

2012 BUILD CONDITIONS

HCS+: Signalized Intersections Release 5.2

Analyst: JCE Inter.: AMBD-DRWY-1
 Agency: JOHN COLLINS ENGINEERS, P.C. Area Type: All other areas
 Date: 4/20/2007 Jurisd:
 Period: WEEKDAY PEAK AM HIGHWAY HOUR Year : 2012 BUILD TRAFFIC VOLUMES
 Project ID: 281
 E/W St: NEPPERHAN AVENUE N/S St: PROPOSED SITE ACCESS / WAVERLY

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3	0	1	3	0	1	1	0	0	1	0
LGConfig	L	TR		L	TR		L	TR			LTR	
Volume	8	1827	10	115	1868	19	120	0	180	84	0	36
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0			12.0	
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left		A			NB Left	A		
Thru	A				Thru	A		
Right	A				Right	A		
Peds	X	X			Peds	X		
WB Left		A			SB Left	A		
Thru	A				Thru	A		
Right	A				Right	A		
Peds	X	X			Peds	X		
NB Right					EB Right			
SB Right					WB Right			
Green	45.0	15.0			25.0			
Yellow	3.0	3.0			3.0			
All Red	2.0	2.0			2.0			

Cycle Length: 100.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group		Approach	
			v/c	g/C	Delay	LOS	Delay	LOS
Eastbound								
L	257	1711	0.04	0.15	36.4	D		
TR	2216	4924	0.90	0.45	31.0	C	31.0	C
Westbound								
L	257	1710	0.49	0.15	40.4	D		
TR	2214	4920	0.93	0.45	33.3	C	33.7	C
Northbound								
L	304	1215	0.43	0.25	32.5	C		
TR	373	1492	0.53	0.25	33.8	C	33.2	C
Southbound								
LTR	192	767	0.68	0.25	43.0	D	43.0	D

Intersection Delay = 32.8 (sec/veh) Intersection LOS = C

Phone: Fax:
 E-Mail:

----- OPERATIONAL ANALYSIS -----

Analyst: JCE
 Agency/Co.: JOHN COLLINS ENGINEERS, P.C.
 Date Performed: 4/20/2007
 Analysis Time Period: WEEKDAY PEAK AM HIGHWAY HOUR
 Intersection: AMBD-DRWY-1
 Area Type: All other areas
 Jurisdiction:
 Analysis Year: 2012 BUILD TRAFFIC VOLUMES
 Project ID: 281
 E/W St: NEPPERHAN AVENUE N/S St: PROPOSED SITE ACCESS / WAVERLY

----- VOLUME DATA -----

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	8	1827	10	115	1868	19	120	0	180	84	0	36
% Heavy Veh	5	5	5	5	5	5	5	5	5	5	5	5
PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PK 15 Vol	2	496	3	31	508	5	33	0	49	23	0	10
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1900	1900		1900	1900		1900	1900			1900	
ParkExist												
NumPark												
No. Lanes	1	3	0	1	3	0	1	1	0	0	1	0
LGConfig	L	TR		L	TR		L	TR			LTR	
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0			12.0	
RTOR Vol			0			0			0			0
Adj Flow	9	1997		125	2051		130	196			130	
%InSharedLn												
Prop LTs		0.000			0.000		1.000	0.000			0.700	
Prop RTs		0.006			0.010			1.000			0.300	
Peds Bikes		25	0		25	0		25	0		25	0
Buses	0	0		0	0		0	0			0	
%InProtPhase												
Duration	0.25											

----- OPERATING PARAMETERS -----

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Arriv. Type	3	3		3	3		3	3			3	
Unit Ext.	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
I Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0		2.0	2.0		2.0	2.0			2.0	
Ext of g	2.0	2.0		2.0	2.0		2.0	2.0			2.0	
Ped Min g		3.4			3.4			3.4			3.4	

TWO-WAY STOP CONTROL SUMMARY

Analyst: JCE
 Agency/Co.: JOHN COLLINS ENGINEERS, P.C.
 Date Performed: 4/20/2007
 Analysis Time Period: WEEKDAY PEAK AM HIGHWAY HOUR
 Intersection: AMBD-DRWY-#2
 Jurisdiction:
 Units: U. S. Customary
 Analysis Year: 2012 BUILD TRAFFIC VOLUMES
 Project ID: 281
 East/West Street: ELM STREET
 North/South Street: PROPOSED SITE DRIVEWAY
 Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street:	Approach Movement	Eastbound			Westbound		
		1	2	3	4	5	6
		L	T	R	L	T	R
Volume					93	747	
Peak-Hour Factor, PHF					0.92	0.92	
Hourly Flow Rate, HFR					101	811	
Percent Heavy Vehicles		--	--	--	5	--	--
Median Type/Storage		Undivided			/		
RT Channelized?							
Lanes					0	2	
Configuration						LT T	
Upstream Signal?		No				No	

Minor Street:	Approach Movement	Northbound			Southbound		
		7	8	9	10	11	12
		L	T	R	L	T	R
Volume		13					
Peak Hour Factor, PHF		0.92					
Hourly Flow Rate, HFR		14					
Percent Heavy Vehicles		5					
Percent Grade (%)			0			0	
Flared Approach: Exists?/Storage					/		/
Lanes		1					
Configuration		L					

Delay, Queue Length, and Level of Service

Approach Movement	EB	WB	Northbound			Southbound		
	1	4	7	8	9	10	11	12
Lane Config		LT	L					
v (vph)		101	14					
C(m) (vph)		1604	426					
v/c		0.06	0.03					
95% queue length		0.20	0.10					
Control Delay		7.4	13.7					
LOS		A	B					
Approach Delay				13.7				
Approach LOS				B				

Analyst: JCE Inter.: AMBD-DRWY-#3 (AM9BD)
 Agency: JOHN COLLINS ENGINEERS, P.C. Area Type: All other areas
 Date: 3/12/2007 Jurisd:
 Period: WEEKDAY PEAK AM HIGHWAY HOUR Year : 2012 BUILD TRAFFIC VOLUMES
 Project ID: 281
 E/W St: PALISADES AVENUE / ELM STREET N/S St: PROPOSED SITE ACCESS

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	0	2	0	0	1	0	0	1	0
LGConfig				LTR			LT			TR		
Volume				49	545	166	31	16			25	306
Lane Width				12.0			12.0			12.0		
RTOR Vol						0						0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left	A		
Thru					Thru	A		
Right					Right			
Peds	X				Peds	X		
WB Left		A			SB Left			
Thru		A			Thru	A		
Right		A			Right	A		
Peds		X			Peds	X		
NB Right					EB Right			
SB Right					WB Right			
Green	35.0				35.0			
Yellow	3.0				3.0			
All Red	2.0				2.0			

