APPENDIX 22:

MITIGATION

HUNTER'S POINT SOUTH REZONING AND RELATED ACTIONS EIS APPENDIX 22: MITIGATION – TABLES

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		_	2017	No Build			<u>20</u> 17	Build		20	017 Build w	ith Mitigatio	<u>on</u>	Mitigation Measures
INTERSECTION & APPROACE	I	Mvt.	V/C		LOS	Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	
CIONALIZED DEPOSE	NG													
SIGNALIZED INTERSECTION	NS													
VERNON BOULEVARD														
VERNON BOULEVARD & 4	8TH AVENUE													
Vernon Boulevard	NB	LT	0.74	25.1	C	LT	0.82	29.2	С	LT	0.78	25.7	C	- Modify signal timing: shift 2 s of green time from EB phase to NB/SB phase [EB green time sh
	SB	TR	0.90	35.9	D	TR	1.00	53.4	D	TR	0.95	41.7	D	from 17 s to 15 s; NB/SB green time shifts from 41 s to 43 s].
48th Avenue	EB	L	0.41	35.1	D	L	0.42	35.2	D C	L	0.48	38.5	D	
	WB	R LTR	0.31	34.3 60.7	C E	R LTR	0.31 0.90	34.3 60.7	C E	R LTR	0.36 0.90	37.3 60.7	D E	
						ZIK				EIR				
	Overall Intersection	ı -	0.79	36.6	D	-	0.84	44.4	D	-	0.84	39.0	D	
VERNON BOULEVARD & 4			0.75	1= 0			0.05	21.5	G		0.70	16.0		Modificated length from 60 at a 00 a IED and the in 22 a NID 6D and in 150 at 150
Vernon Boulevard	NB	LTR	0.78	17.3	B E*	LTR	0.85	21.2	C F*	LTR	0.68	12.9	В	 Modify cycle length from 60 s to 90 s. [EB green time is 22 s; NB/SB green time is 58 s; all pl have 3 s of amber and 2 s of all red time].
49th Avenue	SB EB	LTR LTR	1.20+ 0.19	120+ 15.9	F* B	LTR LTR	1.20+ 0.33	120+ 17.8	B B	LTR LTR	1.17 0.43	101.1 32.9	F C	m. 0000 and 2001 an red anteg.
+)th Avenue	LD	LIK	0.17	13.7	ь	LIK	0.55	17.0	В	LIK	0.43	32.)	C	
	Overall Intersection	ı -	0.90	102.8	F	-	1.05	120+	F *	-	0.96	60.2	E	
VERNON BOULEVARD & 5	OTH AVENUE													
Vernon Boulevard	NB	TR	0.75	16.5	В	TR	0.83	20.3	С	TR	0.94	43.3	D	- Partially Mitigated.
504- A	SB	LT	0.93	31.2	C	LT	1.05 1.20+	60.2	E F*	LTD	0.65	21.3 50.3	C D	 Install "No Standing 7:00 AM - 10:00 AM" regulation on the west curb of the SB Vernon Bou for the entire block to gain an additional through lane in the AM peak period.
50th Avenue	EB	LTR	0.65	27.9	С	LTR	1.20+	120+	F ^π	LTR	0.90	50.5	D	- Modify cycle length from 60 s to 90 s. [EB green time is 39 s; NB/SB green time is 41 s; all ph
	Overall Intersection	ı -	0.82	24.4	C	-	1.16	79.8	E	-	0.92	36.5	D	have 3 s of amber and 2 s of all red time].
VEDNON DOWN EVADD 6 5	den avenue													
VERNON BOULEVARD & 5 Vernon Boulevard	NB	LT	0.93	34.6	C	LT	1.03	57.2	Е	LT	0.78	24.3	С	- Modify cycle length from 60 s to 90 s. [WB green time is 35 s; NB/SB green time is 45 s; all pl
vernon Boulevard	SB	TR	0.88	29.6	C	TR	1.03	58.3	E	TR	0.85	29.4	C	have 3 s of amber and 2 s of all red time].
51st Avenue	WB	LTR	0.55	14.7	В	LTR	0.79	19.5	В	LTR	0.88	33.2	C	
	Overall Intersection	ı -	0.74	25.8	C	-	0.91	41.0	D	-	0.86	29.7	C	
VERNON BOULEVARD & B	RORDEN AVENUE													
Vernon Boulevard	SB	L	1.10	82.1	F	L	1.10	82.1	F	L	0.81	38.7	D	- Install "No Standing Anytime" regulation on the west curb of the SB Vernon Boulevard for 12
		LR	0.67	19.3	В	LR	1.06	67.7	Е	R	0.58	33.7	C	and restripe the approach from one 9 ft. left-turn lane and one 15 ft. left-right lane to two 11 ft
Borden Avenue	EB	LT	0.81	22.9	C	LT	1.20+	120+	F*	LT	0.98	43.0	D	turn lanes and one 11 ft. right-turn lane by switching the parking on the east side from angle to parallel to gain additional 9 ft.
	WB	T	0.27	12.1	В	T	0.53	15.1	В	T	0.41	32.3	C	. •
	Overall Intersection	ı -	0.95	41.2	D	-	1.20+	120+	F*	-	0.91	39.3	D	Install "No Standing 7:00 AM - 7:00 PM" regulation on the south curb of the EB Borden Aven ft. from the intersection and restripe the approach from one 16 ft. travel lane with parking to or ft. shared left through and one 12 ft. through lane.
														 Shift centerline of the WB Borden Avenue 6 ft. to the north tapered 150 ft. from the intersection Restripe EB Borden Avenue receiving as two 11 ft. lanes.
														 Restripe WB Borden Avenue from one 13 ft. through lane and one 15 ft. channelized right-turn to two 11 ft. through lane and one 11 ft. right-turn lane by shifting the north curb 11 ft. to the n
														 Restripe WB Borden Avenue receiving from one 22 ft. lane with parking to two 11 ft. lanes wi parking.
														 Modify cycle length from 60 s to 120 s with EB-lead phase. [SB green time is 45 s; EB-lead gr time is 21 s; EB/WB green time is 39 s; all phases have 3 s of amber and 2 s of all red time].

			2017 N	No Build			201	7 Build		<u>20</u>	017 Build w	ith Mitigatio	<u>on</u>	Mitigation Measures
INTERSECTION & APPROACH		Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	
VERNON BOULEVARD & 44TH D	RIVE													
Vernon Boulevard	NB	LTR	0.62	11.2	В	LTR	0.71	13.1	В	LTR	0.73	13.4	В	- Modify signal timing: shift 1 s of green time from EB/WB phase to NB/SB phase [EB/WB green
	SB	LTR	1.20+	120+	F*	LTR	1.20+	120+	F*	LTR	1.20+	120+	F*	shifts from 16 s to 15 s; NB/SB green time shifts from 34 s to 35 s].
44th Drive	EB	LTR	0.32	20.5	C	LTR	0.32	20.5	С	LTR	0.35	22.1	C	- Restripe NB/SB Vernon Boulevard approach as follows: 150 feet upstream of the stop bar, shift
	WB	LTR	0.67	26.1	C	LTR	0.69	26.7	С	LTR	0.76	31.1	С	centerline 2 ft. to the east to increase the lane width to 16 ft. Shift the centerline on NB Vernon
														Boulevard 2 ft. to the east to coincide with the SB approach reducing the lane width to 12 ft.
	Overall Intersection	-	1.11	88.6	F	-	1.20	113.9	F	-	1.14	85.7	F	
JACKSON AVENUE/NORTHERN I	BOULEVARD													
JACKSON AVENUE & 50TH AVEN	NUE													
Jackson Avenue	NB	TR	0.18	10.5	В	TR	0.30	11.6	В	TR	0.30	11.6	В	- Install "No Standing Anytime" regulation on the north curb of the EB 50th Avenue 150 ft. from
	SB	LT	0.28	11.4	В	LT	0.45	13.4	В	LT	0.45	13.4	В	intersection and restripe the approach from one 14 ft. lane with parking on both sides to one 11
50th Avenue	EB	LTR	0.66	42.3	D	LTR	0.97	73.1	E	L	0.45	35.9	D	turn lane and one 11 ft. through-right lane with parking along the south curb.
30th Fivehac	LD		-	-		-	-	-	-	TR	0.53	38.2	D	
	WB	Ţ	0.35	35.1	D	ī	0.37	36.0	D	L	0.52	41.0	D	
50th Avenue WB Right (Unsignalized)		R	0.33	10.7	B	R	0.57	13.2	В	R	0.32	13.2	В	
John Avenue WB Right (Unsignanzed)	WD	K	-	10.7	ь	K	-	13.2	Ь	K	-	13.2	ь	
	Overall Intersection	-	0.41	20.5	C	-	0.63	27.8	C	-	0.48	20.0	C	
JACKSON AVENUE & 49TH AVEN	NUE													
49th Avenue	SB	LTR	0.41	29.6	C	LTR	0.50	31.5	С	LTR	0.51	31.8	C	- Install "No Standing Anytime" regulation on the south curb of EB Jackson Avenue for the entir
Jackson Avenue	EB	TR	0.71	45.7	D	TR	1.09	104.2	F	T	0.45	39.4	D	block, shift the centerline 5 ft. to the north, and restripe the approach from a 11 ft. through, one
		_	_	_	_		_			R	0.48	19.7	В	shared through-right lane with parking to two 11 ft. through lanes and one 12 ft. exclusive right
	WB	I T	0.22	16.0	В	LT	0.57	20.7	C	Т	0.69	24.2	C	lane.
	WB	LT	0.33	16.9	В	LI	0.57	20.7	C	1	0.69	24.2	C	- Restripe WB Jackson Avenue from one 11 ft. left-through lane and one 20 ft. through lane to o
	0 117 4 41		0.55	20.0			0.03				0.60	25 6	a	ft. through lane.
	Overall Intersection	-	0.57	30.9	C	-	0.83	57.4	E	-	0.62	27.6	C	
														- Prohibit WB Jackson Avenue left-turn on to the 11th Street service road.
														 Restripe WB Jackson Avenue receiving lane from one 11 ft. and one 12 ft. lane with parking to 18 ft. lane with parking.
														- Permit EB Jackson Avenue right-turn to the Pulaski Bridge during the exclusive WB Jackson A
														phase.
JACKSON AVENUE & 11TH STRE	`	GE)								_			_	
11th Street (Pulaski Bridge)	NB	-	-	-	-	-	-	-	-	L -	0.79	54.3	D	- Post signs on the Pulaski Bridge to direct the right turning traffic to the 11th Street service road
		LT	1.20+		F*	LT	1.20+	120+	F*	T	0.90	43.0	D	signs for Queens Boulevard/Jackson Avenue East traffic.
		R	1.12	111.4	F	R	1.18	120+	F*	-	-	-	-	- Restripe the NB 11th Street service road approach traffic island to allow for two 12 ft. right-tur
	SB	LTR	0.71	32.5	C	LTR	0.71	32.7	С	LTR	0.72	32.8	C	by removing parking along the west curb.
Jackson Avenue	EB	LT	0.47	31.8	C	LT	0.85	44.8	D	LT	0.84	44.2	D	- Restripe the NB Pulaski Bridge shared left-through lane to an exclusive left-turn lane.
	WB	DefL	1.10	97.1	F	DefL	1.20+	120+	F*	L	0.95	64.8	E	- Install "No Standing Anytime" regulation on the north curb of the WB Jackson Avenue approa
		T	0.40	18.3	В	T	0.69	24.9	С	T	0.70	25.5	C	150 ft. and restripe the approach from a 10 ft. shared left-through and a 12 ft. through lane with
11th Street Service Road	NB	R	1.20+	120+	F*	R	1.20+	120+	F*	R	0.71	16.1	В	parking to two 10 ft. left-turn lanes and a 10 ft. through lane.
	Overall Intersection	_	1.20	109.1	F	_	1.20+	120+	F*	_	0.90	37.5	D	- Prohibit the WB Jackson Avenue left-turn during the permitted EB/WB phase.
ALGREDAL AND THE CASE CONT.														
JACKSON AVENUE & 21ST STRE					_	_			-				_	D CHARC (1
21st Street	NB	LTR	0.84	39.3	D	LTR	0.87	41.4	D	LTR	0.89	44.5	D	- Partially Mitigated.
	SB	LTR	0.58	28.9	C	LTR	0.66	31.2	С	LTR	0.68	32.2	С	- Modify signal timing: shift 1 s of green time from NB/SB phase to EB/WB-lead phase [EB/WB
Jackson Avenue	EB	L	0.98	83.0	F	L	1.20+	120+	F*	L	1.20+	120+	F*	green time shifts from 13 s to 14 s; NB/SB green time shifts from 50 s to 49 s].
		TR	0.78	39.4	D	TR	0.97	56.4	Е	TR	0.97	56.4	Е	- Install "No Standing 7:00 AM - 10:00 AM; 4:00 PM - 7:00 PM" regulation on the north curb o
	WB	L	0.51	23.7	C	L	0.59	28.0	С	L	0.67	30.6	С	Jackson Avenue for the entire block.
		TR	0.79	39.7	D	TR	0.94	51.7	D	TR	0.86	42.9	D	
	Overell Interception		0.01	40 Q	n	_	1.20+	69.7	Е	_	1.20+	63.7	E	
	Overall Intersection	-	0.91	40.8	D	-	1.20+	09.7	L	-	1.20+	03.7	E	

			2017 N	o Build			2017	Build		<u>20</u>	017 Build w	vith Mitigatio	<u>on</u>	Mitigation Measures
INTERSECTION & APPROACH		Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	
** OVGON AVENUE 2 ****														
JACKSON AVENUE & THOMSON				400	_	-	. = -	•••	~					With a time and a control
Jackson Avenue	NB	TR	0.57	18.9	В	TR	0.73	22.8	C					- Mitigation not required.
	SB	L	0.26	16.0	В	L	0.35	18.7	В					
	****	T	0.49	17.4	В	T	0.52	17.8	В					
Thomson Avenue	WB	L	0.45	30.5	C	L	0.64	35.0	C					
		R	0.10	25.3	C	R	0.10	25.3	С					
	Overall Intersection	-	0.52	19.9	В	-	0.69	22.9	C					
JACKSON AVENUE & 44TH DRI	VE													
Jackson Avenue	NB	L	0.15	34.5	C	L	0.15	34.7	С	L	0.15	33.8	C	- Modify signal timing: shift 1 s of green time from SB-lead phase to NB/SB phase [SB-lead gre
		TR	0.87	51.4	D	TR	0.94	59.6	E	TR	0.92	54.9	D	time shifts from 35 s to 34 s; NB/SB green time shifts from 33 s to 34 s].
	SB	L	1.03	69.1	E	L	1.06	78.8	E	L	1.03	70.5	E	- Restripe SB Jackson Avenue 10 ft. left-turn lane to 11 ft. left-turn lane by reducing the hatched
		TR	0.53	8.3	A	TR	0.55	8.6	A	TR	0.55	8.5	A	median width by one foot.
44th Drive	EB	LTR	1.12	115.7	F	LTR	1.12	115.7	F	LTR	1.12	115.7	F	
	WB	LTR	1.19	120+	F*	LTR	1.19	120+	F*	LTR	1.19	120+	F*	
						LIK				EIR				
	Overall Intersection	-	1.12	73.3	E	-	1.17	75.3	E	-	1.12	73.2	E	
JACKSON AVENUE/QUEENS PLA				20.5	C	TD.	0.54	21.1	G					- Mitigation not required.
Jackson Ave - Northern Blvd	NB	TR	0.51	30.5	C	TR	0.54	31.1	C					- Mitigation not required.
0 8 1 1	SB	T	0.64	33.1	C	T	0.67	33.8	C					
Queens Boulevard	EB	T	0.53	17.7	В	T	0.53	17.7	В					
	WB	TR	1.20+	120+	F*	TR	1.20+	120+	F*					
	Overall Intersection	-	0.96	89.8	F	-	0.98	89.1	F					
NORTHERN BOULEVARD & QU	EENS PLAZA NORTH	[/41ST A	VENUE											
Northern Boulevard	NB	DefL	1.10	120+	F*	DefL	1.10	120+	F*	DefL	1.10	120+	F*	- Modify signal timing: shift 2 s of green time from WB phase to NB/SB phase [WB green time
		TR	0.63	31.2	C	TR	0.67	32.4	С	TR	0.65	30.5	C	from 20 s to 18 s; NB/SB green time shifts from 35 s to 37 s].
	SB	LT	1.17	120+	F*	LT	1.20+	120+	F*	LT	1.14	120+	F*	
		R	1.14	116.2	F	R	1.14	116.2	F	R	1.10	100.5	F	
Queens Plaza North/41st Avenue	EB	L	0.85	45.4	D	L	0.85	45.4	D	L	0.85	45.4	D	
	WB	LTR	0.06	42.2	D	LTR	0.06	42.2	D	LTR	0.06	43.9	D	
	Overall Intersection	-	1.13	102.4	F	-	1.16	106.9	F	-	1.16	93.5	F	
NORTHERN BOULEVARD/31ST	STREET & 40TH AVE	NUE												
31st Street	SB	LTR	1.11	118.4	F	LTR	1.16	120+	F*	LTR	0.99	78.7	E	- Modify signal timing: shift 3 s of green time from EB-through/WB phase to EB-left/SB phase
Northern Boulevard	EB	L	1.20+	120+	F*	L	1.20+	120+	F*	L	1.20+	120+	F*	through/WB green time shifts from 85 s to 82 s; EB-left/SB green time shifts from 25 s to 28 s
		T	0.38	7.2	A	T	0.39	7.3	A	T	0.40	8.6	A	
	WB	TR	0.92	29.1	C	TR	0.92	29.9	C	TR	0.97	37.3	D	
	Overall Intersection	-	1.20+	120+	F*	-	1.20+	120+	F*	-	1.20+	118.7	F	
21ST STREET														
21ST STREET & QUEENS PLAZA	NORTH													
21st Street	NB NB	LT	0.61	16.4	В	LT	0.70	18.7	В	LT	0.65	15.8	В	- Modify signal timing: shift 3 s of green time from WB phase to NB/SB phase [WB green time
	NB SB	TR		22.3	В С									from 37 s to 34 s; NB/SB green time shifts from 73 s to 76 s].
21st Street	NB.	ıĸ	0.96	44.3	C	TR	0.98	26.4	C	TR	0.94	17.8	В	2 · · · · · · · · · · · · · · · · · · ·
Queens Plaza North	WB	LTR	1.20+	120+	F*	LTR	1.20+	120+	F*	LTR	0.93	58.0	E	 Restripe WB Queens Plaza North from one 30 ft. lane with a bus stop to one 11 ft. shared left-through lane and one 11 ft. through-right lane with a bus stop.

				No Build			-	Build		<u>2</u>		ith Mitigatio	 '	Mitigation Measures
INTERSECTION & APPROACH		Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	
410'E CENEER O OLIEBRIC BY AZA CO														
21ST STREET & QUEENS PLAZA SO		LTD	0.42	12.2	D	I TD	0.49	12.0	D	LTD	0.46	12.2	D	- Modify signal timing: shift 3 s of green time from EB phase to NB/SB phase [EB green time shi
21st Street	NB SB	LTR LTR	0.43 1.13	13.2 76.3	B E	LTR LTR	0.48	13.9 102.9	B F	LTR LTR	0.46 1.13	12.2 77.4	B E	from 37 s to 34 s; NB/SB green time shifts from 73 s to 76 s].
Queens Plaza South	EB	LIK	0.27	32.3	C	LIK	0.27	32.3	C	LIK L	0.29	34.8	E C	
Queens Fiaza South	ED	TR	0.45	35.9	D	TR	0.45	32.3 35.9	D	TR	0.50	39.2	D	
		1 K	0.43	33.7	D	1K	0.43	33.7	D	T K	0.50	37.2	Ъ	
O	verall Intersection	_	0.90	56.4	E	_	0.94	72.5	E	-	0.94	56.3	E	
						<u> </u>								
21ST STREET & 44TH DRIVE					~			44.0	_				_	Total INT Constitution AND TOO DAY
21st Street	NB	LTR	0.86	27.8	C	LTR	0.96	41.0	D	LTR	0.96	41.0	D	 Install "No Standing 7:00 AM - 7:00 PM" regulation on the west curb of SB 21st Street for the 6 block.
	SB	LTR	1.20+	120+	F*	LTR	1.20+	120+	F*	LTR	1.16	107.5	F	DIOCK.
44th Drive	EB	LTR	0.95	64.6	Е	LTR	0.95	65.5	E	LTR	0.95	65.5	Е	
	WB	LTR	0.77	44.2	D	LTR	0.78	44.6	D	LTR	0.78	44.6	D	
O	verall Intersection	-	1.12	68.8	E	-	1.20	88.2	F	-	1.09	66.4	E	
VAN DAM STREET														
VAN DAM STREET														
VAN DAM STREET & THOMSON AV	ENUE/QUEENS B	OULEV	ARD											
Van Dam Street	NB	L	1.20+	120+	F*	L	1.20+	120+	F*					- Unmitigatable Impact.
		TR	1.06	107.8	F	TR	1.06	107.8	F					
Queens Boulevard (to Queens Boulevard.)	EB	T	1.09	113.5	F	T	1.09	113.5	F					
Queens Boulevard (to Van Dam Street)		T	1.03	96.8	F	T	1.03	96.8	F					
Queens Boulevard (to Thomson Avenue W	'B)	R	0.09	47.9	D	R	0.09	47.9	D					
Thomson Avenue	EB	T	0.23	15.0	В	T	0.30	15.9	В					
		R	1.01	68.5	E	R	1.01	68.5	E					
Queens Boulevard (to Thomson Avenue W	(B) WB	L	1.19	120+	F*	L	1.20+	120+	F*					
Queens Boulevard (to Viaduct)		TR	0.50	12.2	В	TR	0.50	12.2	В					
O	verall Intersection	_	1.17	105.7	F	_	1.17	112.2	F					
	_													
VAN DAM STREET & LIE EXIT RAM Van Dam Street	I P NB	īТ	0.42	22.6	С	LT	0.42	22.6	С	LT	0.70	40.3	D	- Restripe WB Queens Midtown Expressway Exit Ramp from two 11 ft. through lanes and one 1
van Dan Succi		LT		42.0	D		0.42	42.0	D			40.3 45.4	D D	shared through-right lane to two 11 ft. through lanes and one 11 ft. exclusive right-turn lane.
I IE Evit Domp	SB WB	TR TR	0.94		D F*	TR TR	1.20+	42.0 120+	F*	TR T	0.96	45.4 120+	D F*	- Modify signal phasing plan: Add a new lag phase for the SB approach with the WB right-turn of
LIE Exit Ramp	wB	IK	1.20	120+	L.,	IK	1.20+	120+	Γ"	r R	1.15 1.01	120+	F*	maintain the existing 120 s cycle length with the following signal timing: WB = 56 s green, NB
		-	-	-	-	-	-	-	-	K	1.01	120+	Γ,	38 s green time, and SB/WB-right only = 11 s of green time (each phase has 3 s amber and 2 s s
O	verall Intersection	-	1.07	119.2	F	-	1.12	120+	F*	-	1.06	120+	F*	red).
VAN DAM STREET & BORDEN AVE	NITE													
Van Dam Street Van Dam Street	NUE NB	TR	0.63	42.6	D	TR	0.63	42.6	D	TR	0.70	46.8	D	- Mitigation not required.
Tan Dani Succi	SB	DefL	0.03	52.1	D	DefL	0.03	52.1	D	DefL	0.70	43.6	D	 Modify signal timing plan to coordinate with Van Dam Street and LIE Exit Ramp: Maintain th
	SD	T	0.30	32.1 14.7	В	T	0.30	32.1 14.7	Б В	T	0.92	43.6 14.7	В	existing 120 s cycle length with the following signal timing: EB = 43 s green, NB/SB = 28 s gr
Borden Avenue	EB	LTR	0.54	32.1	C C	LTR	0.66	34.6	C C	LTR	0.66	34.6	Б С	time, and $SB = 34$ s of green time (each phase has 3 s amber and 2 s all red).
Dordell Avellue	ED	LIK	0.54	24.1	C	LIK	0.00	J+.U	C	LIK	0.00	J+.U	C	

