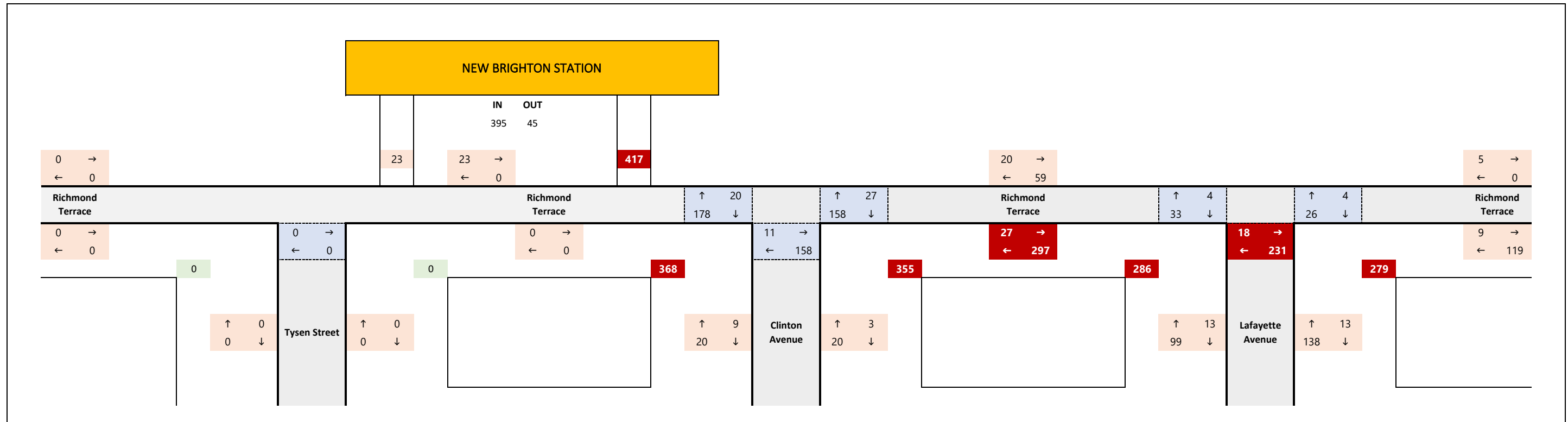
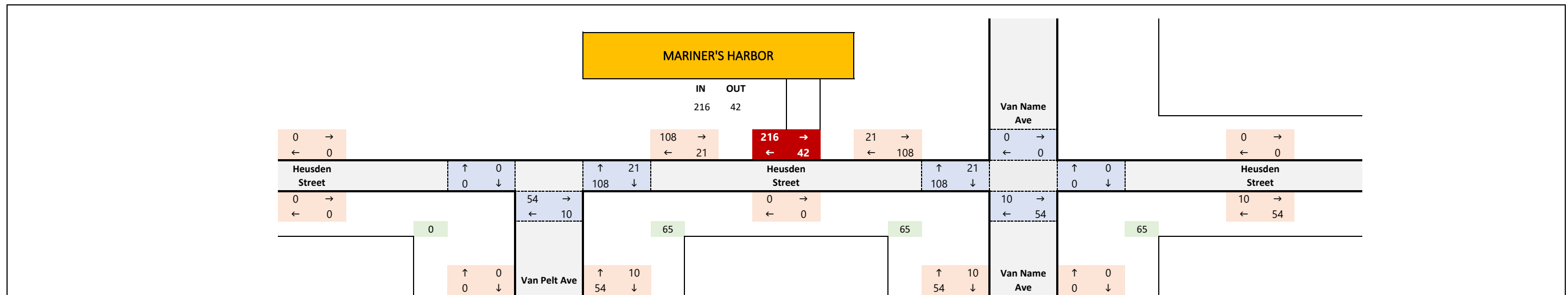

Appendix M: Transportation

Appendix M-1: 2035 With-Action Condition Pedestrian Volume Increment Figures



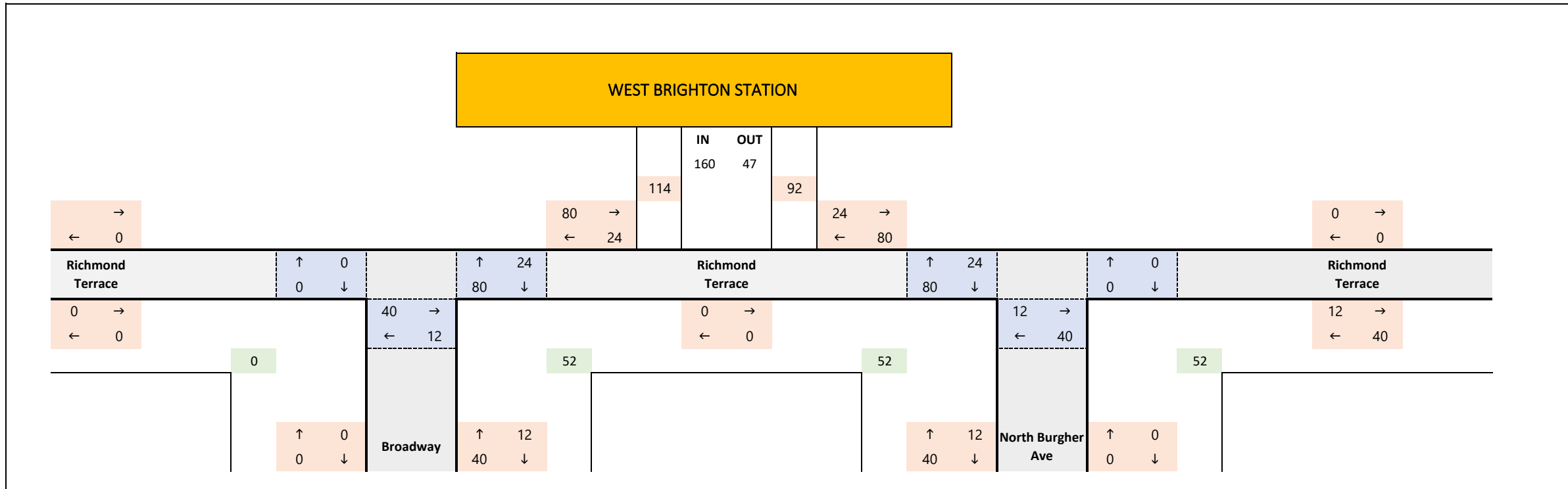
- # Indicates element with a total number of additional pedestrian trips over 200 pedestrian trip per hour.
- # Indicates corner volume.
- # Indicates crosswalk volume.
- # Indicates sidewalk volume.

North Shore BRT EIS
Pedestrian Increment Map - New Brighton Station - AM Peak Hour



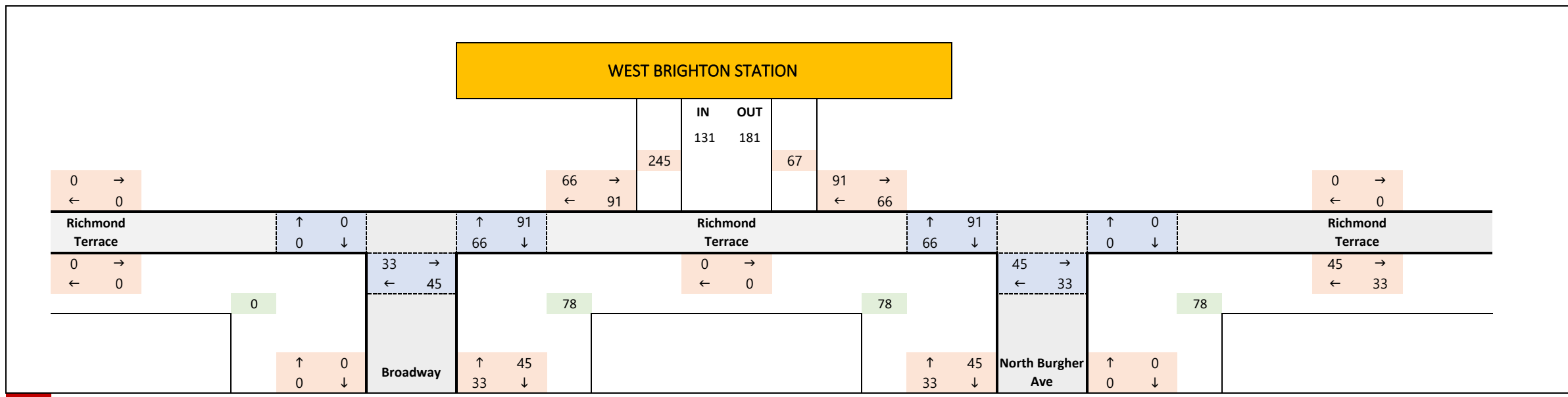
- # Indicates element with a total number of additional pedestrian trips over 200 pedestrian trip per hour.
- # Indicates corner volume.
- # Indicates crosswalk volume.
- # Indicates sidewalk volume.

North Shore BRT EIS
Pedestrian Increment Map - Mariner's Harbor Station - AM Peak Hour



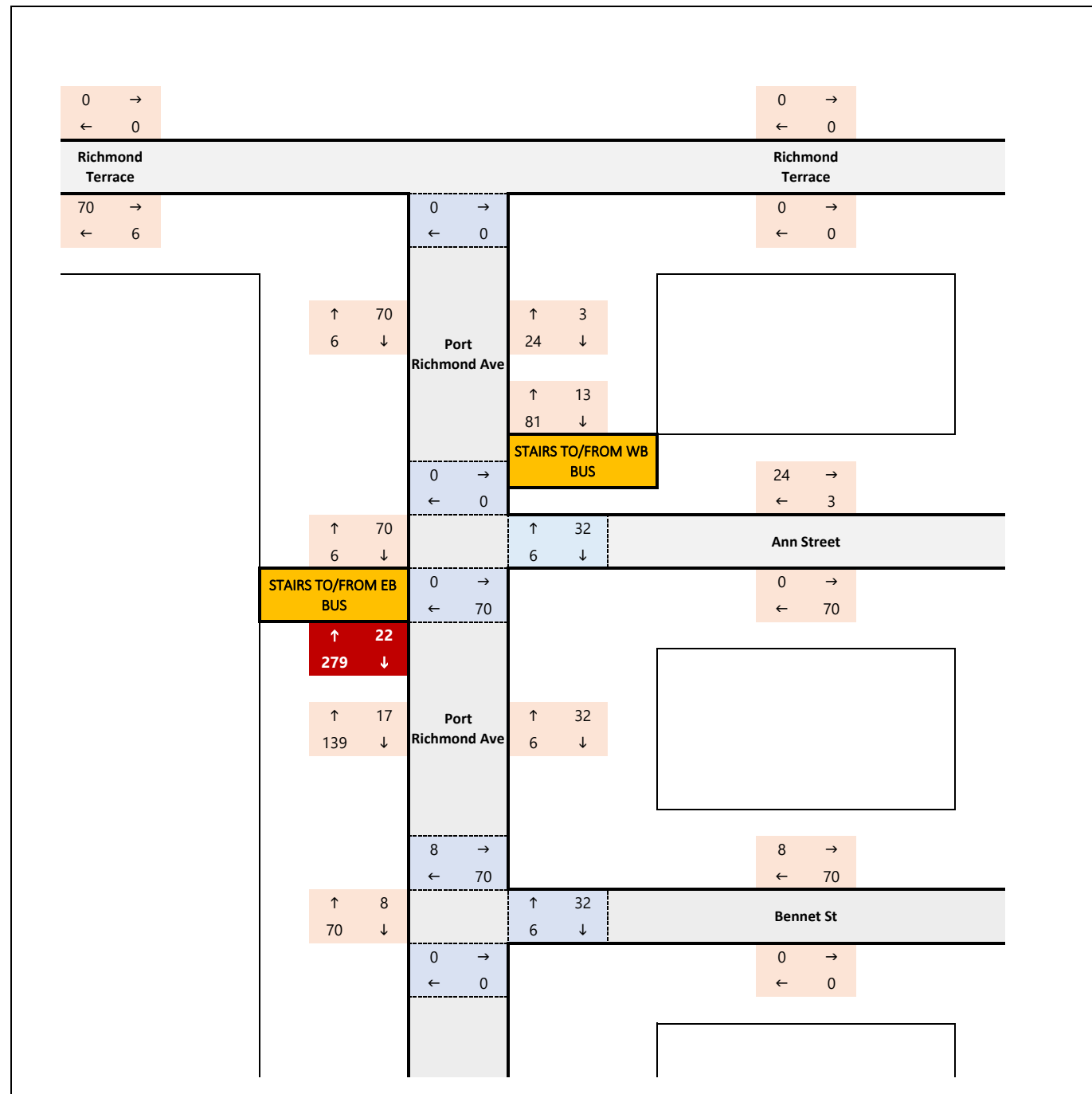
- # Indicates element with a total number of additional pedestrian trips over 200 pedestrian trip per hour.
- # Indicates corner volume.
- # Indicates crosswalk volume.
- # Indicates sidewalk volume.

North Shore BRT EIS
Pedestrian Increment Map - West Brighton Station - AM Peak Hour



- # Indicates element with a total number of additional pedestrian trips over 200 pedestrian trip per hour.
- # Indicates corner volume.
- # Indicates crosswalk volume.
- # Indicates sidewalk volume.

