2 L/T/R	95/352/43	0.77	32.2	C	C	4 to 3	2 L/T/R	95/352/43	0.77	32.2	C	C		
	WB		2 L/T/R	137/378/52	0.88	40.4	D	D		2 L/T/R	137/378/52	0.88	40.4	D	D		
	NB	50	2 L/T/R	63/268/180	0.50	14.2	B	B		1 L	63	0.32	20.1	C	C		
	SB		2 L/T/R	28/410/153	0.45	18.3	B	B		1 T/R	268/180	0.73	25.0	C			
											1 L	28	0.09	15.6	B	C	
									1 T/R	410/153	0.80	30.4	C				
	Offset:	0	Overall Intersection:				26.8	C		Overall Intersection:				32.1	C		
E Tremont Ave	EB	72	2 L/T	106/564	0.76	26.9	C	C		2 L/T	106/564	0.76	26.9	C	C		
			1 R Defacto	95	0.17	13.9	B			1 R Defacto	95	0.19	14.2	B			
	WB		2 L/T	100/846	0.85	30.8	C			C	2 L/T	100/846	0.85	31.0		C	
			1 R Defacto	15	0.03	12.1	B				1 R Defacto	15	0.03	12.1		B	
	NB	48	2 L/T	121/263	0.63	37.1	D	D	4 to 3	1 L	121	0.71	57.7	E	D		
			1 R Defacto	200	0.54	36.6	D			1 T	200	0.50	35.2	D			
	SB		2 L/T/R	20/400/165	0.69	37.4	D			D	Ban Left (divert to Unionport); reduce by one lane; create defacto RT lane by removing parking spaces	1 R Defacto	200	0.54		36.6	D
												1 T	400	0.79		46.4	D
										1 R defacto	165	0.48	34.6	C	D		
	Offset:	98	Overall Intersection:				31.7	C		Overall Intersection:				33.5	C		
Story Ave	EB	36	1 L/T/R	55/83/55	0.60	32.6	C	C	4 to 3	1 L/T/R	55/83/55	0.62	33.4	C	C		
	WB		1 L/T/R	14/160/150	0.71	34.1	C	C		1 L/T/R	14/160/150	0.73	35.7	D	D		
	NB	54	2 L/T/R	65/408/26	0.42	6.2	A	A		1 L	65	0.27	8.5	A	A		
			2 L/T/R	32/380/60	0.36	12.4	B	B		1 T/R	408/26	0.54	8.8	A			
											1 L	32	0.10	10.9	B	B	
									1 T/R	380/60	0.57	17.3	B				
	Offset:	0	Overall Intersection:				17.8	B		Overall Intersection:				20.5	C		
Seward Ave	EB	36	1 L/T/R	47/111/28	0.49	27.9	C	C	4 to 3	1 L/T/R	47/111/28	0.50	28.2	C	C		
	WB		1 L/T/R	18/134/74	0.55	29.1	C	C		1 L/T/R	18/134/74	0.56	29.6	C	C		
	NB	54	2 L/T/R	34/438/34	0.40	9.4	A	A		1 L	34	0.10	8.2	A	B		
			2 L/T/R	60/330/60	0.42	7.4	A	A		1 T/R	438/34	0.69	13.7	B			
											1 L	60	0.22	11.6	B	B	
									1 T/R	330/60	0.59	13.3	B				
	Offset:	0	Overall Intersection:				14.5	B		Overall Intersection:				17.9	B		

Notes:

¹Intersection approaches: EB=eastbound, WB=westbound, NB=northbound, SB=southbound

²Intersection movements: # of lanes in lane group, L=left turn, T=through, R=right turn, L/T=left-through, T/R=through-right

³Volume L/T/R: # of left turn vehicles/# of through vehicles/# of right turn vehicles

White Plains Road, Bronx from Birchall Ave to O'Brien Ave
Signalized Intersections LOS Comparison Summary- Existing & Build Conditions
PM Peak