			2017 No	o Build			2017	Build		2	017 Build w	ith Mitigatio	<u>n</u>	Mitigation Measures
INTERSECTION & APPROACH		Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	
CENTER BOULEVARD														
CENTER BOOLEVARD														
CENTER BOULEVARD & 51ST AVENUE														
Center Boulevard	NB	-	-	-	-	T	0.63	13.6	В	T	0.63	13.6	В	- Mitigation not required.
	SB	-	-	-	-	T	0.11	8.1	A	T	0.11	8.1	A	[Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection mitigati However, no significant impact occurs.]
51st Avenue	WB	-	-	-	-	LR	0.40	17.2	В	LR	0.42	17.5	В	110 WCVC1, 110 significant impact occurs.
Overa	all Intersection	-	-	-	-	-	0.54	13.7	В	-	0.55	13.9	В	
CENTER BOULEVARD & BORDEN AVEN	NUE													
Center Boulevard	NB	-	-	-	-	TR	0.86	39.1	D	TR	0.91	44.1	D	- Mitigation not required.
		-	-	-	-	R	0.68	30.8	С	R	0.74	33.3	C	[Build with mitigation delays are due to diversions from the Borden Avenue and 11th Street intersection
	SB	-	-	-	-	L	0.28	35.2	D	L	0.28	35.2	D	mitigation. However, no significant impact occurs.]
Borden Ave	WB	-	-	-	-	R	0.63	43.9	D	R	0.63	43.9	D	
Overa	all Intersection	-	-	-	-	-	0.77	37.2	D	-	0.80	40.1	D	
CENTER BOULEVARD & 54TH AVENUE														
Center Boulevard	NB	_	_	_	_	Т	0.50	17.1	В	Т	0.50	17.1	В	- Mitigation not required.
54th Avenue	WB	-	-	-	-	R	0.66	14.3	В	R	0.75	16.8	В	[Build with mitigation delays are due to diversions from the Borden Avenue and 11th Street intersection mitigation. However, no significant impact occurs.]
Overa	all Intersection	-	_	_	-	-	0.60	15.8	В	-	0.65	17.0	В	magatom Hotelet, no agametate impact occurs;
CENTEED DOLL EVADO & SCOW A VENUE														
CENTER BOULEVARD & 56TH AVENUE							0.05	164						Mission not required
Center Boulevard	NB	-	-	-	-	T	0.05	16.4	В					- Mitigation not required.
56th Avenue	WB	-	-	-	-	R	0.64	11.4	В					
Overa	all Intersection	-	-	-	-	-	0.45	11.8	В					
2ND STREET														
2ND STREET & 51ST AVENUE	(UNSIC	GNALIZ	ED INT	ERSECT	ΓΙΟΝ)	(SIGN	ALIZED 1	NTERSEC	CTION)	(SIGNAL	IZED INT	ERSECTI	ON)	
2nd Street	SB	LT	-	7.4	A	LTR	0.09	10.7	В	LTR	0.09	10.7	В	- Mitigation not required.
51st Avenue	WB	LR	-	10.3	В	LT	0.39	13.3	В	LT	0.40	13.4	В	[Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection mitigation However, no significant impact occurs.]
Overa	all Intersection	-	-	3.7	A	-	0.24	12.5	В	-	0.25	12.6	В	
2ND STREET & BORDEN AVENUE	(UNSIC	GNALIZ	ED INT	ERSECT	ΓΙΟΝ)	(SIGN	ALIZED 1	NTERSEC	CTION)	(SIGNAL	IZED INT	ERSECTI	ON)	
2nd Street	SB	LT	_	7.8	A	LTR	0.51	44.9	D	LTR	0.45	41.3	D	- Mitigation not required.
Borden Avenue	EB	-	-	-	-	TR	0.71	30.2	C	TR	0.80	34.3	C	[Build with mitigation delays are due to diversions from the Borden Avenue and 11th Street intersection
	WB	LR	_	13.6	В	DefL	0.73	34.1	C	DefL	0.83	43.8	D	mitigation. However, no significant impact occurs.]
	2	-	-	-	-	T	0.23	6.5	A	T	0.24	7.6	A	
Overa	all Intersection	-	-	8.0	A	-	0.78	29.8	C	-	0.79	33.9	C	
9.22		2NIAT 17	FD INT	ERSECT	ΓΙΟΝ)	(SIGN	ALIZED I	NTERSEC	CTION)	(SIGNAI	IZED INT	ERSECTI	ON)	
	(UNSI	TNALIZ				(51011				(510:1111			~- • • • •	
2ND STREET & 54TH AVENUE	`				Δ	Į TD	0.68	17 /	R	Į TD	0.72	183	R	- Mitigation not required.
	SB WB	LT LR	- - -	7.5 9.4	A A	LTR LT	0.68 0.25	17.4 11.9	B B	LTR LT	0.72 0.34	18.3 12.6	B B	 Mitigation not required. [Build with mitigation delays are due to diversions from the Borden Avenue and 11th Street intersection mitigation. However, no significant impact occurs.]

			<u>2017</u> I	No Build			<u>20</u> 17	Build		2	017 <u>Build</u> v	vith Mitigati	on_	Mitigation Measures
INTERSECTION & APPROACH		Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	
				-								-		
2ND STREET & 55TH AVENUE	E													
2nd Street	SB	-	-	-	-	LT	0.11	10.8	В					- Mitigation not required.
55th Avenue	EB	-	-	-	-	TR	0.13	11.1	В					
	Overall Intersection	-	-	-	-	-	0.12	10.9	В					
2ND STREET & 56TH AVENUE	E													
2nd Street	SB	-	-	-	-	T	0.03	2.5	A					- Mitigation not required.
		-	-	-	-	R	0.29	3.5	A					
	Overall Intersection	_	-	_	_	_	0.29	3.4	A					
11TH STREET														
11TH STREET & 44TH DRIVE														
11th Street	NB	LTR	0.73	15.5	В	LTR	0.73	15.7	В	LTR	0.75	16.6	В	- Modify signal timing: shift 1 s of green time from NB/SB phase to EB/WB phase [NB/SB green time from NB/SB green time from NB/SB phase to EB/WB phase [NB/SB green time from NB/SB green time from NB/SB green time from NB/SB phase to EB/WB phase [NB/SB green time from NB/SB green time from NB/
	SB	LTR	0.60	14.0	В	LTR	0.60	14.1	В	LTR	0.73	14.9	В	shifts from 53 s to 52 s; EB/WB green time shifts from 27 s to 28 s].
44th Drive	EB	LTR	0.64	31.4	C	LTR	0.64	31.4	C	LTR	0.62	30.0	C	[Measures reflect changes in signal timing needed for the PM peak period; otherwise
44ul Dilve	WB	LTR	0.80	38.0	D	LTR	0.81	38.4	D	LTR	0.02	35.8	D	mitigation is not needed.]
	₩В	LIK	0.00	30.0	D	LIK	0.61	30.4	Ъ	LIK	0.76	33.0	D	
	Overall Intersection		0.75	21.6	C		0.76	21.8	C		0.76	21.7	C	
	Over all intersection	-	0.73	21.0	C	-	0.70	21.0	C		0.70	21.7	C	
UNSIGNALIZED INTERSECTION	MC													
UNSIGNALIZED INTERSECTION	CAD													
CENTED BOLL EXARD														
CENTER BOULEVARD														
	HAYENILE (UNIS)	CNALL	ZED IN	PEDCEC	PION)	(LINICION)	AT IZED	INTERCE	CTION	(SICNAI	IZED IN	FEDGEÆT	ION)	
CENTER BOULEVARD & 48TH		GNALI	ZED IN	TERSEC'		(UNSIGN	ALIZED	INTERSE		(SIGNAL				Install a new traffic signal with a 120 accord availa largeth. INID/CD array time is 60 a WD arr
	NB	-	-	-	-	-	-	-	-	TR	0.17	16.5	В	
CENTER BOULEVARD & 48TH		- LT	ZED INT - -	12.3	- В	- LT	<u>-</u> -	- 16.7	С		0.17 0.17	16.5 16.7	B B	is 50 s; both phases have 3 s of amber and 2 s of all red time].
CENTER BOULEVARD & 48TH Center Boulevard	NB SB	LT T	-	- 12.3 12.3	- В В	- LT T	- - -	- 16.7 16.5	C C	TR LT	0.17 0.17 -	16.5 16.7	B B	is 50 s; both phases have 3 s of amber and 2 s of all red time] Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides t
CENTER BOULEVARD & 48TH	NB	LT T L	-	12.3 12.3 17.7	B B C	- LT T L	<u>-</u> -	16.7 16.5 34.2	C C D	TR LT - L	0.17 0.17 - 0.09	16.5 16.7 - 21.3	B B - C	is 50 s; both phases have 3 s of amber and 2 s of all red time]. - Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides to 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking of the state of the stat
CENTER BOULEVARD & 48TH Center Boulevard	NB SB	LT T	- - -	- 12.3 12.3	- В В	- LT T	- - -	- 16.7 16.5	C C	TR LT	0.17 0.17 -	16.5 16.7	B B	is 50 s; both phases have 3 s of amber and 2 s of all red time]. - Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides to
CENTER BOULEVARD & 48TH Center Boulevard	NB SB WB	LT T L	- - -	12.3 12.3 17.7 12.8	B B C B	- LT T L	- - -	16.7 16.5 34.2 17.6	C C D	TR LT - L	0.17 0.17 - 0.09 0.17	16.5 16.7 - 21.3 22.8	B B C C	is 50 s; both phases have 3 s of amber and 2 s of all red time]. - Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides to 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking of
CENTER BOULEVARD & 48TH Center Boulevard	NB SB	LT T L	- - -	12.3 12.3 17.7	B B C	- LT T L	- - -	16.7 16.5 34.2	C C D	TR LT - L	0.17 0.17 - 0.09	16.5 16.7 - 21.3	B B - C	 Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides to 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking or
CENTER BOULEVARD & 48TH Center Boulevard 48th Avenue	NB SB WB	LT T L R	- - - -	12.3 12.3 17.7 12.8	B B C B	LT T L R	- - - -	16.7 16.5 34.2 17.6	C C D	TR LT - L	0.17 0.17 - 0.09 0.17	16.5 16.7 - 21.3 22.8	B B C C	is 50 s; both phases have 3 s of amber and 2 s of all red time]. - Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides to 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking of
CENTER BOULEVARD & 48TH Center Boulevard	NB SB WB Overall Intersection	LT T L R	- - - -	12.3 12.3 17.7 12.8	B B C B	LT T L R	- - - - -	16.7 16.5 34.2 17.6 11.2	C C D	TR LT - L	0.17 0.17 - 0.09 0.17	16.5 16.7 - 21.3 22.8	B B C C	is 50 s; both phases have 3 s of amber and 2 s of all red time]. - Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides to 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking east and west curbs.
CENTER BOULEVARD & 48TH Center Boulevard 48th Avenue	NB SB WB Overall Intersection	LT T L R	- - - -	12.3 12.3 17.7 12.8	B B C B	LT T L R	- - - - -	16.7 16.5 34.2 17.6 11.2	- C C D C	TR LT - L	0.17 0.17 - 0.09 0.17	16.5 16.7 - 21.3 22.8	B B C C	is 50 s; both phases have 3 s of amber and 2 s of all red time]. - Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides to 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking of the state of the stat
CENTER BOULEVARD & 48TH Center Boulevard 48th Avenue CENTER BOULEVARD & 49TH	NB SB WB Overall Intersection	LT T L R	- - - -	12.3 12.3 17.7 12.8	B B C B	LT T L R	- - - - -	16.7 16.5 34.2 17.6 11.2	- C C D C	TR LT - L	0.17 0.17 - 0.09 0.17	16.5 16.7 - 21.3 22.8	B B C C	is 50 s; both phases have 3 s of amber and 2 s of all red time]. - Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides to 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking of east and west curbs.
CENTER BOULEVARD & 48TH Center Boulevard 48th Avenue CENTER BOULEVARD & 49TH Center Boulevard	NB SB WB Overall Intersection H AVENUE SB	LT T L R	-	12.3 12.3 17.7 12.8 9.7	B B C B	LT T L R	- - - - -	16.7 16.5 34.2 17.6 11.2	- C C D C B A	TR LT - L	0.17 0.17 - 0.09 0.17	16.5 16.7 - 21.3 22.8	B B C C	is 50 s; both phases have 3 s of amber and 2 s of all red time]. - Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides to 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking of east and west curbs.
CENTER BOULEVARD & 48TH Center Boulevard 48th Avenue CENTER BOULEVARD & 49TH Center Boulevard	NB SB WB Overall Intersection H AVENUE SB	LT T L R	-	12.3 12.3 17.7 12.8 9.7	B B C B	LT T L R	- - - - -	16.7 16.5 34.2 17.6 11.2	- C C D C B A	TR LT - L	0.17 0.17 - 0.09 0.17	16.5 16.7 - 21.3 22.8	B B C C	is 50 s; both phases have 3 s of amber and 2 s of all red time]. - Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides to 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking of east and west curbs.
CENTER BOULEVARD & 48TH Center Boulevard 48th Avenue CENTER BOULEVARD & 49TH Center Boulevard	NB SB WB Overall Intersection H AVENUE SB WB	LT T L R		12.3 12.3 17.7 12.8 9.7 7.9 13.6	B B C B A A	LT T R - LT LR	- - - - -	16.7 16.5 34.2 17.6 11.2	- C C D C B A C C	TR LT - L	0.17 0.17 - 0.09 0.17	16.5 16.7 - 21.3 22.8	B B C C	is 50 s; both phases have 3 s of amber and 2 s of all red time]. - Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides to 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking of east and west curbs.
CENTER BOULEVARD & 48TH Center Boulevard 48th Avenue CENTER BOULEVARD & 49TH Center Boulevard	NB SB WB Overall Intersection H AVENUE SB WB Overall Intersection	LT T L R		12.3 12.3 17.7 12.8 9.7 7.9 13.6	B B C B A A	LT T R - LT LR	- - - - -	16.7 16.5 34.2 17.6 11.2	- C C D C B A C C	TR LT - L	0.17 0.17 - 0.09 0.17	16.5 16.7 - 21.3 22.8	B B C C	is 50 s; both phases have 3 s of amber and 2 s of all red time]. - Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides to 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking of east and west curbs.
CENTER BOULEVARD & 48TH Center Boulevard 48th Avenue CENTER BOULEVARD & 49TH Center Boulevard 49th Avenue	NB SB WB Overall Intersection H AVENUE SB WB Overall Intersection	LT T L R		12.3 12.3 17.7 12.8 9.7 7.9 13.6	B B C B A A	LT T R - LT LR	- - - - -	16.7 16.5 34.2 17.6 11.2	- C C D C B A C C	TR LT - L	0.17 0.17 - 0.09 0.17	16.5 16.7 - 21.3 22.8	B B C C	is 50 s; both phases have 3 s of amber and 2 s of all red time]. - Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides to 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking east and west curbs. - Mitigation not required.
CENTER BOULEVARD & 48TH Center Boulevard 48th Avenue CENTER BOULEVARD & 49TH Center Boulevard 49th Avenue CENTER BOULEVARD & 50TH	NB SB WB Overall Intersection H AVENUE SB WB Overall Intersection H AVENUE	LT T L R	- - - - - - -	12.3 12.3 17.7 12.8 9.7 7.9 13.6 3.3	B B C B A	LT T R LT LR	- - - - -	16.7 16.5 34.2 17.6 11.2 9.5 23.8 4.0	C C D C B A C C A	TR LT - L R	0.17 0.17 - 0.09 0.17 0.17	16.5 16.7 - 21.3 22.8 17.7	B B - C C	 is 50 s; both phases have 3 s of amber and 2 s of all red time]. Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides t 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking east and west curbs. Mitigation not required. Mitigation not required. [Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection mitigation.]
CENTER BOULEVARD & 48TH Center Boulevard 48th Avenue CENTER BOULEVARD & 49TH Center Boulevard 49th Avenue CENTER BOULEVARD & 50TH Center Boulevard	NB SB WB Overall Intersection H AVENUE SB WB Overall Intersection H AVENUE SB	LT T L R LT LR LT LR L	- - - - - - -	12.3 12.3 17.7 12.8 9.7 7.9 13.6 3.3	B B C B A A A A	LT T LT LR LT LR LT LR	- - - - - - - -	16.7 16.5 34.2 17.6 11.2 9.5 23.8 4.0	- C C D C B A C C A B	TR LT - L R -	0.17 0.17 - 0.09 0.17 0.17	16.5 16.7 - 21.3 22.8 17.7	B B C C C B	is 50 s; both phases have 3 s of amber and 2 s of all red time]. - Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides to 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking east and west curbs. - Mitigation not required.
CENTER BOULEVARD & 48TH Center Boulevard 48th Avenue CENTER BOULEVARD & 49TH Center Boulevard 49th Avenue CENTER BOULEVARD & 50TH Center Boulevard	NB SB WB Overall Intersection H AVENUE SB WB Overall Intersection H AVENUE SB	LT T L R LT LR LT LR L	- - - - - - - - - - - - - -	12.3 12.3 17.7 12.8 9.7 7.9 13.6 3.3	B B C B A A A A	LT T LT LR LT LR LT LR	- - - - - - - -	16.7 16.5 34.2 17.6 11.2 9.5 23.8 4.0	- C C D C B A C C A B	TR LT - L R -	0.17 0.17 - 0.09 0.17 0.17	16.5 16.7 - 21.3 22.8 17.7	B B C C C B	 is 50 s; both phases have 3 s of amber and 2 s of all red time]. Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides t 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking east and west curbs. Mitigation not required. Mitigation not required. [Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection mitigation.]
CENTER BOULEVARD & 48TH Center Boulevard 48th Avenue CENTER BOULEVARD & 49TH Center Boulevard 49th Avenue CENTER BOULEVARD & 50TH Center Boulevard	NB SB WB Overall Intersection H AVENUE SB WB Overall Intersection H AVENUE SB WB	LT L R L L R L R	- - - - - - - - - - - - - -	12.3 12.3 17.7 12.8 9.7 7.9 13.6 3.3 EFLOW	B B C B A A A A	LT T LT LR LT LR LT LR	- - - - - - - -	9.5 23.8 4.0	- C C D C B A C A B -	TR LT - L R -	0.17 0.17 - 0.09 0.17 0.17	16.5 16.7 - 21.3 22.8 17.7	B B C C B B	 is 50 s; both phases have 3 s of amber and 2 s of all red time]. Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides t 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking east and west curbs. Mitigation not required. Mitigation not required. [Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection mitigation.]
CENTER BOULEVARD & 48TH Center Boulevard 48th Avenue CENTER BOULEVARD & 49TH Center Boulevard 49th Avenue CENTER BOULEVARD & 50TH Center Boulevard	NB SB WB Overall Intersection H AVENUE SB WB Overall Intersection H AVENUE SB WB Overall Intersection	LT L R L L R L R	- - - - - - - - - - - - - -	12.3 12.3 17.7 12.8 9.7 7.9 13.6 3.3 EFLOW	B B C B A A A A	LT T LT LR LT LR LT LR	- - - - - - - -	9.5 23.8 4.0	- C C D C B A C A B -	TR LT - L R -	0.17 0.17 - 0.09 0.17 0.17	16.5 16.7 - 21.3 22.8 17.7	B B C C B B	 is 50 s; both phases have 3 s of amber and 2 s of all red time]. Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides t 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking east and west curbs. Mitigation not required. Mitigation not required. [Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection mitigation.]
CENTER BOULEVARD & 48TH Center Boulevard 48th Avenue CENTER BOULEVARD & 49TH Center Boulevard 49th Avenue CENTER BOULEVARD & 50TH Center Boulevard 50th Avenue CENTER BOULEVARD & 55TH	NB SB WB Overall Intersection H AVENUE SB WB Overall Intersection H AVENUE SB WB Overall Intersection H AVENUE	LT L R L L R L R	- - - - - - - - - - - - - -	12.3 12.3 17.7 12.8 9.7 7.9 13.6 3.3 EFLOW	B B C B A A A A	LT T LT LR LT LR LT LR	- - - - - - - -	9.5 23.8 4.0	- C C D C B A C A B -	TR LT - L R -	0.17 0.17 - 0.09 0.17 0.17	16.5 16.7 - 21.3 22.8 17.7	B B C C B B	 is 50 s; both phases have 3 s of amber and 2 s of all red time]. Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides t 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking east and west curbs. Mitigation not required. Mitigation not required. [Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection mitigation.]
CENTER BOULEVARD & 48TH Center Boulevard 48th Avenue CENTER BOULEVARD & 49TH Center Boulevard 49th Avenue CENTER BOULEVARD & 50TH Center Boulevard 50th Avenue	NB SB WB Overall Intersection H AVENUE SB WB Overall Intersection H AVENUE SB WB Overall Intersection	LT T L R LT LR L R	- - - - - - - - - - - - - -	12.3 12.3 17.7 12.8 9.7 7.9 13.6 3.3 EFLOW	B B C B A A A A	LT	- - - - - - - - -	9.5 23.8 4.0 11.9 - 2.0	- C C C D C B A C C A A B - A B - A B	TR LT - L R -	0.17 0.17 - 0.09 0.17 0.17	16.5 16.7 - 21.3 22.8 17.7	B B C C B B	 is 50 s; both phases have 3 s of amber and 2 s of all red time]. Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides t 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking east and west curbs. Mitigation not required. Mitigation not required. [Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection mithowever, no significant impact occurs.]
CENTER BOULEVARD & 48TH Center Boulevard 48th Avenue CENTER BOULEVARD & 49TH Center Boulevard 49th Avenue CENTER BOULEVARD & 50TH Center Boulevard 50th Avenue CENTER BOULEVARD & 55TH	NB SB WB Overall Intersection H AVENUE SB WB Overall Intersection H AVENUE SB WB Overall Intersection H AVENUE	LT T L R LT LR L R	- - - - - - - - - - - - - -	12.3 12.3 17.7 12.8 9.7 7.9 13.6 3.3 EFLOW	B B C B A A A A A A A	LT LR LT LR -	- - - - - - - - - - -	9.5 23.8 4.0	- C C D C B A C A A A A	TR LT - L R -	0.17 0.17 - 0.09 0.17 0.17	16.5 16.7 - 21.3 22.8 17.7	B B C C B B	 is 50 s; both phases have 3 s of amber and 2 s of all red time]. Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides of 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking east and west curbs. Mitigation not required. Mitigation not required. [Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection mit However, no significant impact occurs.]
CENTER BOULEVARD & 48TH Center Boulevard 48th Avenue CENTER BOULEVARD & 49TH Center Boulevard 49th Avenue CENTER BOULEVARD & 50TH Center Boulevard 50th Avenue CENTER BOULEVARD & 55TH	NB SB WB Overall Intersection H AVENUE SB WB Overall Intersection H AVENUE SB WB NB NB	LT T L R LT LR L R	- - - - - - - - - - - - - -	12.3 12.3 17.7 12.8 9.7 7.9 13.6 3.3 EFLOW	B B C B A A A A A A A	LT	- - - - - - - - - - -	16.7 16.5 34.2 17.6 11.2 9.5 23.8 4.0	- C C C D C B A C C A B - A B - A B B B	TR LT - L R -	0.17 0.17 - 0.09 0.17 0.17	16.5 16.7 - 21.3 22.8 17.7	B B C C B B	 is 50 s; both phases have 3 s of amber and 2 s of all red time]. Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides of 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking east and west curbs. Mitigation not required. Mitigation not required. [Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection mit However, no significant impact occurs.]
CENTER BOULEVARD & 48TH Center Boulevard 48th Avenue CENTER BOULEVARD & 49TH Center Boulevard 49th Avenue CENTER BOULEVARD & 50TH Center Boulevard 50th Avenue CENTER BOULEVARD & 55TH	NB SB WB Overall Intersection H AVENUE SB WB Overall Intersection H AVENUE SB WB Overall Intersection H AVENUE	LT T L R LT LR L R	- - - - - - - - - - - - - -	12.3 12.3 17.7 12.8 9.7 7.9 13.6 3.3 EFLOW	B B C B A A A A A A A	LT	- - - - - - - - - - -	9.5 23.8 4.0 11.9 - 2.0	- C C C D C B A C C A A B - A B - A B	TR LT - L R -	0.17 0.17 - 0.09 0.17 0.17	16.5 16.7 - 21.3 22.8 17.7	B B C C B B	 is 50 s; both phases have 3 s of amber and 2 s of all red time]. Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides t 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking east and west curbs. Mitigation not required. Mitigation not required. [Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection mithowever, no significant impact occurs.]
CENTER BOULEVARD & 48TH Center Boulevard 48th Avenue CENTER BOULEVARD & 49TH Center Boulevard 49th Avenue CENTER BOULEVARD & 50TH Center Boulevard 50th Avenue CENTER BOULEVARD & 55TH Center Boulevard	NB SB WB Overall Intersection H AVENUE SB WB Overall Intersection H AVENUE SB WB Overall Intersection H AVENUE NB	LT T L R LT LR L R	- - - - - - - - - - - - - -	12.3 12.3 17.7 12.8 9.7 7.9 13.6 3.3 EFLOW	B B C B A A A A A A A	LT	- - - - - - - - - - -	16.7 16.5 34.2 17.6 11.2 9.5 23.8 4.0	- C C C D C B A C C A B - A B - A B B B	TR LT - L R -	0.17 0.17 - 0.09 0.17 0.17	16.5 16.7 - 21.3 22.8 17.7	B B C C B B	 is 50 s; both phases have 3 s of amber and 2 s of all red time]. Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides of 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking east and west curbs. Mitigation not required. Mitigation not required. [Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection mit However, no significant impact occurs.]
CENTER BOULEVARD & 48TH Center Boulevard 48th Avenue CENTER BOULEVARD & 49TH Center Boulevard 49th Avenue CENTER BOULEVARD & 50TH Center Boulevard 50th Avenue CENTER BOULEVARD & 55TH Center Boulevard	NB SB WB Overall Intersection H AVENUE SB WB Overall Intersection H AVENUE NB Overall Intersection H AVENUE NB	LT T LR LR -	- - - - - - - - - - - - - -	12.3 12.3 17.7 12.8 9.7 7.9 13.6 3.3 EFLOW	B B C B A A A A A A A	- LT T L R - LT LR - LT LR - T T T	- - - - - - - - - - - -	16.7 16.5 34.2 17.6 11.2 9.5 23.8 4.0 11.9 - 2.0	- C C C D C B A C A B B B B B	TR LT - L R	0.17 0.17 - 0.09 0.17 0.17	16.5 16.7 - 21.3 22.8 17.7	B B C C B B	is 50 s; both phases have 3 s of amber and 2 s of all red time]. - Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides t 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking east and west curbs. - Mitigation not required. - Mitigation not required. [Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection mithowever, no significant impact occurs.] - Mitigation not required.
CENTER BOULEVARD & 48TH Center Boulevard 48th Avenue CENTER BOULEVARD & 49TH Center Boulevard 49th Avenue CENTER BOULEVARD & 50TH Center Boulevard 50th Avenue CENTER BOULEVARD & 55TH Center Boulevard	NB SB WB Overall Intersection H AVENUE SB WB Overall Intersection H AVENUE SB WB Overall Intersection H AVENUE NB	LT T L R LT LR L R	- - - - - - - - - - - - - -	12.3 12.3 17.7 12.8 9.7 7.9 13.6 3.3 EFLOW	B B C B A A A A A A A	LT	- - - - - - - - - - -	16.7 16.5 34.2 17.6 11.2 9.5 23.8 4.0	- C C C D C B A C C A B - A B - A B B B	TR LT - L R	0.17 0.17 - 0.09 0.17 0.17	16.5 16.7 - 21.3 22.8 17.7	B B C C B B	 is 50 s; both phases have 3 s of amber and 2 s of all red time]. Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides t 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking east and west curbs. Mitigation not required. Mitigation not required. [Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection mi However, no significant impact occurs.]
CENTER BOULEVARD & 48TH Center Boulevard 48th Avenue CENTER BOULEVARD & 49TH Center Boulevard 49th Avenue CENTER BOULEVARD & 50TH Center Boulevard 50th Avenue CENTER BOULEVARD & 55TH Center Boulevard	NB SB WB Overall Intersection H AVENUE SB WB Overall Intersection H AVENUE NB Overall Intersection H AVENUE NB	LT T L R L R	- - - - - - - - - - - - - -	12.3 12.3 17.7 12.8 9.7 7.9 13.6 3.3 EFLOW	B B C B A A A A A A A	- LT T L R - LT LR - LT LR - T T T	- - - - - - - - - - - -	16.7 16.5 34.2 17.6 11.2 9.5 23.8 4.0 11.9 - 2.0	- C C C D C B A C A B B B B B	TR LT - L R	0.17 0.17 - 0.09 0.17 0.17	16.5 16.7 - 21.3 22.8 17.7	B B C C B B	is 50 s; both phases have 3 s of amber and 2 s of all red time]. - Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides t 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking east and west curbs. - Mitigation not required. - Mitigation not required. [Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection mi However, no significant impact occurs.] - Mitigation not required.