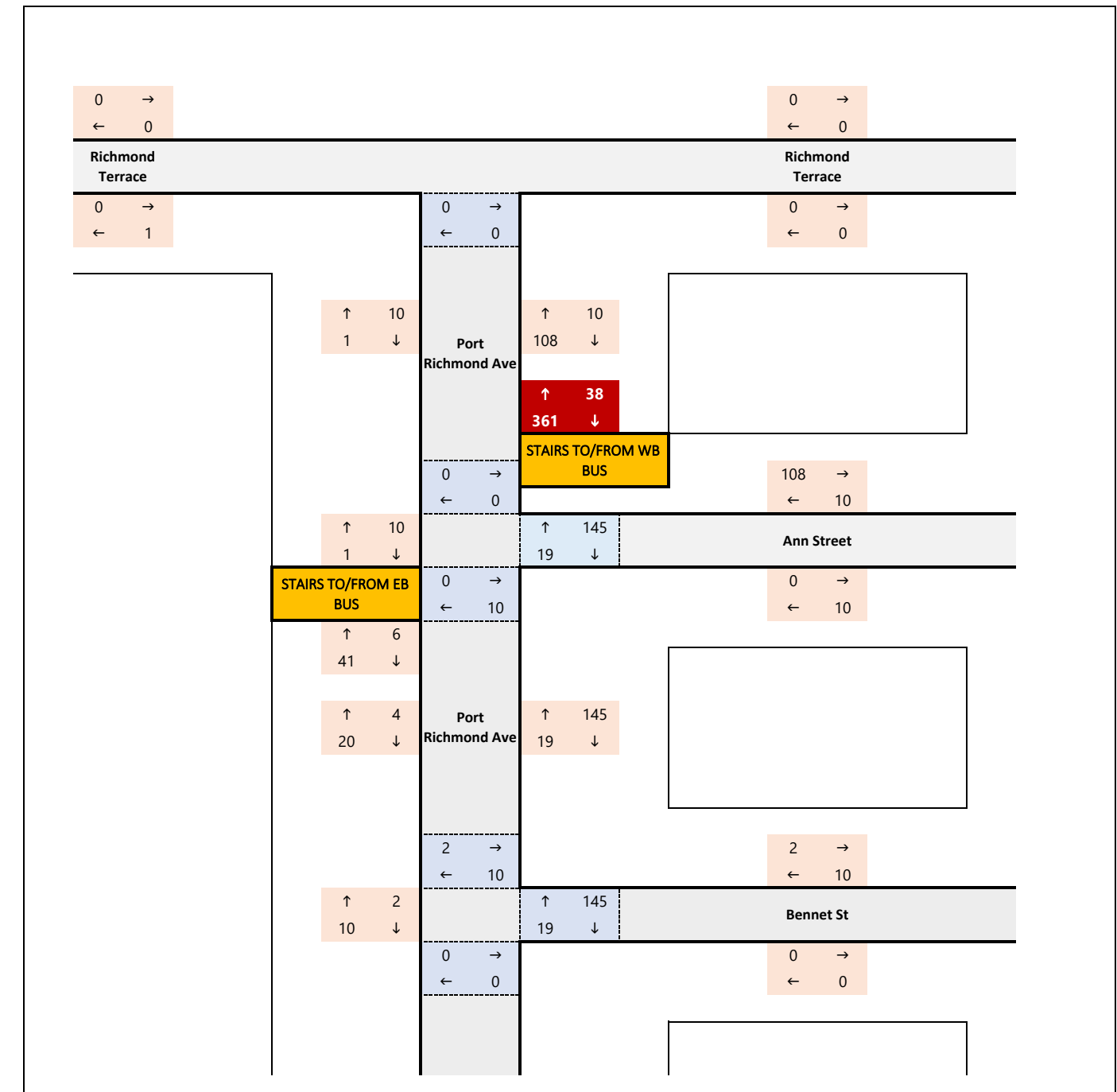
North Shore BRT EIS
Pedestrian Increment Map - West Brighton Station - PM Peak Hour



Indicates element with a total number of additional pedestrian trips over 200 pedestrian trip per hour.
 # Indicates corner volume.
 # Indicates crosswalk volume.
 # Indicates sidewalk volume.

*Volumes at stairwell are distributed between each direction on sidewalk

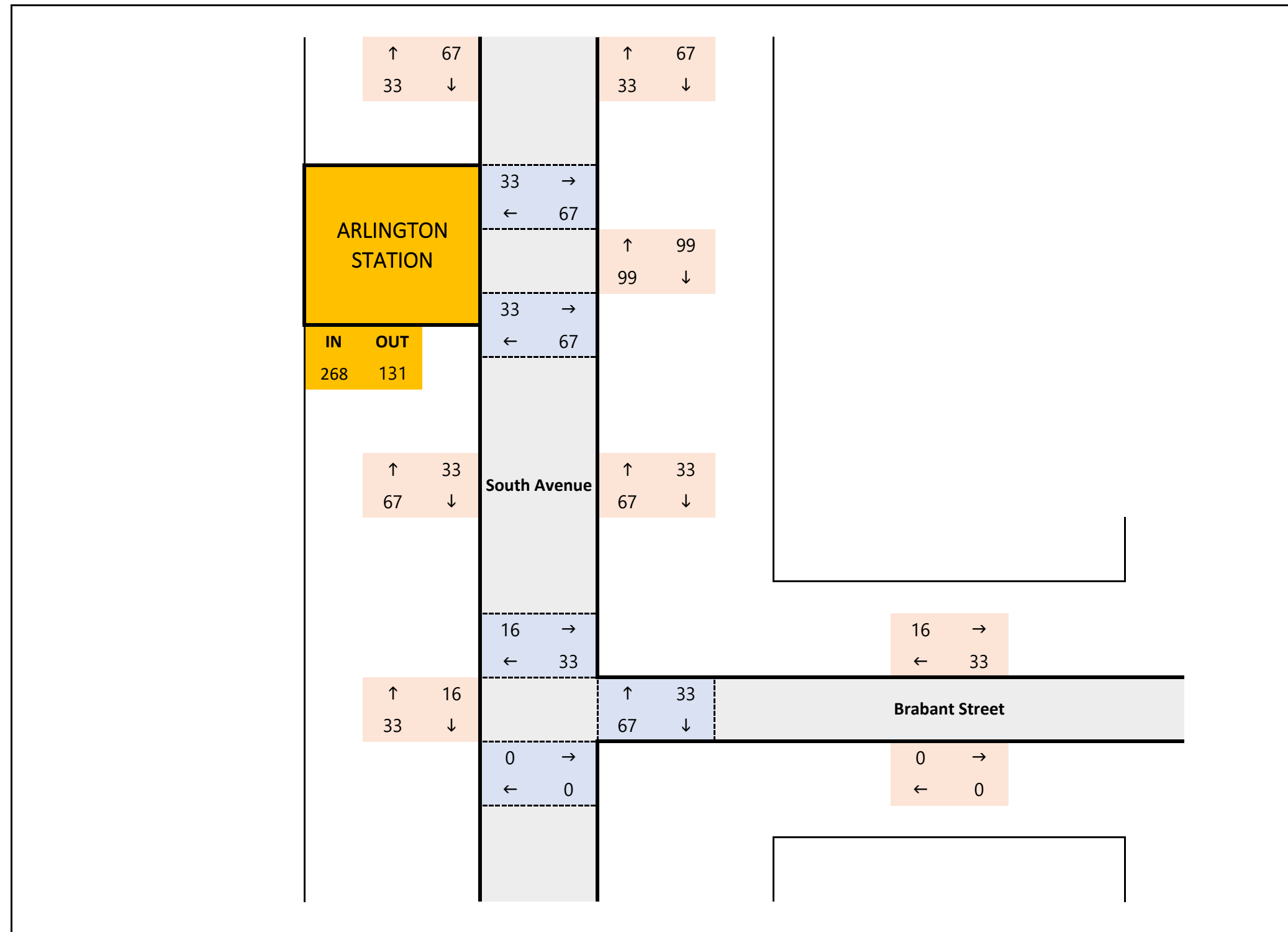
North Shore BRT EIS
Pedestrian Increment Map - Port Richmond Station - AM Peak Hour



Indicates element with a total number of additional pedestrian trips over 200 pedestrian trip per hour.
 # Indicates corner volume.
 # Indicates crosswalk volume.
 # Indicates sidewalk volume.

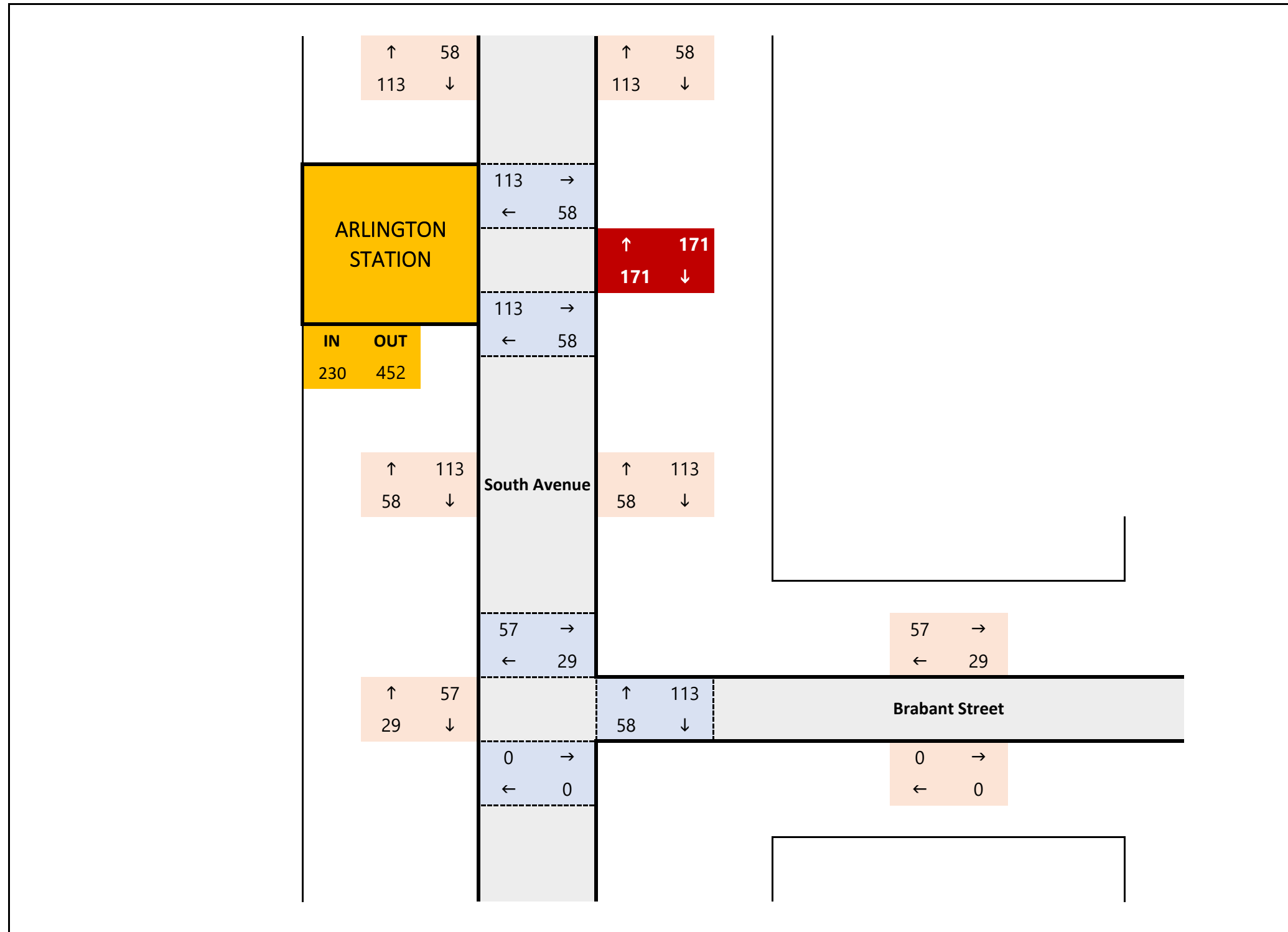
*Volumes at stairwell are distributed between each direction on sidewalk

North Shore BRT EIS
Pedestrian Increment Map - Port Richmond Station - PM Peak Hour



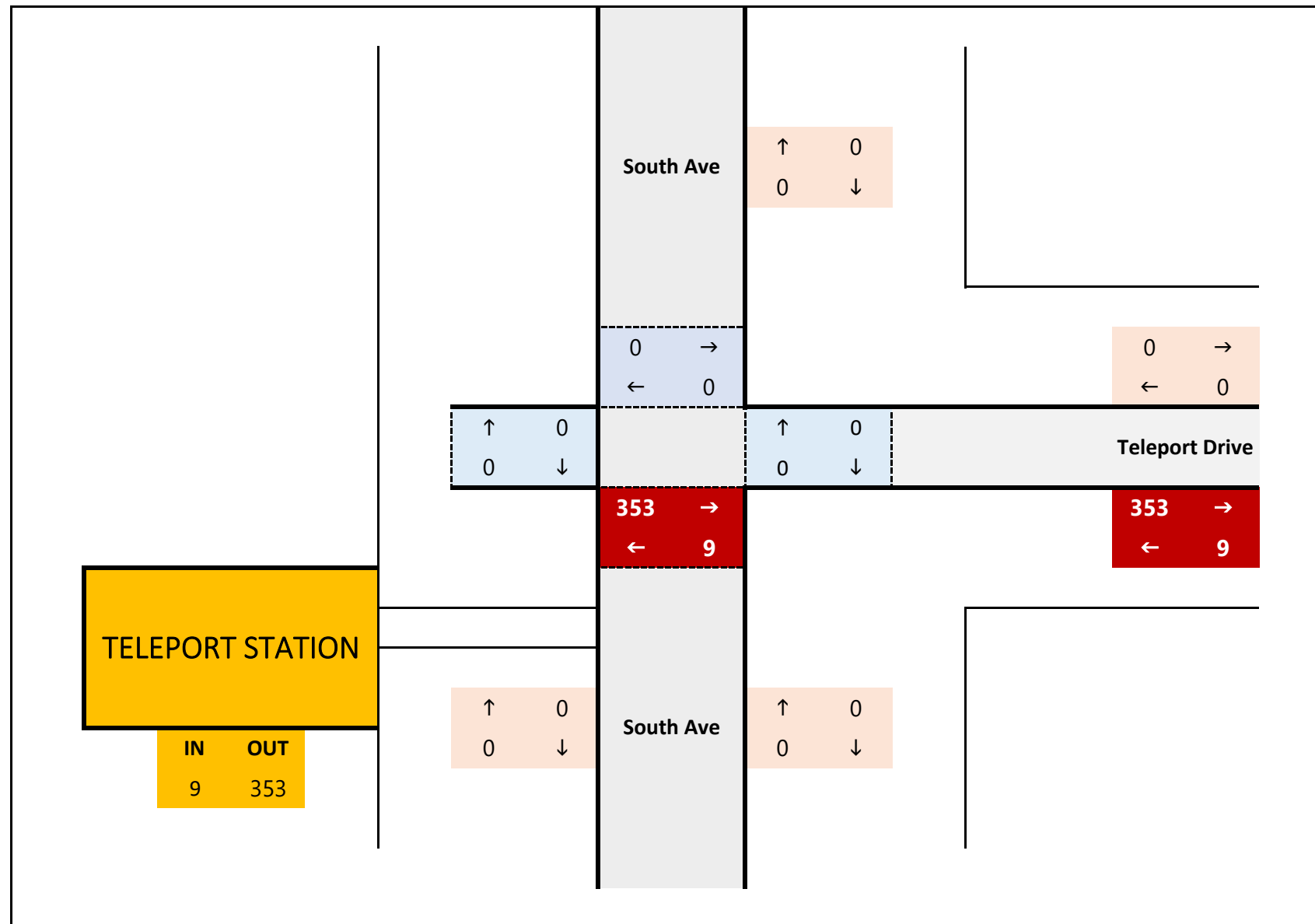
- # Indicates element with a total number of additional pedestrian trips over 200 pedestrian trip per hour.
- # Indicates corner volume.
- # Indicates crosswalk volume.
- # Indicates sidewalk volume.