Cycle Length: 80.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group		Approach	
			v/c	g/C	Delay	LOS	Delay	LOS

Eastbound

Westbound

LTR 1444 3301 0.57 0.44 17.4 B 17.4 B

Northbound

LT 580 1326 0.09 0.44 13.2 B 13.2 B

Southbound

TR 682 1559 0.53 0.44 17.2 B 17.2 B

Intersection Delay = 17.2 (sec/veh) Intersection LOS = B

Phone: Fax:
 E-Mail:

----- OPERATIONAL ANALYSIS -----

Analyst: JCE
 Agency/Co.: JOHN COLLINS ENGINEERS, P.C.
 Date Performed: 3/12/2007
 Analysis Time Period: WEEKDAY PEAK AM HIGHWAY HOUR
 Intersection: AMBD-DRWY-#3 (AM9BD)
 Area Type: All other areas
 Jurisdiction:
 Analysis Year: 2012 BUILD TRAFFIC VOLUMES
 Project ID: 281
 E/W St: PALISADES AVENUE / ELM STREET N/S St: PROPOSED SITE ACCESS

----- VOLUME DATA -----

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume				49	545	166	31	16			25	306
% Heavy Veh				5	5	5	5	5			5	5
PHF				0.92	0.92	0.92	0.92	0.92			0.92	0.92
PK 15 Vol				13	148	45	8	4			7	83
Hi Ln Vol												
% Grade					0			0			0	
Ideal Sat					1900			1900			1900	
ParkExist												
NumPark												
No. Lanes	0	0	0	0	2	0	0	1	0	0	1	0
LGConfig					LTR			LT			TR	
Lane Width					12.0			12.0			12.0	
RTOR Vol						0						0
Adj Flow					825			51			360	
%InSharedLn												
Prop LTs					0.064			0.667			0.000	
Prop RTs					0.218			0.000			0.925	
Peds Bikes	0			25		0				25		0
Buses				0			0			0		
%InProtPhase												
Duration	0.25			Area Type: All other areas								

----- OPERATING PARAMETERS -----

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet					0.0			0.0			0.0	
Arriv. Type					3			3			3	
Unit Ext.					3.0			3.0			3.0	
I Factor					1.000			1.000			1.000	
Lost Time					2.0			2.0			2.0	
Ext of g					2.0			2.0			2.0	
Ped Min g		3.2			3.4						3.4	

TWO-WAY STOP CONTROL SUMMARY

Analyst: JCE
 Agency/Co.: JOHN COLLINS ENGINEERS, P.C.
 Date Performed: 4/20/2007
 Analysis Time Period: WEEKDAY PEAK AM HIGHWAY HOUR
 Intersection: AMBD-DRWY-#5
 Jurisdiction:
 Units: U. S. Customary
 Analysis Year: 2012 BUILD TRAFFIC VOLUMES
 Project ID: 281
 East/West Street: PALISADE AVENUE
 North/South Street: PROPOSED SITE DRIVEWAY
 Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street:	Approach Movement	Eastbound			Westbound		
		1	2	3	4	5	6
		L	T	R	L	T	R
Volume					49	833	
Peak-Hour Factor, PHF					0.92	0.92	
Hourly Flow Rate, HFR					53	905	
Percent Heavy Vehicles		--	--	--	5	--	--
Median Type/Storage		Undivided			/		
RT Channelized?							
Lanes					0	2	
Configuration						LT T	
Upstream Signal?		No				No	

Minor Street:	Approach Movement	Northbound			Southbound		
		7	8	9	10	11	12
		L	T	R	L	T	R
Volume		31					
Peak Hour Factor, PHF		0.92					
Hourly Flow Rate, HFR		33					
Percent Heavy Vehicles		5					
Percent Grade (%)			0			0	
Flared Approach: Exists?/Storage					/		/
Lanes		1					
Configuration		L					

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT	L					
v (vph)	53	33						
C(m) (vph)	1604	540						
v/c	0.03	0.06						
95% queue length	0.10	0.19						
Control Delay	7.3	12.1						
LOS	A	B						
Approach Delay				12.1				
Approach LOS				B				

TWO-WAY STOP CONTROL SUMMARY

Analyst: JCE
 Agency/Co.: JOHN COLLINS ENGINEERS, P.C.
 Date Performed: 4/20/2007
 Analysis Time Period: WEEKDAY PEAK AM HIGHWAY HOUR
 Intersection: AMBD-DRWY-#6
 Jurisdiction:
 Units: U. S. Customary
 Analysis Year: 2012 BUILD TRAFFIC VOLUMES
 Project ID: 281
 East/West Street: PALISADE AVENUE
 North/South Street: PROPOSED SITE DRIVEWAY
 Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street:	Approach Movement	Eastbound			Westbound		
		1	2	3	4	5	6
		L	T	R	L	T	R
Volume					25	658	
Peak-Hour Factor, PHF					0.92	0.92	
Hourly Flow Rate, HFR					27	715	
Percent Heavy Vehicles		--	--	--	5	--	--
Median Type/Storage		Undivided			/		
RT Channelized?							
Lanes					0	2	
Configuration						LT T	
Upstream Signal?		No				No	

Minor Street:	Approach Movement	Northbound			Southbound		
		7	8	9	10	11	12
		L	T	R	L	T	R
Volume		16					
Peak Hour Factor, PHF		0.92					
Hourly Flow Rate, HFR		17					
Percent Heavy Vehicles		5					
Percent Grade (%)			0			0	
Flared Approach: Exists?/Storage					/		/
Lanes		1					
Configuration		L					

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT	L					
v (vph)	27	17						
C(m) (vph)	1604	581						
v/c	0.02	0.03						
95% queue length	0.05	0.09						
Control Delay	7.3	11.4						
LOS	A	B						
Approach Delay			11.4					
Approach LOS			B					

HCS+: Signalized Intersections Release 5.2

Analyst: JCE Inter.: AMBD-DRWY-7
 Agency: JOHN COLLINS ENGINEERS, P.C. Area Type: All other areas
 Date: 4/20/2007 Jurisd: W/ SIGNALIZATION
 Period: WEEKDAY PEAK AM HIGHWAY HOUR Year : 2012 BUILD TRAFFIC VOLUMES
 Project ID: 281
 E/W St: PROPOSED SITE ACCESS N/S St: NEW MAIN STREET

