

HCS+: Signalized Intersections Release 5.5

Analyst: djp
 Agency: D&D
 Date: 4-16-2014
 Period: sat Peak WIHT MIT
 Project ID: Dykstra - Sparta
 E/W St: Lafayette Rd

Inter.: NJ Rt 15 & Lafayette Rd
 Area Type: All other areas
 Jurisd:
 Year : b

N/S St: NJ Route 15

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	1	0	0	2	0	0	2	0
LGConfig	LR			LT			T			T		
Volume	410		15	2	12		880			704		
Lane Width		12.0			12.0		12.0			12.0		
RTOR Vol			3									

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			
Thru					Thru	P		
Right	A				Right			
Peds					Peds			
WB Left	A				SB Left			
Thru	A				Thru	P		
Right					Right			
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	32.0				35.0			
Yellow	3.0				6.0			
All Red	3.0				1.0			

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								
LR	530	1326	0.89	0.40	40.0	D	40.0	D
Westbound								
LT	733	1832	0.02	0.40	14.5	B	14.5	B
Northbound								
T	1537	3512	0.64	0.44	19.7	B	19.7	B
Southbound								
T	1537	3512	0.51	0.44	17.6	B	17.6	B

Intersection Delay = 23.2 (sec/veh) Intersection LOS = C

CAPACITY ANALYSIS SUMMARY TABLE

4/18/2014

INTERSECTION: Rt 15 and Houses Corner
PEAK HOUR: PM Peak

APPROACH MOVEMENT	NO BUILD CONDITIONS					BUILD CONDITIONS					CHANGE IN DELAY				BUILD WITH MITIGATION					CHANGE IN DELAY			
	# LANES	VOLUME	GREEN TIME	DELAY	LOS	# LANES	VOLUME	GREEN TIME	DELAY	LOS	ALLOWED	COMPUTED	EXCEEDED	# LANES	VOLUME	GREEN TIME	DELAY	LOS	ALLOWED	COMPUTED	EXCEEDED		
EB	LEFT	1	11	32	48.9	D	1	13	32	47.0	D	8.3	0.1	NO	1	13	16	45.7	D	8.3	-1.2	NO	
	THRU	0.5	27	32	48.3	D	0.5	27	32	48.3	D	7.7	0.0	NO	0.5	27	16	48.6	D	7.7	-0.7	NO	
	RIGHT	0.5	49	32	49.3	D	0.5	49	32	49.3	D	7.7	0.0	NO	0.5	49	16	48.6	D	7.7	-0.7	NO	
	OVERALL	2	87	32	48.0	D	2	89	32	48.9	D	7.8	-0.1	NO	2	89	16	48.2	D	7.8	-0.8	NO	
WB	LEFT	1	52	32	48.9	D	1	52	32	48.9	D	7.8	0.0	NO	1	52	16	48.3	D	7.8	-0.6	NO	
	THRU	0.5	9	32	47.3	D	0.5	9	32	47.6	D	8.2	0.3	NO	0.5	9	16	48.4	D	8.2	-0.9	NO	
	RIGHT	0.5	16	32	47.3	D	0.5	23	32	47.6	D	8.2	0.3	NO	0.5	23	16	48.4	D	8.2	-0.9	NO	
	OVERALL	2	77	32	48.4	D	2	84	32	48.4	D	7.9	0.0	NO	2	84	16	47.5	D	7.9	-0.8	NO	
NB	LEFT	1	49	105	7.9	A	1	49	105	8.7	A	18.0	0.8	NO	1	49	91	4.4	A	18.0	-3.5	NO	
	THRU	0.5	993	105	28.7	C	0.5	1143	105	54.1	D	13.3	27.4	YES	0.5	1143	91	25.8	C	13.3	-0.9	NO	
	RIGHT	0.5	43	105	25.7	C	0.5	43	105	54.1	D	13.3	27.4	YES	0.5	43	91	25.8	C	13.3	-0.9	NO	
	OVERALL	2	1036	105	25.8	C	2	1186	105	52.3	D	13.6	28.5	YES	2	1186	91	24.9	C	13.6	-0.9	NO	
SB	LEFT	1	32	105	10.3	B	1	38	105	94.5	F	17.4	84.2	YES	1	38	91	14.5	B	17.4	4.2	NO	
	THRU	0.5	719	105	13.3	B	0.5	862	105	17.4	B	16.7	4.1	NO	0.5	862	91	9.3	A	16.7	-4.0	NO	
	RIGHT	0.5	24	105	13.3	B	0.5	26	105	17.4	B	16.7	4.1	NO	0.5	26	91	9.3	A	16.7	-4.0	NO	
	OVERALL	2	743	105	13.2	B	2	888	105	20.6	B	16.7	7.4	NO	2	888	91	9.5	A	16.7	-3.7	NO	