North Shore BRT EIS
Pedestrian Increment Map - Arlington Station - AM Peak Hour



- # Indicates element with a total number of additional pedestrian trips over 200 pedestrian trip per hour.
- # Indicates corner volume.
- # Indicates crosswalk volume.
- # Indicates sidewalk volume.

**North Shore BRT EIS
Pedestrian Increment Map - Arlington Station - PM Peak Hour**



- # Indicates element with a total number of additional pedestrian trips over 200 pedestrian trip per hour.
- # Indicates corner volume.
- # Indicates crosswalk volume.
- # Indicates sidewalk volume.

**North Shore BRT EIS
Pedestrian Increment Map - Teleport Station - PM Peak Hour**

Appendix M-2: Traffic Analysis Level of Service Tables

2018 Existing Conditions

2035 No-Action Condition

2035 With-Action Condition

2035 With-Action with Mitigation Condition


SIGNALIZED INTERSECTIONS	NORTH SHORE RIGHT OF WAY EXISTING CONDITIONS RESULTS versus NO-BUILD CONDITIONS RESULTS versus BUILD CONDITIONS RESULTS versus BUILD MITIGATED CONDITIONS RESULTS															AM
--------------------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	----

ID	Intersection				V/C Ratio				Delay (sec)				LOS				IMPACT?			Proposed Mitigation
	Description	Approach	Movement	EX	NB	BU	MI	EX	NB	BU	MI	EX	NB	BU	MI	BU	MI	RESOLVE?		
100	Richmond Terrace & Ferry Terminal Viaduct & Bay Street	EB (Bay Street)	L2					31.0	39.3	37.0	37.0	C	D	D	D					
			T					9.9	12.5	11.4	11.4	A	B	B	B					
			R					33.7	38.4	48.4	48.4	C	D	D	D					
		NB (Promenade)	R2					39.4	40.5	44.2	44.2	D	D	D	D					
			L																	
			T																	
		SB (Richmond Terrace)	R																	
			L2																	
			L																	
		SWB (Lower Level Exit)	T					24.0	24.1	16.1	16.1	C	C	B	B					
R						0.6	0.3	0.6	0.6	A	A	A	A							
R2						54.1	46.9	56.1	56.1	D	D	E	E	YES	YES	UNMITIGABLE				
200	Richmond Terrace & Ferry Terminal Viaduct	WB (Upper Level Exit)	L					27.5	25.5	27.4	27.4	C	C	C	C					
			R					51.8	44.2	37.3	37.3	D	D	D	D					
			T					38.1	143.1	32.6	32.6	D	F	C	C					
		NB	T					4.5	16.9	8.5	8.5	A	B	A	A					
			R					2.8	1.7	4.0	4.0	A	A	A	A					
			T					14.9	19.8	7.8	7.8	B	B	A	A					
		400	Richmond Terrace & Wall Street	EB	L					43.7	42.1	33.7	33.7	D	D	C	C			
					T					0.0				0						
					R															
				WB	L						28.0	33.7	33.7		C	C	C			
T								29.6	29.2	34.4	34.4	C	C	C	C					
R																				
NB	T							12.0	7.4	16.3	16.3	B	A	B	B					
	R							0.0	6.8	20.3	20.3	0	A	C	C					
	L																			
SB	T							6.6	10.2	16.9	16.9	A	B	B	B					
	R																			
	L																			
500	Richmond Terrace & Hamilton Avenue	NB	T					0.0	13.9	10.5	10.5	A	B	B	B					
			R						12.8	3.0	3.0		B	A	A					
			L					0.0				0								
		SB (Busway)	T							0.5	0.5			A	A					
			R							3.4	3.4			A	A					
			L							3.4	3.4			A	A					
		NB (Busway)	T					8.4	13.3	6.4	6.4	A	B	A	A					
			R							6.4	6.4			A	A					
			L							21.2	21.2			C	C					
		600	Richmond Terrace & Stuyvesant Place	NB	L							65.1	65.1			E	E	YES	YES	UNMITIGABLE
T										17.8	17.8			B	B					
R										48.6	48.6			D	D					
SB (Busway)	T									0.9	0.9			A	A					
	R									0.6	0.6			A	A					
	L									39.0	39.0			D	D					
700	Richmond Terrace & Nicholas Street/Garage Ramp			EB	L					0.0	14.0	15.4	15.4	0	B	B	B			
					T					5.2	23.8	16.5	16.5	A	C	B	B			
					R					0.0				0						
				NB	L					0.0		33.9	33.2		C	C	C			
		T																		
		R																		
		SB	L					0.0		0.0	0.0	0								
			T					0.0	0.0	0.0	0.0	A	A	A	A					
			R																	
		SEB (Busway)	T							4.1	4.1			A	A					
R								4.7	4.7			A	A							
L																				
800	Richmond Terrace & St Peters Place	EB	T					8.3	10.9	6.4	6.4	A	B	A	A					
			R																	
			L																	
		WB	T					17.4	26.9	27.3	27.3	B	C	C	C					
			R					29.0	30.3	30.3	30.3	C	C	C	C					
			L																	
		NB	T					13.0	18.0	15.4	15.4	B	B	B	B					
			R					15.2	12.6	14.3	14.3	B	B	B	B					
			L																	
		900	Richmond Terrace & Westervelt Avenue	EB	L					28.1	29.7	26.4	26.4	C	C	C	C			
T								32.6	32.8	32.0	32.0	C	C	C	C					
R																				
WB	L							22.1	20.8	20.4	20.4	C	C	C	C					
	T							19.8	24.4	16.6	16.6	B	C	B	B					
	R							26.2	30.2	24.3	24.3	C	C	C	C					
NB	L							46.6	60.9	32.6	32.6	D	E	C	C					
	T							32.1	26.2	19.0	19.0	C	C	B	B					
	R																			
SB	L							24.6	31.5	39.7	39.7	C	C	D	D					
	T					37.8	39.4	47.7	47.7	D	D	D	D							
	R																			
1000	Richmond Terrace & Jersey Street	EB	L					26.4	28.2	9.6	9.6	C	C	A	A					
			T					34.9	42.4	4.7	4.7	C	D	A	A					
			R																	
		WB	L					28.8	29.4	23.4	23.4	C	C	C	C					
			T																	
			R																	

VISSIM RESULTS
Note: Vissim results do not include v/c ratio outputs.

ID	Intersection			V/C Ratio				Delay (sec)				LOS				IMPACT?			Proposed Mitigation		
	Description	Approach	Movement	EX	NB	BU	MI	EX	NB	BU	MI	EX	NB	BU	MI	BU	MI	RESOLVE?			
2900	South Avenue & Teleport Drive	EB	L																		
			T	0.38	0.53	0.53	0.53	23.2	28.4	28.3	20.2	C	C	C	C						
		WB	R																		
			L	0.31	0.45	0.45	0.45	24.9	31.6	31.6	31.6	C	C	C	C						
		NB	T	0.26	0.36	0.36	0.36	22.8	25.4	25.4	25.4	C	C	C	C						
			R	0.26	0.37	0.37	0.37	22.5	24.9	24.9	24.9	C	C	C	C						
		SB	T	0.24	0.43	0.45	0.45	13.8	13.4	13.7	13.7	B	B	B	B						
			R	0.41	0.44	0.44	0.44	17.6	14.0	14.1	14.1	B	B	B	B						
		Intersection		T	0.19	0.25	0.26	0.26	10.6	5.8	5.8	10.3	B	A	A	B					
		Intersection		R					17.8	17.6	17.6	16.5	B	B	B	B					
3000	South Avenue & Travis Avenue	WB	L	0.57	0.70	0.70	0.70	29.2	36.5	36.5	36.5	C	D	D	D						
			R	0.82	0.96	0.96	0.96	40.6	45.4	45.4	45.4	D	D	D	D						
		NB	T	0.28	0.78	0.79	0.79	18.9	29.7	30.2	30.2	B	C	C	C						
			R																		
		SB	L	0.44	1.00	1.01	1.01	15.8	77.0	79.6	71.9	B	E	E	E						
			T	0.15	0.24	0.25	0.25	9.0	12.4	12.5	6.7	A	B	B	A						
		Intersection		T					24.3	37.3	37.7	35.8	C	D	D	D					

Notes:
1. Delay and LOS results for intersections 100 to 1020 are derived from the Richmond Terrace Vissim model. Also, it should be noted that vissim does not provide V/C ratio outputs.

Legend:
 Indicates movements that trigger CEQR impact criteria.

ID	Description	Intersection			Delay (sec)				LOS				IMPACT?			Proposed Mitigation		
		Direction	Approach Type	Movement	EX	NB	BU	MI	EX	NB	BU	MI	BU	MI	RESOLVE?			
1500	Richmond Terrace & Alaska Street	EB	MAJOR	L														
			MAJOR	T	0.0					A								
			MAJOR	R														
		WB	MAJOR	L														
			MAJOR	T	0.3						A							
			MAJOR	R														
		NB	MINOR	L														
			MINOR	T	41.6						E							
			MINOR	R														
		SB	MINOR	L														
			MINOR	T	40.1						E							
			MINOR	R														
		Intersection					1.2				A							
1700	Richmond Terrace & Heberton Avenue	EB	MINOR	L	15.6	20.6	20.7	20.7	C	C	C	C						
			MINOR	R														
		NB	MAJOR	L														
			MAJOR	T	1.8	2.3	2.3	2.3	A	A	A	A						
		SB	MAJOR	T	0.0	0.0	0.0	0.0	A	A	A	A						
			MAJOR	R														
		Intersection					1.9	2.3	2.3	2.3	A	A	A	A				
2400	South Avenue & Continental Place	WB	MINOR	L	13.5	14.9	14.4	14.4	B	B	B	B						
			MINOR	R														
		NB	MAJOR	T	0.0	0.0	0.0	0.0	A	A	A	A						
			MAJOR	R														
		SB	MAJOR	L														
			MAJOR	T	0.2	0.3	0.9	0.9	A	A	A	A						
		Intersection					0.6	0.7	1.2	1.2	A	A	A	A				
2410	South Avenue & Cable Way	EB	MINOR	L	13.0	14.1	15.0	15.0	B	B	C	C						
			MINOR	R														
		NB	MAJOR	L	0.0	0.0	0.0	0.0										
			MAJOR	T	1.4	1.4	1.4	1.4	A	A	A	A						
		SB	MAJOR	T	0.0	0.0	0.0	0.0	A	A	A	A						
			MAJOR	R														
		Intersection					1.2	1.2	1.2	1.2	A	A	A	A				
2800	South Avenue & Edward Curry Avenue	EB	MINOR	L	43.4				E									
			MINOR	R	12.2				B									
		NB	MAJOR	L	10.3													
			MAJOR	T	0.0					A								
		SB	MAJOR	T	0.0					A								
			MAJOR	R														
		Intersection					1.9				A							