		_		No Build				7 Build		-		with Mitigatio		Mitigation Measures
INTERSECTION & APPROACH		Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	
2ND STREET														
2ND STREET & 50TH AVENUE														
2nd Street	NB	LR	-	13.5	В	-	-	-	-					- Mitigation not required.
0th Avenue	EB	TR	-	-	-	TR	FRE	EFLOW	A					
	Overall Intersection	ı -	-	6.4	A	-	FRE	EFLOW	A					
ND STREET & 57TH AVENUE	CD					T		0.7						- Mitigation not required.
2nd Street	SB	-	-	-	-	T	-	9.7	A					- Mugation not required.
	Overall Intersection	ı -	-	-	-	-	-	9.7	A					
TH STREET														
5TH STREET & 48TH AVENUE														
5th Street	NB	LTR	-	9.9	A	LTR	-	9.9	A					- Mitigation not required.
	SB	LTR	-	13.2	В	LTR	-	13.4	В					
48th Avenue	EB	LT	-	10.1	В	LT	-	10.1	В					
		TR	-	9.9	A	TR	-	9.9	A					
	WB	LT	-	11.2	В	LT	-	11.2	В					
		TR	-	9.5	A	TR	-	9.5	A					
	Overall Intersection	ı -	-	11.4	В	-	-	11.5	В					
5TH STREET & 49TH AVENUE	(UNSI	IGNALI	ZED IN	TERSEC	TION)	(UNSIGN	ALIZED) INTERSE	ECTION)	(SIGNAI	IZED IN	TERSECT	(ON)	
5th Street	NB	LTR	_	9.0	Á	LTR	-	9.0	Α	LTR	0.30	9.6	A	- Install a new traffic signal with a 60-second cycle length. [NB/SB green time is 30 s; EB/WB gree
	SB	LTR	_	8.1	A	LTR	_	8.1	A	LTR	0.53	11.9	В	time is 20 s; both phases have 3 s of amber and 2 s of all red time].
49th Avenue	EB	LTR	_	21.4	C	LTR	-	34.8	D	LTR	0.24	15.2	В	- Install "No Standing Anytime" regulation on the east curb of NB 5th Street and restripe it from on
	WB	LTR	-	22.1	C	LTR	-	25.8	D	LTR	0.11	14.2	В	30 ft. lane with parking on both sides to one 11 ft. approach and one 11 ft. receiving lane with parking on the west side.
	Overall Intersection	ı -	-	4.3	A	-	-	8.0	A	-	0.41	12.0	В	- Install "No Standing Anytime" regulation on the north curb of EB 49th Avenue and WB 49th Ave
														120 ft. from the intersection and restripe it from one 30 ft. lane with parking on both sides to one 1 ft. approach and one 11 ft. receiving lane with parking on the south side.
5TH STREET & 50TH AVENUE	,	IGNALI	ZED IN	TERSEC	TION)	(UNSIGN	ALIZED	INTERSE	ECTION)	`		TERSECT	· ·	Table 100 to 1 to 1 to 1 DID 0D 1 to 1 DID 100 to 1
5th Street	NB	- 	-	-	-	- I.T.	-	-	-	TR	0.26	12.1	В	 Install a new traffic signal with a 60-second cycle length. [NB/SB green time is 25 s; EB green time 25 s; both phases have 3 s of amber and 2 s of all red time].
50th Avenue	SB EB	LT LTR	-	7.7 33.0	A D	LT LTR	-	7.7 120+	A F*	LT LTR	0.53 0.57	15.3 15.7	B B	- Install "No Standing Anytime" regulation on the east curb of NB 5th Street and restripe it from one
														30 ft. lane with parking on both sides to one 11 ft. approach and one 11 ft. receiving lane with
	Overall Intersection	ı -	-	8.7	A	-	-	120+	F*	-	0.55	14.8	В	parking on the west side.
														- Install an east-west crosswalk on the south side of the intersection to accommodate pedestrians.
5TH STREET & 51ST AVENUE														
5th Street	NB	LT	_	8.1	A	LT	_	8.3	A	LT	_	9.7	A	- Designate 51st Avenue as one way WB only.
Sui Bucci	SB	TR	-	0.1	А		-	0.3	- A	TR	-	12.1	В	- Install "All Way" Stop control sign on all approaches.
51st Avenue	EB	LR	-	13.6	В	LR	-	12.7	В	1 K	-	12.1	- -	[Measures reflect geometric improvements needed for the PM peak period; otherwise
11st AVEILLE	WB	LTR	-	13.9	В	LTR	-	20.9	C C	LTR	-	11.6	В	mitigation is not needed.]
	Overall Intersection			5.2	Δ			Q 7	A			11 5	D	
	Overan Intersection		-	5.4	A	-	-	8.7	A	-	-	11.5	В	

			2017	No Build			2017	Build			017 Build w	ith Mitigati	<u>on</u>	Mitigation Measures
INTERSECTION & APPROACH		Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	
5TH STREET & BORDEN AVENU	HE (LINCI	ICNALI	ZED IN	TERSEC'	TION)	JUNGION	AI IZED	INTERSE	CTION)	(SICNAI	IZED INT	FDSFCT	ION)	
5th Street	SB	LR	- -	18.3	C C	LR	ALIZED -		F*	LR	0.59	19.5	B	- Install a new traffic signal with a 60-second cycle length. [SB green time is 20 s; EB/WB gree
Borden Avenue	EB	L	_	7.9	A			120+	F*	L	0.35	9.0	A	is 30 s; both phases have 3 s of amber and 2 s of all red time].
			-	-	-	-	-	-	-	T	0.92	24.3	С	- Install an east-west crosswalk on the north side of the intersection to accommodate pedestrian
	WB		-	-	-	-	-	-	-	TR	0.87	22.5	C	
														- Install "No Standing Anytime" regulation on the west curb of SB 5th Street and shift the center
	Overall Intersection	ı -	-	6.9	A	-	-	120+	F*	-	0.79	22.6	C	ft. to the west to gain a 11 ft. moving lane.
11TH STREET/11TH PLACE														
11TH STREET & BORDEN AVEN	NUE AT QMT TOLL PI	LAZA E	XIT RA	MP										
	(UNSI	IGNALI	ZED IN	TERSEC'	TION)	(UNSIGN	ALIZED	INTERSE	CTION)	(SIGNAL	IZED INT	ERSECT	ION)	- Partially Mitigated.
11th Street	NB	LTR	-	120+	F*	LTR	-		F*	R	0.06	11.2	В	- Prohibit NB 11th Street left (on to Borden Avenue) and through (on to QMT/LIE) movement
	SB	LTR	-	120+	F*	LTR	-	120+	F*	R	0.19	10.8	В	restripe it as 20 ft. right turn only lane.
Borden Avenue	EB	LTR	-	120+	F*	LTR	-	120+	F*	L	1.20+	120+	F*	 Prohibit SB QMT Exit left (on to Borden Avenue) and through (on to 11th Street) movements restripe it as 26 ft. right turn only lane.
	WB	- LTR	-	7.8	A	- LTR	-	8.1	A	TR LTR	0.53 0.99	14.4 36.3	B D	- Restripe EB Borden Avenue from one 20 ft. lane to one 10 ft. left turn lane and one 10 ft. thro
														right lane.
	Overall Intersection		-	120+	F*	-	-	120+	F*	-	1.20+	96.3	F	 Restripe WB Borden Avenue from one 22 ft. lane to one 11 ft. shared left-through lane and or shared through-right lane.
														 Install a new traffic signal with a 60-second cycle length. [EB+SB right turn green time is 26 WB+EB-left+NB right turn green time is 24 s; both phases have 3 s of amber and 2 s of all re-
														- Allow Right Turn on Red from the SB QMT Exit.
														 Provide signage along the QMT to direct traffic headed to 11th Street and EB Borden Avenue the 21st Street ramp
11TH PLACE & 50TH AVENUE														
11th Place	SB	TR	-	18.7	C	TR		20.0	C	TR	-	21.2	C	- Mitigation not required.
50th Avenue	WB	LT	-	7.8	A	LT	-	7.9	A	LT	-	7.9	A	[Build with mitigation delays are due to diversions from the Borden Avenue and 11th Street intersection mitigation. However, no significant impact occurs.]
	Overall Intersection		-	8.2	A	-	-	8.0	A	-	-	8.1	A	
11TH STREET SERVICE ROAD &	& 49TH AVENUE													
11th Street Service Road	NB	R	-	11.2	В	R		11.2	В					- Mitigation not required.
49th Avenue	WB	R	-	10.5	В	R	-	10.5	В					
	Overall Intersection	ı -	-	3.9	A	-	-	3.9	A					
11TH STREET & QUEENS PLAZA	A SOUTH													
11th Street	NB	LTR	-	17.2	C	LTR	-	17.9	C					- Mitigation not required.
Queens Plaza South	EB	LT	-	14.5	В	LT	-	14.8	В					
		TR	-	11.0	В	TR	-	11.1	В					
	WB	LT	-	11.9	В	LT	-	12.0	В					
		TR	-	9.5	A	TR	-	9.6	A					
	Overall Intersection	ı -	-	14.4	В	-	-	14.8	В					
OTHER UNSIGNALIZED INTERS	<u>SECTIONS</u>													
21ST STREET & 50TH AVENUE														
21st Street	NB	LT		EFLOW	A	LT		EFLOW	A					- Mitigation not required.
50th Avenue	SB	R	FREE	EFLOW	A	R	FREE	EFLOW	A					
	Overall Interception		pner	ELOW	A		EDEL	ELOW	A					
	Overall Intersection		FKEL	EFLOW	A	-	FKE	EFLOW	A					

APPENDIX TABLE 22-1

HUNTER'S POINT SOUTH REZONING AND RELATED ACTIONS EIS 2017 NO BUILD VS. BUILD AND MITIGATION TRAFFIC LEVELS OF SERVICE COMPARISON (AM PEAK HOUR)

			2017 N	lo Build			2017	<u>Build</u>		2	017 Build w	ith Mitigatio	<u>n</u>	
INTERSECTION & APPROACH		Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	
JACKSON AVENUE & 51ST AV	ENUE													
Jackson Avenue	NB	T	-	9.1	A	T	-	11.9	В	T	-	11.9	В	 Mitigation not required.
51st Avenue	WB	TR	-	12.9	В	TR	-	16.4	С	TR	-	16.8	С	[Build with mitigation delays are dimitigation. However, no significan
	Overall Intersection	-	-	3.9	A	-	-	5.1	A	-	-	5.1	A	
VERNON BOULEVARD & QUE	ENS PLAZA SOUTH													
VERNON BOULEVARD & QUE		GNALIZ	ZED INT	ERSEC	ΓΙΟΝ)	(UNSIGN	ALIZED	INTERSE	CTION)	(SIGNAL	IZED INT	ERSECTI	ON)	
VERNON BOULEVARD & QUEI		GNALIZ TR	ZED INT -	ERSECT	ΓΙΟΝ) -	(UNSIGN TR	ALIZED	INTERSE	CTION)	(SIGNAL TR	IZED INT 0.69	TERSECTI 13.7	ON) B	- Install a new traffic signal with
	(UNSI					,		INTERSE - 11.5		`			,	- Install a new traffic signal with time is 23 s; both phases have 3
VERNON BOULEVARD & QUED Vernon Boulevard	(UNSI) NB	TR	-	-	-	TR	-	-	-	TR	0.69	13.7	В	e
	(UNSI) NB	TR LT	-	- 11.0	B	TR LT	-	11.5	- B	TR L	0.69 0.94	13.7 40.9	B D	time is 23 s; both phases have 3 - Install "No Standing Anytime" intersection and restripe the app
Vernon Boulevard	(UNSI) NB SB	TR LT	-	- 11.0 -	- B	TR LT -	- - -	- 11.5 -	- B -	TR L T	0.69 0.94 0.90	13.7 40.9 24.4	B D C	time is 23 s; both phases have 3 - Install "No Standing Anytime" i

- (1) Control delay is measured in seconds per vehicle.
- (2) Level of service (LOS) for signalized intersections is based upon average control delay per vehicle (sec/veh) for each lane group as listed in the 2000 Highway Capacity Manual -- TRB.
- (3) Level of service (LOS) for unsignalized intersections is based upon control delay per vehicle (sec/veh) for each minor-approach as listed in the 2000 Highway Capacity Manual -- TRB.
- (4) Overall intersection V/C ratio is the critical lane groups' V/C ratio, not the weighted average of all the movements.
- (5) F* indicates levels of service F conditions with delays in excess of two minutes for the movement with the asterik (*).

Denotes a significant impact

[Build with mitigation delays are due to diversions from the Borden Avenue and 11th Street intersection mitigation. However, no significant impact occurs.]

Mitigation Measures

- Install a new traffic signal with a 90-second cycle length. [NB/SB green time is 57 s; EB/WB green time is 23 s; both phases have 3 s of amber and 2 s of all red time].
- Install "No Standing Anytime" regulation on the west curb of SB Vernon Boulevard 150 ft. from the intersection and restripe the approach from a 14 ft. lane with parking to one 11 ft. left-turn lane and one 11 ft. through lane.

			<u>2017</u> N	No Build			<u>20</u> 17	Build		2	017 Build w	ith Mitigatio	on_	Mitigation Measures
INTERSECTION & APPROACH		Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	
SIGNALIZED INTERSECTIONS														
VERNON BOULEVARD														
TEATTON DOGESTION														
VERNON BOULEVARD & 48T	H AVENUE													
Vernon Boulevard	NB	LT	0.67	23.0	C	LT	0.72	24.5	C					- Mitigation not required.
	SB	TR	0.67	22.6	C	TR	0.73	24.7	C					
48th Avenue	EB	L	0.28	33.8	С	L	0.29	34.0	С					
	WD	R	0.40	39.3 50.4	D	R	0.40	39.3 50.4	D					
	WB	LTR	0.77	50.4	D	LTR	0.77	50.4	D					
	Overall Intersection		0.63	28.1	\mathbf{C}	-	0.67	29.2	C					
VERNON BOULEVARD & 49T	H AVENUE													
Vernon Boulevard	NB	LTR	0.68	14.4	В	LTR	0.73	15.5	В	LTR	0.58	10.9	В	- Modify cycle length from 60 s to 90 s. [EB green time is 22 s; NB/SB green time is 58 s; all ph
	SB	LTR	0.63	13.1	В	LTR	0.69	14.3	В	LTR	0.55	10.4	В	have 3 s of amber and 2 s of all red time].
49th Avenue	EB	LTR	0.17	15.7	В	LTR	0.20	16.0	В	LTR	0.26	29.5	C	[Measures reflect change in signal timing needed for the AM/PM peak period; otherwise
														mitigation is not needed.]
	Overall Intersection	-	0.49	13.9	В	-	0.53	15.0	В	-	0.49	12.1	В	
VERNON BOULEVARD & 50T	H AVENUE													
Vernon Boulevard	NB	TR	0.72	15.6	В	TR	0.76	16.9	В	TR	0.89	35.9	D	- Modify cycle length from 60 s to 90 s . [EB green time is 40 s ; NB/SB green time is 40 s ; all phases a second
	SB	LT	0.58	12.5	В	LT	0.65	13.9	В	LT	0.83	32.4	C	have 3 s of amber and 2 s of all red time].
50th Avenue	EB	LTR	0.64	27.9	С	LTR	1.02	79.0	E	LTR	0.69	29.2	C	
	Overall Intersection	. -	0.69	16.7	В	-	0.86	30.7	C	-	0.79	33.1	C	
VERNON BOULEVARD & 51S	T AVENUE													
Vernon Boulevard	NB	LT	0.74	20.8	C	LT	0.78	22.6	C	LT	0.65	20.1	C	- Modify cycle length from 60 s to 90 s. [WB green time is 35 s; NB/SB green time is 45 s; all pl
	SB	TR	0.63	17.3	В	TR	0.78	22.3	C	TR	0.65	19.9	В	have 3 s of amber and 2 s of all red time].
51st Avenue	WB	LTR	0.61	15.4	В	LTR	0.80	19.7	В	LTR	0.93	37.9	D	[Measures reflect change in signal timing needed for the AM peak period; otherwise mitig is not needed.]
	Overall Intersection		0.68	17.5	В	-	0.79	21.1	C	-	0.77	29.2	C	is not needed.
VERNON BOULEVARD & BOI	DDEN AVENUE													
Vernon Boulevard	SB	Ī.	0.97	44.7	D	L	0.97	44.7	D	L	0.75	36.3	D	- Install "No Standing Anytime" regulation on the west curb of the SB Vernon Boulevard for 120
, email Boulevalu	22	LR	0.55	16.5	В	LR	1.02	62.4	Е	R	0.55	34.4	C	and restripe the approach from one 9 ft. left-turn lane and one 15 ft. left-right lane to two 11 ft.
Borden Avenue	EB	LT	0.57	16.5	В	LT	1.20+	120+	F*	DefL	0.43	17.3	В	turn lanes and one 11 ft. right-turn lane by switching the parking on the east side from angle to
		-	-	-	-	-	-	-	-	T	0.54	19.6	В	parallel to gain additional 9 ft.
	WB	T	0.49	14.6	В	T	0.70	18.4	В	T	0.51	34.1	С	 Install "No Standing 7:00 AM - 7:00 PM" regulation on the south curb of the EB Borden Aven ft. from the intersection and restripe the approach from one 16 ft. travel lane with parking to on
	Overall Intersection	_	0.77	25.8	C		1.20+	120+	F*	-	0.85	30.1	C	ft. shared left through and one 12 ft. through lane.
	Overall Intersection		0.77	23.0	C		1.201	1201	•		0.02	30.1	C	- Shift centerline of the WB Borden Avenue 6 ft. to the north tapered 150 ft. from the intersection Restripe EB Borden Avenue receiving as two 11 ft. lanes.
														- Restripe WB Borden Avenue from one 13 ft. through lane and one 15 ft. channelized right-turn to two 11 ft. through lane and one 11 ft. right-turn lane by shifting the north curb 11 ft. to the no
														 Restripe WB Borden Avenue receiving from one 22 ft. lane with parking to two 11 ft. lanes with parking.
														 Modify cycle length from 60 s to 120 s with EB-lead phase. [SB green time is 45 s; EB-lead gr time is 21 s; EB/WB green time is 39 s; all phases have 3 s of amber and 2 s of all red time].