HCS+: Signalized Intersections Release 5.5

Analyst: djp
 Agency: D&D
 Date: 12-10-2013
 Period: PM Peak
 Project ID: Dykstra - Sparta
 E/W St: Houses Corner Rd

Inter.: Rt 15 and Houses Corner
 Area Type: All other areas
 Jurisd:
 Year : nobuild
 N/S St: Route 15

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	1	1	0	1	1	0	1	1	0
LGConfig	L	TR		L	TR		L	TR		L	TR	
Volume	11	27	49	52	9	16	49	993	43	32	719	24
Lane Width	12.0	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						Peds		
WB	Left	A				SB	Left	A	
	Thru	A					Thru	A	
	Right	A					Right	A	
	Peds						Peds		
NB	Right					EB	Right		
SB	Right					WB	Right		
Green		32.0					105.0		
Yellow		4.0					5.0		
All Red		2.0					2.0		

Cycle Length: 150.0 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	288	1350	0.04	0.21	46.9	D		
TR	352	1651	0.24	0.21	49.3	D	49.0	D
Westbound								
L	274	1283	0.21	0.21	48.9	D		
TR	352	1651	0.08	0.21	47.3	D	48.4	D
Northbound								
L	325	465	0.17	0.70	7.9	A		
TR	1271	1816	0.90	0.70	26.7	C	25.8	C
Southbound								
L	111	159	0.32	0.70	10.3	B		
TR	1273	1818	0.64	0.70	13.3	B	13.2	B

Intersection Delay = 22.9 (sec/veh) Intersection LOS = C

HCS+: Signalized Intersections Release 5.5

Analyst: djp
 Agency: D&D
 Date: 4-18-2014
 Period: PM Peak
 Project ID: Dykstra - Sparta
 E/W St: Houses Corner Rd

Inter.: Rt 15 and Houses Corner
 Area Type: All other areas
 Jurisd:
 Year : b
 N/S St: Route 15

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	1	1	0	1	1	0	1	1	0
LGConfig	L	TR		L	TR		L	TR		L	TR	
Volume	13	27	49	52	9	23	49	1143	43	38	862	26
Lane Width	12.0	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						Peds		
WB	Left	A				SB	Left	A	
	Thru	A					Thru	A	
	Right	A					Right	A	
	Peds						Peds		
NB	Right					EB	Right		
SB	Right					WB	Right		
Green		32.0					105.0		
Yellow		4.0					5.0		
All Red		2.0					2.0		

Cycle Length: 150.0 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	286	1342	0.05	0.21	47.0	D		
TR	352	1651	0.24	0.21	49.3	D	48.9	D
Westbound								
L	274	1283	0.21	0.21	48.9	D		
TR	348	1631	0.10	0.21	47.6	D	48.4	D
Northbound								
L	220	315	0.25	0.70	8.7	A		
TR	1272	1817	1.02	0.70	54.1	D	52.3	D
Southbound								
L	49	70	0.86	0.70	94.5	F		
TR	1273	1819	0.77	0.70	17.4	B	20.6	C

Intersection Delay = 39.5 (sec/veh) Intersection LOS = D

HCS+: Signalized Intersections Release 5.5

Analyst: djp

Inter.: Rt 15 and Houses Corner

Agency: D&D

Area Type: All other areas

Date: 4-18-2014

Jurisd:

Period: PM Peak

Year : b WITH MIT

Project ID: Dykstra - Sparta

E/W St: Houses Corner Rd

N/S St: Route 15

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	1	1	0	1	1	0	1	1	0
LGConfig	L	TR		L	TR		L	TR		L	TR	
Volume	13	27	49	52	9	23	49	1143	43	38	862	26
Lane Width	12.0	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						Peds		
WB	Left	A				SB	Left	A	
	Thru	A					Thru	A	
	Right	A					Right	A	
	Peds						Peds		
NB	Right					EB	Right		
SB	Right					WB	Right		
Green		16.0					91.0		
Yellow		4.0					5.0		
All Red		2.0					2.0		