ID	Intersection				V/C Ratio				Delay (sec)				LOS				IMPACT?			Proposed Mitigation
	Description	Approach	Movement	EX	NB	BU	MI	EX	NB	BU	MI	EX	NB	BU	MI	BU	MI	RESOLVE?		
1020	Bank Street & Jersey Street	EB (Busway)	T							69.0	69.0			E	E	YES	YES	UNMITIGABLE		
		WB (Busway)	T							5.3	5.3			A	A					
		EB	T							0.0	0.0									
			R																	
		WB	L							35.6	35.6			D	D					
			T							13.9	13.9			B	B					
		NB	L																	
			R																	
	Intersection									33.6	33.6			C	C					
1100	Richmond Terrace & Franklin Avenue	EB	T	0.46	0.73	0.73	0.73	10.1	16.4					B	B	B	B			
			R																	
		WB	L																	
			T	0.71	1.44	1.44	1.44	5.9	206.4	205.6	205.6	A	F	F	F					
1200	Richmond Terrace & Lafayette Avenue	NB	L	0.19	0.21	0.21	0.21	35.8	36.2	36.2	36.2			D	D	D	D			
			R																	
		Intersection						9.0	122.8	122.4	122.4	A	F	F	F					
		EB	T	0.57	0.78	0.79	0.78	13.9	20.0	20.4	19.4	B	B	C	B					
1200	Richmond Terrace & Lafayette Avenue		R																	
		WB	L	0.68	1.57	1.59	1.54	5.1	259.6	270.1	246.1	A	F	F	F	YES		RESOLVE		
			T	0.28	0.31	0.37	0.39	37.7	38.4	39.7	40.8	D	D	D	D					
		NB	L	0.28	0.31	0.37	0.39	37.7	38.4	39.7	40.8	D	D	D	D					
1300	Richmond Terrace & Bard Avenue		R																	
		Intersection						10.7	151.4	155.5	142.3	B	F	F	F					
		EB	L	0.44	0.76	1.31	1.31	8.6	15.7	167.7	167.7	A	B	F	F	YES	YES	UNMITIGABLE		
			T	0.50	0.81	0.83	0.83	9.3	17.6	19.0	19.0	A	B	B	B					
1300	Richmond Terrace & Bard Avenue	NB	L	0.31	0.36	0.43	0.43	41.9	42.9	44.2	44.2			D	D	D	D			
			T																	
			R																	
		SB	L	0.07	0.08	0.22	0.22	38.5	38.7	40.8	40.8	D	D	D	D					
1400	Richmond Terrace & Broadway		T																	
		Intersection						12.9	18.9	85.3	85.3	B	B	F	F					
		EB	L	0.42	0.68	0.72	0.79	7.5	11.8	12.7	15.6	A	B	B	B					
			T	0.61	0.99	1.06	0.92	10.3	38.8	62.0	26.7	B	D	E	C	YES		RESOLVE		
1400	Richmond Terrace & Broadway	NB	L	0.43	0.51	0.57	0.57	48.4	51.0	54.8	54.8			D	D	D	D			
			T																	
			R																	
		SB	L	0.06	0.07	0.07	0.07	40.0	40.1	40.2	40.2	D	D	D	D					
1500	Richmond Terrace & Alaska Street		T																	
		Intersection																		
		EB	L		0.80	0.84	0.83			20.0	22.9	21.6			C	C	C			
			T		1.03	1.05	1.03			54.3	60.3	55.4			D	E	E	YES		RESOLVE
1500	Richmond Terrace & Alaska Street	NB	L	0.25	0.31	0.33			45.6	47.5	49.0			D	D	D				
			T																	
			R																	
		SB	L	0.01	0.08	0.09			41.0	42.3	43.2			D	D	D				
1600	Richmond Terrace & Jewett Avenue		T																	
		Intersection																		
		WB	R	0.58	0.78	0.79	0.79	6.5	12.5	12.7	12.7	A	B	B	B					
		NB	R	0.43	1.19	1.19	1.19	49.1	165.8	165.8	165.8	D	F	F	F					
1800	Castleton Avenue & Port Richmond Avenue		L																	
		Intersection																		
		EB	L	0.50	0.56	0.56	0.56	37.5	39.2	39.2	39.2	D	D	D	D					
			T	0.43	0.52	0.52	0.52	39.1	43.0	43.0	43.0	D	D	D	D					
1800	Castleton Avenue & Port Richmond Avenue	WB	L	0.65	0.72	0.72	0.72	44.3	48.2	48.2	48.2			D	D	D	D			
			T																	
			R																	
		NB	L	0.48	0.54	0.57	0.57	23.5	25.2	26.5	26.5	C	C	C	C					
1900	Castleton Avenue & Jewett Avenue		T																	
		Intersection																		
		EB	L	0.36	0.48	0.48	0.48	10.5	18.5	18.5	18.5	B	B	B	B					
			T	0.83	1.56	1.56	1.56	24.9	287.6	287.6	287.6	C	F	F	F					
1900	Castleton Avenue & Jewett Avenue	NB	L	0.69	1.16	1.16	1.16	51.0	140.8	140.8	140.8			D	F	F	F			
			T																	
			R																	
		SB	L	0.21	0.25	0.25	0.25	35.3	34.7	34.7	34.7	D	C	C	C					
1900	Castleton Avenue & Jewett Avenue		T																	
		Intersection						26.0	182.3	182.3	182.3	C	F	F	F					

Modify signal timing: Shift 1 sec of green time from the NB phase to the EB/WB phase. [NB split shifts from 36 sec to 35 sec. EB/WB split shifts from 84 sec to 85 sec.]


Unmitigable.

Shift the WB approach centerline one foot to the south and retripe the WB approach from one 20-foot wide travel lane to one 10-foot wide left turn lane and one 11-foot wide shared through-right lane.

Modify signal timing: Shift 1 sec of green time from the NB/SB phase to the EB/WB phase. [NB split shifts from 26 sec to 25 sec. EB/WB split shifts from 84 sec to 85 sec.]

ID	Intersection			V/C Ratio				Delay (sec)				LOS				IMPACT?			Proposed Mitigation	
	Description	Approach	Movement	EX	NB	BU	MI	EX	NB	BU	MI	EX	NB	BU	MI	BU	MI	RESOLVE?		
2900	South Avenue & Teleport Drive	EB	L																	
			T	0.21	0.35	0.35	0.35	21.3	23.2	23.2	23.7	C	C	C	C					
		WB	L	0.29	0.42	0.42	0.42	23.5	27.6	27.6	27.6	C	C	C	C					
			T	0.27	0.34	0.34	0.34	22.8	24.9	24.9	24.9	C	C	C	C					
		NB	L	0.22	0.27	0.27	0.27	21.9	23.3	23.3	23.3	C	C	C	C					
			T	0.17	0.34	0.35	0.35	20.7	14.2	14.7	8.7	C	B	B	A					
		SB	L	0.06	0.06	0.06	0.06	18.6	12.4	12.5	5.8	B	B	B	A					
			T	0.54	0.65	0.68	0.68	14.2	7.7	8.0	7.8	B	A	A	A					
		Intersection						17.7	13.9	14.1	12.6	B	B	B	B					
		3000	South Avenue & Travis Avenue	WB	L	0.41	0.55	0.55	0.55	25.5	32.5	32.5	32.5	C	C	C	C			
R	0.39				0.43	0.43	0.43	25.4	16.8	16.8	16.8	C	B	B	B					
NB	T			0.27	0.64	0.65	0.65	18.6	24.9	25.2	25.2	B	C	C	C					
	R																			
SB	L			0.96	1.77	1.79	1.79	53.5	388.3	395.1	387.2	D	F	F	F	YES		RESOLVE		
	T			0.45	0.61	0.62	0.62	11.7	16.2	16.5	8.8	B	B	B	A					
Intersection						23.5	88.2	89.3	84.9	C	F	F	F							

Notes:
1. Delay and LOS results for intersections 100 to 1020 are derived from the Richmond Terrace Vissim model. Also, it should be noted that vissim does not provide V/C ratio outputs.

Legend:
 Indicates movements that trigger CEQR impact criteria.

Modify signal timing: Shift offset from 0 sec to 36 sec.

ID	Description	Intersection			Delay (sec)				LOS				IMPACT?			Proposed Mitigation	
		Direction	Approach Type	Movement	EX	NB	BU	MI	EX	NB	BU	MI	BU	MI	RESOLVE?		
1500	Richmond Terrace & Alaska Street	EB	MAJOR	L													
			MAJOR	T	0.0					A							
			MAJOR	R													
		WB	MAJOR	L													
			MAJOR	T	0.3						A						
			MAJOR	R													
		NB	MINOR	L													
			MINOR	T	40.6						E						
			MINOR	R													
		SB	MINOR	L													
			MINOR	T	13.7						B						
			MINOR	R													
	Intersection			1.5					A								
1700	Richmond Terrace & Heberton Avenue	EB	MINOR	L	23.3	44.3	45.2	45.2	C	E	E	E					
			MINOR	R													
		NB	MAJOR	L													
			MAJOR	T	1.9	2.8	2.8	2.8	A	A	A	A					
		SB	MAJOR	T	0.0	0.0	0.0	0.0	A	A	A	A					
			MAJOR	R													
			Intersection			2.1	3.2	3.2	3.2	A	A	A	A				
2400	South Avenue & Continental Place	WB	MINOR	L	12.1	16.6	17.1	17.1	B	C	C	C					
			MINOR	R													
		NB	MAJOR	T	0.0	0.0	0.0	0.0	A	A	A	A					
			MAJOR	R													
		SB	MAJOR	L													
			MAJOR	T	0.3	0.3	1.3	1.3	A	A	A	A					
			Intersection			0.5	0.5	1.3	1.3	A	A	A	A				
2410	South Avenue & Cable Way	EB	MINOR	L	11.7	15.8	16.4	16.4	B	C	C	C					
			MINOR	R													
		NB	MAJOR	L													
			MAJOR	T	0.4	0.4	0.4	0.4	A	A	A	A					
		SB	MAJOR	T	0.0	0.0	0.0	0.0	A	A	A	A					
			MAJOR	R													
			Intersection			1.2	1.1	1.1	1.1	A	A	A	A				
2800	South Avenue & Edward Curry Avenue	EB	MINOR	L	89.3				F								
			MINOR	R	15.2												
		NB	MAJOR	L	12.8												
			MAJOR	T	0.0												
		SB	MAJOR	T	0.0												
			MAJOR	R													
			Intersection			3.7				A							

SIGNALIZED INTERSECTIONS	NORTH SHORE RIGHT OF WAY EXISTING CONDITIONS RESULTS versus NO-BUILD CONDITIONS RESULTS versus BUILD CONDITIONS RESULTS versus BUILD MITIGATED CONDITIONS RESULTS													SAT		
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ID	Intersection			V/C Ratio				Delay (sec)				LOS				IMPACT?			Proposed Mitigation	
	Description	Approach	Movement	EX	NB	BU	MI	EX	NB	BU	MI	EX	NB	BU	MI	BU	MI	RESOLVE?		
100	Richmond Terrace & Ferry Terminal Viaduct & Bay Street	EB (Bay Street)	L2					23.7	237.0	55.1	55.1	C	F	E	E					
			T					6.3	15.4	9.8	9.8	A	B	A	A					
			R					21.4	32.6	31.7	31.7	C	C	C	C					
			R2																	
		NB (Promenade)	L																	
			T																	
		SB (Richmond Terrace)	L2																	
			L																	
		SWB (Lower Level Exit)	L																	
			R																	
Intersection								17.6	44.8	19.8	19.8	B	D	B	B					
200	Richmond Terrace & Ferry Terminal Viaduct	WB (Upper Level Exit)	L					38.0	47.0	40.2	40.2	D	D	D	D					
			R					33.2	1345.5	35.1	35.1	C	F	D	D					
		NB	T					5.0	21.3	10.4	10.4	A	C	B	B					
			T					2.7	2.4	2.2	2.2	A	A	A	A					
		SB	T					11.5	24.3	6.8	6.8	B	C	A	A					
			T																	
		Intersection								17.1	95.3	28.3	28.3	B	F	C	C	YES	YES	UNMITIGABLE
		400	Richmond Terrace & Wall Street	EB	L					26.2	31.0	28.6	28.6	C	C	C	C			
					T					0.0				0						
					R															
WB	L									28.6	82.5	82.5		C	F	F	YES	YES	UNMITIGABLE	
	T							0.0	37.9	92.2	92.2	A	D	F	F	YES	YES	UNMITIGABLE		
	R																			
NB	T							12.8	62.0	26.5	26.5	B	E	C	C					
	R							0.0	42.0	42.8	42.8	0	D	D	D					
SB	L																			
	T							14.5	128.6	95.4	95.4	B	F	F	F					
SB (Busway)	T																			
	T																			
Intersection									62.6	65.7	65.7		E	E	E					
500	Richmond Terrace & Hamilton Avenue	NB	L					0.0				0								
			T					11.9	40.9	11.2	11.2	B	D	B	B					
		SB	T							52.8	46.1	46.1		D	D	D				
			R					0.0				0								
		SB (Busway)	T												A	A				
			T												A	A				
Intersection								11.0	46.3	26.6	26.6	B	D	C	C					
600	Richmond Terrace & Stuyvesant Place	NB	L							75.9	75.9			E	E	YES	YES	UNMITIGABLE		
			T								12.3	12.3			B	B				
		SB	T									77.1	77.1			E	E	YES	YES	UNMITIGABLE
			R																	
		SB (Busway)	T									0.7	0.7			A	A			
			T									0.6	0.6			A	A			
Intersection										48.3	48.3			D	D					
700	Richmond Terrace & Nicholas Street/Garage Ramp	EB	L					0.0				0								
			T					6.2	153.1	21.2	21.2	A	F	C	C					
		WB	T					0.0		22.5	18.0	18.0		C	B					
			R					0.0				0.0								
		NB	T							34.9	75.5	75.5		C	E	E	YES	YES	UNMITIGABLE	
			R																	
		SB	L					0.0				0.0								
			T					18.5	48.5	102.2	102.2	0	B	D	F	F	YES	YES	UNMITIGABLE	
		SEB (Busway)	T									3.7	3.7			A	A			
			T									4.9	4.9			A	A			
Intersection								9.4	75.9	27.1	27.1	A	E	C	C					
800	Richmond Terrace & St Peters Place	EB	T					9.5	94.4	4.3	4.3	A	F	A	A					
			R																	
		WB	L																	
			T					18.5	50.7	33.5	33.5	B	D	C	C					
		NB	L					17.6	25.3	27.0	27.0	B	C	C	C					
			R																	
Intersection								14.0	71.6	19.1	19.1	B	E	B	B					
900	Richmond Terrace & Westervelt Avenue	EB	T					12.6	41.8	12.3	12.3	B	D	B	B					
			R																	
		WB	L																	
			T					15.5	85.2	28.9	28.9	B	F	C	C					
		NB	L					20.3	79.6	31.9	31.9	C	E	C	C					
			R																	
Intersection								15.0	64.5	21.5	21.5	B	E	C	C					
1000	Richmond Terrace & Jersey Street	EB	L					17.9	24.8	23.3	23.3	B	C	C	C					
			R					16.4	125.4	16.3	16.3	B	F	B	B					
		WB	L					29.4	93.4	35.0	35.0	C	F	C	C					
			T					20.9	39.7	23.0	23.0	C	D	C	C					
		NB	L					19.1	20.3	39.2	39.2	B	C	D	D					
			R					26.7	38.7	42.5	42.5	C	D	D	D					
		SB	L					18.6	35.2	10.1	10.1	B	D	B	B					
			T					29.1	28.6	4.6	4.6	C	C	A	A					
		Intersection								19.2	76.6	21.7	21.7	B	E	C	C			

VISSIM RESULTS
Note: Vissim results do not include v/c ratio outputs.