			2017 N	No Build			2017	Build		<u>2</u>	017 Build w	ith Mitigatio	<u>n</u>	Mitigation Measures
INTERSECTION & APPROACH		Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	
VERNON BOULEVARD & 44TH I	DRIVE													
Vernon Boulevard	NB	LTR	0.72	13.8	В	LTR	0.75	14.8	В	LTR	0.78	15.3	В	- Modify signal timing: shift 1 s of green time from EB/WB phase to NB/SB phase [EB/WB green
	SB	LTR	1.20+	120+	F*	LTR	1.20+	120+	F*	LTR	1.16	95.1	F	shifts from 16 s to 15 s; NB/SB green time shifts from 34 s to 35 s].
44th Drive	EB	LTR	0.54	23.3	C	LTR	0.54	23.3	С	LTR	0.58	25.4	C	- Restripe NB/SB Vernon Boulevard approach as follows: 150 feet upstream of the stop bar, shift t
	WB	LTR	0.71	26.6	C	LTR	0.72	26.9	С	LTR	0.78	30.9	C	centerline 2 ft. to the east to increase the lane width to 16 ft. Shift the centerline on NB Vernon Boulevard 2 ft. to the east to coincide with the SB approach reducing the lane width to 12 ft.
	Overall Intersection	-	1.07	65.5	E	-	1.10	72.8	E	-	1.04	52.2	D	
JACKSON AVENUE/NORTHERN	BOULEVARD													
JACKSON AVENUE & 50TH AVE	ENUE													
Jackson Avenue	NB	TR	0.20	10.7	В	TR	0.28	11.4	В	TR	0.28	11.4	В	- Install "No Standing Anytime" regulation on the north curb of the EB 50th Avenue 150 ft. from
	SB	LT	0.33	11.9	В	LT	0.47	13.7	В	LT	0.47	13.7	В	intersection and restripe the approach from one 14 ft. lane with parking on both sides to one 11 ft turn lane and one 11 ft. through-right lane with parking along the south curb.
50th Avenue	EB	LTR	0.44	35.5	D	LTR	0.57	38.4	D	L	0.28	32.5	С	
		-	-	-	-	<u>-</u> -	-	-	-	TR	0.29	32.6	C	[Measures reflect changes needed for the AM peak period; otherwise mitigation is not need
	WB	L	0.35	35.0	D	L	0.37	35.4	D	L	0.62	43.6	D	
50th Avenue WB Right (Unsignalized	l) WB	R	-	10.9	В	R	-	12.3	В	R	-	12.3	В	
	Overall Intersection	-	0.37	17.6	В	-	0.51	18.3	В	-	0.52	18.8	В	
JACKSON AVENUE & 49TH AVE	ENUE													
49th Avenue	SB	LTR	0.36	28.6	C	LTR	0.39	29.1	С	LTR	0.41	29.5	С	- Install "No Standing Anytime" regulation on the south curb of EB Jackson Avenue for the entire
Jackson Avenue	EB	TR	0.67	44.6	D	TR	0.92	59.5	Е	T	0.45	39.4	D	block, shift the centerline 5 ft. to the north, and restripe the approach from a 11 ft. through, one shared through-right lane with parking to two 11 ft. through lanes and one 12 ft. exclusive right
		-	-	-	-	-	-	-	-	R	0.34	17.4	В	lane.
	WB	LT	0.34	16.9	В	LT	0.51	19.5	В	T	0.64	22.8	С	
	0 117 4		0.54	20.0			0.50	25.0			0.55	260		 Restripe WB Jackson Avenue from one 11 ft. left-through lane and one 20 ft. through lane to on ft. through lane.
	Overall Intersection	-	0.54	30.0	C	-	0.70	37.2	D	-	0.55	26.8	C	- Prohibit WB Jackson Avenue left-turn on to the 11th Street service road.
														 Restripe WB Jackson Avenue receiving lane from one 11 ft. and one 12 ft. lane with parking to 0. 18 ft. lane with parking.
														- Permit EB Jackson Avenue right-turn to the Pulaski Bridge during the exclusive WB Jackson Av
														phase.
JACKSON AVENUE & 11TH STR	EET (PULASKI BRID	GE)												
11th Street (Pulaski Bridge)	NB	-	-	-	-	-	-	-	-	L	0.58	38.8	D	 Post signs on the Pulaski Bridge to direct the right turning traffic to the 11th Street service road signs for Queens Boulevard/Jackson Avenue East traffic.
		LT	0.82	39.9	D	LT	1.03	73.5	Е	T	0.63	32.6	С	č (
		R	0.81	45.0	D	R	0.81	45.0	D	-	-	-	-	 Restripe the NB 11th Street service road approach traffic island to allow for two 12 ft. right-turn by removing parking along the west curb.
	SB	LTR	0.52	30.6	С	LTR	0.56	31.3	С	LTR	0.56	31.4	С	
Jackson Avenue	EB	LT	0.47	31.7	C	LT	0.81	41.9	D	LT	0.80	41.4	D	- Restripe the NB Pulaski Bridge shared left-through lane to an exclusive left-turn lane.
	WB	DefL	1.06	85.4	F	DefL	1.17	120+	F*	L	0.90	58.1	Е	- Install "No Standing Anytime" regulation on the north curb of the WB Jackson Avenue approac 150 ft. and restripe the approach from a 10 ft. shared left-through and a 12 ft. through lane with
11d Court Comics Deed	ND	T	0.47	19.6	В	T	0.69	24.9	С	T	0.69	25.3	C	parking to two 10 ft. left-turn lanes and a 10 ft. through lane.
11th Street Service Road	NB	R	0.89	65.5	Е	R	0.89	65.5	E	R	0.47	11.4	В	- Prohibit the WB Jackson Avenue left-turn during the permitted EB/WB phase.
	Overall Intersection	-	0.99	47.0	D	-	1.20+	62.9	E	-	0.75	33.4	C	
JACKSON AVENUE & 21ST STRI														
21st Street	NB	LTR	1.05	86.2	F	LTR	1.09	100.1	F	LTR	1.02	77.2	E	- Partially Mitigated.
	SB	LTR	0.73	40.3	D	LTR	0.81	44.2	D	LTR	0.81	44.2	D	- Install "No Standing 10:00 AM - 7:00 PM" regulation on the east curb of NB 21st Street for 120 from the intersection
Jackson Avenue	EB	L	0.71	24.2	C	L	1.06	105.6	F	L	1.03	96.0	F	from the intersection.
	***	TR	0.52	24.8	C	TR	0.57	25.9	С	TR	0.57	25.9	С	
	WB	L	0.43	15.2	В	L	0.45	15.9	В	L	0.55	17.8	В	
		TR	0.71	29.2	С	TR	0.78	31.9	С	TR	0.76	30.8	С	
	Overall Intersection	_	0.87	40.9	D	-	1.10	51.5	D	-	1.04	46.1	D	

			2017 N	lo Build			2017	Build		2	017 Build w	ith Mitigatio	<u>n</u>	Mitigation Measures
INTERSECTION & APPROACH		Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	
JACKSON AVENUE & THOMSO														
Jackson Avenue	NB	TR	0.61	21.8	C	TR	0.66	22.9	С					- Mitigation not required.
	SB	L	0.15	16.2	В	L	0.17	16.6	В					
		T	0.47	19.3	В	T	0.48	19.4	В					
Thomson Avenue	WB	L	0.42	27.3	C	L	0.48	28.5	C					
		R	0.24	25.2	C	R	0.24	25.2	C					
	Overall Intersection	-	0.53	21.7	C	-	0.58	22.5	C					
JACKSON AVENUE & 44TH DR	DIVE													
Jackson Avenue	NB	L	0.19	12.2	В	L	0.19	12.3	В	L	0.19	12.3	В	- Restripe SB Jackson Avenue 10 ft. left-turn lane to 11 ft. left-turn lane by reducing the hatche
Jackson Avenue	ND							23.1				23.1		median width by one foot.
	an.	TR	0.87	21.3	С	TR	0.89		C	TR	0.89		C	
	SB	L	0.55	18.9	В	L	0.56	19.7	В	L	0.54	18.8	В	[Measures reflect geometric improvements needed for the AM peak period; otherwise
		TR	0.47	3.9	A	TR	0.48	4.0	A	TR	0.48	4.0	A	mitigation is not needed.]
44th Drive	EB	DefL	1.20+	120+	F*	DefL	1.20+	120+	F*	DefL	1.20+	120+	F*	
		TR	0.75	51.1	D	TR	0.75	51.1	D	TR	0.75	51.1	D	
	WB	LTR	1.11	113.1	F	LTR	1.11	113.1	F	LTR	1.11	113.1	F	
	Overall Intersection	-	1.12	59.9	E	-	1.13	59.8	E	-	1.13	59.7	E	
JACKSON AVENUE/QUEENS P	I AZA EACT & OHEEN	c doin	EVADD											
	_				C	TID.	0.50	22.5	C.					Area et al. 1
Jackson Ave - Northern Blvd	NB	TR	0.57	32.3	C	TR	0.58	32.5	C					- Mitigation not required.
	SB	T	0.38	29.2	C	T	0.39	29.4	C					
Queens Boulevard	EB	T	0.60	18.3	В	T	0.60	18.3	В					
	WB	TR	0.62	18.8	В	TR	0.62	18.8	В					
	Overall Intersection	-	0.60	22.6	C	-	0.61	22.7	C					
NORTHERN BOULEVARD & Q	HEENS PLAZA NORTE	I/41ST /	AVENUE											
Northern Boulevard	NB	LTR	0.70	25.2	С	LTR	0.71	25.5	С					- Mitigation not required.
	SB	LT	0.69	33.5	C	LT	0.72	34.2	C					······································
	SD	R	0.73	15.1	В	R	0.72	15.1	В					
Outgoing Diama North (44 of Avenue	ED													
Queens Plaza North/41st Avenue		L	0.98	53.1	D	L	0.98	53.1	D					
	WB	LTR	0.06	31.7	С	LTR	0.06	31.7	С					
	Overall Intersection	-	0.80	30.2	C	-	0.80	30.4	C					
NORTHERN BOULEVARD/31ST	Γ STREET & 40TH AVE	ENUE												
31st Street	SB	LTR	0.68	47.8	D	LTR	0.69	48.1	D	LTR	0.61	43.7	D	- Modify signal timing: shift 3 s of green time from EB-through/WB phase to EB-left/SB phase
Northern Boulevard	EB	L	1.20+	120+	F*	L	1.20+	120+	F*	L	1.20+	120+	F*	through/WB green time shifts from 85 s to 82 s; EB-left/SB green time shifts from 25 s to 28
Totalem Boulevalu	டம்	T	0.41		A	T	0.41	7.5		T	0.43	8.8	-	
	WB	TR	0.41	7.5 7.5	A A	TR	0.41	7.5 7.5	A A	TR	0.43	8.8 8.9	A A	
	,, D	110	0.72	7.5	4.1	110	0.72	,		110	0.73	0.7		
	Overall Intersection	-	0.93	100.7	F	-	0.98	111.8	F	-	0.89	79.9	Е	
21ST STREET														
21ST STREET & QUEENS PLAZ	ZA NORTH													
21st Street	NB	LT	1.20+	120+	F*	LT	1.20+	120+	F*	LT	1.20+	120+	F*	- Modify signal timing: shift 2 s of green time from WB phase to NB/SB phase [WB green tim
	SB	TR	0.83	33.0	C	TR	0.84	33.9	C	TR	0.81	31.1	C	from 55 s to 53 s; NB/SB green time shifts from 55 s to 57 s].
Queens Plaza North	WB	LTR	0.60	27.6	C	LTR	0.60	27.6	C	LTR	0.31	22.2	C	- Restripe WB Queens Plaza North from one 30 ft. lane with a bus stop to one 11 ft. shared left
Zucons i iuzu i tortii	*** D	LIK	0.00	27.0	C	LIK	0.00	27.0	C	LIK	0.51	<i></i>	C	through lane and one 11 ft. through-right lane with a bus stop.
	Overall Intersection					· ·	1.02	120+				116.7		

		2017	No Build			201	7 Build		<u>2</u>	017 Build v	with Mitigation	<u>on</u>	Mitigation Measures
INTERSECTION & APPROACH	Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	
21ST STREET & QUEENS PLAZA SOUTH													
21st Street NB	LTR		14.7	В	LTR	0.95	16.8	В					- Mitigation not required.
SB	LTR		15.2	В	LTR	0.72	15.8	В					
Queens Plaza South EB	L	0.30	38.1	D	L	0.30	38.1	D					
	TR	0.39	39.6	D	TR	0.39	39.6	D					
Overall Intersection	1 -	0.78	17.2	В	-	0.79	18.6	В					
21ST STREET & 44TH DRIVE													
21st Street NB	LTR	0.68	11.8	В	LTR	0.71	12.6	В	LTR	0.71	12.6	В	- Install "No Standing 7:00 AM - 7:00 PM" regulation on the west curb of SB 21st Street for the
SB	LTR		43.3	D	LTR	1.05	54.6	D	LTR	0.92	23.9	C	block.
44th Drive EB	LTR		41.7	D	LTR	0.68	41.7	D	LTR	0.68	41.7	D	
WB	LTR		59.6	E	LTR	0.94	59.6	E	LTR	0.94	59.6	E	
WB	LIK	0.54	37.0	L	LIK	0.74	37.0	L	LIK	0.74	37.0	L	
Overall Intersection	ı -	0.99	38.9	D	-	1.01	42.8	D	-	0.92	32.1	C	
VAN DAM STREET													
VAN DAM STREET & THOMSON AVENUE/QUEENS	BOULI	EVARD											
Van Dam Street NB	L	1.20+	120+	F*	L	1.20+	120+	F*					- Unmitigatable Impact.
	TR	1.10	107.6	F	TR	1.10	107.6	F					
Queens Boulevard (to Queens Boulevard.)	T	0.66	30.9	C	T	0.66	30.9	C					
Queens Boulevard (to Van Dam Street)	T	0.93	61.3	E	T	0.93	61.3	E					
Queens Boulevard (to Thomson Avenue WB)	R	0.08	35.5	D	R	0.08	35.5	D					
Thomson Avenue EB	T	0.65	22.6	C	T	0.68	23.2	C					
	R	1.19	120+	F*	R	1.19	120+	F*					
Queens Boulevard (to Thomson Avenue WB) WB	L	0.94	70.3	E	L	0.99	79.4	Е					
Queens Boulevard (to Viaduct)	TR	0.32	9.1	A	TR	0.32	9.1	A					
Overall Intersection	1 -	1.20+	71.1	E	-	1.20+	72.1	E					
VAN DAM STREET & LIE EXIT RAMP													
Van Dam Street NB	LT	0.23	15.8	В	LT	0.23	15.8	В	LT	0.58	34.8	С	- Restripe WB Queens Midtown Expressway Exit Ramp from two 11 ft. through lanes and one 1
SB	TR	1.14	120+	F*	TR	1.14	120+	F*	TR	1.14	120+	F*	shared through-right lane to two 11 ft. through lanes and one 11 ft. exclusive right-turn lane.
LIE Exit Ramp WB	TR	1.17	107.8	F	TR	1.20+	120+	F*	T	1.06	64.4	E	- Modify signal phasing plan: Add a new lag phase for the SB approach with the WB right-turn
ELE Exit Namp	-	-	-	-	-	-	-	-	R	0.95	29.1	C	maintain the existing 90 s cycle length with the following signal timing: WB = 40 s green, NB, 20 s green time, and SB/WB-right only = 15 s of green time (each phase has 3 s amber and 2 s
													red).
Overall Intersection	1 -	1.16	107.6	F	-	1.20	120+	F*	-	1.10	76.4	E	
VAN DAM STREET & BORDEN AVENUE													
Van Dam Street NB	TR	0.67	40.5	D	TR	0.67	40.5	D	TR	0.67	40.5	D	- Mitigation not required.
SB	DefL	0.88	27.1	C	DefL	0.88	27.1	C	DefL	0.90	28.7	C	- Modify signal phasing to allowed pedestrian movements to match AM/PM peak periods.
	T	0.22	10.6	В	T	0.22	10.6	В	T	0.22	10.6	В	
Borden Avenue EB	LTR	0.59	26.6	C	LTR	0.62	27.2	C	LTR	0.62	27.2	C	
Overall Intersection		0.78	27.4	C	_	0.80	27.6	C	_	0.81	28.4	C	

			201	7 No Build			2017	Build		2	2017 Build w	ith Mitigatio	<u>on</u>	Mitigation Measures
INTERSECTION & APPROACH		Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	
CENTEED DOLL EN LDD														
CENTER BOULEVARD														
CENTER BOULEVARD & 518	ST AVENUE													
Center Boulevard	NB	-	-	-	-	T	0.38	10.2	В	T	0.38	10.2	В	- Mitigation not required.
	SB	-	-	-	-	T	0.04	7.7	A	T	0.04	7.7	A	[Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection mitigation
51st Avenue	WB	-	-	-	-	LR	0.21	15.1	В	LR	0.26	15.5	В	However, no significant impact occurs.]
	Overall Intersection	ı -	-	-	-	-	0.31	11.1	В	-	0.33	11.3	В	
CENTER BOULEVARD & BO	ORDEN AVENUE													
Center Boulevard	NB	_	_	_	-	TR	0.67	23.7	С	TR	0.64	36.2	D	- Mitigation not required.
		_	_	_	_	R	0.49	20.5	C	R	0.51	33.2	C	[Build with mitigation delays are due to diversions from the Borden Avenue and 11th Street intersection
	SB	_	_	_	_	L	0.10	15.4	В	L	0.08	24.3	C	mitigation. However, no significant impact occurs.]
Borden Ave	WB	_	_	_	_	R	0.35	18.2	В	R	0.28	27.2	C	
Jorden 1110	,,,,					K	0.55	10.2	Б	IX	0.20	27.2	C	
	Overall Intersection	ı -	-	-	-	-	0.52	21.1	C	-	0.46	33.0	C	
CENTER BOULEVARD & 541	TH AVENUE													
Center Boulevard	NB	-	-	-	-	T	0.27	15.2	В	T	0.29	15.2	В	- Mitigation not required.
54th Avenue	WB	-	-	-	-	R	0.29	9.3	A	R	0.39	10.4	В	[Build with mitigation delays are due to diversions from the Borden Avenue and 11th Street intersection mitigation. However, no significant impact occurs.]
	Overall Intersection	ı -	-	-	-	-	0.28	12.9	В	-	0.35	12.9	В	
CENTER BOULEVARD & 561	PH AVENUE													
						T	0.00	16.6	D					Millionian and according to
Center Boulevard	NB	-	-	-	-	T	0.08	16.6	В					- Mitigation not required.
56th Avenue	WB	-	-	-	-	R	0.36	7.9	A					
	Overall Intersection	ı -	-	-	-	-	0.27	9.4	A					
2ND STREET														
2ND STREET & 51ST AVENU	E (UNS	SIGNAI	LIZED I	NTERSEC	TION)	(SIGN	ALIZED I	NTERSE	CTION)	(SIGN	ALIZED I	NTERSE	CTION)	
2nd Street	SB	LT	-	7.7	A	LTR	0.04	10.4	В	LTR	0.04	10.4	В	- Mitigation not required.
51st Avenue	WB	LR	-	9.7	A	LT	0.28	12.2	В	LT	0.30	12.4	В	[Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection mitigation However, no significant impact occurs.]
	Overall Intersection	ı -	-	2.8	A	-	0.16	11.9	В	-	0.17	12.1	В	
2ND STREET & BORDEN AV	ENUE (UNS	SIGNAI	LIZED I	NTERSEC	TION)	(SIGN	ALIZED I	NTERSE	CTION)	(SIGN	ALIZED I	NTERSEC	CTION)	
2nd Street	SB	LT	_	7.7	A	LTR	0.21	17.5	В	LTR	0.24	38.0	D	- Mitigation not required.
Borden Avenue	EB	-	_	-	-	TR	0.47	18.4	В	TR	0.42	25.4	C	[Build with mitigation delays are due to diversions from the Borden Avenue and 11th Street intersection
	WB	LR	_	11.9	В	DefL	0.60	13.9	В	DefL	0.58	19.6	В	mitigation. However, no significant impact occurs.]
	,,,,	-	-	-	-	T	0.17	6.5	A	T	0.14	6.9	A	
	Overall Intersection	ı -	-	7.0	A	-	0.60	15.2	В	-	0.65	22.8	C	
2ND STREET & 54TH AVENU	JE (JINS	SIGNAI	JZED I	NTERSEC	TION)	(SIGN	ALIZED I	NTERSE	CTION)	(SIGN	ALIZED I	NTERSE	CTION)	
2nd Street	SB	LT	- -	7.7	A A	LTR	0.56	15.1	B	LTR	0.58	15.4	В	- Mitigation not required.
54th Avenue	WB	LR	-	7.7 9.9	A A	LT	0.36	11.2	В	LTR	0.38	12.0	В	[Build with mitigation delays are due to diversions from the Borden Avenue and 11th Street intersection
J+III AVEIIUE	wв	LK	-	9.9	А	LI	0.10	11.4	D	LI	0.27	12.0	D	mitigation. However, no significant impact occurs.]
	Overall Intersection	ı -	-	5.6	A	-	0.36	14.3	В	-	0.42	14.3	В	