Cycle Length: 120.0 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	179	1342	0.08	0.13	45.7	D		
TR	220	1651	0.38	0.13	48.6	D	48.2	D
Westbound								
L	171	1283	0.33	0.13	48.3	D		
TR	217	1631	0.16	0.13	46.4	D	47.6	D
Northbound								
L	299	394	0.18	0.76	4.4	A		
TR	1378	1817	0.95	0.76	25.8	C	24.9	C
Southbound								
L	76	100	0.55	0.76	14.5	B		
TR	1379	1819	0.71	0.76	9.3	A	9.5	A

Intersection Delay = 20.5 (sec/veh) Intersection LOS = C

CAPACITY ANALYSIS SUMMARY TABLE

4/18/2014

INTERSECTION: Rt 15 and Houses Corner
PEAK HOUR: SAT Peak

APPROACH MOVEMENT	NO BUILD CONDITIONS				BUILD CONDITIONS				CHANGE IN DELAY				BUILD WITH MITIGATION				CHANGE IN DELAY					
	# LANES	VOLUME	GREEN TIME	DELAY	LOS	# LANES	VOLUME	GREEN TIME	DELAY	LOS	ALLOWED	COMPUTED	EXCEEDED	# LANES	VOLUME	GREEN TIME	DELAY	LOS	ALLOWED	COMPUTED	EXCEEDED	
EB	LEFT	1	6	32	46.7	D	1	8	32	46.8	D	8.3	0.1	NO	1	8	16	45.5	D	8.3	-1.2	NO
	THRU	0.5	12	32	48.1	D	0.5	12	32	48.1	D	8.0	0.0	NO	0.5	12	16	47.1	D	8.0	-1.0	NO
	RIGHT	0.5	35	32	48.1	D	0.5	35	32	48.1	D	8.0	0.0	NO	0.5	35	16	47.1	D	8.0	-1.0	NO
	OVERALL	2	53	32	47.9	D	2	55	32	47.9	D	8.0	0.0	NO	2	55	16	46.8	D	8.0	-1.1	NO
WB	LEFT	1	34	32	47.9	D	1	34	32	47.9	D	8.0	0.0	NO	1	34	16	46.9	D	8.0	-1.0	NO
	THRU	0.5	36	32	48.4	D	0.5	36	32	48.8	D	7.9	0.4	NO	0.5	36	16	47.9	D	7.9	-0.5	NO
	RIGHT	0.5	23	32	48.4	D	0.5	33	32	48.8	D	7.9	0.4	NO	0.5	33	16	47.9	D	7.9	-0.5	NO
	OVERALL	2	93	32	48.2	D	2	103	32	48.5	D	8.0	0.3	NO	2	103	16	47.6	D	8.0	-0.6	NO
NB	LEFT	1	31	105	7.5	A	1	31	105	8.5	A	18.1	1.0	NO	1	31	91	4.2	A	18.1	-3.3	NO
	THRU	0.5	962	105	20.7	C	0.5	1182	105	50.5	D	14.8	29.8	YES	0.5	1182	91	23.8	C	14.8	3.1	NO
	RIGHT	0.5	29	105	20.7	C	0.5	29	105	50.5	D	14.8	29.8	YES	0.5	29	91	23.8	C	14.8	3.1	NO
	OVERALL	2	991	105	20.3	C	2	1211	105	49.5	D	14.9	29.2	YES	2	1211	91	23.3	C	14.9	3.0	NO
SB	LEFT	1	24	105	8.1	A	1	33	105	52.5	D	18.0	44.4	YES	1	33	91	9.6	A	18.0	1.5	NO
	THRU	0.5	789	105	14.1	B	0.5	981	105	20.9	C	16.5	6.8	NO	0.5	981	91	11.0	B	16.5	-3.1	NO
	RIGHT	0.5	13	105	14.1	B	0.5	15	105	20.9	C	16.5	6.8	NO	0.5	15	91	11.0	B	16.5	-3.1	NO
	OVERALL	2	802	105	13.9	B	2	996	105	21.9	C	16.5	8.0	NO	2	996	91	11.0	B	16.5	-2.9	NO