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	1	0	0	0	0	0	0	2	0
LGConfig				L							LT	
Volume				62						98	549	
Lane Width				12.0							12.0	
RTOR Vol												

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru					Thru			
Right					Right			
Peds	X				Peds	X		
WB Left		A			SB Left	A		
Thru					Thru	A		
Right					Right			
Peds		X			Peds	X		
NB Right					EB Right			
SB Right					WB Right			
Green	30.0				50.0			
Yellow	3.0				3.0			
All Red	2.0				2.0			

Cycle Length: 90.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group		Approach	
			v/c	g/C	Delay	LOS	Delay	LOS

Eastbound

Westbound

L	573	1719	0.12	0.33	20.9	C	20.9	C
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Northbound

Southbound

LT	1899	3419	0.37	0.56	11.3	B	11.3	B
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Intersection Delay = 12.2 (sec/veh) Intersection LOS = B

Phone: Fax:
E-Mail:

OPERATIONAL ANALYSIS

Analyst: JCE
 Agency/Co.: JOHN COLLINS ENGINEERS, P.C.
 Date Performed: 4/20/2007
 Analysis Time Period: WEEKDAY PEAK AM HIGHWAY HOUR
 Intersection: AMBD-DRWY-7
 Area Type: All other areas
 Jurisdiction: W/ SIGNALIZATION
 Analysis Year: 2012 BUILD TRAFFIC VOLUMES
 Project ID: 281
 E/W St: PROPOSED SITE ACCESS N/S St: NEW MAIN STREET

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume				62						98	549	
% Heavy Veh				5						5	5	
PHF				0.92						0.92	0.92	
PK 15 Vol				17						27	149	
Hi Ln Vol												
% Grade					0						0	
Ideal Sat				1900							1900	
ParkExist												
NumPark												
No. Lanes	0	0	0	1	0	0	0	0	0	0	2	0
LGConfig				L							LT	
Lane Width				12.0							12.0	
RTOR Vol												
Adj Flow				67							704	
%InSharedLn												
Prop LTs											0.152	
Prop RTs										0.000		
Peds Bikes	0							0				
Buses				0							0	
%InProtPhase												
Duration	0.25			Area Type: All other areas								

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet				0.0							0.0	
Arriv. Type				3							3	
Unit Ext.				3.0							3.0	
I Factor					1.000						1.000	
Lost Time				2.0							2.0	
Ext of g				2.0							2.0	
Ped Min g		3.2						3.2				

TWO-WAY STOP CONTROL SUMMARY

Analyst: JCE
 Agency/Co.: JOHN COLLINS ENGINEERS, P.C.
 Date Performed: 4/20/2007
 Analysis Time Period: WEEKDAY PEAK AM HIGHWAY HOUR
 Intersection: AMBD-DRWY-#9
 Jurisdiction:
 Units: U. S. Customary
 Analysis Year: 2012 BUILD TRAFFIC VOLUMES
 Project ID: 281
 East/West Street: PROPOSED SITE ACCESS
 North/South Street: SOUTH BROADWAY
 Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street:	Approach Movement	Northbound			Southbound		
		1 L	2 T	3 R	4 L	5 T	6 R
Volume		482	18				
Peak-Hour Factor, PHF		0.92	0.92				
Hourly Flow Rate, HFR		523	19				
Percent Heavy Vehicles		--	--			--	--
Median Type/Storage		Undivided			/		
RT Channelized?							
Lanes		2	0				
Configuration		T	TR				
Upstream Signal?		No				No	

Minor Street:	Approach Movement	Westbound			Eastbound		
		7 L	8 T	9 R	10 L	11 T	12 R
Volume				39			
Peak Hour Factor, PHF				0.92			
Hourly Flow Rate, HFR				42			
Percent Heavy Vehicles				5			
Percent Grade (%)		0				0	
Flared Approach: Exists?/Storage					/		/
Lanes				1			
Configuration				R			

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
			7	8	9	10	11	12
Movement	1	4			R			
Lane Config								
v (vph)					42			
C(m) (vph)					761			
v/c					0.06			
95% queue length					0.17			
Control Delay					10.0+			
LOS					B			
Approach Delay					10.0+			
Approach LOS					B			

HCS+: Signalized Intersections Release 5.2

Analyst: JCE Inter.: PMBD-DRWY-1
 Agency: JOHN COLLINS ENGINEERS, P.C. Area Type: All other areas
 Date: 4/20/2007 Jurisd:
 Period: WEEKDAY PEAK PM HIGHWAY HOUR Year : 2012 BUILD TRAFFIC VOLUMES
 Project ID: 281
 E/W St: NEPPERHAN AVENUE N/S St: PROPOSED SITE ACCESS / WAVERLY

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3	0	1	3	0	1	1	0	0	1	0
LGConfig	L	TR		L	TR		L	TR			LTR	
Volume	33	2564	10	85	1257	105	200	0	100	72	0	19
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0			12.0	
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left	A		
Thru	A				Thru	A		
Right	A				Right	A		
Peds	X	X			Peds	X		
WB Left			A		SB Left	A		
Thru	A				Thru	A		
Right	A				Right	A		
Peds	X	X			Peds	X		
NB Right					EB Right			
SB Right					WB Right			
Green	55.0	10.0			20.0			
Yellow	3.0	3.0			3.0			
All Red	2.0	2.0			2.0			

Cycle Length: 100.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group		Approach	
			v/c	g/C	Delay	LOS	Delay	LOS
Eastbound								
L	169	1692	0.21	0.10	42.0	D		
TR	2709	4926	1.03	0.55	49.0	D	48.9	D
Westbound								
L	172	1715	0.53	0.10	46.0	D		
TR	2675	4864	0.55	0.55	14.8	B	16.6	B
Northbound								
L	253	1263	0.86	0.20	62.8	E		
TR	296	1480	0.37	0.20	35.3	D	53.6	D
Southbound								
LTR	190	950	0.52	0.20	38.3	D	38.3	D

Intersection Delay = 38.5 (sec/veh) Intersection LOS = D

Phone:
E-Mail:

Fax:

OPERATIONAL ANALYSIS

Analyst: JCE
 Agency/Co.: JOHN COLLINS ENGINEERS, P.C.
 Date Performed: 4/20/2007
 Analysis Time Period: WEEKDAY PEAK PM HIGHWAY HOUR
 Intersection: PMBD-DRWY-1
 Area Type: All other areas
 Jurisdiction:
 Analysis Year: 2012 BUILD TRAFFIC VOLUMES
 Project ID: 281
 E/W St: NEPPERHAN AVENUE