				No Build				<u>Build</u>				ith Mitigatio		Mitigation Measures
INTERSECTION & APPROACH		Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	
AND CEDIERE O SSELLANDALIE														
2ND STREET & 55TH AVENUE	CD.					T. (T)	0.20	11.4	D					New Action Control
2nd Street	SB	-	-	-	-	LT	0.20	11.4	В					- Mitigation not required.
55th Avenue	EB	-	-	-	-	TR	0.05	10.6	В					
									_					
	Overall Intersection	-	-	-	-	-	0.13	11.3	В					
2ND STREET & 56TH AVENUE														
2nd Street	SB	-	-	-	-	T	0.04	2.5	Α					- Mitigation not required.
		-	-	-	-	R	0.29	3.5	A					
	Overall Intersection	-	-	-	-	-	0.29	3.4	A					
11TH STREET														
11TH STREET & 44TH DRIVE														
11th Street	NB	LTR	0.56	12.5	В	LTR	0.56	12.5	В	LTR	0.57	13.2	В	- Modify signal timing: shift 1 s of green time from NB/SB phase to EB/WB phase [NB/SB green time from NB/SB green time from NB/SB phase to EB/WB phase [NB/SB green time from NB/SB green time from time from NB/SB green time from NB/SB green time from time from NB/SB green time from time from NB/SB gre
	SB	LTR	0.36	10.4	В	LTR	0.36	10.4	В	LTR	0.37	11.0	В	shifts from 53 s to 52 s; EB/WB green time shifts from 27 s to 28 s].
44th Drive	EB	LTR	0.72	33.3	C	LTR	0.72	33.3	C	LTR	0.69	31.6	C	[Measures reflect change in signal timing needed for the PM peak period; otherwise miti
	WB	LTR	0.77	35.9	D	LTR	0.77	36.0	D	LTR	0.74	33.6	C	is not needed.]
	Overall Intersection	-	0.63	21.6	C	-	0.63	21.6	C	-	0.63	21.1	C	
UNSIGNALIZED INTERSECTIONS	S													
CENTER BOULEVARD														
CENTER BOULEVARD & 48TH A	AVENUE (UNS)	IGNALI	IZED IN	TERSECT	TON)	(UNSIGN	ALIZED	INTERSE	CTION)	(SIGNAL	IZED IN	TERSECT	ION)	
Center Boulevard	NB	-			-		-	-	-	TR	0.14	16.3	В	- Install a new traffic signal with a 120-second cycle length. [NB/SB green time is 60 s; WB gre
Center Boulevard	SB	LT	_	120+	F*	LT	_	120+	F*	DefL	0.16	17.0	В	is 50 s; both phases have 3 s of amber and 2 s of all red time].
	SD		=	120-	1		-	120+	1		0.10	17.0		
		Т	_	120+	E*			120±	E*		0.10	16.1		
48th Avenue	WD	T	-	120+	F*	T	-	120+	F*	T	0.10	16.1	В	- Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides to
48th Avenue	WB	L	-	120+	F*	T L	-	120+	F*	T L	0.10	21.5	B C	- Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides to
48th Avenue	WB					T				T			В	- Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides to 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking of
48th Avenue		L	-	120+ 120+	F* F*	T L R	-	120+ 120+	F* F*	T L R	0.10 0.19	21.5 22.8	B C C	- Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides to 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking of
48th Avenue	WB Overall Intersection	L	-	120+	F*	T L	-	120+	F*	T L	0.10	21.5	B C	- Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides to 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking of
	Overall Intersection	L	-	120+ 120+	F* F*	T L R	-	120+ 120+	F* F*	T L R	0.10 0.19	21.5 22.8	B C C	- Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides to 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking of
CENTER BOULEVARD & 49TH A	Overall Intersection	L R	-	120+ 120+ 120 +	F* F* F *	T L R	- - -	120+ 120+ 120+	F* F* F *	T L R	0.10 0.19	21.5 22.8	B C C	- Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides to 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking of east and west curbs.
CENTER BOULEVARD & 49TH A Center Boulevard	Overall Intersection AVENUE SB	L R - LT	-	120+ 120+ 120 +	F* F* C	T L R	-	120+ 120+ 120+	F* F* C	T L R	0.10 0.19	21.5 22.8	B C C	- Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides to 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking of
CENTER BOULEVARD & 49TH A	Overall Intersection	L R	-	120+ 120+ 120 +	F* F* F *	T L R	- - -	120+ 120+ 120+	F* F* F *	T L R	0.10 0.19	21.5 22.8	B C C	 Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides to 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking of east and west curbs.
CENTER BOULEVARD & 49TH A Center Boulevard	Overall Intersection AVENUE SB WB	L R - LT LR	-	120+ 120+ 120 + 16.0 80.1	F* F* C F	T L R	-	120+ 120+ 120+ 23.5 120+	F* F* C F*	T L R	0.10 0.19	21.5 22.8	B C C	 Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides to 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking of east and west curbs.
CENTER BOULEVARD & 49TH A Center Boulevard	Overall Intersection AVENUE SB	L R - LT LR	-	120+ 120+ 120 +	F* F* C	T L R	-	120+ 120+ 120+	F* F* C	T L R	0.10 0.19	21.5 22.8	B C C	 Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides to 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking of east and west curbs.
CENTER BOULEVARD & 49TH A Center Boulevard 49th Avenue	Overall Intersection AVENUE SB WB Overall Intersection	L R - LT LR	-	120+ 120+ 120 + 16.0 80.1	F* F* C F	T L R	-	120+ 120+ 120+ 23.5 120+	F* F* C F*	T L R	0.10 0.19	21.5 22.8	B C C	 Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides to 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking of east and west curbs.
CENTER BOULEVARD & 49TH A Center Boulevard 49th Avenue	Overall Intersection AVENUE SB WB Overall Intersection	L R - LT LR	-	120+ 120+ 120 + 16.0 80.1	F* F* C F	T L R	-	120+ 120+ 120+ 23.5 120+	F* F* C F*	T L R	0.10 0.19	21.5 22.8 18.5	B C C	 Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides to 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking of east and west curbs. Unmitigatable Impact.
CENTER BOULEVARD & 49TH A Center Boulevard	Overall Intersection AVENUE SB WB Overall Intersection	L R - LT LR	-	120+ 120+ 120 + 16.0 80.1	F* F* C F	T L R	-	120+ 120+ 120+ 23.5 120+	F* F* C F*	T L R	0.10 0.19	21.5 22.8	B C C	 Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides to 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking of east and west curbs. Unmitigatable Impact. Mitigation not required.
CENTER BOULEVARD & 49TH A Center Boulevard 49th Avenue CENTER BOULEVARD & 50TH A	Overall Intersection AVENUE SB WB Overall Intersection AVENUE	L R - LT LR -	- - - - - - FREE	120+ 120+ 120+ 16.0 80.1 12.5	F* F* C F	T L R	- - - -	120+ 120+ 120+ 23.5 120+	F* F* C F*	T L R	0.10 0.19 0.17	21.5 22.8 18.5	В С С	 Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides to 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking ceast and west curbs. Unmitigatable Impact. Mitigation not required. [Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection mit
CENTER BOULEVARD & 49TH A Center Boulevard 49th Avenue CENTER BOULEVARD & 50TH A Center Boulevard	Overall Intersection AVENUE SB WB Overall Intersection AVENUE SB	L R - LT LR -	- - - - - - FREE	120+ 120+ 120+ 16.0 80.1 12.5	F* F* C F B	T L R - LT LR -	- - - -	120+ 120+ 120+ 23.5 120+ 31.4	F* F* C F* D	T L R	0.10 0.19 0.17	21.5 22.8 18.5	В С С В	 Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides to 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking ceast and west curbs. Unmitigatable Impact. Mitigation not required.
CENTER BOULEVARD & 49TH A Center Boulevard 49th Avenue CENTER BOULEVARD & 50TH A Center Boulevard	Overall Intersection AVENUE SB WB Overall Intersection AVENUE SB	L R - LT LR - L R	- - - FREE FREE	120+ 120+ 120+ 16.0 80.1 12.5	F* F* C F B	T L R - LT LR -	- - - -	120+ 120+ 120+ 23.5 120+ 31.4	F* F* C F* D	T L R	0.10 0.19 0.17	21.5 22.8 18.5	В С С В	 Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides to 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking of east and west curbs. Unmitigatable Impact. Mitigation not required. [Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection mit.]
CENTER BOULEVARD & 49TH A Center Boulevard 49th Avenue CENTER BOULEVARD & 50TH A Center Boulevard	Overall Intersection AVENUE SB WB Overall Intersection AVENUE SB WB	L R - LT LR - L R	- - - FREE FREE	120+ 120+ 120+ 16.0 80.1 12.5	F* F* C F A A	T L R - LT LR - LT -	- - - -	120+ 120+ 120+ 23.5 120+ 31.4	F* F* C F* D	T L R	0.10 0.19 0.17	21.5 22.8 18.5	В С В В	 Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides to 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking of east and west curbs. Unmitigatable Impact. Mitigation not required. [Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection mitigation.
CENTER BOULEVARD & 49TH A Center Boulevard 49th Avenue CENTER BOULEVARD & 50TH A Center Boulevard 50th Avenue	Overall Intersection AVENUE SB WB Overall Intersection AVENUE SB WB Overall Intersection	L R - LT LR - L R	- - - FREE FREE	120+ 120+ 120+ 16.0 80.1 12.5	F* F* C F A A	T L R - LT LR - LT -	- - - -	120+ 120+ 120+ 23.5 120+ 31.4	F* F* C F* D	T L R	0.10 0.19 0.17	21.5 22.8 18.5	В С В В	 Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides to 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking of east and west curbs. Unmitigatable Impact. Mitigation not required. [Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection mitigation.
CENTER BOULEVARD & 49TH A Center Boulevard 49th Avenue CENTER BOULEVARD & 50TH A Center Boulevard 50th Avenue CENTER BOULEVARD & 55TH A	Overall Intersection AVENUE SB WB Overall Intersection AVENUE SB WB Overall Intersection	L R - LT LR - L R	- - - FREE FREE	120+ 120+ 120+ 16.0 80.1 12.5	F* F* C F A	T L R - LT LR - LT -	- - - -	120+ 120+ 120+ 23.5 120+ 31.4	F* F* C F* D	T L R	0.10 0.19 0.17	21.5 22.8 18.5	В С В В	 Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides to 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking of east and west curbs. Unmitigatable Impact. Mitigation not required. [Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection mitigation.
CENTER BOULEVARD & 49TH A Center Boulevard 49th Avenue CENTER BOULEVARD & 50TH A Center Boulevard	Overall Intersection AVENUE SB WB Overall Intersection AVENUE SB WB Overall Intersection	L R - LT LR - L R	- - - FREE FREE	120+ 120+ 120+ 16.0 80.1 12.5	F* F* C F A	T L R - LT LR - LT	- - -	120+ 120+ 120+ 23.5 120+ 31.4 11.1 - 2.3	F* F* C F* D A	T L R	0.10 0.19 0.17	21.5 22.8 18.5	В С В В	 Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides to 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking of east and west curbs. Unmitigatable Impact. Mitigation not required. [Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection mithowever, no significant impact occurs.]
CENTER BOULEVARD & 49TH A Center Boulevard 49th Avenue CENTER BOULEVARD & 50TH A Center Boulevard 50th Avenue CENTER BOULEVARD & 55TH A	Overall Intersection AVENUE SB WB Overall Intersection AVENUE SB WB Overall Intersection	L R - LT LR - L R	- - - FREE FREE	120+ 120+ 120+ 16.0 80.1 12.5	F* F* C F A	T L R - LT LR - LT - T	- - - -	120+ 120+ 120+ 23.5 120+ 31.4 11.1 - 2.3	F* F* C F* D A	T L R	0.10 0.19 0.17	21.5 22.8 18.5	В С В В	 Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides t 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking east and west curbs. Unmitigatable Impact. Mitigation not required. [Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection mi However, no significant impact occurs.]
CENTER BOULEVARD & 49TH A Center Boulevard 49th Avenue CENTER BOULEVARD & 50TH A Center Boulevard 50th Avenue CENTER BOULEVARD & 55TH A	Overall Intersection AVENUE SB WB Overall Intersection AVENUE SB WB Overall Intersection	L R - LT LR - L R	- - - FREE FREE	120+ 120+ 120+ 16.0 80.1 12.5	F* F* C F A	T L R - LT LR - LT - T	- - - -	120+ 120+ 120+ 23.5 120+ 31.4 11.1 - 2.3	F* F* C F* D A	T L R	0.10 0.19 0.17	21.5 22.8 18.5	В С В В	 Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides t 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking east and west curbs. Unmitigatable Impact. Mitigation not required. [Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection mi However, no significant impact occurs.]
CENTER BOULEVARD & 49TH A Center Boulevard 49th Avenue CENTER BOULEVARD & 50TH A Center Boulevard 50th Avenue CENTER BOULEVARD & 55TH A	Overall Intersection AVENUE SB WB Overall Intersection AVENUE SB WB Overall Intersection AVENUE NB	L R - LT LR - L R	- - - FREE FREE	120+ 120+ 120+ 16.0 80.1 12.5	F* F* C F A	T L R - LT LR - LT T T T TR	- - - -	120+ 120+ 120+ 23.5 120+ 31.4 11.1 - 2.3 10.9 12.8	F* F* C F* D B - A B B B	T L R	0.10 0.19 0.17	21.5 22.8 18.5	В С В В	 Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides to 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking of east and west curbs. Unmitigatable Impact. Mitigation not required. [Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection mithowever, no significant impact occurs.]
CENTER BOULEVARD & 49TH A Center Boulevard 49th Avenue CENTER BOULEVARD & 50TH A Center Boulevard 50th Avenue CENTER BOULEVARD & 55TH A Center Boulevard	Overall Intersection AVENUE SB WB Overall Intersection AVENUE SB WB Overall Intersection AVENUE NB Overall Intersection	L R - LT LR - L R	- - - FREE FREE	120+ 120+ 120+ 16.0 80.1 12.5	F* F* C F A	T L R - LT LR - LT T T T TR	- - - -	120+ 120+ 120+ 23.5 120+ 31.4 11.1 - 2.3 10.9 12.8	F* F* C F* D B - A B B B	T L R	0.10 0.19 0.17	21.5 22.8 18.5	В С В В	 Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides to 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking of east and west curbs. Unmitigatable Impact. Mitigation not required. [Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection mithowever, no significant impact occurs.]
CENTER BOULEVARD & 49TH A Center Boulevard 49th Avenue CENTER BOULEVARD & 50TH A Center Boulevard 50th Avenue CENTER BOULEVARD & 55TH A Center Boulevard	Overall Intersection AVENUE SB WB Overall Intersection AVENUE SB WB Overall Intersection AVENUE NB Overall Intersection	L R - LT LR - L R	- - - FREE FREE	120+ 120+ 120+ 16.0 80.1 12.5	F* F* C F A	T L R - LT LR - T T T T T T T T T T T T T T T T T T	- - - -	120+ 120+ 120+ 23.5 120+ 31.4 11.1 - 2.3 10.9 12.8 11.9	F* F* C F* D B - A B B B	T L R	0.10 0.19 0.17	21.5 22.8 18.5	В С В В	 Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides to 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking of east and west curbs. Unmitigatable Impact. Mitigation not required. [Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection mit However, no significant impact occurs.] Mitigation not required.
CENTER BOULEVARD & 49TH A Center Boulevard 49th Avenue CENTER BOULEVARD & 50TH A Center Boulevard 50th Avenue CENTER BOULEVARD & 55TH A Center Boulevard	Overall Intersection AVENUE SB WB Overall Intersection AVENUE SB WB Overall Intersection AVENUE NB Overall Intersection	L R - LT LR - R	- - - FREE FREE	120+ 120+ 120+ 16.0 80.1 12.5	F* F* C F B A A	T L R - LT LR - LT T T T TR	- - - - - - -	120+ 120+ 120+ 23.5 120+ 31.4 11.1 - 2.3 10.9 12.8	F* F* C F* D B - A B B B	T L R	0.10 0.19 0.17	21.5 22.8 18.5	В С В В	 Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sides to 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking of east and west curbs. Unmitigatable Impact. Mitigation not required. [Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection mithowever, no significant impact occurs.]

			<u>2017 I</u>	No Build			201	7 Build		2	017 Build w	ith Mitigatio	<u>n</u>	Mitigation Measures
INTERSECTION & APPROACH		Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	
AND STREET														
2ND STREET														
2ND STREET & 50TH AVENUE														
2nd Street	NB	LR	-	11.0	В	-	-	-	-					- Mitigation not required.
50th Avenue	EB	-	-	-	-	TR	FREI	EFLOW	A					
	Overell Intersection			5 6										
	Overall Intersection		-	5.6	A	-	FREI	EFLOW	A					
2ND STREET & 57TH AVENUE														
2nd Street	SB	-	-	-	-	T	-	9.7	A					- Mitigation not required.
	Overall Intersection							9.7						
	Overall Intersection	-	-	-	-	-	-	9.7	A					
5TH STREET														
5TH STREET & 48TH AVENUE														
5th Street	NB	LTR	_	9.4	A	LTR	_	9.5	A					- Mitigation not required.
	SB	LTR	-	9.3	A	LTR	-	9.4	A					
48th Avenue	EB	LT	_	9.0	A	LT	_	9.0	Α					
		TR	-	8.6	A	TR	_	8.7	A					
	WB	LT	-	9.7	A	LT	-	9.7	A					
		TR	-	8.7	A	TR	-	8.7	A					
	Overall Intersection	ı -	-	9.3	A	-	-	9.3	A					
TON CODDETE O ACTIVA VIENNIE	(III)	TONAT I	ZED IN	TEDGEG	TION	AMGION	A L LZED	. DJÆEDÆE	CETON)	(CICNAI	IZED IN	EDGEGE	01 0	
5TH STREET & 49TH AVENUE 5th Street	NB	LTR	ZED IN -	TERSEC ' 9.6	A A	LTR	ALIZED	INTERSE 9.6	A	(SIGNAL LTR	0.25	FERSECTI 9.2	ON) A	- Install a new traffic signal with a 60-second cycle length. [NB/SB green time is 30 s; EB/WB gre
Jui Sueet	SB	LTR	-	8.9	A	LTR	-	8.9	A	LTR	0.23	9.8	A	time is 20 s; both phases have 3 s of amber and 2 s of all red time].
49th Avenue	EB	LTR	_	33.9	D	LTR	_	42.0	E	LTR	0.19	14.8	В	- Install "No Standing Anytime" regulation on the east curb of NB 5th Street and restripe it from or
1) in Tiveline	WB	LTR	-	28.9	D	LTR	-	31.1	D	LTR	0.14	14.5	В	30 ft. lane with parking on both sides to one 11 ft. approach and one 11 ft. receiving lane with parking on the west side.
	Overall Intersection	ı -	-	8.2	A	-	-	10.5	В	-	0.27	10.9	В	- Install "No Standing Anytime" regulation on the north curb of EB 49th Avenue and WB 49th Avenue
														120 ft. from the intersection and restripe it from one 30 ft. lane with parking on both sides to one
														ft. approach and one 11 ft. receiving lane with parking on the south side.
5TH STREET & 50TH AVENUE	(UNS	SIGNALI	ZED IN	TERSEC'	TION)	(UNSIGN	ALIZED	INTERSE	CTION)	(SIGNAL	IZED IN	TERSECTI	ON)	
5th Street	NB	-	-	-	-	-	-	-	-	TR	0.32	12.7	В	- Install a new traffic signal with a 60-second cycle length. [NB/SB green time is 25 s; EB green time
	SB	LT	-	7.9	A	LT	-	7.8	A	LT	0.36	13.1	В	25 s; both phases have 3 s of amber and 2 s of all red time].
50th Avenue	EB	LTR	-	32.8	D	LTR	-	120+	F*	LTR	0.37	13.0	В	- Install "No Standing Anytime" regulation on the east curb of NB 5th Street and restripe it from or 30 ft. lane with parking on both sides to one 11 ft. approach and one 11 ft. receiving lane with
	Overall Intersection	ı -	-	6.8	A	-	-	104.0	F	-	0.36	12.9	В	parking on the west side.
														$\hbox{-} In stall \ an \ east-west \ crosswalk \ on \ the \ south \ side \ of \ the \ intersection \ to \ accommodate \ pedestrians.$
5TH STREET & 51ST AVENUE														
5th Street	NB	LT	-	8.1	A	LT	-	8.2	A	LT	-	9.6	A	- Designate 51st Avenue as one way WB only.
	SB	TR	-	-	-	-	-	-	-	TR	-	10.1	В	- Install "All Way" Stop control sign on all approaches.
								0.6	A					[Measures reflect geometric improvements needed for the PM peak period; otherwise
51st Avenue	EB	LR	-	12.7	В	LR	-	9.6	A	-	-	-	-	
51st Avenue		LR LTR	-	12.7 14.0	B B	LR LTR	-	9.6 27.7	D D	LT	-	11.4	В	mitigation is not needed.]

				No Build				7 Build		<u>2</u> (ith Mitigatio	<u>on</u>	Mitigation Measures
INTERSECTION & APPROACH		Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	
5TH STREET & BORDEN AVEN	`		IZED IN	TERSECT	· · · · · ·	_		INTERSE		,		TERSECTI		The Harmonian Control of the Control
5th Street	SB	LR	-	12.6	В	LR	-	120+	F*	LR	0.46	17.7	В	- Install a new traffic signal with a 60-second cycle length. [SB green time is 20 s; EB/WB green is 30 s; both phases have 3 s of amber and 2 s of all red time].
Borden Avenue	EB	L	-	7.9	A	L	-	17.4	С	L	0.03	7.7	A	•
		-	-	-	-	-	-	-	-	T	0.49	11.1	В	- Install a east-west crosswalk on the north side of the intersection to accommodate pedestrians.
	WB	-	-	-	-	-	-	-	-	TR	0.77	17.4	В	
														- Install "No Standing Anytime" regulation on the west curb of SB 5th Street and shift the centerly
	Overall Intersection		-	4.3	A	-	-	120+	F*	-	0.65	15.1	В	ft. to the west to gain a 11 ft. moving lane.
11TH STREET/11TH PLACE														
11TH STREET & BORDEN AVE	NUE AT QMT TOLL P	LAZA E	XIT RAI	MP										
	(UNS	IGNALI	IZED IN	TERSECT	TON)	(UNSIGN	ALIZED	INTERSE	CTION)	(SIGNAL	IZED INT	TERSECTI	ION)	
11th Street	NB	LTR	_	120+	F*	LTR	_	120+	F*	R	0.14	11.9	В	- Prohibit NB 11th Street left (on to Borden Avenue) and through (on to QMT/LIE) movements a
	SB	LTR	_	120+	F*		_	120+	F*	R	0.21	11.0	В	restripe it as 20 ft. right turn only lane.
Borden Avenue	EB	LTR	_	27.5	D	LTR	_	80.7	F	L	0.93	23.0	C	- Prohibit SB QMT Exit left (on to Borden Avenue) and through (on to 11th Street) movements a
20130111101100	LD	LIK		21.3		LIK	-	-	-	TR	0.39	12.7	В	restripe it as 26 ft. right turn only lane.
	WB	LTR	-	- 7.7	A	LTR	-	7.8	A	LTR	0.39	18.1	В	- Restripe EB Borden Avenue from one 20 ft. lane to one 10 ft. left turn lane and one 10 ft. throu
														right lane.
	Overall Intersection	-	-	120+	F*	-	-	120+	F*	-	0.89	18.7	В	 Restripe WB Borden Avenue from one 22 ft. lane to one 11 ft. shared left-through lane and one shared through-right lane.
														- Install a new traffic signal with a 60-second cycle length. [EB+SB right turn green time is 26 s; WB+EB-left+NB right turn green time is 24 s; both phases have 3 s of amber and 2 s of all red
														 Allow Right Turn on Red from the SB QMT Exit. Provide signage along the QMT to direct traffic headed to 11th Street and EB Borden Avenue to the 21st Street ramp
11TH PLACE & 50TH AVENUE														
11th Place	SB	TR	-	12.5	В	TR	-	12.6	В	TR	-	13.7	В	- Mitigation not required.
50th Avenue	WB	LT	-	7.7	A	LT	-	7.8	A	LT	-	7.8	A	[Build with mitigation delays are due to diversions from the Borden Avenue and 11th Street intersection mitigation. However, no significant impact occurs.]
	Overall Intersection	-	-	5.4	A	-	-	5.2	A	-	-	4.7	A	
11TH STREET SERVICE ROAD	& 49TH AVENUE													
11th Street Service Road	NB	R	_	9.4	A	R	_	9.4	A					- Mitigation not required.
49th Avenue	WB	R	_	9.7	A	R	_	9.7	A					Tangaton not required.
47th Avenue	W.D	K	_	7.1	Α	K	_	7.1	А					
	Overall Intersection	-	-	3.8	A	-	-	3.8	A					
11TH STREET & QUEENS PLAZ	A SOUTH													
11th Street	NB	LTR	_	15.9	C	LTR	_	16.1	С					- Mitigation not required.
Queens Plaza South	EB	LT	_	12.8	В	LT	_	12.8	В					· 6 ·
Z I men bouti	2.0	TR	_	9.8	A	TR	_	9.8	A					
	WB	LT	_	10.8	В	LT	-	10.8	В					
	WD	TR	-	9.8	A	TR	-	9.9	A					
	Overall Intersection		_	13.3	В	_	_	13.5	В					
OTHER UNSIGNALIZED INTER		-	-	13.3	D	-	-	13.3	Đ					
21ST STREET & 50TH AVENUE	_													
21st Street	NB	LT	EDEL	ELOW	٨	LT	EDET	EFLOW	٨					- Mitigation not required
				FLOW	A				A					- Mitigation not required.
50th Avenue	SB	R	FREE	FLOW	A	R	FREI	EFLOW	Α					

APPENDIX TABLE 22-2

HUNTER'S POINT SOUTH REZONING AND RELATED ACTIONS EIS

2017 NO BUILD VS. BUILD AND MITIGATION TRAFFIC LEVELS OF SERVICE COMPARISON (MIDDAY PEAK HOUR)

			<u>2017 l</u>	No Build			2017	Build		<u>2</u>	017 Build w	ith Mitigatio	<u>on</u>	
INTERSECTION & APPROACH		Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	
JACKSON AVENUE & 51ST AVEN	IUE													
Jackson Avenue	NB	T	-	9.5	A	T	-	11.5	В	T	-	11.5	В	- Mitig
51st Avenue	WB	TR	-	14.8	В	TR	-	18.7	С	TR	-	20.5	С	[Build mitiga
	Overall Intersection	-	-	4.7	A	-	-	5.4	A	-	-	5.4	A	
VERNON BOULEVARD & QUEEN	IS PLAZA SOUTH													
	(UNS	IGNALI	ZED IN	TERSEC	ΓΙΟN)	(UNSIGN	ALIZED	INTERSEC	CTION)	(SIGNAL	IZED INT	TERSECT	ION)	
Vernon Boulevard	NB	TR	-	-	-	TR	-	-	-	TR	0.75	15.4	В	- Instal
	SB	LT	-	10.2	В	LT	-	10.3	В	L	0.52	12.8	В	time i
		-	-	-	-	-	-	-	-	T	0.71	14.6	В	- Instal
Queens Plaza South	WB	L	-	120+	F*	L	-	120+	F*	L	0.15	26.6	C	inters
		R	-	17.2	C	R	-	17.7	С	R	0.49	32.3	C	one 1
	Overall Intersection	_	-	8.6	A	-	_	9.3	A	-	0.67	16.7	В	

⁽¹⁾ Control delay is measured in seconds per vehicle.

Denotes a significant impact

Mitigation not required.

[Build with mitigation delays are due to diversions from the Borden Avenue and 11th Street intersection mitigation. However, no significant impact occurs.]

Mitigation Measures

- Install a new traffic signal with a 90-second cycle length. [NB/SB green time is 57 s; EB/WB green time is 23 s; both phases have 3 s of amber and 2 s of all red time].
- Install "No Standing Anytime" regulation on the west curb of SB Vernon Boulevard 150 ft. from the intersection and restripe the approach from a 14 ft. lane with parking to one 11 ft. left-turn lane and one 11 ft. through lane.

⁽²⁾ Level of service (LOS) for signalized intersections is based upon average control delay per vehicle (sec/veh) for each lane group as listed in the 2000 Highway Capacity Manual -- TRB.

⁽³⁾ Level of service (LOS) for unsignalized intersections is based upon control delay per vehicle (sec/veh) for each minor-approach as listed in the 2000 Highway Capacity Manual -- TRB.

⁽⁴⁾ Overall intersection V/C ratio is the critical lane groups' V/C ratio, not the weighted average of all the movements.

⁽⁵⁾ F* indicates levels of service F conditions with delays in excess of two minutes for the movement with the asterik (*).