ID	Description	Intersection		V/C Ratio				Delay (sec)				LOS				IMPACT?			Proposed Mitigation
		Approach	Movement	EX	NB	BU	MI	EX	NB	BU	MI	EX	NB	BU	MI	BU	MI	RESOLVE?	
1020	Bank Street & Jersey Street	EB (Busway)	T						81.1	81.1			F	F	YES	YES	UNMITIGABLE		
		WB (Busway)	T						3.0	3.0			A	A					
		EB	T						0.0	0.0			A	A					
			R																
		WB	L						44.2	44.2			D	D					
			T						11.4	11.4			B	B					
		NB	L																
			R																
	Intersection							29.8	29.8			C	C						
1100	Richmond Terrace & Franklin Avenue	EB	T	0.39	0.71	0.71	0.71	3.7	4.3	4.3	4.3	A	A	A	A				
			R																
		WB	L	0.47	0.96	0.96	0.96	30.2	46.7	46.7	46.7	C	D	D	D				
			T	0.09	0.11	0.11	0.11	22.4	22.6	22.6	22.6	C	C	C	C				
	Intersection						18.0	26.6	26.6	26.6	B	C	C	C					
1200	Richmond Terrace & Lafayette Avenue	EB	T	0.49	0.77	0.77	0.77	13.3	19.9	19.9	19.9	B	B	B	B				
			R																
		WB	L	0.43	1.05	1.05	1.05	21.0	64.1	64.1	64.1	C	E	E	E				
			T	0.22	0.24	0.24	0.24	24.2	24.6	24.6	24.6	C	C	C	C				
	Intersection						17.9	41.6	41.6	41.6	B	D	D	D					
1300	Richmond Terrace & Bard Avenue	EB	L	0.44	0.89	0.89	0.89	16.0	33.4	33.4	33.4	B	C	C	C				
			T	0.45	0.91	0.91	0.91	16.1	35.6	35.6	35.6	B	D	D	D				
		NB	L	0.18	0.21	0.21	0.21	18.7	19.1	19.1	19.1	B	B	B	B				
			T	0.04	0.05	0.05	0.05	17.2	17.3	17.3	17.3	B	B	B	B				
	Intersection						16.4	33.2	33.2	33.2	B	C	C	C					
1400	Richmond Terrace & Broadway	EB	L	0.35	0.64	0.64	0.70	8.5	12.8	12.8	14.6	A	B	B	B				Shift the WB approach centerline one foot to the south and retripec the WB approach from one 20-foot wide travel lane to one 10-foot wide left turn lane and one 11-foot wide shared through-right lane. Measures needed to mitigate impacts during other peak hours.
			T																
		WB	L	0.40	0.76	0.76	0.16	9.2	16.6	16.6	7.7	A	B	B	A				
			T	0.27	0.31	0.31	0.31	28.6	29.5	29.5	29.5	C	C	C	C				
	Intersection						10.8	15.7	15.7	16.4	B	B	B	B					
1500	Richmond Terrace & Alaska Street	EB	L		0.83	0.83	0.83		24.5	25.0	25.0		C	C	C				
			T																
		WB	L		0.97	0.97	0.97		43.0	43.0	43.0		D	D	D				
			T						29.2	30.6	30.6		C	C	C				
	Intersection							26.7	27.3	27.3		C	C	C					
1600	Richmond Terrace & Jewett Avenue	WB	R	0.45	0.62	0.63	0.63	6.1	9.5	9.5	9.5	A	A	A	A				
		NB	R	0.27	0.93	0.93	0.93	30.0	66.8	66.8	66.8	C	E	E	E				
		SB	L	0.62	0.89	0.89	0.89	23.5	40.7	41.4	41.4	C	D	D	D				
			T					15.2	32.4	32.7	32.7	B	C	C	C				
1800	Castleton Avenue & Port Richmond Avenue	EB	L	0.30	0.34	0.34	0.34	25.1	25.7	25.7	25.7	C	C	C	C				
			T																
		WB	L	0.23	0.26	0.26	0.26	24.6	25.2	25.2	25.2	C	C	C	C				
			T	0.38	0.43	0.43	0.43	27.2	28.2	28.2	28.2	C	C	C	C				
	Intersection						23.5	24.6	24.8	24.8	C	C	C	C					
1900	Castleton Avenue & Jewett Avenue	EB	L	0.25	0.30	0.30	0.30	13.6	15.2	15.2	15.2	B	B	B	B				
			T																
		WB	L	0.58	1.20	1.20	1.20	18.9	126.8	126.8	126.8	B	F	F	F				
			T																
	Intersection						18.0	82.7	82.7	82.7	B	F	F	F					

Intersection				V/C Ratio				Delay (sec)				LOS				IMPACT?			Proposed Mitigation			
ID	Description	Approach	Movement	EX	NB	BU	MI	EX	NB	BU	MI	EX	NB	BU	MI	BU	MI	RESOLVE?				
2900	South Avenue & Teleport Drive	EB	L																			
			T	0.05	0.09	0.09	0.09	19.8	21.4	21.5	21.5	B	C	C	C							
		WB	L	0.05	0.06	0.06	0.06	19.9	20.7	20.7	20.7	B	C	C	C							
			T	0.05	0.05	0.05	0.05	19.8	20.6	20.6	20.6	B	C	C	C							
		NB	L	0.04	0.05	0.05	0.05	19.7	20.5	20.5	20.5	B	C	C	C							
			T	0.18	0.20	0.21	0.21	11.1	6.4	6.4	6.4	B	A	A	A							
		SB	L	0.03	0.03	0.03	0.03	8.9	4.9	4.9	4.9	A	A	A	A							
			T	0.26	0.32	0.32	0.32	11.2	6.1	6.2	6.2	B	A	A	A							
		Intersection								12.2	8.2	8.2	8.2	B	A	A	A					
		3000	South Avenue & Travis Avenue	WB	L	0.63	0.70	0.70	0.70	30.6	33.2	33.2	33.2	C	C	C	C					
R	0.40				0.34	0.34	0.34	25.6	15.9	15.9	15.9	C	B	B	B							
NB	T			0.17	0.19	0.19	0.19	17.6	17.8	17.9	17.9	B	B	B	B							
	R																					
SB	L			0.51	0.64	0.64	0.64	22.4	29.7	29.8	29.8	C	C	C	C							
	T			0.17	0.23	0.24	0.24	13.7	19.0	19.1	19.1	B	B	B	B							
Intersection										21.7	23.6	23.6	23.6	C	C	C	C					

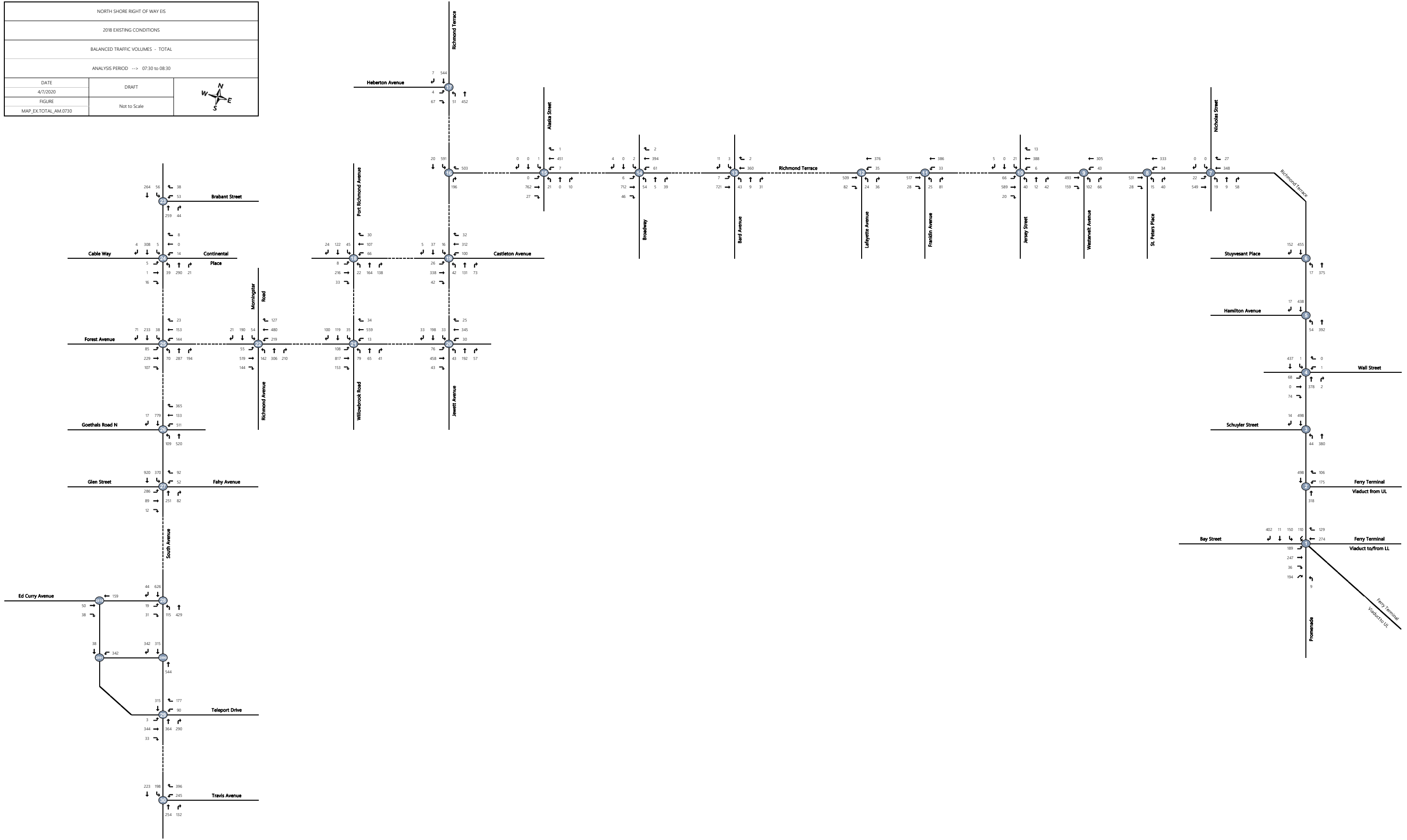
Notes:
1. Delay and LOS results for intersections 100 to 1020 are derived from the Richmond Terrace Vissim model. Also, it should be noted that vissim does not provide V/C ratio output:

Legend:
 Indicates movements that trigger CEQR impact criteria.