N/S St: PROPOSED SITE ACCESS / WAVERLY

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	33	2564	10	85	1257	105	200	0	100	72	0	19
% Heavy Veh	5	5	5	5	5	5	5	5	5	5	5	5
PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PK 15 Vol	9	697	3	23	342	29	54	0	27	20	0	5
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1900	1900		1900	1900		1900	1900			1900	
ParkExist												
NumPark												
No. Lanes	1	3	0	1	3	0	1	1	0	0	1	0
LGConfig	L	TR		L	TR		L	TR			LTR	
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0			12.0	
RTOR Vol			0			0			0			0
Adj Flow	36	2798		92	1480		217	109			99	
%InSharedLn												
Prop LTs		0.000			0.000		1.000	0.000			0.788	
Prop RTs		0.004			0.077			1.000			0.212	
Peds Bikes		25	0		25	0		25	0		25	0
Buses	0	0		0	0		0	0			0	
%InProtPhase												
Duration	0.25											

Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Arriv. Type	3	3		3	3		3	3			3	
Unit Ext.	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
I Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0		2.0	2.0		2.0	2.0			2.0	
Ext of g	2.0	2.0		2.0	2.0		2.0	2.0			2.0	
Ped Min g		3.4			3.4			3.4			3.4	

TWO-WAY STOP CONTROL SUMMARY

Analyst: JCE
 Agency/Co.: JOHN COLLINS ENGINEERS, P.C.
 Date Performed: 4/20/2007
 Analysis Time Period: WEEKDAY PEAK PM HIGHWAY HOUR
 Intersection: PMBD-DRWY-#2
 Jurisdiction:
 Units: U. S. Customary
 Analysis Year: 2012 BUILD TRAFFIC VOLUMES
 Project ID: 281
 East/West Street: ELM STREET
 North/South Street: PROPOSED SITE DRIVEWAY
 Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street:	Approach Movement	Eastbound			Westbound		
		1	2	3	4	5	6
		L	T	R	L	T	R
Volume					17	886	
Peak-Hour Factor, PHF					0.92	0.92	
Hourly Flow Rate, HFR					18	963	
Percent Heavy Vehicles		--	--	--	5	--	--
Median Type/Storage		Undivided			/		
RT Channelized?							
Lanes					0	2	
Configuration						LT T	
Upstream Signal?			No			No	

Minor Street:	Approach Movement	Northbound			Southbound		
		7	8	9	10	11	12
		L	T	R	L	T	R
Volume		85					
Peak Hour Factor, PHF		0.92					
Hourly Flow Rate, HFR		92					
Percent Heavy Vehicles		5					
Percent Grade (%)			0			0	
Flared Approach: Exists?/Storage					/		/
Lanes		1					
Configuration			L				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT	L					
v (vph)		18	92					
C(m) (vph)		1604	507					
v/c		0.01	0.18					
95% queue length		0.03	0.66					
Control Delay		7.3	13.7					
LOS		A	B					
Approach Delay				13.7				
Approach LOS				B				

Analyst: JCE Inter.: PMBD-DRWY-#3 (PM9BD)
 Agency: JOHN COLLINS ENGINEERS, P.C. Area Type: All other areas
 Date: 3/12/2007 Jurisd:
 Period: WEEKDAY PEAK PM HIGHWAY HOUR Year : 2012 BUILD TRAFFIC VOLUMES
 Project ID: 281
 E/W St: PALISADES AVENUE / ELM STREET N/S St: PPROPOSED SITE ACCESS

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	0	2	0	0	1	0	0	1	0
LGConfig				LTR			LT			TR		
Volume				140	614	217	152	93			87	239
Lane Width				12.0			12.0			12.0		
RTOR Vol						0						0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left	A		
Thru					Thru	A		
Right					Right			
Peds	X				Peds	X		
WB Left	A				SB Left			
Thru	A				Thru	A		
Right	A				Right	A		
Peds	X				Peds	X		
NB Right					EB Right			
SB Right					WB Right			
Green	35.0				35.0			
Yellow	3.0				3.0			
All Red	2.0				2.0			

Cycle Length: 80.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group		Approach	
			v/c	g/C	Delay	LOS	Delay	LOS

Eastbound

Westbound

LTR 1437 3285 0.73 0.44 20.6 C 20.6 C

Northbound

LT 377 862 0.71 0.44 24.2 C 24.2 C

Southbound

TR 704 1610 0.50 0.44 16.8 B 16.8 B

Intersection Delay = 20.4 (sec/veh) Intersection LOS = C

Phone: Fax:
 E-Mail:

----- OPERATIONAL ANALYSIS -----

Analyst: JCE
 Agency/Co.: JOHN COLLINS ENGINEERS, P.C.
 Date Performed: 3/12/2007
 Analysis Time Period: WEEKDAY PEAK PM HIGHWAY HOUR
 Intersection: PMBD-DRWY-#3 (PM9BD)
 Area Type: All other areas
 Jurisdiction:
 Analysis Year: 2012 BUILD TRAFFIC VOLUMES
 Project ID: 281
 E/W St: PALISADES AVENUE / ELM STREET N/S St: PPROPOSED SITE ACCESS

----- VOLUME DATA -----

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume				140	614	217	152	93			87	239
% Heavy Veh				5	5	5	5	5			5	5
PHF				0.92	0.92	0.92	0.92	0.92			0.92	0.92
PK 15 Vol				38	167	59	41	25			24	65
Hi Ln Vol												
% Grade					0			0			0	
Ideal Sat					1900			1900			1900	
ParkExist												
NumPark												
No. Lanes	0	0	0	0	2	0	0	1	0	0	1	0
LGConfig					LTR			LT			TR	
Lane Width					12.0			12.0			12.0	
RTOR Vol						0						0
Adj Flow					1055			266			355	
%InSharedLn												
Prop LTs					0.144			0.620			0.000	
Prop RTs					0.224			0.000			0.732	
Peds Bikes	0			25		0				25		0
Buses					0			0			0	
%InProtPhase												
Duration	0.25			Area Type: All other areas								

----- OPERATING PARAMETERS -----

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet					0.0			0.0			0.0	
Arriv. Type					3			3			3	
Unit Ext.					3.0			3.0			3.0	
I Factor					1.000			1.000			1.000	
Lost Time					2.0			2.0			2.0	
Ext of g					2.0			2.0			2.0	
Ped Min g		3.2			3.4						3.4	