			2017 N	No Build			201	7 Build		20	17 Build v	vith Mitigat	<u>ion</u>	Mitigation Measures
INTERSECTION & APPROACH		Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	
SIGNALIZED INTERSECTIONS														
SIGNALIZED INTERSECTIONS														
VERNON BOULEVARD														
VEDNON DOULEVADD 0- 40TH A	VENILIE													
VERNON BOULEVARD & 48TH A Vernon Boulevard	VENUE NB	LT	0.77	26.9	С	LT	0.87	33.4	С	LT	0.75	23.5	С	- Modify signal timing: shift 3 s of green time from EB phase to NB/SB phase [EB green time
vernon boulevard	SB	TR	0.77	39.0	D	TR	1.03	60.6	E	TR	0.73	40.7	D	from 17 s to 14 s; NB/SB green time shifts from 41 s to 44 s].
48th Avenue	EB	I	0.94	36.4	D	L L	0.42	36.8	D	L	0.55	44.6	D	
46th Avenue	LD	R	0.41	34.4	C	R	0.42	34.4	C	R	0.33	40.5	D	
	WB	LTR	1.02	90.0	F	LTR	1.02	90.0	F	LTR	1.02	90.0	F	
	WB	LIK	1.02	90.0	1	LIK	1.02	90.0	1	LIK	1.02	90.0	1	
	Overall Intersection	-	0.84	43.2	D	-	0.89	54.9	D	-	0.90	43.0	D	
VEDNON DOUT EVADD & 40TH A	VENITE													
VERNON BOULEVARD & 49TH A Vernon Boulevard	VENUE NB	LTR	0.63	13.0	В	LTR	0.67	13.8	В	LTR	0.53	10.1	В	- Modify cycle length from 60 s to 90 s. [EB green time is 22 s; NB/SB green time is 58 s; all
vernon Boulevard	SB	LTR	0.96	32.7	C	LTR	1.05	56.4	E	LTR	0.85	19.3	В	have 3 s of amber and 2 s of all red time].
49th Avenue	EB	LTR	0.16	15.6	В	LTR	0.20	16.0	В	LTR	0.26	29.5	C	
Tym 11 voluce	22	2110	0.10	10.0	2	2111	0.20	10.0	2	2	0.20	27.0	Ü	
	Overall Intersection	-	0.65	24.1	C	-	0.73	37.8	D	-	0.69	16.5	В	
VERNON BOULEVARD & 50TH A	VENUE													
Vernon Boulevard	NB	TR	0.64	13.4	В	TR	0.67	14.0	В	TR	0.78	27.6	С	- Modify cycle length from $60~s$ to $90~s$. [EB green time is $40~s$; NB/SB green time is $40~s$; all
	SB	LT	0.84	20.2	C	LT	0.95	30.8	C	LT	0.54	19.5	В	have 3 s of amber and 2 s of all red time].
50th Avenue	EB	LTR	0.39	19.8	В	LTR	0.68	30.5	C	LTR	0.45	20.8	С	[Measures reflect changes in the intersection needed for AM/MD peak periods; otherwinitigation is not needed.]
	Overall Intersection	-	0.67	17.4	В	-	0.84	24.7	C	-	0.61	22.6	С	intugation is not needed.]
VERNON BOULEVARD & 51ST A	VENUE													
Vernon Boulevard	NB	LT	0.90	31.5	C	LT	1.01	54.6	D	LT	0.72	22.0	C	- Modify cycle length from 60 s to 90 s. [WB green time is 35 s; NB/SB green time is 45 s; all
	SB	TR	0.85	25.0	C	TR	1.02	50.9	D	TR	0.85	27.2	C	have 3 s of amber and 2 s of all red time].
51st Avenue	WB	LTR	0.48	13.8	В	LTR	0.82	20.1	C	LTR	0.94	39.1	D	
	Overall Intersection	-	0.69	23.1	C	-	0.92	37.9	D	-	0.89	31.6	C	
VERNON BOULEVARD & BORDE	N AVENUE													
Vernon Boulevard	SB	L	1.07	70.1	Е	L	1.08	72.7	Е	L	0.82	38.8	D	- Install "No Standing Anytime" regulation on the west curb of the SB Vernon Boulevard for
	55	LR	0.59	16.9	В	LR	1.20+	120+	F*	R	0.76	44.7	D	and restripe the approach from one 9 ft. left-turn lane and one 15 ft. left-right lane to two 11
Borden Avenue	EB	LT	0.90	34.3	C	LT	1.20+	120+	F*	DefL	0.66	29.1	C	turn lanes and one 11 ft. right-turn lane by switching the parking on the east side from angle
		-	_	-	-	-	-	-	-	T	0.67	22.7	C	parallel to gain additional 9 ft.
	WB	T	0.57	15.5	В	T	1.17	102.7	F	T	0.85	43.8	D	- Install "No Standing 7:00 AM - 7:00 PM" regulation on the south curb of the EB Borden Av
					_		4.50	4.5	T21				_	120 ft. from the intersection and restripe the approach from one 16 ft. travel lane with parkin one 12 ft. shared left through and one 12 ft. through lane.
	Overall Intersection	-	0.98	38.6	D	-	1.20+	120+	F*	-	1.08	36.9	D	•
														 Shift centerline of the WB Borden Avenue 6 ft. to the north tapered 150 ft. from the intersect Restripe EB Borden Avenue receiving as two 11 ft. lanes.
														- Restripe WB Borden Avenue from one 13 ft. through lane and one 15 ft. channelized right-tu
														to two 11 ft. through lane and one 11 ft. right-turn lane by shifting the north curb 11 ft. to the

- Restripe WB Borden Avenue receiving from one 22 ft. lane with parking to two 11 ft. lanes with

- Modify cycle length from 60 s to 120 s with EB-lead phase. [SB green time is 45 s; EB-lead green time is 21 s; EB/WB green time is 39 s; all phases have 3 s of amber and 2 s of all red time].

			<u>2017 N</u>					Build		· · · · · · · · · · · · · · · · · · ·		ith Mitigati		Mitigation Measures
INTERSECTION & APPROACH		Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	
VEDNON DOULENADD 6 44TH DDE	T/E													
VERNON BOULEVARD & 44TH DRIV		LTD	0.00	165	D	I TD	0.05	10.1	D	I TD	0.01	24.6	C	- Restripe NB/SB Vernon Boulevard approach as follows: 150 feet upstream of the stop bar, sh
Vernon Boulevard	NB	LTR	0.80	16.5	В	LTR	0.85	19.1	B	LTR	0.91	24.6	C E*	centerline 2 ft. to the east to increase the lane width to 16 ft. Shift the centerline on NB Verno
	SB	LTR	1.20+	120+	F*	LTR	1.20+	120+	F*	LTR	1.20+	120+	F*	Boulevard 2 ft. to the east to coincide with the SB approach reducing the lane width to 12 ft.
44th Drive	EB	LTR	0.31	19.7	В	LTR	0.31	19.7	В	LTR	0.31	19.7	В	Boule and 2 in to the control with the 82 approach reducing the mine to 12 in
	WB	LTR	0.84	33.7	С	LTR	0.86	34.7	С	LTR	0.86	34.7	С	
Ov	verall Intersection	-	1.20+	120+	F *	-	1.20+	120+	F*	-	1.20+	120+	F*	
JACKSON AVENUE/NORTHERN BO	ULEVARD													
JACKSON AVENUE & 50TH AVENUE	E													
Jackson Avenue	NB	TR	0.19	10.6	В	TR	0.26	11.2	В	TR	0.26	11.2	В	- Install "No Standing Anytime" regulation on the north curb of the EB 50th Avenue 150 ft. fr
	SB	LT	0.27	11.3	В	LT	0.49	13.8	В	LT	0.49	13.8	В	intersection and restripe the approach from one 14 ft. lane with parking on both sides to one
50th Avenue	EB	LTR	0.39	34.5	C	LTR	0.53	37.6	D	L	0.26	32.1	С	left turn lane and one 11 ft. through-right lane with parking along the south curb.
		-	-	-	-	-	-	-	-	TR	0.28	32.6	С	[Measures reflect changes needed for the AM peak period; otherwise mitigation is not
	WB	L	0.30	33.6	С	L	0.31	34.1	С	L	0.62	42.9	D	needed.]
50th Avenue WB Right (Unsignalized)	WB	R	-	10.8	В	R	-	12.2	В	R	-	12.2	В	
Ov	verall Intersection	-	0.31	16.6	В	-	0.50	17.5	В	-	0.53	18.4	В	
JACKSON AVENUE & 49TH AVENUI	E													
49th Avenue	SB	LTR	0.30	27.3	C	LTR	0.33	27.8	C	LTR	0.33	27.8	C	- Install "No Standing Anytime" regulation on the south curb of EB Jackson Avenue for the e
Jackson Avenue	EB	TR	0.69	44.8	D	TR	0.91	58.2	Е	T	0.28	30.6	C	block, shift the centerline 5 ft. to the north, and restripe the approach from a 11 ft. through, or
		-	-	-	_		_	-	-	R	0.42	18.5	В	ft. shared through-right lane with parking to two 11 ft. through lanes and one 12 ft. exclusive
	WB	LT	0.31	16.6	В	LT	0.58	20.9	С	Т	0.75	26.1	C	turn lane.
	WD	LI	0.51	10.0	Б	LI	0.56	20.9	C	1	0.75	20.1	C	- Restripe WB Jackson Avenue from one 11 ft. left-through lane and one 20 ft. through lane to
Ov	erall Intersection	-	0.50	30.5	C	-	0.69	36.3	D	-	0.57	25.5	C	26 ft. through lane.
														- Prohibit WB Jackson Avenue left-turn on to the 11th Street service road.
														 Restripe WB Jackson Avenue receiving lane from one 11 ft. and one 12 ft. lane with parking 18 ft. lane with parking.
														- Permit EB Jackson Avenue right-turn to the Pulaski Bridge during the exclusive WB Jackson Avenue phase.
JACKSON AVENUE & 11TH STREET	Γ (PULASKI BRIL	OGE)												
11th Street (Pulaski Bridge)	NB	-	-	-	-	-	-	-	-	L	1.20+	120+	F*	- Partially Mitigated.
		LT	1.16	119.4	F	LT	1.20+	120+	F*	T	0.82	41.3	D	- Post signs on the Pulaski Bridge to direct the right turning traffic to the 11th Street service ro
									-				_	with signs for Queens Boulevard/Jackson Avenue East traffic.
		R	0.84	46.0			0.88	50.9	D	-	-	-		
	SB	R LTR	0.84 0.74	46.0 33.2	D	R	0.88	50.9 34.2	D C	- LTR	0.84	40.8	D	- Restripe the NB 11th Street service road approach traffic island to allow for two 12 ft. right-
Jackson Avenue	SB FR	LTR	0.74	33.2	D C	R LTR	0.77	34.2	С	- LTR I T	0.84	40.8	D D	 Restripe the NB 11th Street service road approach traffic island to allow for two 12 ft. right- lanes by removing parking along the west curb.
Jackson Avenue	SB EB			33.2 31.9	D C C	R LTR DefL	0.77 0.79	34.2 61.1	C E	LTR LT	0.84	44.4	D	lanes by removing parking along the west curb.
Jackson Avenue	ЕВ	LTR LT -	0.74 0.48 -	33.2 31.9	D C C	R LTR DefL T	0.77 0.79 0.83	34.2 61.1 47.1	C E D	LT -	0.84	44.4	D -	lanes by removing parking along the west curb Restripe the NB Pulaski Bridge shared left-through lane to an exclusive left-turn lane.
Jackson Avenue		LTR LT - DefL	0.74 0.48 - 1.16	33.2 31.9 - 107.5	D C C F	R LTR DefL T DefL	0.77 0.79 0.83 1.16	34.2 61.1 47.1 107.3	C E D	LT - L	0.84 - 1.11	44.4 - 105.9	D - F	lanes by removing parking along the west curb. - Restripe the NB Pulaski Bridge shared left-through lane to an exclusive left-turn lane. - Install "No Standing Anytime" regulation on the north curb of the WB Jackson Avenue appr
	EB WB	LTR LT - DefL T	0.74 0.48 - 1.16 0.47	33.2 31.9 - 107.5 19.5	D C C - F B	R LTR DefL T DefL T	0.77 0.79 0.83 1.16 0.83	34.2 61.1 47.1 107.3 31.6	C E D F C	LT - L T	0.84 - 1.11 0.80	44.4 - 105.9 27.6	D - F C	lanes by removing parking along the west curb. - Restripe the NB Pulaski Bridge shared left-through lane to an exclusive left-turn lane. - Install "No Standing Anytime" regulation on the north curb of the WB Jackson Avenue appr for 150 ft. and restripe the approach from a 10 ft. shared left-through and a 12 ft. through lar
Jackson Avenue 11th Street Service Road	ЕВ	LTR LT - DefL	0.74 0.48 - 1.16	33.2 31.9 - 107.5	D C C F	R LTR DefL T DefL	0.77 0.79 0.83 1.16	34.2 61.1 47.1 107.3	C E D	LT - L	0.84 - 1.11	44.4 - 105.9	D - F	lanes by removing parking along the west curb. Restripe the NB Pulaski Bridge shared left-through lane to an exclusive left-turn lane. Install "No Standing Anytime" regulation on the north curb of the WB Jackson Avenue appr for 150 ft. and restripe the approach from a 10 ft. shared left-through and a 12 ft. through lar parking to two 10 ft. left-turn lanes and a 10 ft. through lane.
11th Street Service Road	EB WB	LTR LT - DefL T R	0.74 0.48 - 1.16 0.47	33.2 31.9 - 107.5 19.5	D C C - F B	R LTR DefL T DefL T	0.77 0.79 0.83 1.16 0.83	34.2 61.1 47.1 107.3 31.6	C E D F C	LT - L T	0.84 - 1.11 0.80	44.4 - 105.9 27.6	D - F C	 Restripe the NB Pulaski Bridge shared left-through lane to an exclusive left-turn lane. Install "No Standing Anytime" regulation on the north curb of the WB Jackson Avenue appr for 150 ft. and restripe the approach from a 10 ft. shared left-through and a 12 ft. through lan
11th Street Service Road Ov	EB WB NB verall Intersection	LTR LT - DefL T R	0.74 0.48 - 1.16 0.47 0.60	33.2 31.9 - 107.5 19.5 46.5	D C C - F B	R LTR DefL T DefL T R	0.77 0.79 0.83 1.16 0.83 0.60	34.2 61.1 47.1 107.3 31.6 46.5	C E D F C D	LT - L T R	0.84 - 1.11 0.80 0.45	44.4 - 105.9 27.6 11.2	D F C B	lanes by removing parking along the west curb. Restripe the NB Pulaski Bridge shared left-through lane to an exclusive left-turn lane. Install "No Standing Anytime" regulation on the north curb of the WB Jackson Avenue appr for 150 ft. and restripe the approach from a 10 ft. shared left-through and a 12 ft. through lar parking to two 10 ft. left-turn lanes and a 10 ft. through lane. Prohibit the WB Jackson Avenue left-turn during the permitted EB/WB phase. Modify signal timing: shift 4 s of green time from NB/SB phase to WB-lead phase [NB/SB]
11th Street Service Road Ov JACKSON AVENUE & 21ST STREET	EB WB NB	LTR LT - DefL T R	0.74 0.48 - 1.16 0.47 0.60 1.16	33.2 31.9 - 107.5 19.5 46.5 72.9	D C C F B D	R LTR DefL T DefL T R	0.77 0.79 0.83 1.16 0.83 0.60 1.20+	34.2 61.1 47.1 107.3 31.6 46.5	C E D F C D	LT - L T R	0.84 - 1.11 0.80 0.45 1.17	44.4 - 105.9 27.6 11.2 60.1	D F C B	lanes by removing parking along the west curb. Restripe the NB Pulaski Bridge shared left-through lane to an exclusive left-turn lane. Install "No Standing Anytime" regulation on the north curb of the WB Jackson Avenue appr for 150 ft. and restripe the approach from a 10 ft. shared left-through and a 12 ft. through lar parking to two 10 ft. left-turn lanes and a 10 ft. through lane. Prohibit the WB Jackson Avenue left-turn during the permitted EB/WB phase. Modify signal timing: shift 4 s of green time from NB/SB phase to WB-lead phase [NB/SB] green time shifts from 45 s to 41 s; WB-lead phase green time shifts from 28 s to 32 s].
11th Street Service Road	EB WB NB verall Intersection	LTR LT - DefL T R -	0.74 0.48 - 1.16 0.47 0.60 1.16	33.2 31.9 - 107.5 19.5 46.5 72.9	D C C F B D	R LTR DefL T DefL T R	0.77 0.79 0.83 1.16 0.83 0.60 1.20+	34.2 61.1 47.1 107.3 31.6 46.5 110.8	C E D F C D	LT - L T R -	0.84 - 1.11 0.80 0.45 1.17	44.4 - 105.9 27.6 11.2 60.1	D - F C B E F*	lanes by removing parking along the west curb. Restripe the NB Pulaski Bridge shared left-through lane to an exclusive left-turn lane. Install "No Standing Anytime" regulation on the north curb of the WB Jackson Avenue appr for 150 ft. and restripe the approach from a 10 ft. shared left-through and a 12 ft. through lan parking to two 10 ft. left-turn lanes and a 10 ft. through lane. Prohibit the WB Jackson Avenue left-turn during the permitted EB/WB phase. Modify signal timing: shift 4 s of green time from NB/SB phase to WB-lead phase [NB/SB green time shifts from 45 s to 41 s; WB-lead phase green time shifts from 28 s to 32 s].
11th Street Service Road Ov JACKSON AVENUE & 21ST STREET 21st Street	EB WB NB verall Intersection NB SB	LTR LT - DefL T R -	0.74 0.48 - 1.16 0.47 0.60 1.16	33.2 31.9 - 107.5 19.5 46.5 72.9	D C C F B D E	R LTR DefL T DefL T R	0.77 0.79 0.83 1.16 0.83 0.60 1.20+ 1.20+	34.2 61.1 47.1 107.3 31.6 46.5 110.8	C E D F C D F	LT - L T R - L T L T	0.84 - 1.11 0.80 0.45 1.17	44.4 - 105.9 27.6 11.2 60.1 120+	D - F C B E F*	lanes by removing parking along the west curb. Restripe the NB Pulaski Bridge shared left-through lane to an exclusive left-turn lane. Install "No Standing Anytime" regulation on the north curb of the WB Jackson Avenue appr for 150 ft. and restripe the approach from a 10 ft. shared left-through and a 12 ft. through lan parking to two 10 ft. left-turn lanes and a 10 ft. through lane. Prohibit the WB Jackson Avenue left-turn during the permitted EB/WB phase. Modify signal timing: shift 4 s of green time from NB/SB phase to WB-lead phase [NB/SB green time shifts from 45 s to 41 s; WB-lead phase green time shifts from 28 s to 32 s]. Partially Mitigated. Install "No Standing 10:00 AM - 7:00 PM" regulation on the east curb of NB 21st Street for
11th Street Service Road Ov JACKSON AVENUE & 21ST STREET 21st Street	EB WB NB verall Intersection	LTR LT - DefL T R - LTR LTR LTR	0.74 0.48 - 1.16 0.47 0.60 1.16 1.18 1.12 0.87	33.2 31.9 - 107.5 19.5 46.5 72.9 120+ 105.0 40.9	D C C F B D E	R LTR DefL T DefL T R	0.77 0.79 0.83 1.16 0.83 0.60 1.20+ 1.20+ 1.20+ 1.20+	34.2 61.1 47.1 107.3 31.6 46.5 110.8	C E D F C D F	LT L T R - LTR LTR L	0.84 - 1.11 0.80 0.45 1.17 1.17 1.20+	44.4 - 105.9 27.6 11.2 60.1 120+ 120+ 120+	D - F C B E F* F* F*	lanes by removing parking along the west curb. Restripe the NB Pulaski Bridge shared left-through lane to an exclusive left-turn lane. Install "No Standing Anytime" regulation on the north curb of the WB Jackson Avenue appr for 150 ft. and restripe the approach from a 10 ft. shared left-through and a 12 ft. through lan parking to two 10 ft. left-turn lanes and a 10 ft. through lane. Prohibit the WB Jackson Avenue left-turn during the permitted EB/WB phase. Modify signal timing: shift 4 s of green time from NB/SB phase to WB-lead phase [NB/SB green time shifts from 45 s to 41 s; WB-lead phase green time shifts from 28 s to 32 s]. Partially Mitigated. Install "No Standing 10:00 AM - 7:00 PM" regulation on the east curb of NB 21st Street for from the intersection.
11th Street Service Road Ov JACKSON AVENUE & 21ST STREET	EB WB NB Werall Intersection NB SB EB	LTR LT - DefL T R - LTR LTR LTR LTR	0.74 0.48 - 1.16 0.47 0.60 1.16 1.18 1.12 0.87 0.50	33.2 31.9 - 107.5 19.5 46.5 72.9 120+ 105.0 40.9 26.2	D C C F B D E	R LTR DefL T DefL T R	0.77 0.79 0.83 1.16 0.83 0.60 1.20+ 1.20+ 1.20+ 0.58	34.2 61.1 47.1 107.3 31.6 46.5 110.8	C E D F C D	LT - L T R - L T L T	0.84 - 1.11 0.80 0.45 1.17 1.17 1.20+ 0.58	44.4 - 105.9 27.6 11.2 60.1 120+ 120+ 120+ 27.7	D - F C B E F* F* F* C	lanes by removing parking along the west curb. Restripe the NB Pulaski Bridge shared left-through lane to an exclusive left-turn lane. Install "No Standing Anytime" regulation on the north curb of the WB Jackson Avenue appr for 150 ft. and restripe the approach from a 10 ft. shared left-through and a 12 ft. through lane parking to two 10 ft. left-turn lanes and a 10 ft. through lane. Prohibit the WB Jackson Avenue left-turn during the permitted EB/WB phase. Modify signal timing: shift 4 s of green time from NB/SB phase to WB-lead phase [NB/SB green time shifts from 45 s to 41 s; WB-lead phase green time shifts from 28 s to 32 s]. Partially Mitigated. Install "No Standing 10:00 AM - 7:00 PM" regulation on the east curb of NB 21st Street for from the intersection. Install "No Standing 7:00 AM - 10:00 AM; 4:00 PM - 7:00 PM" regulation on the north curb
11th Street Service Road Ov JACKSON AVENUE & 21ST STREET 21st Street	EB WB NB verall Intersection NB SB	LTR LT - DefL T R - LTR LTR LTR	0.74 0.48 - 1.16 0.47 0.60 1.16 1.18 1.12 0.87	33.2 31.9 - 107.5 19.5 46.5 72.9 120+ 105.0 40.9	D C C F B D E	R LTR DefL T DefL T R	0.77 0.79 0.83 1.16 0.83 0.60 1.20+ 1.20+ 1.20+ 1.20+	34.2 61.1 47.1 107.3 31.6 46.5 110.8	C E D F C D F	LT L T R - LTR LTR L	0.84 - 1.11 0.80 0.45 1.17 1.17 1.20+	44.4 - 105.9 27.6 11.2 60.1 120+ 120+ 120+	D - F C B E F* F* F*	lanes by removing parking along the west curb. Restripe the NB Pulaski Bridge shared left-through lane to an exclusive left-turn lane. Install "No Standing Anytime" regulation on the north curb of the WB Jackson Avenue appr for 150 ft. and restripe the approach from a 10 ft. shared left-through and a 12 ft. through lan parking to two 10 ft. left-turn lanes and a 10 ft. through lane. Prohibit the WB Jackson Avenue left-turn during the permitted EB/WB phase. Modify signal timing: shift 4 s of green time from NB/SB phase to WB-lead phase [NB/SB green time shifts from 45 s to 41 s; WB-lead phase green time shifts from 28 s to 32 s]. Partially Mitigated. Install "No Standing 10:00 AM - 7:00 PM" regulation on the east curb of NB 21st Street for from the intersection.
11th Street Service Road Ov JACKSON AVENUE & 21ST STREET 21st Street	EB WB NB Werall Intersection NB SB EB	LTR LT - DefL T R - LTR LTR LTR LTR	0.74 0.48 - 1.16 0.47 0.60 1.16 1.18 1.12 0.87 0.50	33.2 31.9 - 107.5 19.5 46.5 72.9 120+ 105.0 40.9 26.2	D C C F B D E	R LTR DefL T DefL T R	0.77 0.79 0.83 1.16 0.83 0.60 1.20+ 1.20+ 1.20+ 0.58	34.2 61.1 47.1 107.3 31.6 46.5 110.8	C E D F C D	LT L LT LTR LTR LTR LTR	0.84 - 1.11 0.80 0.45 1.17 1.17 1.20+ 0.58	44.4 - 105.9 27.6 11.2 60.1 120+ 120+ 120+ 27.7	D - F C B E F* F* F* C	lanes by removing parking along the west curb. Restripe the NB Pulaski Bridge shared left-through lane to an exclusive left-turn lane. Install "No Standing Anytime" regulation on the north curb of the WB Jackson Avenue appr for 150 ft. and restripe the approach from a 10 ft. shared left-through and a 12 ft. through lane parking to two 10 ft. left-turn lanes and a 10 ft. through lane. Prohibit the WB Jackson Avenue left-turn during the permitted EB/WB phase. Modify signal timing: shift 4 s of green time from NB/SB phase to WB-lead phase [NB/SB green time shifts from 45 s to 41 s; WB-lead phase green time shifts from 28 s to 32 s]. Partially Mitigated. Install "No Standing 10:00 AM - 7:00 PM" regulation on the east curb of NB 21st Street for from the intersection. Install "No Standing 7:00 AM - 10:00 AM; 4:00 PM - 7:00 PM" regulation on the north curb

			2017 N	No Build			201	7 Build		<u>20</u>)17 Build v	vith Mitigat	<u>ion</u>	Mitigation Measures
INTERSECTION & APPROACH		Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	
JACKSON AVENUE & THOMS	ON AVENUE													
Jackson Avenue	NB	TR	0.55	20.1	C	TR	0.62	21.5	C					- Mitigation not required.
	SB	L	0.18	16.3	В	L	0.21	17.0	В					
		T	0.52	19.5	В	T	0.54	19.9	В					
Thomson Avenue	WB	L	0.52	29.9	С	L	0.71	35.2	D					
		R	0.10	23.4	C	R	0.10	23.4	C					
	Overall Intersection	_	0.54	21.5	\mathbf{c}	_	0.66	23.6	С					
JACKSON AVENUE & 44TH D	RIVE													
Jackson Avenue	NB	L	0.15	25.9	C	L	0.15	26.0	C	L	0.15	26.0	C	- Restripe SB Jackson Avenue 10 ft. left-turn lane to 11 ft. left-turn lane by reducing the hatch
		TR	0.48	29.6	C	TR	0.50	29.9	C	TR	0.50	29.9	C	center median width by one foot.
	SB	L	0.53	16.6	В	L	0.53	16.8	В	L	0.52	16.4	В	[Measures reflect geometric improvements needed for the AM peak period; otherwise
		TR	0.52	10.0	A	TR	0.54	10.2	В	TR	0.54	10.2	В	mitigation is not needed.]
44th Drive	EB	LTR	0.97	62.1	E	LTR	0.97	62.1	E	LTR	0.97	62.1	E	
	WB	LTR	0.76	40.4	D	LTR	0.76	40.4	D	LTR	0.76	40.4	D	
	0 1114 4		0.76	21.6	G		0.55	21.5	C		0.76	21.4	G	
	Overall Intersection	-	0.76	31.6	C	-	0.77	31.5	С	-	0.76	31.4	С	
JACKSON AVENUE/QUEENS I	PLAZA EAST & QUEE	NS BOU	LEVARI	D										
ackson Ave - Northern Blvd	NB	TR	0.62	27.3	C	TR	0.63	27.6	C					- Mitigation not required.
	SB	T	0.37	20.1	C	T	0.40	20.5	C					
Queens Boulevard	EB	T	0.79	28.1	C	T	0.79	28.1	C					
	WB	TR	1.15	120+	F*	TR	1.15	120+	F*					
	Overall Intersection	-	0.88	77.8	E	-	0.88	77.1	E					
NORTHERN BOULEVARD & (NIEENS DI AZA NODT	TI ///1CT	AVENIT	E.										
Northern Boulevard	VEENSTEAZA NORT NB	LTR	1.08	89.9	F	LTR	1.11	103.4	F	LTR	1.08	90.6	F	- Modify signal timing: shift 1 s of green time from WB phase to permitted NB/SB phase [W.
Norment Boulevard	SB	LT	0.86	57.5	E	LT	0.94	67.2	E	LT	0.88	58.2	E	time shifts from 20 s to 19 s; NB/SB green time shifts from 25 s to 26 s].
	30	R		29.0	C		0.86	29.0	C				C	,
O DI N 1/41 4	ED	K	0.86			R				R	0.84	27.6		
Queens Plaza North/41st Avenue	EB	L	0.91	41.7	D	L	0.91	41.7	D	L	0.91	41.7	D	
	WB	LTR	0.06	42.2	D	LTR	0.06	42.2	D	LTR	0.06	43.1	D	
	Overall Intersection	-	0.78	52.8	D	-	0.78	58.0	E	-	0.79	52.9	D	
NORTHERN BOULEVARD/31S	T STREET & 40TH AV	ENUE												
31st Street	SB	LTR	0.81	52.4	D	LTR	0.85	54.6	D	LTR	0.75	47.5	D	- Modify signal timing: shift 3 s of green time from EB-through/WB phase to EB-left/SB phase
Northern Boulevard	EB	L	1.20+	120+	F*	L	1.20+	120+	F*	L	1.20+	120+	F*	through/WB green time shifts from 85 s to 82 s; EB-left/SB green time shifts from 25 s to 2
1.01.110111 Doulevard	LD	т	0.66	10.4	В	T	0.66	10.4	В	T	0.69	12.2	В	
	WB	TD								-				
	WB	TR	0.51	8.4	A	TR	0.51	8.4	A	TR	0.53	9.9	A	
	Overall Intersection	-	1.20+	120+	F *	-	1.20+	120+	F*	-	1.20+	120+	F*	
<u> 21ST STREET</u>														
21ST STREET & QUEENS PLA	ZA NORTH													
21st Street	NB	LT	1.20+	119.4	F	LT	1.20+	120+	F*	LT	1.20	112.5	F	- Modify signal timing: shift 3 s of green time from WB phase to NB/SB phase [WB green ti
21st Succi													В	from 45 s to 42 s; NB/SB green time shifts from 65 s to 68 s].
Overes Diego North	SB	TR	0.53	18.6	B	TR	0.57	19.2	B E*	TR	0.54	17.1		- Restripe WB Queens Plaza North from one 30 ft. lane with a bus stop to one 11 ft. shared le
Queens Plaza North	WB	LTR	1.16	120+	F*	LTR	1.16	120+	F*	LTR	0.63	34.8	C	
														through lane and one 11 ft. through-right lane with a bus stop.