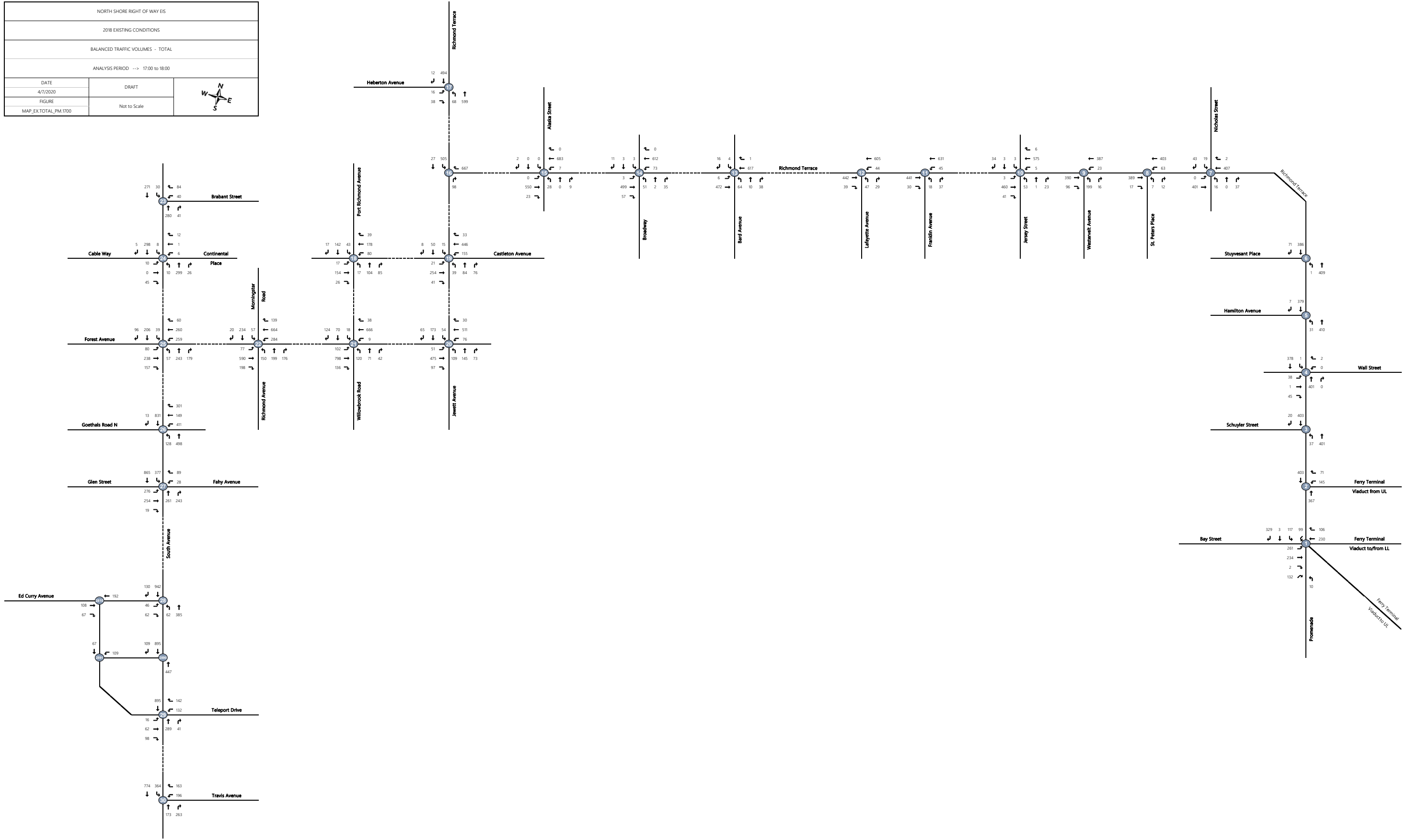
UNSIGNALIZED INTERSECTIONS		NORTH SHORE RIGHT OF WAY												SAT					
		EXISTING CONDITIONS RESULTS versus NO-BUILD CONDITIONS RESULTS versus BUILD CONDITIONS RESULTS versus BUILD MITIGATED CONDITIONS RESULTS																	
ID	Description	Intersection			Delay (sec)				LOS				IMPACT?			Proposed Mitigation			
		Direction	Approach Type	Movement	EX	NB	BU	MI	EX	NB	BU	MI	BU	MI	RESOLVE?				
1500	Richmond Terrace & Alaska Street	EB	MAJOR	L															
			MAJOR	T	0.2					A									
			MAJOR	R															
		WB	MAJOR	L															
			MAJOR	T	0.1						A								
			MAJOR	R															
		NB	MINOR	L															
			MINOR	T	22.9						C								
			MINOR	R															
		SB	MINOR	L															
MINOR	T		12.6						B										
MINOR	R																		
	Intersection				1.3				A										
1700	Richmond Terrace & Heberton Avenue	EB	MINOR	L	13.6	17.6	17.7	17.7	B	C	C	C							
			MINOR	R															
		NB	MAJOR	L															
			MAJOR	T	0.8	0.9	0.9	0.9	A	A	A	A							
		SB	MAJOR	T	0.0	0.0	0.0	0.0	A	A	A	A							
			MAJOR	R															
	Intersection				1.2	1.3	1.3	1.3	A	A	A	A							
2400	South Avenue & Continental Place	WB	MINOR	L	12.7	15.8	16.4	16.4	B	C	C	C							
			MINOR	R															
		NB	MAJOR	T	0.0	0.0	0.0	0.0	A	A	A	A							
			MAJOR	R															
		SB	MAJOR	L															
			MAJOR	T	0.5	0.4	0.4	0.4	A	A	A	A							
	Intersection				0.8	0.8	0.8	0.8	A	A	A	A							
2410	South Avenue & Cable Way	EB	MINOR	L	11.5	14.4	14.5	14.5	B	B	B	B							
			MINOR	R															
		NB	MAJOR	L															
			MAJOR	T	0.3	0.3	0.3	0.3	A	A	A	A							
		SB	MAJOR	T	0.0	0.0	0.0	0.0	A	A	A	A							
			MAJOR	R															
	Intersection				0.4	0.4	0.4	0.4	A	A	A	A							
2800	South Avenue & Edward Curry Avenue	EB	MINOR	L	15.6				C										
			MINOR	R	10.2				B										
		NB	MAJOR	L	8.7														
			MAJOR	T	0.0					A									
		SB	MAJOR	T	0.0					A									
			MAJOR	R															
			Intersection				1.0				A								

Appendix M-3: 2018 Existing Conditions Traffic Volume Figures

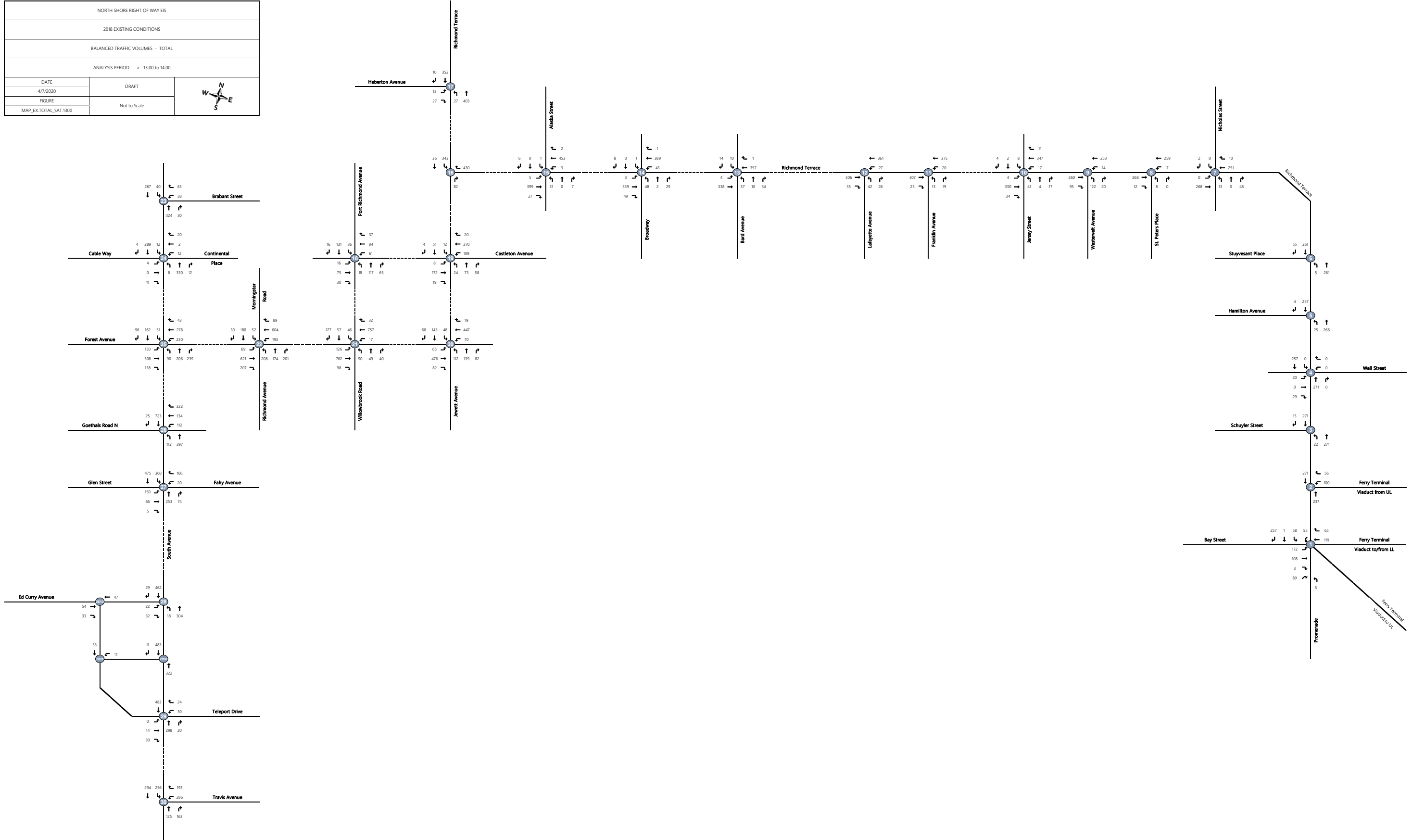
NORTH SHORE RIGHT OF WAY EIS		
2018 EXISTING CONDITIONS		
BALANCED TRAFFIC VOLUMES - TOTAL		
ANALYSIS PERIOD --> 07:30 to 08:30		
DATE	DRAFT	
4/7/2020		
FIGURE	Not to Scale	
MAP_EX.TOTAL_AM.0730		



NORTH SHORE RIGHT OF WAY EIS		
2018 EXISTING CONDITIONS		
BALANCED TRAFFIC VOLUMES - TOTAL		
ANALYSIS PERIOD --> 17:00 to 18:00		
DATE	DRAFT	
4/7/2020		
FIGURE	Not to Scale	
MAP_EX.TOTAL_PM.1700		

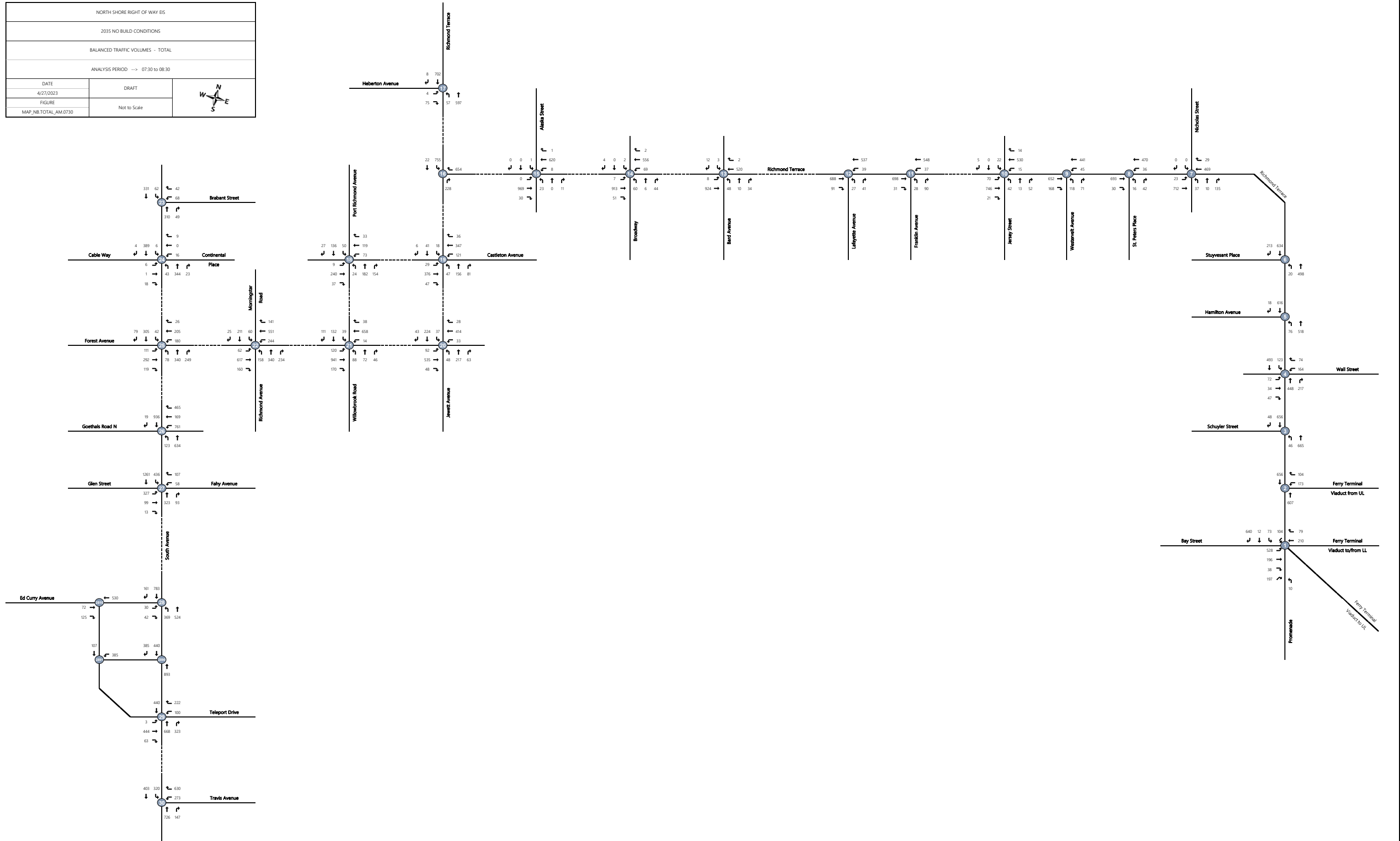


NORTH SHORE RIGHT OF WAY EIS		
2018 EXISTING CONDITIONS		
BALANCED TRAFFIC VOLUMES - TOTAL		
ANALYSIS PERIOD --> 13:00 to 14:00		
DATE	DRAFT	
4/7/2020		
FIGURE	Not to Scale	
MAP_EX.TOTAL_SAT.1300		