TWO-WAY STOP CONTROL SUMMARY

Analyst: JCE
 Agency/Co.: JOHN COLLINS ENGINEERS, P.C.
 Date Performed: 4/20/2007
 Analysis Time Period: WEEKDAY PEAK PM HIGHWAY HOUR
 Intersection: PMBD-DRWY-#5
 Jurisdiction:
 Units: U. S. Customary
 Analysis Year: 2012 BUILD TRAFFIC VOLUMES
 Project ID: 281
 East/West Street: PALISADE AVENUE
 North/South Street: PROPOSED SITE DRIVEWAY
 Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street:	Approach Movement	Eastbound			Westbound		
		1 L	2 T	3 R	4 L	5 T	6 R
Volume					140	865	
Peak-Hour Factor, PHF					0.92	0.92	
Hourly Flow Rate, HFR					152	940	
Percent Heavy Vehicles		--	--		5	--	--
Median Type/Storage		Undivided			/		
RT Channelized?							
Lanes					0	2	
Configuration					LT	T	
Upstream Signal?		No				No	

Minor Street:	Approach Movement	Northbound			Southbound		
		7 L	8 T	9 R	10 L	11 T	12 R
Volume		152					
Peak Hour Factor, PHF		0.92					
Hourly Flow Rate, HFR		165					
Percent Heavy Vehicles		5					
Percent Grade (%)			0			0	
Flared Approach: Exists?/Storage					/		/
Lanes		1					
Configuration		L					

Delay, Queue Length, and Level of Service

Approach Movement	EB	WB	Northbound			Southbound		
			4 LT	7 L	8 R	9 R	10 L	11 T
v (vph)		152	165					
C(m) (vph)		1604	398					
v/c		0.09	0.41					
95% queue length		0.31	1.99					
Control Delay		7.5	20.3					
LOS		A	C					
Approach Delay				20.3				
Approach LOS				C				

TWO-WAY STOP CONTROL SUMMARY

Analyst: JCE
 Agency/Co.: JOHN COLLINS ENGINEERS, P.C.
 Date Performed: 4/20/2007
 Analysis Time Period: WEEKDAY PEAK PM HIGHWAY HOUR
 Intersection: PMBD-DRWY-#6
 Jurisdiction:
 Units: U. S. Customary
 Analysis Year: 2012 BUILD TRAFFIC VOLUMES
 Project ID: 281
 East/West Street: PALISADE AVENUE
 North/South Street: PROPOSED SITE DRIVEWAY
 Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street:	Approach Movement	Eastbound			Westbound		
		1	2	3	4	5	6
		L	T	R	L	T	R
Volume					70	1070	
Peak-Hour Factor, PHF					0.92	0.92	
Hourly Flow Rate, HFR					76	1163	
Percent Heavy Vehicles		--	--	--	5	--	--
Median Type/Storage		Undivided			/		
RT Channelized?							
Lanes					0	2	
Configuration						LT T	
Upstream Signal?			No			No	

Minor Street:	Approach Movement	Northbound			Southbound		
		7	8	9	10	11	12
		L	T	R	L	T	R
Volume		76					
Peak Hour Factor, PHF		0.92					
Hourly Flow Rate, HFR		82					
Percent Heavy Vehicles		5					
Percent Grade (%)			0			0	
Flared Approach: Exists?/Storage					/		/
Lanes		1					
Configuration		L					

Delay, Queue Length, and Level of Service

Approach Movement	EB	WB	Northbound			Southbound		
	1	4	7	8	9	10	11	12
Lane Config		LT	L					
v (vph)		76	82					
C(m) (vph)		1604	365					
v/c		0.05	0.22					
95% queue length		0.15	0.85					
Control Delay		7.4	17.7					
LOS		A	C					
Approach Delay				17.7				
Approach LOS				C				

Analyst: JCE Inter.: PMBD-DRWY-7
 Agency: JOHN COLLINS ENGINEERS, P.C. Area Type: All other areas
 Date: 4/20/2007 Jurisd: W/ SIGNALIZATION
 Period: WEEKDAY PEAK PM HIGHWAY HOUR Year : 2012 BUILD TRAFFIC VOLUMES
 Project ID: 281
 E/W St: PROPOSED SITE ACCESS N/S St: NEW MAIN STREET

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	1	0	0	0	0	0	0	2	0
LGConfig				L							LT	
Volume				328						304	921	
Lane Width				12.0							12.0	
RTOR Vol												

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru					Thru			
Right					Right			
Peds	X				Peds	X		
WB Left		A			SB Left	A		
Thru					Thru	A		
Right					Right			
Peds		X			Peds	X		
NB Right					EB Right			
SB Right					WB Right			
Green	30.0				50.0			
Yellow	3.0				3.0			
All Red	2.0				2.0			

Cycle Length: 90.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group		Approach	
			v/c	g/C	Delay	LOS	Delay	LOS

Eastbound

Westbound

L	573	1719	0.62	0.33	27.4	C	27.4	C
---	-----	------	------	------	------	---	------	---

Northbound

Southbound

LT	1880	3384	0.71	0.56	15.9	B	15.9	B
----	------	------	------	------	------	---	------	---

Intersection Delay = 18.3 (sec/veh) Intersection LOS = B

Phone: Fax:
E-Mail:

OPERATIONAL ANALYSIS

Analyst: JCE
 Agency/Co.: JOHN COLLINS ENGINEERS, P.C.
 Date Performed: 4/20/2007
 Analysis Time Period: WEEKDAY PEAK PM HIGHWAY HOUR
 Intersection: PMBD-DRWY-7
 Area Type: All other areas
 Jurisdiction: W/ SIGNALIZATION
 Analysis Year: 2012 BUILD TRAFFIC VOLUMES
 Project ID: 281
 E/W St: PROPOSED SITE ACCESS N/S St: NEW MAIN STREET

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume				328						304	921	
% Heavy Veh				5						5	5	
PHF				0.92						0.92	0.92	
PK 15 Vol				89						83	250	
Hi Ln Vol												
% Grade					0						0	
Ideal Sat				1900							1900	
ParkExist												
NumPark												
No. Lanes	0	0	0	1	0	0	0	0	0	0	2	0
LGConfig				L							LT	
Lane Width				12.0							12.0	
RTOR Vol												
Adj Flow				357							1331	
%InSharedLn												
Prop LTs											0.248	
Prop RTs										0.000		
Peds Bikes	25							25				
Buses				0							0	
%InProtPhase												
Duration	0.25			Area Type: All other areas								