APPENDIX TABLE 22-3

			2017 N	No Build			201	7 Build		<u>20</u>	017 Build	with Mitigat	<u>tion</u>	Mitigation Measures
INTERSECTION & APPROACH		Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	
								_					·	
21ST STREET & QUEENS PLAZA SOUTH														
21st Street	NB	LTR	0.95	11.5	В	LTR	0.98	15.6	В					- Mitigation not required.
	SB	LTR	0.67	9.6	A	LTR	0.71	10.6	В					
Queens Plaza South	EB	L	0.52	50.8	D	L	0.52	50.8	D					
		TR	0.80	64.2	E	TR	0.80	64.2	E					
Overall Interse	ection	-	0.92	16.3	В	-	0.94	18.9	В					
21ST STREET & 44TH DRIVE														
	ND	LTR	0.82	24.5	С	т тр	0.86	27.5	C	LTR	0.86	27.5	С	- Install "No Standing 7:00 AM - 7:00 PM" regulation on the west curb of SB 21st Street for
	NB					LTR	1.20+	120+	C F*		0.86		F	entire block.
	SB	LTR	1.20+	120+	F*	LTR				LTR	1.14	96.6		
	EB	LTR	0.80	46.7	D	LTR	0.80	46.9	D	LTR	0.80	46.9	D	
	WB	LTR	0.89	54.9	D	LTR	0.90	55.6	Е	LTR	0.90	55.6	Е	
Overall Interse	ection	-	1.11	75.7	E	_	1.17	93.7	F	-	1.06	64.1	E	
VAN DAM STREET														
VAN DAM STREET & THOMSON AVENUE/QUI														TI W 411 T 4
Van Dam Street	NB	L	1.20+	120+	F*	L	1.20+	120+	F*					- Unmitigatable Impact.
		TR	1.11	120+	F*	TR	1.11	120+	F*					
, , ,	EB	T	1.20	120+	F*	T	1.20	120+	F*					
Queens Boulevard (to Van Dam Street)		T	1.08	111.1	F	T	1.08	111.1	F					
Queens Boulevard (to Thomson Avenue WB)		R	0.07	46.7	D	R	0.07	46.7	D					
Thomson Avenue	EB	T	1.15	102.2	F	T	1.18	116.6	F					
		R	1.00	62.8	E	R	1.00	62.8	Е					
Queens Boulevard (to Thomson Avenue WB)	WB	L	0.60	62.0	E	L	0.72	65.4	E					
Queens Boulevard (to Viaduct)		TR	0.34	9.1	A	TR	0.34	9.1	A					
Overall Interse	ection	-	1.20+	105.4	F		1.20+	109.1	F					
NANDAM CEDERT O LIE DYNE DAND														
VAN DAM STREET & LIE EXIT RAMP Van Dam Street	NB	LT	0.35	21.6	С	LT	0.35	21.6	С	LT	0.52	35.5	D	- Unmitigatable Impact.
	SB	TR	1.20+	120+	F*	TR	1.20+	120+	F*	TR	1.20+	120+	F*	- Restripe WB Queens Midtown Expressway Exit Ramp from two 11 ft. through lanes and
	WB	TR	1.08	73.8	E	TR	1.20+	120+	F*	T	1.20+	120+	F*	shared through-right lane to two 11 ft. through lanes and one 11 ft. exclusive right-turn lan
LIE Exit Ramp	WD	ıĸ	1.08	13.8	E		1.20+					29.3		- Modify signal phasing plan: Add a new lag phase for the SB approach with the WB right-
		-	-	-	-	-	-	-	-	R	0.88	29.3	С	maintain the existing 120 s cycle length with the following signal timing: WB = 55 s green
Overall Interse	ection	-	1.20+	117.9	F	-	1.20+	120+	F*	-	1.20+	120+	F*	= 38 s green time, and SB/WB-right only = 12 s of green time (each phase has 3 s amber a red).
VAN DAM STREET & BORDEN AVENUE														
	NB	TR	0.50	39.4	D	TR	0.50	39.4	D	TR	0.59	44.9	D	- Unmitigatable Impact.
	SB	DefL	1.20+	120+	F*	DefL	1.20+	120+	F*	DefL	1.20+	120+	F*	- Modify signal timing plan to coordinate with Van Dam Street and LIE Exit Ramp: Mainta
	SD	T			C	T	0.66	21.6	C	T	0.67		C	existing 120 s cycle length with the following signal timing: EB = 43 s green, NB/SB = 26
Dondon Arronno	ED		0.66	21.6								22.0		time, and SB = 36 s of green time (each phase has 3 s amber and 2 s all red).
Borden Avenue	EB	LTR	1.13	104.0	F	LTR	1.16	119.3	F	LTR	1.16	119.3	F	, ,
Overall Inters	oction		1 20+	120±	F*	_	1 20_	120+	E*		1.20	120+	r *	

			2017	No Build			201	7 Build		21)17 Ruild v	vith Mitigat	tion	Mitigation Measures
INTERSECTION & APPROACH		Mvt.	V/C		LOS	Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	Miligation Measures
CENTER BOULEVARD														
CENTER BOULEVARD & 51ST AVENUE														
Center Boulevard	NB	-	-	-	-	T	0.49	11.5	В	T	0.49	11.5	В	- Mitigation not required.
	SB	-	-	-	-	T	0.05	7.8	A	T	0.05	7.8	A	[Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection
51st Avenue	WB	-	-	-	-	LR	0.17	14.7	В	LR	0.20	14.9	В	mitigation. However, no significant impact occurs.]
Overall I	Intersection	-	-	-	-	-	0.36	11.6	В	-	0.37	11.7	В	
CENTER BOULEVARD & BORDEN AVENU	UE													
Center Boulevard	NB	-	_	-	-	TR	0.61	33.6	C	TR	0.68	35.7	D	- Mitigation not required.
		_	_	_	_	R	0.47	30.8	C	R	0.56	32.9	С	[Build with mitigation delays are due to diversions from the Borden Avenue and 11th Street intersec
	SB	_	_	_	_	L	0.10	25.9	C	L	0.10	25.9	C	mitigation. However, no significant impact occurs.]
Borden Ave	WB	_	_	_	_	R	0.49	32.4	C	R	0.49	32.4	C	
2014011110	,,,,2						0	52	C		0,	02	C	
Overall I	Intersection	-	-	-	-	-	0.55	32.0	C	-	0.57	33.5	C	
CENTER BOULEVARD & 54TH AVENUE														
Center Boulevard	NB	-	-	-	-	T	0.28	15.2	В	T	0.28	15.2	В	- Mitigation not required.
54th Avenue	WB	-	-	-	-	R	0.40	10.5	В	R	0.51	11.7	В	[Build with mitigation delays are due to diversions from the Borden Avenue and 11th Street intersec mitigation. However, no significant impact occurs.]
Overall I	Intersection	-	-	-	-	-	0.35	12.8	В	-	0.42	13.3	В	
CENTEED DOLLI EVADD 8 5/701 AVENUE														
CENTER BOULEVARD & 56TH AVENUE	MD					TD.	0.02	16.2	D					Mitigation not required
Center Boulevard	NB	-	-	-	-	T	0.03	16.3	В					- Mitigation not required.
56th Avenue	WB	-	-	-	-	R	0.45	8.7	Α					
Overall I	Intersection	-	-	-	-	-	0.31	9.2	A					
2ND STREET														
2ND STREET & 51ST AVENUE	(UNSIG	NALIZE	D INTE	ERSECTI	ON)	(SIGNA	LIZED	INTERSE	CTION)	(SIGNA	LIZED I	NTERSE	CTION)	
2nd Street	SB	LT		7.6	A	LTR	0.05	10.5	В	LTR	0.05	10.5	В	- Mitigation not required.
51st Avenue	WB	LR	-	10.5	В	LT	0.48	14.4	В	LT	0.50	14.6	В	[Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection
0 117				2.2					_				_	mitigation. However, no significant impact occurs.]
Overali I	Intersection	-	-	2.3	A	-	0.27	13.8	В	-	0.28	14.0	В	
2ND STREET & BORDEN AVENUE	,		D INTE	ERSECTI	ON)	,		INTERSE	-	,		NTERSE		
2nd Street	SB	LT	-	7.7	A	LTR	0.49	43.3	D	LTR	0.49	43.3	D	- Mitigation not required.
Borden Avenue	EB	-	-	-	-	TR	0.45	27.9	C	TR	0.52	29.1	C	[Build with mitigation delays are due to diversions from the Borden Avenue and 11th Street intersect mitigation. However, no significant impact occurs.]
	WB	LR	-	11.0	В	DefL	0.89	36.0	D	DefL	0.93	43.7	D	nnugation. riowever, no significant impact occurs.]
		-	-	-	-	T	0.23	6.8	A	T	0.23	6.8	A	
Overall I	Intersection	-	-	6.5	A	-	0.82	30.5	C	-	0.85	33.6	C	
2ND STREET & 54TH AVENUE	(UNSIG	NALIZE	D INTE	ERSECTI	ON)	(SIGNA	LIZED	INTERSE	CTION)	(SIGNA	LIZED I	NTERSE	CTION)	
2nd Street	SB	LT	_	8.0	A	LTR	0.99	40.0	D	LTR	1.01	44.3	D	- Mitigation not required.
54th Avenue	WB	LR	-	9.4	A	LT	0.21	11.6	В	LT	0.30	12.3	В	[Build with mitigation delays are due to diversions from the Borden Avenue and 11th Street intersec mitigation. However, no significant impact occurs.]
Overell I	Intersection	_	_	6.0	A	_	0.60	35.3	D	_	0.66	37.2	D	magatom Horiett, no agameant impact occurs.]
Overali I	inter section	-	-	0.0	A.	-	0.00	33.3	v	-	0.00	31.4	D	