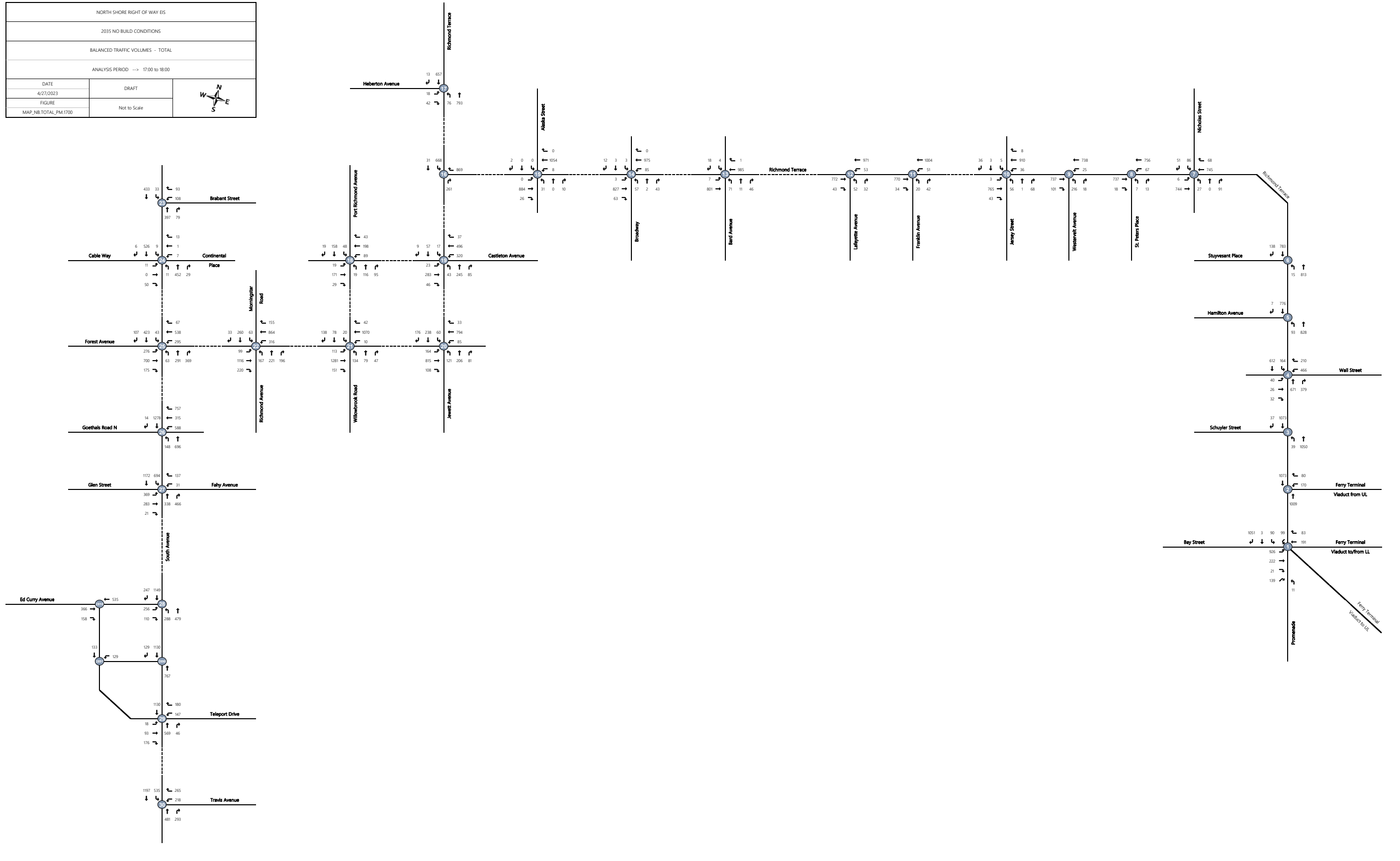


Appendix M-4: 2035 No-Action Condition Traffic Volume Figures

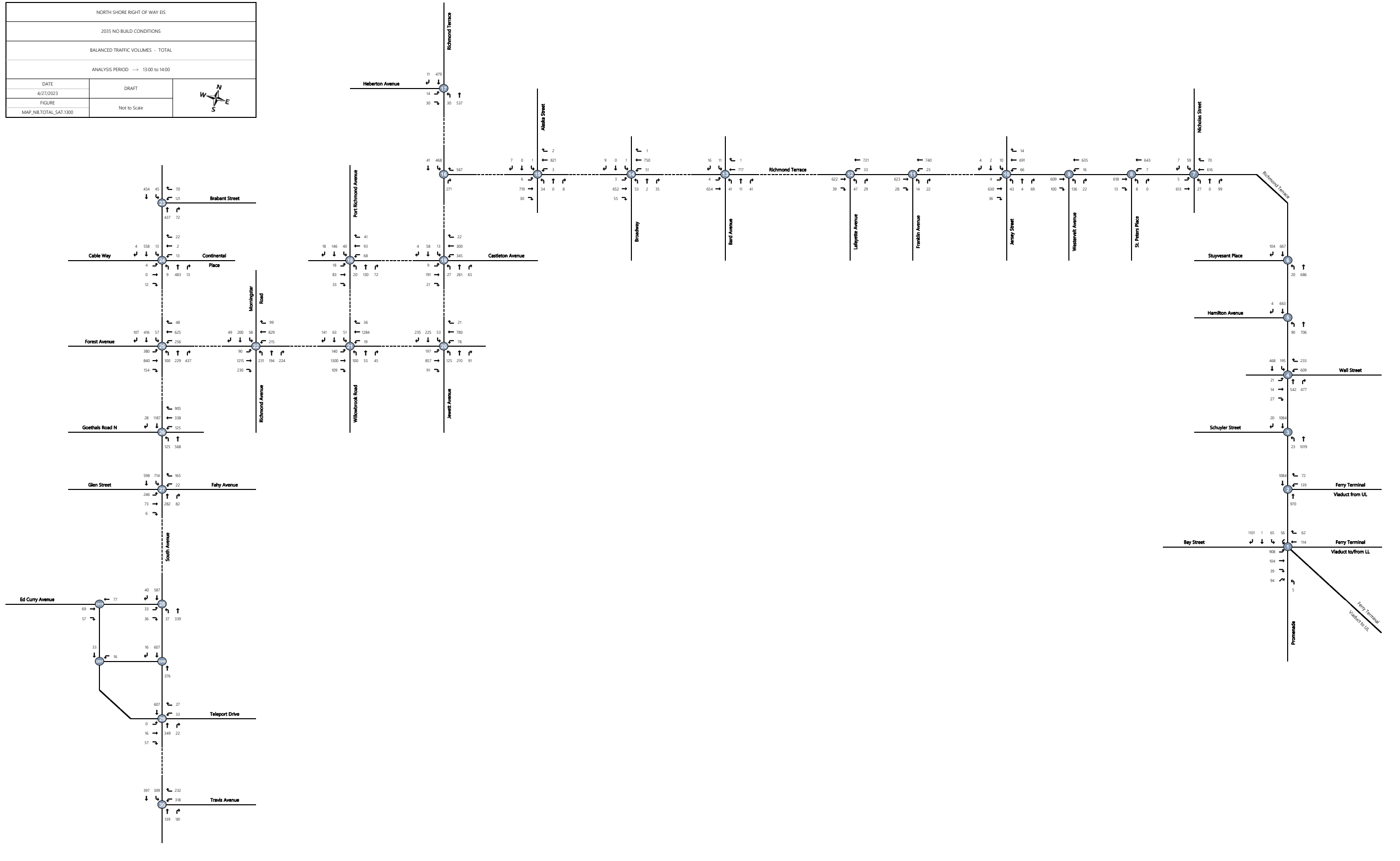
NORTH SHORE RIGHT OF WAY EIS		
2035 NO BUILD CONDITIONS		
BALANCED TRAFFIC VOLUMES - TOTAL		
ANALYSIS PERIOD --> 07:30 to 08:30		
DATE	DRAFT	
4/27/2023		
FIGURE	Not to Scale	
MAP_NB_TOTAL_AM.0730		



NORTH SHORE RIGHT OF WAY EIS		
2035 NO BUILD CONDITIONS		
BALANCED TRAFFIC VOLUMES - TOTAL		
ANALYSIS PERIOD --> 17:00 to 18:00		
DATE	DRAFT	
4/27/2023		
FIGURE	Not to Scale	
MAP_NB.TOTAL_PM1700		

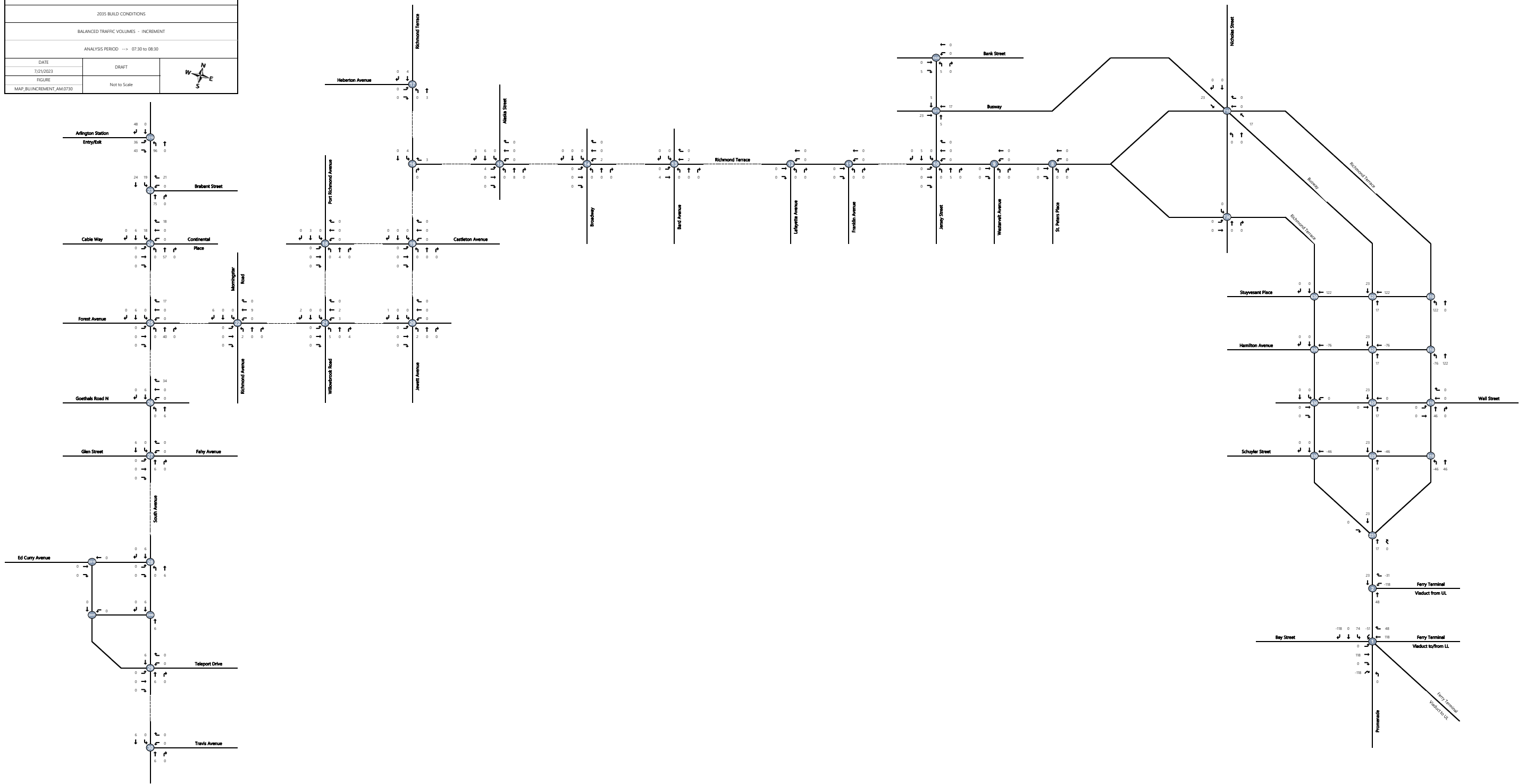


NORTH SHORE RIGHT OF WAY EIS		
2035 NO BUILD CONDITIONS		
BALANCED TRAFFIC VOLUMES - TOTAL		
ANALYSIS PERIOD --> 13:00 to 14:00		
DATE	DRAFT	
4/27/2023		
FIGURE	Not to Scale	
MAP_NB TOTAL_SAT.1300		