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet				0.0							0.0	
Arriv. Type				3							3	
Unit Ext.				3.0							3.0	
I Factor					1.000						1.000	
Lost Time				2.0							2.0	
Ext of g				2.0							2.0	
Ped Min g	3.4							3.4				

TWO-WAY STOP CONTROL SUMMARY

Analyst: JCE
 Agency/Co.: JOHN COLLINS ENGINEERS, P.C.
 Date Performed: 4/20/2007
 Analysis Time Period: WEEKDAY PEAK PM HIGHWAY HOUR
 Intersection: PMBD-DRWY-#9
 Jurisdiction:
 Units: U. S. Customary
 Analysis Year: 2012 BUILD TRAFFIC VOLUMES
 Project ID: 281
 East/West Street: PROPOSED SITE ACCESS
 North/South Street: SOUTH BROADWAY
 Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street:	Approach Movement	Northbound			Southbound		
		1 L	2 T	3 R	4 L	5 T	6 R
Volume		630	6				
Peak-Hour Factor, PHF		0.92	0.92				
Hourly Flow Rate, HFR		684	6				
Percent Heavy Vehicles		--	--		--	--	
Median Type/Storage		Undivided			/		
RT Channelized?							
Lanes		2	0				
Configuration		T	TR				
Upstream Signal?		No				No	

Minor Street:	Approach Movement	Westbound			Eastbound		
		7 L	8 T	9 R	10 L	11 T	12 R
Volume				143			
Peak Hour Factor, PHF				0.92			
Hourly Flow Rate, HFR				155			
Percent Heavy Vehicles				5			
Percent Grade (%)		0			0		
Flared Approach: Exists?/Storage				/		/	
Lanes			1				
Configuration			R				

Delay, Queue Length, and Level of Service

Approach Movement	NB	SB	Westbound			Eastbound		
			7	8	9	10	11	12
Lane Config	1	4			R			
v (vph)					155			
C(m) (vph)					691			
v/c					0.22			
95% queue length					0.86			
Control Delay					11.7			
LOS					B			
Approach Delay				11.7				
Approach LOS				B				

HCS+: Signalized Intersections Release 5.2

Analyst: JCE Inter.: SATBD-DRWY-1
 Agency: JOHN COLLINS ENGINEERS, P.C. Area Type: All other areas
 Date: 4/20/2007 Jurisd:
 Period: SATURDAY PEAK HOUR Year : 2012 BUILD TRAFFIC VOLUMES
 Project ID: 281
 E/W St: NEPPERHAN AVENUE N/S St: PROPOSED SITE ACCESS / WAVERLY

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3	0	1	3	0	1	1	0	0	1	0
LGConfig	L	TR		L	TR		L	TR			LTR	
Volume	25	2029	8	68	1090	86	160	0	80	80	0	22
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0			12.0	
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left	A		
Thru	A				Thru	A		
Right	A				Right	A		
Peds	X	X			Peds	X		
WB Left			A		SB Left	A		
Thru	A				Thru	A		
Right	A				Right	A		
Peds	X	X			Peds	X		
NB Right					EB Right			
SB Right					WB Right			
Green	55.0	10.0			20.0			
Yellow	3.0	3.0			3.0			
All Red	2.0	2.0			2.0			

Cycle Length: 100.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group		Approach	
			v/c	g/C	Delay	LOS	Delay	LOS
Eastbound								
L	168	1683	0.16	0.10	41.6	D		
TR	2709	4926	0.82	0.55	20.5	C	20.7	C
Westbound								
L	171	1709	0.43	0.10	44.1	D		
TR	2677	4867	0.48	0.55	13.9	B	15.5	B
Northbound								
L	251	1253	0.69	0.20	45.1	D		
TR	296	1480	0.29	0.20	34.6	C	41.6	D
Southbound								
LTR	211	1055	0.53	0.20	38.2	D	38.2	D

Intersection Delay = 20.8 (sec/veh) Intersection LOS = C

Phone: Fax:
 E-Mail:

OPERATIONAL ANALYSIS

Analyst: JCE
 Agency/Co.: JOHN COLLINS ENGINEERS, P.C.
 Date Performed: 4/20/2007
 Analysis Time Period: SATURDAY PEAK HOUR
 Intersection: SATBD-DRWY-1
 Area Type: All other areas
 Jurisdiction:
 Analysis Year: 2012 BUILD TRAFFIC VOLUMES
 Project ID: 281
 E/W St: NEPPERHAN AVENUE N/S St: PROPOSED SITE ACCESS / WAVERLY

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	25	2029	8	68	1090	86	160	0	80	80	0	22
% Heavy Veh	5	5	5	5	5	5	5	5	5	5	5	5
PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PK 15 Vol	7	551	2	18	296	23	43	0	22	22	0	6
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1900	1900		1900	1900		1900	1900			1900	
ParkExist												
NumPark												
No. Lanes	1	3	0	1	3	0	1	1	0	0	1	0
LGConfig	L	TR		L	TR		L	TR			LTR	
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0			12.0	
RTOR Vol			0			0			0			0
Adj Flow	27	2214		74	1278		174	87			111	
%InSharedLn												
Prop LTs		0.000			0.000		1.000	0.000			0.784	
Prop RTs		0.004			0.073			1.000			0.216	
Peds Bikes		25	0		25	0		25	0		25	0
Buses	0	0		0	0		0	0			0	
%InProtPhase												
Duration	0.25											

Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Arriv. Type	3	3		3	3		3	3			3	
Unit Ext.	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
I Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0		2.0	2.0		2.0	2.0			2.0	
Ext of g	2.0	2.0		2.0	2.0		2.0	2.0			2.0	
Ped Min g		3.4			3.4			3.4			3.4	

TWO-WAY STOP CONTROL SUMMARY

Analyst: JCE
 Agency/Co.: JOHN COLLINS ENGINEERS, P.C.
 Date Performed: 4/20/2007
 Analysis Time Period: SATURDAY PEAK HOUR
 Intersection: SATBD-DRWY-#2
 Jurisdiction:
 Units: U. S. Customary
 Analysis Year: 2012 BUILD TRAFFIC VOLUMES
 Project ID: 281
 East/West Street: ELM STREET
 North/South Street: PROPOSED SITE DRIVEWAY
 Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street:	Approach Movement	Eastbound			Westbound		
		1 L	2 T	3 R	4 L	5 T	6 R
Volume					15	885	
Peak-Hour Factor, PHF					0.92	0.92	
Hourly Flow Rate, HFR					16	961	
Percent Heavy Vehicles		--	--	--	5	--	--
Median Type/Storage		Undivided			/		
RT Channelized?							
Lanes					0	2	
Configuration						LT T	
Upstream Signal?		No				No	