NB/SB= Major, White Plains Rd
 EB/WB= Minor, Cross Street

	Cross street	Intersection Approach ¹	Signal timing splits/offsets	2013 Existing						Build								
				4 lanes						3 lanes (2 through & dedicated LT Bay)								
				Mvmt2	Volume ²	v/c Ratio	Total Delay	Lane grp LOS	Approach LOS	Build Design Description (as relevant in Synchro model)	Mvmt2	Volume ²	v/c Ratio	Total Delay	Lane grp LOS	Approach LOS		
1	Morris Park Ave	EB	40	2 L/T/R	130/450/54	0.90	42.3	D	D	4 to 3	2 L/T/R	130/450/54	0.90	42.3	D	D		
		WB		2 L/T/R	104/330/57	0.76	32.3	C	C		2 L/T/R	104/330/57	0.76	32.3	C	C		
		NB	50	2 L/T/R	44/307/144	0.43	12.7	B	B		1 L	44	0.16	16.6	B	C		
				2 L/T/R	25/319/124	0.39	10.8	B	B		1 T/R	307/144	0.74	24.0	C			
													1 L	25	0.10	16.6	B	C
													1 T/R	319/124	0.67	24.1	C	
		Offset:	0	Overall Intersection:			25.9	C		Overall Intersection:			31.3	C				
2	E Tremont Ave	EB	72	2 L/T	149/615	1.00	31.0	C	C	4 to 3	2 L/T	149/615	1.00	31.0	C	C		
				1 R Defacto	167	0.25	14.8	B			1 R Defacto	167	0.27	15.3	B			
		WB		2 L/T	103/979	0.87	32.0	C	C		2 L/T	103/979	0.87	32.1	C	C		
				1 R Defacto	12	0.02	12.0	B			1 R Defacto	12	0.02	12.1	B			
		NB	48	2 L/T	97/368	0.70	39.1	D	D		1 L	97	0.49	38.9	D	D		
				1 R Defacto	135	0.38	32.0	C			1 T	368	0.72	49.7	D			
		SB		2 L/T/R	24/320/127	0.55	33.5	C	C		Ban Left (divert to Unionport); reduce by one lane; create defacto RT lane by removing parking spaces	1 R Defacto	135	0.38	32.0	C	D	
												1 T	Nov-00	0.63	37.9	D		
												1 R defacto	127	0.35	31.1	C		
		Offset:	2	Overall Intersection:			32.1	C		Overall Intersection:			33.8	C				
3	Story Ave	EB	36	1 L/T/R	65/126/29	0.74	40.7	D	D	4 to 3	1 L/T/R	65/126/29	0.75	41.5	D	D		
		WB		1 L/T/R	24/184/180	0.82	41.4	D	D		1 L/T/R	24/184/180	0.85	44.4	D	D		
		NB	54	2 L/T/R	41/430/20	0.38	4.9	A	A		1 L	41	0.15	7.3	A	A		
				2 L/T/R	85/290/110	0.41	13.3	B	B		1 T/R	430/20	0.57	8.8	A			
															1 L	85	0.28	13.8
													1 T/R	290/110	0.49	15.0	B	
		Offset:	0	Overall Intersection:			21.5	C		Overall Intersection:			24.1	C				
4	Seward Ave	EB	36	1 L/T/R	65/95/15	0.45	27.0	C	C	4 to 3	1 L/T/R	65/95/15	0.46	27.3	C	C		
		WB		1 L/T/R	7/97/70	0.41	25.6	C	C		1 L/T/R	7/97/70	0.42	25.9	C	C		
		NB	54	2 L/T/R	13/380/8	0.29	8.9	A	A		1 L	13	0.04	7.9	A	B		
				2 L/T/R	35/278/60	0.30	7.0	A	A		1 T/R	380/8	0.54	11.6	B			
															1 L	35	0.11	8.2
													1 T/R	278/60	0.48	9.9	A	
		Offset:	0	Overall Intersection:			13.7	B		Overall Intersection:			15.6	B				

Notes:

¹Intersection approaches: EB=eastbound, WB=westbound, NB=northbound, SB=southbound

²Intersection movements: # of lanes in lane group, L=left turn, T=through, R=right turn, L/T=left-through, T/R=through-right

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