			2017 N	lo Build			201	Build Build		2	017 Build v	with Mitigat	<u>ion</u>	Mitigation Measures
INTERSECTION & APPROACH		Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	
2ND STREET & 55TH AVENUE														
2nd Street	SB	-	-	-	-	LT	0.38	12.7	В					- Mitigation not required.
55th Avenue	EB	-	-	-	-	TR	0.06	10.6	В					
	Overall Intersection	-	-	-	-	-	0.22	12.5	В					
2ND STREET & 56TH AVENUE														
2nd Street	SB	-	-	-	-	T	0.01	2.4	A					- Mitigation not required.
		-	-	-	-	R	0.51	5.0	A					
	Overall Intersection	_	_	_	_	-	0.51	5.0	A					
11TH STREET														
11TH STREET & 44TH DRIVE														
11th Street	NB	LTR	0.55	12.3	В	LTR	0.55	12.4	В	LTR	0.57	13.1	В	- Modify signal timing: shift 1 s of green time from NB/SB phase to EB/WB phase [NB/SB
Till Street														time shifts from 53 s to 52 s; EB/WB green time shifts from 27 s to 28 s].
4.44h Duiyya	SB	LTR	0.57	13.3	В	LTR	0.57	13.3	В	LTR	0.59	14.0	В	2 3 4 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
44th Drive	EB	LTR	0.91	45.8	D	LTR	0.91	45.8	D	LTR	0.87	41.2	D	
	WB	LTR	1.06	82.6	F	LTR	1.07	86.0	F	LTR	1.03	71.1	E	
					_				_				_	
	Overall Intersection	-	0.74	35.7	D	-	0.74	36.6	D	-	0.74	32.6	C	
	AMENITIE (LINIS	ICNALI	ZED IN	redce <i>c</i> a	PION)	JUNGIO	NAT 171	n intel	SECTION)	(SICN)	I IZED I	MTEDSE	CTION)	
CENTER BOULEVARD & 48TH	,	IGNALI	ZED IN	TERSECT	,	,			RSECTION)	•		INTERSE		. Install a new traffic signal with a 120-second cycle length [NB/SB green time is 60 s; WB
CENTER BOULEVARD & 48TH	NB	-	-	-	-	-	-	-	-	TR	0.16	16.5	В	
CENTER BOULEVARD & 48TH . Center Boulevard	,	- LT	-	28.0	- D	LT	- -	120+	- F*	TR LT	0.16 0.07	16.5 15.7	B B	time is 50 s; both phases have 3 s of amber and 2 s of all red time].
CENTER BOULEVARD & 48TH Center Boulevard	NB SB	- LT T	- - -	28.0 25.3	D D	LT T	- - -	120+ 43.5	F* E	TR LT	0.16 0.07 -	16.5 15.7	B B	time is 50 s; both phases have 3 s of amber and 2 s of all red time]. - Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both side
CENTER BOULEVARD & 48TH	NB	- LT T L	- - -	28.0 25.3 120+	D D F*	LT T L	- - -	120+ 43.5 120+	F* E F*	TR LT - L	0.16 0.07 - 0.11	16.5 15.7 - 21.6	B B - C	time is 50 s; both phases have 3 s of amber and 2 s of all red time]. - Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both side
CENTER BOULEVARD & 48TH Center Boulevard	NB SB	- LT T	- - -	28.0 25.3	D D	LT T	- - -	120+ 43.5	F* E	TR LT	0.16 0.07 -	16.5 15.7	B B	 Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both side 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking
CENTER BOULEVARD & 48TH . Center Boulevard	NB SB WB	LT T L R	- - - -	28.0 25.3 120+ 45.4	D D F* E	LT T L R	- - - - -	120+ 43.5 120+ 120+	F* E F* F*	TR LT - L R	0.16 0.07 - 0.11 0.38	16.5 15.7 - 21.6 26.8	B B - C C	time is 50 s; both phases have 3 s of amber and 2 s of all red time]. - Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both side 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking the state of the state
CENTER BOULEVARD & 48TH . Center Boulevard	NB SB	LT T L R	- - -	28.0 25.3 120+	D D F*	LT T L R	- - -	120+ 43.5 120+	F* E F*	TR LT - L	0.16 0.07 - 0.11	16.5 15.7 - 21.6	B B - C	time is 50 s; both phases have 3 s of amber and 2 s of all red time]. - Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both side 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking the state of the state
CENTER BOULEVARD & 48TH Center Boulevard 48th Avenue	NB SB WB	LT T L R	- - - -	28.0 25.3 120+ 45.4	D D F* E	LT T L R	- - - - -	120+ 43.5 120+ 120+	F* E F* F*	TR LT - L R	0.16 0.07 - 0.11 0.38	16.5 15.7 - 21.6 26.8	B B - C C	time is 50 s; both phases have 3 s of amber and 2 s of all red time]. - Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sid- 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parki
CENTER BOULEVARD & 48TH Center Boulevard 48th Avenue CENTER BOULEVARD & 49TH	NB SB WB Overall Intersection	LT T L R	-	28.0 25.3 120+ 45.4 50.5	D D F* E	LT T L R	- - - -	120+ 43.5 120+ 120+ 120+	F* E F* F*	TR LT - L R	0.16 0.07 - 0.11 0.38	16.5 15.7 - 21.6 26.8	B B - C C	time is 50 s; both phases have 3 s of amber and 2 s of all red time]. - Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both side 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking east and west curbs.
CENTER BOULEVARD & 48TH Avenue CENTER BOULEVARD & 49TH AVENUE BOULEVARD & 49TH AVENUE AVENUE BOULEVARD & 49TH AVENUE BOULEVAR	NB SB WB Overall Intersection AVENUE SB	LT T L R	- - - -	28.0 25.3 120+ 45.4 50.5	D D F* E	LT T L R		120+ 43.5 120+ 120+ 120+	F* E F* F*	TR LT - L R	0.16 0.07 - 0.11 0.38	16.5 15.7 - 21.6 26.8	B B - C C	time is 50 s; both phases have 3 s of amber and 2 s of all red time]. - Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both side 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking the state of the state
CENTER BOULEVARD & 48TH A Center Boulevard 48th Avenue CENTER BOULEVARD & 49TH A Center Boulevard	NB SB WB Overall Intersection	LT T L R	-	28.0 25.3 120+ 45.4 50.5	D D F* E	LT T L R	- - - -	120+ 43.5 120+ 120+ 120+	F* E F* F*	TR LT - L R	0.16 0.07 - 0.11 0.38	16.5 15.7 - 21.6 26.8	B B - C C	time is 50 s; both phases have 3 s of amber and 2 s of all red time]. - Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both side 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking east and west curbs.
CENTER BOULEVARD & 48TH A Center Boulevard 48th Avenue CENTER BOULEVARD & 49TH A Center Boulevard	NB SB WB Overall Intersection AVENUE SB WB	LT T L R	- - - -	28.0 25.3 120+ 45.4 50.5	D D F* E B D	LT T L R		120+ 43.5 120+ 120+ 120+ 13.4 63.7	F* E F* F* B F*	TR LT - L R	0.16 0.07 - 0.11 0.38	16.5 15.7 - 21.6 26.8	B B - C C	time is 50 s; both phases have 3 s of amber and 2 s of all red time]. - Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both side 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking east and west curbs.
CENTER BOULEVARD & 48TH A Center Boulevard 48th Avenue CENTER BOULEVARD & 49TH A Center Boulevard	NB SB WB Overall Intersection AVENUE SB	LT T L R	- - - -	28.0 25.3 120+ 45.4 50.5	D D F* E	LT T L R		120+ 43.5 120+ 120+ 120+	F* E F* F*	TR LT - L R	0.16 0.07 - 0.11 0.38	16.5 15.7 - 21.6 26.8	B B - C C	time is 50 s; both phases have 3 s of amber and 2 s of all red time]. - Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both side 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking east and west curbs.
CENTER BOULEVARD & 48TH A Center Boulevard 48th Avenue CENTER BOULEVARD & 49TH A Center Boulevard 49th Avenue	NB SB WB Overall Intersection AVENUE SB WB Overall Intersection	LT T L R	-	28.0 25.3 120+ 45.4 50.5	D D F* E B D	LT LR LR		120+ 43.5 120+ 120+ 120+ 13.4 63.7	F* E F* F* B F*	TR LT - L R	0.16 0.07 - 0.11 0.38	16.5 15.7 - 21.6 26.8	B B - C C	time is 50 s; both phases have 3 s of amber and 2 s of all red time]. - Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both side 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking east and west curbs.
CENTER BOULEVARD & 48TH A Center Boulevard 48th Avenue CENTER BOULEVARD & 49TH A Center Boulevard 49th Avenue CENTER BOULEVARD & 50TH A	NB SB WB Overall Intersection AVENUE SB WB Overall Intersection AVENUE	LT LT LR LT LR	-	28.0 25.3 120+ 45.4 50.5 10.3 29.1 3.6	D D F* E E A	LT LR LR		120+ 43.5 120+ 120+ 120+ 13.4 63.7 5.7	F* E F* F* F* A	TR LT - L R	0.16 0.07 - 0.11 0.38	16.5 15.7 - 21.6 26.8 19.4	B B - C C B	time is 50 s; both phases have 3 s of amber and 2 s of all red time]. - Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sid 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parki east and west curbs. - Unmitigatable Impact.
CENTER BOULEVARD & 48TH A Center Boulevard 48th Avenue CENTER BOULEVARD & 49TH A Center Boulevard 49th Avenue CENTER BOULEVARD & 50TH A Center Boulevard	NB SB WB Overall Intersection AVENUE SB WB Overall Intersection AVENUE SB	LT T L R LT LR LR LR LR	- - - - - - - -	28.0 25.3 120+ 45.4 50.5 10.3 29.1 3.6	D D F* E E A	LT LR LR		120+ 43.5 120+ 120+ 120+ 13.4 63.7	F* E F* F* B F*	TR LT - L R	0.16 0.07 - 0.11 0.38	16.5 15.7 - 21.6 26.8 19.4	B B - C C	time is 50 s; both phases have 3 s of amber and 2 s of all red time]. - Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sid 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parki east and west curbs. - Unmitigatable Impact. - Mitigation not required.
CENTER BOULEVARD & 48TH Center Boulevard 48th Avenue CENTER BOULEVARD & 49TH	NB SB WB Overall Intersection AVENUE SB WB Overall Intersection AVENUE	LT LT LR LT LR	- - - - - - - -	28.0 25.3 120+ 45.4 50.5 10.3 29.1 3.6	D D F* E E A	LT LR LR	-	120+ 43.5 120+ 120+ 120+ 13.4 63.7 5.7	F* E F* F* F* A	TR LT - L R	0.16 0.07 - 0.11 0.38 0.26	16.5 15.7 - 21.6 26.8 19.4	B B - C C B	time is 50 s; both phases have 3 s of amber and 2 s of all red time]. - Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both side 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking east and west curbs. - Unmitigatable Impact. - Mitigation not required. [Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection.]
CENTER BOULEVARD & 48TH A Center Boulevard 48th Avenue CENTER BOULEVARD & 49TH A Center Boulevard 49th Avenue CENTER BOULEVARD & 50TH A Center Boulevard	NB SB WB Overall Intersection AVENUE SB WB Overall Intersection AVENUE SB WB WB	LT LR LR LR R	- - - - - - - - - - - - - -	28.0 25.3 120+ 45.4 50.5 10.3 29.1 3.6	D D F* E E A A A	LT LR LT LR	-	120+ 43.5 120+ 120+ 120+ 13.4 63.7 5.7	F* E F* F* B F A	TR LT - L R	0.16 0.07 - 0.11 0.38 0.26	16.5 15.7 - 21.6 26.8 19.4	B B - C C B B -	time is 50 s; both phases have 3 s of amber and 2 s of all red time]. - Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sid 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parki east and west curbs. - Unmitigatable Impact. - Mitigation not required.
CENTER BOULEVARD & 48TH A Center Boulevard 48th Avenue CENTER BOULEVARD & 49TH A Center Boulevard 49th Avenue CENTER BOULEVARD & 50TH A Center Boulevard	NB SB WB Overall Intersection AVENUE SB WB Overall Intersection AVENUE SB	LT LR LR LR R	- - - - - - - - - - - - - -	28.0 25.3 120+ 45.4 50.5 10.3 29.1 3.6	D D F* E E A A A	LT LR LT LR	-	120+ 43.5 120+ 120+ 120+ 13.4 63.7 5.7	F* E F* F* F* A B	TR LT - L R	0.16 0.07 - 0.11 0.38 0.26	16.5 15.7 - 21.6 26.8 19.4	B B C C C	time is 50 s; both phases have 3 s of amber and 2 s of all red time]. - Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sid- 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking east and west curbs. - Unmitigatable Impact. - Mitigation not required. [Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection.]
CENTER BOULEVARD & 48TH A Center Boulevard 48th Avenue CENTER BOULEVARD & 49TH A Center Boulevard 49th Avenue CENTER BOULEVARD & 50TH A Center Boulevard 50th Avenue	NB SB WB Overall Intersection AVENUE SB WB Overall Intersection AVENUE SB WB Overall Intersection	LT LR LR LR R	- - - - - - - - - - - - - -	28.0 25.3 120+ 45.4 50.5 10.3 29.1 3.6	D D F* E E A A A	LT LR LT LR	-	120+ 43.5 120+ 120+ 120+ 13.4 63.7 5.7	F* E F* F* B F A	TR LT - L R	0.16 0.07 - 0.11 0.38 0.26	16.5 15.7 - 21.6 26.8 19.4	B B - C C B B -	time is 50 s; both phases have 3 s of amber and 2 s of all red time]. - Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sid- 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking east and west curbs. - Unmitigatable Impact. - Mitigation not required. [Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection.]
CENTER BOULEVARD & 48TH A Center Boulevard 48th Avenue CENTER BOULEVARD & 49TH A Center Boulevard 49th Avenue CENTER BOULEVARD & 50TH A Center Boulevard	NB SB WB Overall Intersection AVENUE SB WB Overall Intersection AVENUE SB WB Overall Intersection AVENUE	LT LR LR LR R	- - - - - - - - - - - - -	28.0 25.3 120+ 45.4 50.5 10.3 29.1 3.6	D D F* E E A A A	LT LR LT LR	-	120+ 43.5 120+ 120+ 120+ 13.4 63.7 5.7	F* E F* F* B F A	TR LT - L R	0.16 0.07 - 0.11 0.38 0.26	16.5 15.7 - 21.6 26.8 19.4	B B - C C B B -	time is 50 s; both phases have 3 s of amber and 2 s of all red time]. - Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sid 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking east and west curbs. - Unmitigatable Impact. - Mitigation not required. [Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection mitigation. However, no significant impact occurs.]
CENTER BOULEVARD & 48TH A Center Boulevard 48th Avenue CENTER BOULEVARD & 49TH A Center Boulevard 49th Avenue CENTER BOULEVARD & 50TH A Center Boulevard 50th Avenue	NB SB WB Overall Intersection AVENUE SB WB Overall Intersection AVENUE SB WB Overall Intersection	LT LR LR LR R	- - - - - - - - - - - - -	28.0 25.3 120+ 45.4 50.5 10.3 29.1 3.6	D D F* E E A A A	LT LR LT LR	-	120+ 43.5 120+ 120+ 120+ 13.4 63.7 5.7	F* E F* F* B F A	TR LT - L R	0.16 0.07 - 0.11 0.38 0.26	16.5 15.7 - 21.6 26.8 19.4	B B - C C B B -	time is 50 s; both phases have 3 s of amber and 2 s of all red time]. - Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sid- 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking east and west curbs. - Unmitigatable Impact. - Mitigation not required. [Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection.]
CENTER BOULEVARD & 48TH A Center Boulevard 48th Avenue CENTER BOULEVARD & 49TH A Center Boulevard 49th Avenue CENTER BOULEVARD & 50TH A Center Boulevard 50th Avenue	NB SB WB Overall Intersection AVENUE SB WB Overall Intersection AVENUE SB WB Overall Intersection AVENUE	LT LR LR LR R	- - - - - - - - - - - - -	28.0 25.3 120+ 45.4 50.5 10.3 29.1 3.6	D D F* E E A A A	LT L R LT LR - LT LR	- - - - - -	120+ 43.5 120+ 120+ 120+ 13.4 63.7 5.7	F* E F* F* B F A A A	TR LT - L R	0.16 0.07 - 0.11 0.38 0.26	16.5 15.7 - 21.6 26.8 19.4	B B - C C B B -	time is 50 s; both phases have 3 s of amber and 2 s of all red time]. - Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sid 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking east and west curbs. - Unmitigatable Impact. - Mitigation not required. [Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection mitigation. However, no significant impact occurs.]
CENTER BOULEVARD & 48TH A Center Boulevard 48th Avenue CENTER BOULEVARD & 49TH A Center Boulevard 49th Avenue CENTER BOULEVARD & 50TH A Center Boulevard 50th Avenue	NB SB WB Overall Intersection AVENUE SB WB Overall Intersection AVENUE SB WB Overall Intersection AVENUE	LT LR LR LR	- - - - - - - - - - - - -	28.0 25.3 120+ 45.4 50.5 10.3 29.1 3.6 EFLOW EFLOW	D D F* E E A A A	LT LR LT LT LT LT LT T	-	120+ 43.5 120+ 120+ 120+ 13.4 63.7 5.7 10.9	F* E F* F* B F A B A B	TR LT - L R	0.16 0.07 - 0.11 0.38 0.26	16.5 15.7 - 21.6 26.8 19.4	B B - C C B B -	time is 50 s; both phases have 3 s of amber and 2 s of all red time]. - Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sid 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking east and west curbs. - Unmitigatable Impact. - Mitigation not required. [Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection mitigation. However, no significant impact occurs.]
CENTER BOULEVARD & 48TH A Center Boulevard 48th Avenue CENTER BOULEVARD & 49TH A Center Boulevard 49th Avenue CENTER BOULEVARD & 50TH A Center Boulevard 50th Avenue	NB SB WB Overall Intersection AVENUE SB WB Overall Intersection AVENUE SB WB Overall Intersection AVENUE	LT LR LR R	- - - - - - - - - - - - -	28.0 25.3 120+ 45.4 50.5 10.3 29.1 3.6 EFLOW EFLOW	D D F* E E A A A	LT LR LT LT LT LT LT T	-	120+ 43.5 120+ 120+ 120+ 13.4 63.7 5.7 10.9	F* E F* F* B F A B A B	TR LT - L R	0.16 0.07 - 0.11 0.38 0.26	16.5 15.7 - 21.6 26.8 19.4	B B - C C B B -	time is 50 s; both phases have 3 s of amber and 2 s of all red time]. - Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sid 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking east and west curbs. - Unmitigatable Impact. - Mitigation not required. [Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection mitigation. However, no significant impact occurs.]
CENTER BOULEVARD & 48TH A Center Boulevard 48th Avenue CENTER BOULEVARD & 49TH A Center Boulevard 49th Avenue CENTER BOULEVARD & 50TH A Center Boulevard 50th Avenue	NB SB WB Overall Intersection AVENUE SB WB Overall Intersection AVENUE SB WB Overall Intersection AVENUE NB	LT LR LR R	- - - - - - - - - - - - -	28.0 25.3 120+ 45.4 50.5 10.3 29.1 3.6 EFLOW EFLOW	D D F* E E A A A	LT LR LT LR T LT T T T T T T T T T T T T	-	120+ 43.5 120+ 120+ 120+ 13.4 63.7 5.7 10.9 - 1.8	F* E F* F* B F A B C	TR LT - L R	0.16 0.07 - 0.11 0.38 0.26	16.5 15.7 - 21.6 26.8 19.4	B B - C C B B -	time is 50 s; both phases have 3 s of amber and 2 s of all red time]. - Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both sid 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking east and west curbs. - Unmitigatable Impact. - Mitigation not required. [Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection mitigation. However, no significant impact occurs.]
CENTER BOULEVARD & 48TH A Center Boulevard 48th Avenue CENTER BOULEVARD & 49TH A Center Boulevard 49th Avenue CENTER BOULEVARD & 50TH A Center Boulevard 50th Avenue	NB SB WB Overall Intersection AVENUE SB WB Overall Intersection AVENUE SB WB Overall Intersection AVENUE NB Overall Intersection	LT LR LR R	- - - - - - - - - - - - -	28.0 25.3 120+ 45.4 50.5 10.3 29.1 3.6 EFLOW EFLOW	D D F* E E A A A	LT LR LT LR T LT T T T T T T T T T T T T	-	120+ 43.5 120+ 120+ 120+ 13.4 63.7 5.7 10.9 - 1.8	F* E F* F* B F A B C	TR LT - L R	0.16 0.07 - 0.11 0.38 0.26	16.5 15.7 - 21.6 26.8 19.4	B B - C C B B -	time is 50 s; both phases have 3 s of amber and 2 s of all red time]. - Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both side 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking east and west curbs. - Unmitigatable Impact. - Mitigation not required. [Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection mitigation. However, no significant impact occurs.]
CENTER BOULEVARD & 48TH Center Boulevard 48th Avenue CENTER BOULEVARD & 49TH Center Boulevard 49th Avenue CENTER BOULEVARD & 50TH Center Boulevard 50th Avenue CENTER BOULEVARD & 55TH Center Boulevard Center Boulevard	NB SB WB Overall Intersection AVENUE SB WB Overall Intersection AVENUE SB WB Overall Intersection AVENUE NB Overall Intersection	LT LR LR R	- - - - - - - - - - - - -	28.0 25.3 120+ 45.4 50.5 10.3 29.1 3.6 EFLOW EFLOW	D D F* E E A A A	LT LR LT LR T LT T T T T T T T T T T T T	-	120+ 43.5 120+ 120+ 120+ 13.4 63.7 5.7 10.9 - 1.8	F* E F* F* B F A B C	TR LT - L R	0.16 0.07 - 0.11 0.38 0.26	16.5 15.7 - 21.6 26.8 19.4	B B - C C B B -	time is 50 s; both phases have 3 s of amber and 2 s of all red time]. - Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both side 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking east and west curbs. - Unmitigatable Impact. - Mitigation not required. [Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection mitigation. However, no significant impact occurs.]
CENTER BOULEVARD & 48TH A Center Boulevard 48th Avenue CENTER BOULEVARD & 49TH A Center Boulevard 49th Avenue CENTER BOULEVARD & 50TH A Center Boulevard 50th Avenue CENTER BOULEVARD & 55TH A Center Boulevard CENTER BOULEVARD & 55TH A Center Boulevard	NB SB WB Overall Intersection AVENUE SB WB Overall Intersection AVENUE SB WB Overall Intersection AVENUE NB Overall Intersection	LT LR LR -	- - - - - - - - - - - - -	28.0 25.3 120+ 45.4 50.5 10.3 29.1 3.6 FLOW	D D F* E E B D A A	LT LR LT LR T LT T LR - T T T T	- - - - - - - - - - -	120+ 43.5 120+ 120+ 120+ 13.4 63.7 5.7 10.9 - 1.8 10.9 24.5	F* E F* F* B F A B C C	TR LT - L R	0.16 0.07 - 0.11 0.38 0.26	16.5 15.7 - 21.6 26.8 19.4	B B - C C B B -	time is 50 s; both phases have 3 s of amber and 2 s of all red time]. - Restripe NB Center Boulevard from unmarked 63 ft. curb to curb with parking on both side 11 ft. through and one 11 ft. through-right NB lanes and two SB receiving lanes with parking east and west curbs. - Unmitigatable Impact. - Mitigation not required. [Build with mitigation delays are due to diversions from the 5th Street and 51st Avenue intersection mitigation. However, no significant impact occurs.]

				No Build			<u>2017 Build</u>			20		vith Mitigatio	_	Mitigation Measures		
INTERSECTION & APPROACH		Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS			
AND CODERG																
<u>2ND STREET</u>																
2ND STREET & 50TH AVENUE																
2nd Street	NB	LR	_	14.5	В	_	_	_	_	_	_	_	_	- Mitigation not required.		
50th Avenue	EB	-	_	-	-	TR	FREI	EFLOW	A	TR	FREE	EFLOW	A			
	Overall Intersection	-	-	8.8	A	-	FREI	EFLOW	A	-	FREE	EFLOW	A			
2ND STREET & 57TH AVENUE																
2nd Street	SB	-	-	-	-	T	-	9.6	A					- Mitigation not required.		
	Overall Intersection	-	-	-	-	-	-	9.6	A							
<u>5TH STREET</u>																
EDII CODDIDO O ACOUT A TENTETE																
5TH STREET & 48TH AVENUE	NID	I TD		11.1	ъ	1 mp		11 1	D					- Mitigation not required.		
5th Street	NB SB	LTR LTR	-	11.1	В	LTR	-	11.1	В					- Mugation not required.		
48th Avenue	SB EB	LIK	-	9.5 9.3	A A	LTR LT	-	9.6 9.4	A A							
48th Avenue	ED	TR	-	9.3 8.8	A A	TR	-	9.4 8.8	A A							
	WB	LT	-	9.7	A	LT	-	9.7	A							
	44.0	TR	_	9.2	A	TR	_	9.3	A							
		1 IX	_	7.2	А	TK	_	7.3	А							
	Overall Intersection	_	-	10.0	A	-	_	10.0	В							
STIL CTREET 8- 40TH AMENINE	CUNC	ICNALI	ZED IN	TERSEC	TION)	(LINEIC	NIAT 171	an initian	SECTION)	(SICNA	i ized i	NTEDCEC	TION)			
5TH STREET & 49TH AVENUE 5th Street	NB	LTR	LTR	0.42	NTERSEC 10.5	B	- Install a new traffic signal with a 60-second cycle length. [NB/SB green time is 30 s; EB/WB gr									
Jul Sueet	SB	LTR LTR	-	9.6 9.6	A A	LTR	-	9.6 9.6	A A	LTR	0.42	10.5	A	time is 20 s; both phases have 3 s of amber and 2 s of all red time].		
49th Avenue	EB	LTR	-	62.4	F	LTR	_	98.4	F	LTR	0.18	14.7	В	- Install "No Standing Anytime" regulation on the east curb of NB 5th Street and restripe it from		
15th Tivenue	WB	LTR	_	50.6	F	LTR		64.4	F	LTR	0.09	14.0	В	30 ft. lane with parking on both sides to one 11 ft. approach and one 11 ft. receiving lane with		
					-						****		_	parking on the west side.		
	Overall Intersection	-	-	8.9	A	-	-	15.6	С	-	0.32	11.0	В	- Install "No Standing Anytime" regulation on the north curb of EB 49th Avenue and WB 49th Avenue 120 ft. from the intersection and restripe it from one 30 ft. lane with parking on both sid to one 11 ft. approach and one 11 ft. receiving lane with parking on the south side.		
5TH STREET & 50TH AVENUE	(UNS	IGNALI	ZED IN	TERSEC	TION)	(UNSIG	NALIZI	ED INTER	SECTION)	(SIGNA	LIZED I	NTERSEC	TION)			
5th Street	ND.			-	,		-	-	-	,		13.3	,	- Install a new traffic signal with a 60-second cycle length. [NB/SB green time is 25 s; EB green		
	SB	LT	-	7.9	Α	LT	_	7.8	A	LT	0.31	12.5	В	is 25 s; both phases have 3 s of amber and 2 s of all red time].		
50th Avenue	ЕВ	LTR	-	38.0	E	LTR	-	120+	F*	LTR	0.34	12.8	В	- Install "No Standing Anytime" regulation on the east curb of NB 5th Street and restripe it from 30 ft. lane with parking on both sides to one 11 ft. approach and one 11 ft. receiving lane with		
	Overall Intersection	_	-	6.2	A	-	-	120+	F*	-	0.37	12.9	В	parking on the west side.		
														- Install an east-west crosswalk on the south side of the intersection to accommodate pedestrians.		
5TH STREET & 51ST AVENUE														D. C.		
5th Street	NB	LT	-	7.9	A	LT	-	8.2	A	LT	-	14.1	В	- Designate 51st Avenue as one way WB only.		
Jul Bucci	SB	TR	-	-	-	-	-		-	TR	-	11.8	В	- Install "All Way" Stop control sign on all approaches.		
		I D	-	14.8	В	LR	-	120+	F*	-	-	-	-			
51st Avenue	EB	LR			~				T7.1				т-			
	EB WB	LTR	-	16.7	C	LTR	-	120+	F*	LT	-	14.5	В			
		LTR			C A			120+ 120+	F* F *	LT	-	14.5 13.6	В В			

APPENDIX TABLE 22-3

INTERSECTION & APPROACH 5TH STREET & BORDEN AVEN 5th Street Borden Avenue	IUE (UNSI	Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	
5th Street	UE (UNSI													
5th Street	(UNSI					/***********************				(07.03.11			~~~	
	CD		ZED INT		,				RSECTION)	,		NTERSEC	*	- Install a new traffic signal with a 60-second cycle length. [SB green time is 11 s; EB/WB green t
Borden Avenue	SB	LR	-	15.6	C	LR	-		F*	LR	0.60	27.9	C	is 39 s; both phases have 3 s of amber and 2 s of all red time].
	EB	L	-	8.2	A	L	-	120+	F*	L	0.06	4.1	A	
	****	-	-	-	-	-	-	-	-	T	0.45	5.9	A	- Install a east-west crosswalk on the north side of the intersection to accommodate pedestrians.
	WB	-	-	-	-	-	-	-	-	TR	1.01	36.3	D	Install "No Ctonding Anytime" application on the west such of CD 5th Ctoot and shift the control
	0 1114 4			2.0				120.	T) ±		0.02	25.4		 Install "No Standing Anytime" regulation on the west curb of SB 5th Street and shift the centerli- 4 ft. to the west to gain a 11 ft. moving lane.
	Overall Intersection	-	-	3.8	A	-	-	120+	F*	-	0.92	25.4	C	The to the west to gain a TT to moving ratio.
11TH STREET/11TH PLACE														
11TH STREET & BORDEN AVE	NUE AT QMT TOLL F	LAZA E	XIT RA	MP										
	(UNSI	IGNALIZ	ZED INT	ERSECT	YON)	(UNSIGNALIZED INTERSECTION)				(SIGNA	LIZED I	NTERSEC	CTION)	
11th Street	NB	LTR	-	120+	F*	LTR	-	120+	F*	R	0.06	8.9	A	- Prohibit NB 11th Street left (on to Borden Avenue) and through (on to QMT/LIE) movements a
	SB	LTR	-	120+	F*	LTR	-	120+	F*	R	0.24	13.7	В	restripe it as 20 ft. right turn only lane.
Borden Avenue	EB	LTR	-	109.8	F	LTR	-	120+	F*	L	1.18	103.2	F	- Prohibit SB QMT Exit left (on to Borden Avenue) and through (on to 11th Street) movements a
		-	-	-	-	-	-	-	-	TR	0.67	19.7	В	restripe it as 26 ft. right turn only lane.
	WB	LTR	-	8.1	A	LTR	-	8.1	A	LTR	1.00	35.4	D	 Restripe EB Borden Avenue from one 20 ft. lane to one 10 ft. left turn lane and one 10 ft. throug right lane.
	Overall Intersection	-	-	120+	F *	-	-	120+	F*	-	120+	53.9	D	- Restripe WB Borden Avenue from one 22 ft. lane to one 11 ft. shared left-through lane and one ft. shared through-right lane.
														- Install a new traffic signal with a 60-second cycle length. [EB+SB right turn green time is 22 s; WB+EB-left+NB right turn green time is 28 s; both phases have 3 s of amber and 2 s of all red time].
														-
														 Allow Right Turn on Red from the SB QMT Exit. Provide signage along the QMT to direct traffic headed to 11th Street and EB Borden Avenue to use the 21st Street ramp
11TH PLACE & 50TH AVENUE														r
11th Place	SB	TR	_	13.4	В	TR	_	13.6	В	TR	_	14.7	В	- Mitigation not required.
50th Avenue	WB	LT	_	7.6	A	LT	_	7.6	A	LT	_	7.6	A	[Build with mitigation delays are due to diversions from the Borden Avenue and 11th Street intersection
John Avenue	WB	LI		7.0	A	Lī		7.0	А	Lī		7.0	Α	mitigation. However, no significant impact occurs.]
	Overall Intersection	-	-	5.4	A	-	-	5.2	A	-	-	4.7	Α	
11TH STREET SERVICE ROAD	& 49TH AVENUE													
11th Street Service Road	NB	R	_	9.9	A	R	_	9.9	A					- Mitigation not required.
49th Avenue	WB	R	_	9.3	A	R	_	9.3	A					
1) III I I I I I I I I I I I I I I I I I	,,,,			7.0				7.0	••					
	Overall Intersection	-	-	3.2	A	-	-	3.2	A					
11TH STREET & QUEENS PLAZ	ZA SOUTH													
11th Street	NB	LTR	_	14.6	В	LTR	_	14.9	В					- Mitigation not required.
Queens Plaza South	EB	LT	_	13.1	В	LT	_	13.3	В					•
Zacom i men boudi	LD	TR	_	10.3	В	TR	_	10.3	В					
	WB	LT		11.3	В	LT								
	WB	TR	-			TR	-	11.3	В					
		ıĸ	-	9.6	A	IK	-	9.7	A					
	Overall Intersection	-	-	12.7	В	-	-	12.9	В					
OTHER UNSIGNALIZED INTER	RSECTIONS													
21ST STREET & 50TH AVENUE														
21st Street	NB	LT	FREE	FLOW	A	LT	FREE	EFLOW	A					- Mitigation not required.
	SB	R	FREE		A	R		EFLOW	A					
50th Avenue				LLOW		11	LKE	LLUW	Λ					
50th Avenue			IKLL	I LOW	71	K	PKEI	IT LOW	А					

2017 NO BUILD VS. BUILD AND MITIGATION TRAFFIC LEVELS OF SERVICE COMPARISON (PM PEAK HOUR)

			2017 N	No Build			2017	Build		20	17 Build v	vith Mitigati	<u>ion</u>
INTERSECTION & APPROACH			V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS
JACKSON AVENUE & 51ST AV	ENUE												
Jackson Avenue	NB	T	-	9.4	A	T	-	11.2	В	T	-	11.2	В
51st Avenue	WB	TR	-	11.7	В	TR	-	15.2	C	TR	-	16.1	С
	Overall Intersection	-	-	4.7	A	-	-	4.8	A	-	-	4.7	Α
VERNON BOULEVARD & QUE	ENS PLAZA SOUTH												
	(UNSI	GNALI	ZED IN	TERSEC'	TION)	(UNSIG	NALIZE	D INTER	SECTION)	(SIGNA	LIZED I	NTERSE	CTION)
Vernon Boulevard	NB	TR	-	-	-	-	-	-	-	TR	0.98	38.0	D
	SB	LT	-	10.8	В	LT	-	11.1	В	L	0.67	20.4	C
		-	-	-	-	-	-	-	-	T	0.74	16.5	В
Queens Plaza South	WB	L	-	120+	F*	L	-	120+	F*	L	0.08	24.2	C
		R	-	33.5	D	R	-	37.0	Е	R	0.77	41.1	D
	Overall Intersection	_	_	8.6	A	_	_	9.5	A	_	0.91	29.7	C

⁽¹⁾ Control delay is measured in seconds per vehicle.

Denotes a significant impact

- Mitigation not required.

[Build with mitigation delays are due to diversions from the Borden Avenue and 11th Street intersection mitigation. However, no significant impact occurs.]

Mitigation Measures

- Install a new traffic signal with a 90-second cycle length. [NB/SB green time is $55 \, s$; EB/WB green time is $25 \, s$; both phases have $3 \, s$ of amber and $2 \, s$ of all red time].
- Install "No Standing Anytime" regulation on the west curb of SB Vernon Boulevard 150 ft. from the intersection and restripe the approach from a 14 ft. lane with parking to one 11 ft. left-turn lane and one 11 ft. through lane.

⁽²⁾ Level of service (LOS) for signalized intersections is based upon average control delay per vehicle (sec/veh) for each lane group as listed in the 2000 Highway Capacity Manual -- TRB.

⁽³⁾ Level of service (LOS) for unsignalized intersections is based upon control delay per vehicle (sec/veh) for each minor-approach as listed in the 2000 Highway Capacity Manual -- TRB.

⁽⁴⁾ Overall intersection V/C ratio is the critical lane groups' V/C ratio, not the weighted average of all the movements.

⁽⁵⁾ F* indicates levels of service F conditions with delays in excess of two minutes for the movement with the asterik (*).