Minor Street:	Approach Movement	Northbound			Southbound		
		7 L	8 T	9 R	10 L	11 T	12 R
Volume		13					
Peak Hour Factor, PHF		0.92					
Hourly Flow Rate, HFR		14					
Percent Heavy Vehicles		5					
Percent Grade (%)			0			0	
Flared Approach: Exists?/Storage					/		/
Lanes		1					
Configuration		L					

Delay, Queue Length, and Level of Service

Approach Movement	EB	WB	Northbound			Southbound		
			4 LT	7 L	8 L	9 L	10 L	11 T
v (vph)		16	14					
C(m) (vph)		1604	512					
v/c		0.01	0.03					
95% queue length		0.03	0.08					
Control Delay		7.3	12.2					
LOS		A	B					
Approach Delay				12.2				
Approach LOS				B				

Analyst: JCE Inter.: SATBD-DRWY-#3 (SAT9BD)
 Agency: JOHN COLLINS ENGINEERS, P.C. Area Type: All other areas
 Date: 3/12/2007 Jurisd:
 Period: SATURDAY PEAK HOUR Year : 2012 BUILD TRAFFIC VOLUMES
 Project ID: 281
 E/W St: PALISADES AVENUE / ELM STREET N/S St: PROPOSED SITE ACCESS

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	0	2	0	0	1	0	0	1	0
LGConfig				LTR			LT			TR		
Volume				201	524	174	186	110			118	192
Lane Width				12.0			12.0			12.0		
RTOR Vol						0						0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left	A		
Thru					Thru	A		
Right					Right			
Peds	X				Peds	X		
WB Left		A			SB Left			
Thru		A			Thru	A		
Right		A			Right	A		
Peds		X			Peds	X		
NB Right					EB Right			
SB Right					WB Right			
Green	35.0				35.0			
Yellow	3.0				3.0			
All Red	2.0				2.0			

Cycle Length: 80.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group		Approach	
			v/c	g/C	Delay	LOS	Delay	LOS

Eastbound

Westbound

LTR 1439 3290 0.68 0.44 19.3 B 19.3 B

Northbound

LT 388 886 0.83 0.44 33.9 C 33.9 C

Southbound

TR 718 1640 0.47 0.44 16.4 B 16.4 B

Intersection Delay = 21.6 (sec/veh) Intersection LOS = C

Phone: Fax:
E-Mail:

OPERATIONAL ANALYSIS

Analyst: JCE
 Agency/Co.: JOHN COLLINS ENGINEERS, P.C.
 Date Performed: 3/12/2007
 Analysis Time Period: SATURDAY PEAK HOUR
 Intersection: SATBD-DRWY-#3 (SAT9BD)
 Area Type: All other areas
 Jurisdiction:
 Analysis Year: 2012 BUILD TRAFFIC VOLUMES
 Project ID: 281
 E/W St: PALISADES AVENUE / ELM STREET N/S St: PROPOSED SITE ACCESS

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume				201	524	174	186	110			118	192
% Heavy Veh				5	5	5	5	5			5	5
PHF				0.92	0.92	0.92	0.92	0.92			0.92	0.92
PK 15 Vol				55	142	47	51	30			32	52
Hi Ln Vol												
% Grade					0			0			0	
Ideal Sat					1900			1900			1900	
ParkExist												
NumPark												
No. Lanes	0	0	0	0	2	0	0	1	0	0	1	0
LGConfig					LTR			LT			TR	
Lane Width					12.0			12.0			12.0	
RTOR Vol						0						0
Adj Flow					977			322			337	
%InSharedLn												
Prop LTs					0.223			0.627			0.000	
Prop RTs					0.193			0.000			0.620	
Peds Bikes	0				25	0					25	0
Buses					0			0			0	
%InProtPhase												
Duration	0.25			Area Type: All other areas								

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet					0.0			0.0			0.0	
Arriv. Type					3			3			3	
Unit Ext.					3.0			3.0			3.0	
I Factor					1.000			1.000			1.000	
Lost Time					2.0			2.0			2.0	
Ext of g					2.0			2.0			2.0	
Ped Min g		3.2			3.4						3.4	

TWO-WAY STOP CONTROL SUMMARY

Analyst: JCE
 Agency/Co.: JOHN COLLINS ENGINEERS, P.C.
 Date Performed: 4/20/2007
 Analysis Time Period: SATURDAY PEAK HOUR
 Intersection: SATBD-DRWY-#5
 Jurisdiction:
 Units: U. S. Customary
 Analysis Year: 2012 BUILD TRAFFIC VOLUMES
 Project ID: 281
 East/West Street: PALISADE AVENUE
 North/South Street: PROPOSED SITE DRIVEWAY
 Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street:	Approach Movement	Eastbound			Westbound		
		1 L	2 T	3 R	4 L	5 T	6 R
Volume					201	701	
Peak-Hour Factor, PHF					0.92	0.92	
Hourly Flow Rate, HFR					218	761	
Percent Heavy Vehicles		--	--	--	5	--	--
Median Type/Storage		Undivided			/		
RT Channelized?							
Lanes					0	2	
Configuration					LT	T	
Upstream Signal?		No				No	

Minor Street:	Approach Movement	Northbound			Southbound		
		7 L	8 T	9 R	10 L	11 T	12 R
Volume		186					
Peak Hour Factor, PHF		0.92					
Hourly Flow Rate, HFR		202					
Percent Heavy Vehicles		5					
Percent Grade (%)			0			0	
Flared Approach: Exists?/Storage					/		/
Lanes		1					
Configuration		L					

Delay, Queue Length, and Level of Service

Approach Movement	EB	WB	Northbound			Southbound		
			4 LT	7 L	8 L	9 L	10 L	11 T
v (vph)		218	202					
C(m) (vph)		1604	363					
v/c		0.14	0.56					
95% queue length		0.47	3.24					
Control Delay		7.6	26.7					
LOS		A	D					
Approach Delay				26.7				
Approach LOS				D				