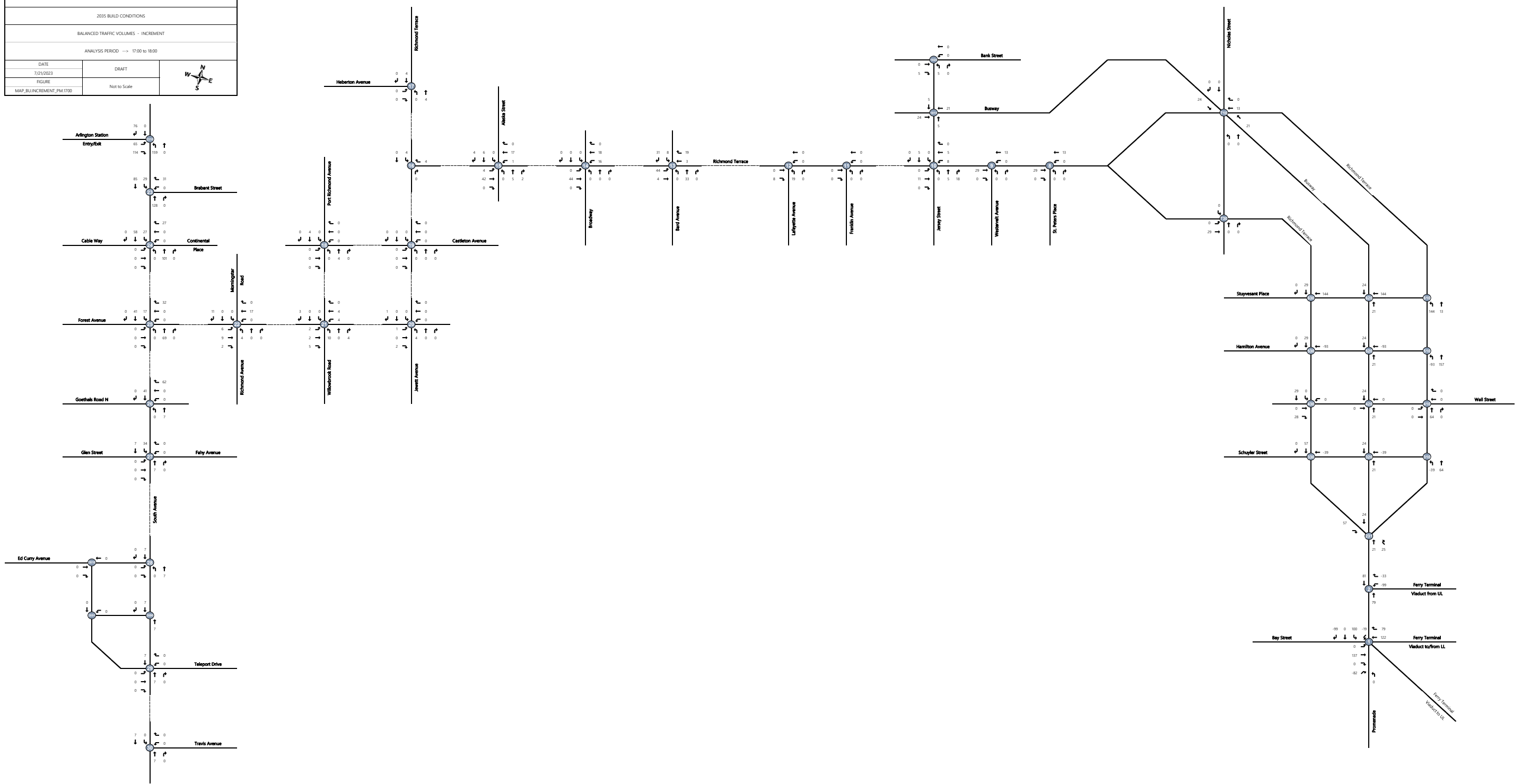


Appendix M-5: 2035 With-Action Condition Traffic Volume Increment Figures

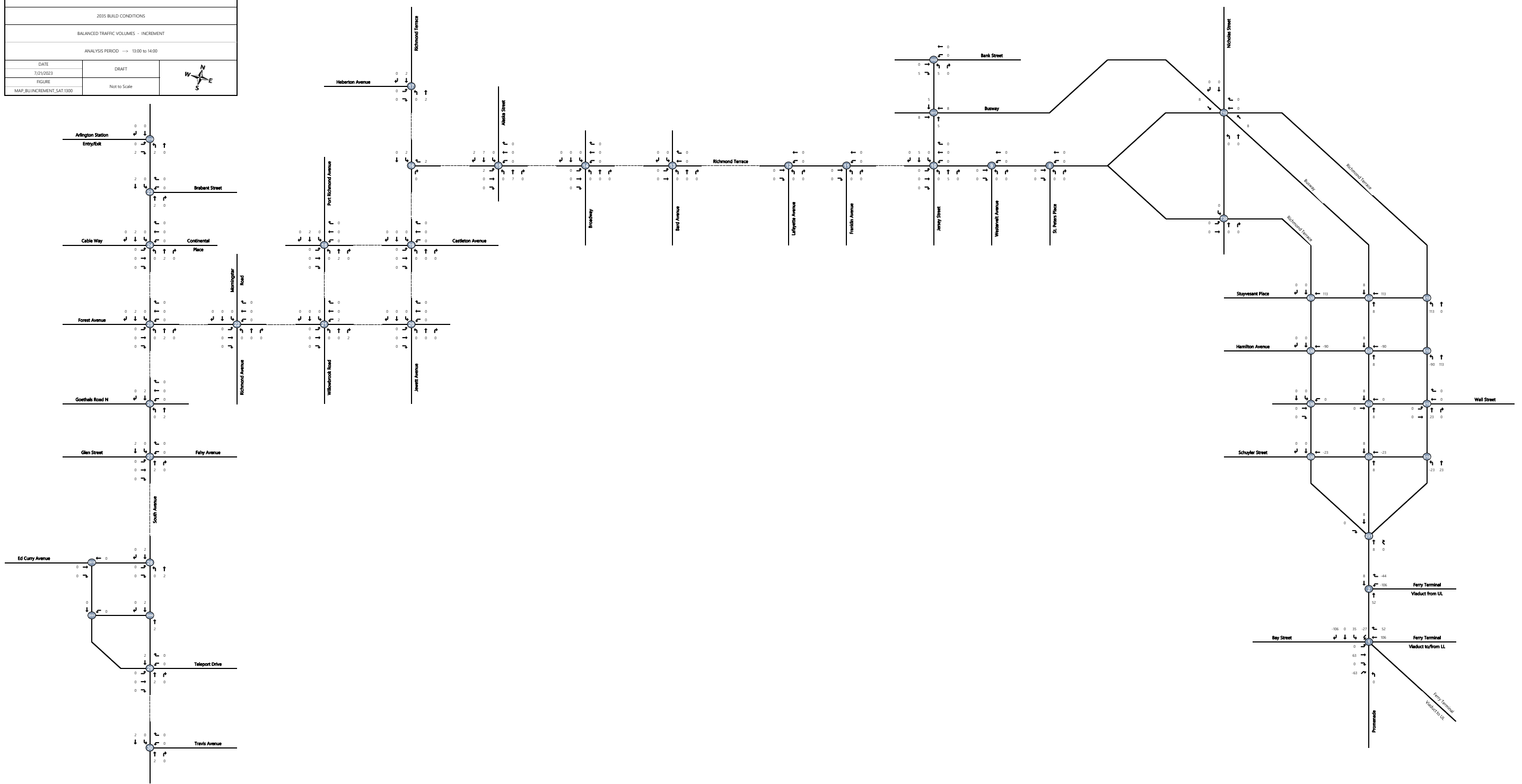
NORTH SHORE RIGHT OF WAY E/S	
2035 BUILD CONDITIONS	
BALANCED TRAFFIC VOLUMES - INCREMENT	
ANALYSIS PERIOD --> 07:30 to 08:30	
DATE	DRAFT
7/21/2023	
FIGURE	Not to Scale
MAP_BUNINCREMENT_AM0730	



NORTH SHORE RIGHT OF WAY E/S	
2035 BUILD CONDITIONS	
BALANCED TRAFFIC VOLUMES - INCREMENT	
ANALYSIS PERIOD --> 17:00 to 18:00	
DATE	DRAFT
7/21/2023	
FIGURE	Not to Scale
MAP_BUIINCREMENT_PM1700	

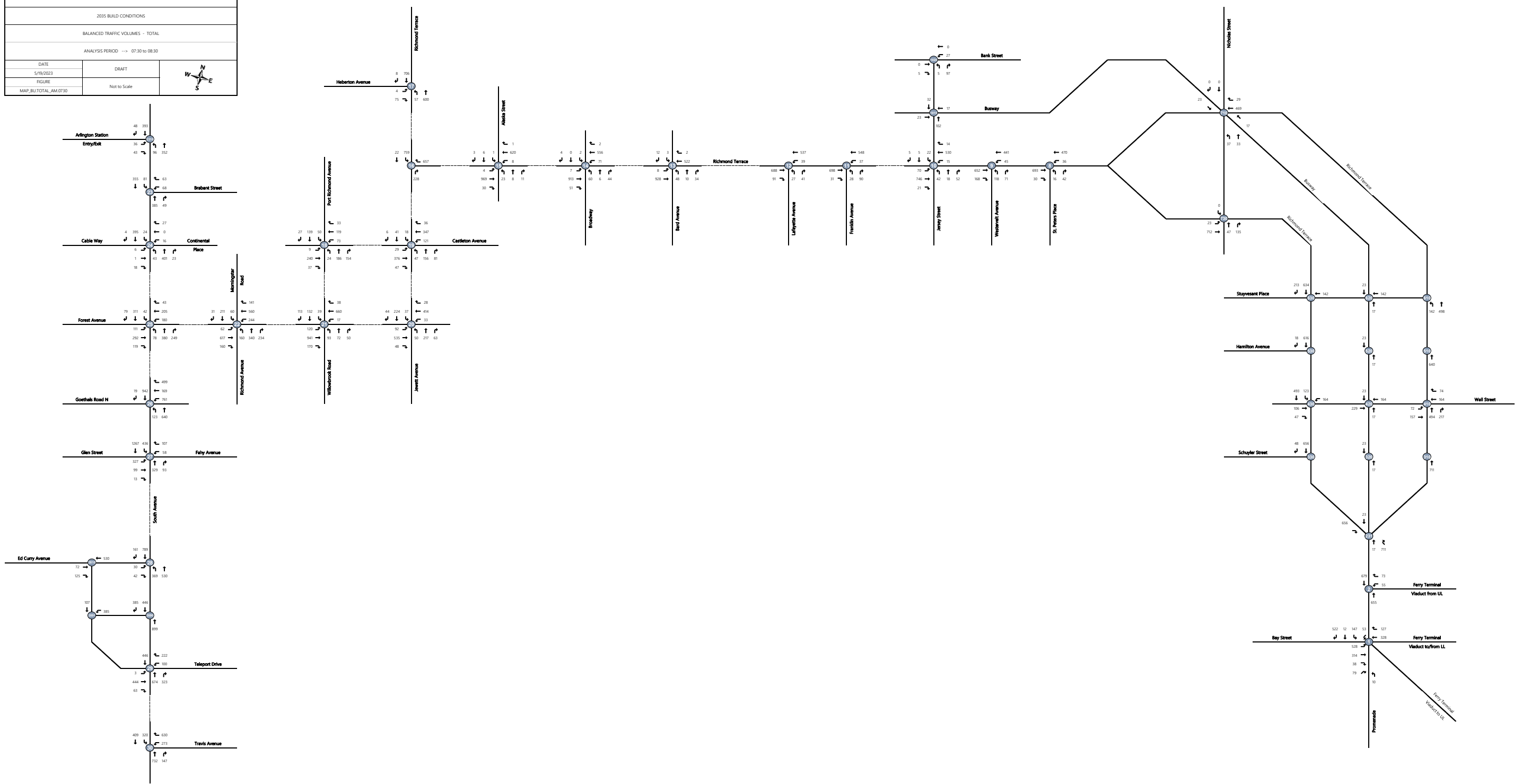


NORTH SHORE RIGHT OF WAY E/S	
2035 BUILD CONDITIONS	
BALANCED TRAFFIC VOLUMES - INCREMENT	
ANALYSIS PERIOD --> 13:00 to 14:00	
DATE	DRAFT
7/21/2023	
FIGURE	Not to Scale
MAP_BUNINCMENT_SAT.0200	

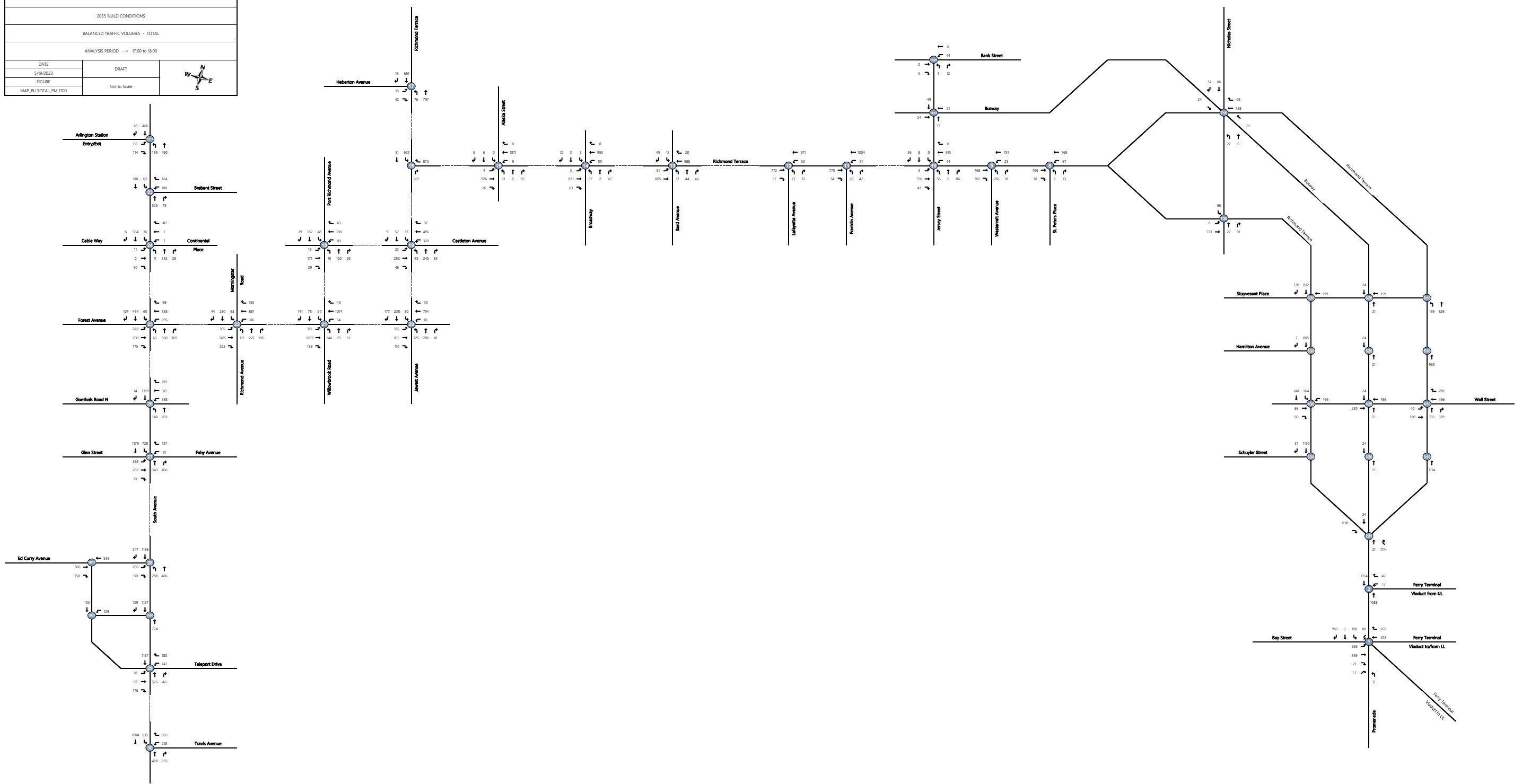


Appendix M-6: 2035 With-Action Condition Traffic Volume Figures

NORTH SHORE RIGHT OF WAY E/S	
2035 BUILD CONDITIONS	
BALANCED TRAFFIC VOLUMES - TOTAL	
ANALYSIS PERIOD --> 07:30 to 08:30	
DATE	DRAFT
5/19/2023	
FIGURE	Not to Scale
MAP_BUTOTAL_AM.0730	



NORTH SHORE RIGHT OF WAY E5	
2035 BUILD CONDITIONS	
BALANCED TRAFFIC VOLUMES - TOTAL	
ANALYSIS PERIOD --> 17:00 to 18:00	
DATE	DRAFT
5/19/2023	
FIGURE	Not to Scale
MAP_BU TOTAL_PM 1700	



NORTH SHORE RIGHT OF WAY E/S	
2035 BUILD CONDITIONS	
BALANCED TRAFFIC VOLUMES - TOTAL	
ANALYSIS PERIOD --> 13:00 to 14:00	
DATE	DRAFT
5/19/2023	
FIGURE	Not to Scale
MAP_BUTOTAL_SAT 1300	