TWO-WAY STOP CONTROL SUMMARY

Analyst: JCE
 Agency/Co.: JOHN COLLINS ENGINEERS, P.C.
 Date Performed: 4/20/2007
 Analysis Time Period: SATURDAY PEAK HOUR
 Intersection: SATBD-DRWY-#6
 Jurisdiction:
 Units: U. S. Customary
 Analysis Year: 2012 BUILD TRAFFIC VOLUMES
 Project ID: 281
 East/West Street: PALISADE AVENUE
 North/South Street: PROPOSED SITE DRIVEWAY
 Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street:	Approach Movement	Eastbound			Westbound		
		1 L	2 T	3 R	4 L	5 T	6 R
Volume					100	818	
Peak-Hour Factor, PHF					0.92	0.92	
Hourly Flow Rate, HFR					108	889	
Percent Heavy Vehicles		--	--		5	--	--
Median Type/Storage		Undivided			/		
RT Channelized?							
Lanes					0	2	
Configuration					LT	T	
Upstream Signal?		No				No	

Minor Street:	Approach Movement	Northbound			Southbound		
		7 L	8 T	9 R	10 L	11 T	12 R
Volume		93					
Peak Hour Factor, PHF		0.92					
Hourly Flow Rate, HFR		101					
Percent Heavy Vehicles		5					
Percent Grade (%)			0			0	
Flared Approach: Exists?/Storage					/		/
Lanes		1					
Configuration		L					

Delay, Queue Length, and Level of Service

Approach Movement	EB	WB	Northbound			Southbound		
			4 LT	7 L	8 L	9 L	10 L	11 T
v (vph)		108	101					
C(m) (vph)		1604	395					
v/c		0.07	0.26					
95% queue length		0.22	1.00					
Control Delay		7.4	17.2					
LOS		A	C					
Approach Delay				17.2				
Approach LOS				C				

Analyst: JCE Inter.: SATBD-DRWY-7
 Agency: JOHN COLLINS ENGINEERS, P.C. Area Type: All other areas
 Date: 4/20/2007 Jurisd: W/ SIGNALIZATION
 Period: SATURDAY PEAK HOUR Year : 2012 BUILD TRAFFIC VOLUMES
 Project ID: 281
 E/W St: PROPOSED SITE ACCESS N/S St: NEW MAIN STREET

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	1	0	0	0	0	0	0	2	0
LGConfig				L							LT	
Volume				396						426	701	
Lane Width				12.0							12.0	
RTOR Vol												

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru					Thru			
Right					Right			
Peds	X				Peds	X		
WB Left		A			SB Left	A		
Thru					Thru	A		
Right					Right			
Peds		X			Peds	X		
NB Right					EB Right			
SB Right					WB Right			
Green	30.0				50.0			
Yellow	3.0				3.0			
All Red	2.0				2.0			

Cycle Length: 90.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group		Approach	
			v/c	g/C	Delay	LOS	Delay	LOS

Eastbound

Westbound

L	573	1719	0.75	0.33	32.2	C	32.2	C
---	-----	------	------	------	------	---	------	---

Northbound

Southbound

LT	1863	3353	0.66	0.56	14.9	B	14.9	B
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Intersection Delay = 19.4 (sec/veh) Intersection LOS = B

Phone: Fax:
E-Mail:

OPERATIONAL ANALYSIS

Analyst: JCE
 Agency/Co.: JOHN COLLINS ENGINEERS, P.C.
 Date Performed: 4/20/2007
 Analysis Time Period: SATURDAY PEAK HOUR
 Intersection: SATBD-DRWY-7
 Area Type: All other areas
 Jurisdiction: W/ SIGNALIZATION
 Analysis Year: 2012 BUILD TRAFFIC VOLUMES
 Project ID: 281
 E/W St: PROPOSED SITE ACCESS N/S St: NEW MAIN STREET

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume				396						426	701	
% Heavy Veh				5						5	5	
PHF				0.92						0.92	0.92	
PK 15 Vol				108						116	190	
Hi Ln Vol												
% Grade					0						0	
Ideal Sat				1900							1900	
ParkExist												
NumPark												
No. Lanes	0	0	0	1	0	0	0	0	0	0	2	0
LGConfig				L							LT	
Lane Width				12.0							12.0	
RTOR Vol												
Adj Flow				430							1225	
%InSharedLn												
Prop LTs											0.378	
Prop RTs										0.000		
Peds Bikes	25							25				
Buses				0							0	
%InProtPhase												
Duration	0.25			Area Type: All other areas								

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet				0.0							0.0	
Arriv. Type				3							3	
Unit Ext.				3.0							3.0	
I Factor					1.000						1.000	
Lost Time				2.0							2.0	
Ext of g				2.0							2.0	
Ped Min g	3.4							3.4				

TWO-WAY STOP CONTROL SUMMARY

Analyst: JCE
 Agency/Co.: JOHN COLLINS ENGINEERS, P.C.
 Date Performed: 4/20/2007
 Analysis Time Period: SATURDAY PEAK HOUR
 Intersection: SATBD-DRWY-#9
 Jurisdiction:
 Units: U. S. Customary
 Analysis Year: 2012 BUILD TRAFFIC VOLUMES
 Project ID: 281
 East/West Street: PROPOSED SITE ACCESS
 North/South Street: SOUTH BROADWAY
 Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street:	Approach Movement	Northbound			Southbound		
		1 L	2 T	3 R	4 L	5 T	6 R
Volume		548	7				
Peak-Hour Factor, PHF		0.92	0.92				
Hourly Flow Rate, HFR		595	7				
Percent Heavy Vehicles		--	--		--	--	
Median Type/Storage		Undivided			/		
RT Channelized?							
Lanes		2	0				
Configuration		T	TR				
Upstream Signal?		No				No	

Minor Street:	Approach Movement	Westbound			Eastbound		
		7 L	8 T	9 R	10 L	11 T	12 R
Volume				48			
Peak Hour Factor, PHF				0.92			
Hourly Flow Rate, HFR				52			
Percent Heavy Vehicles				5			
Percent Grade (%)		0			0		
Flared Approach: Exists?/Storage					/		/
Lanes			1				
Configuration			R				

Delay, Queue Length, and Level of Service

Approach Movement	NB	SB	Westbound			Eastbound		
			7	8	9	10	11	12
Lane Config	1	4			R			
v (vph)					52			
C(m) (vph)					732			
v/c					0.07			
95% queue length					0.23			
Control Delay					10.3			
LOS					B			
Approach Delay				10.3				
Approach LOS				B				