HCS+: Signalized Intersections Release 5.5

Analyst: djp
 Agency: D&D
 Date: 12-10-2013
 Period: sat Peak
 Project ID: Dykstra - Sparta
 E/W St: Houses Corner Rd

Inter.: Rt 15 and Houses Corner
 Area Type: All other areas
 Jurisd:
 Year : nobuild
 N/S St: Route 15

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	1	1	0	1	1	0	1	1	0
LGConfig	L	TR		L	TR		L	TR		L	TR	
Volume	6	12	35	34	36	23	31	962	29	24	789	13
Lane Width	12.0	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					Peds			
WB	Left	A				SB Left	A		
	Thru	A				Thru	A		
	Right	A				Right	A		
	Peds					Peds			
NB	Right					EB Right			
SB	Right					WB Right			
Green		32.0					105.0		
Yellow		4.0					5.0		
All Red		2.0					2.0		

Cycle Length: 150.0 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	281	1319	0.02	0.21	46.7	D		
TR	349	1638	0.15	0.21	48.1	D	47.9	D
Westbound								
L	285	1335	0.13	0.21	47.9	D		
TR	371	1737	0.17	0.21	48.4	D	48.2	D
Northbound								
L	298	426	0.11	0.70	7.5	A		
TR	1286	1837	0.83	0.70	20.7	C	20.3	C
Southbound								
L	163	233	0.16	0.70	8.1	A		
TR	1288	1840	0.67	0.70	14.1	B	13.9	B

Intersection Delay = 19.7 (sec/veh) Intersection LOS = B

HCS+: Signalized Intersections Release 5.5

Analyst: djp

Agency: D&D

Date: 4-18-2014

Period: sat Peak

Project ID: Dykstra - Sparta

E/W St: Houses Corner Rd

Inter.: Rt 15 and Houses Corner

Area Type: All other areas

Jurisd:

Year : b

N/S St: Route 15

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	1	1	0	1	1	0	1	1	0
LGConfig	L	TR		L	TR		L	TR		L	TR	
Volume	8	12	35	34	36	33	31	1182	29	33	981	15
Lane Width	12.0	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					Peds			
WB Left	A				SB Left	A		
Thru	A				Thru	A		
Right	A				Right	A		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	32.0				105.0			
Yellow	4.0				5.0			
All Red	2.0				2.0			

Cycle Length: 150.0 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	279	1308	0.03	0.21	46.8	D		
TR	349	1638	0.15	0.21	48.1	D	47.9	D
Westbound								
L	285	1335	0.13	0.21	47.9	D		
TR	366	1714	0.20	0.21	48.8	D	48.5	D
Northbound								
L	159	227	0.21	0.70	8.5	A		
TR	1287	1838	1.01	0.70	50.5	D	49.5	D
Southbound								
L	49	70	0.71	0.70	52.5	D		
TR	1289	1841	0.83	0.70	20.9	C	21.9	C

Intersection Delay = 37.7 (sec/veh) Intersection LOS = D

HCS+: Signalized Intersections Release 5.5

Analyst: djp

Inter.: Rt 15 and Houses Corner

Agency: D&D

Area Type: All other areas

Date: 4-18-2014

Jurisd:

Period: sat Peak

Year : b WITH MIT

Project ID: Dykstra - Sparta

E/W St: Houses Corner Rd

N/S St: Route 15

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	1	1	0	1	1	0	1	1	0
LGConfig	L	TR		L	TR		L	TR		L	TR	
Volume	8	12	35	34	36	33	31	1182	29	33	981	15
Lane Width	12.0	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						Peds		
WB	Left	A				SB	Left	A	
	Thru	A					Thru	A	
	Right	A					Right	A	
	Peds						Peds		
NB	Right					EB	Right		
SB	Right					WB	Right		
Green		16.0					91.0		
Yellow		4.0					5.0		
All Red		2.0					2.0		

Cycle Length: 120.0 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	174	1308	0.05	0.13	45.5	D		
TR	218	1638	0.23	0.13	47.1	D	46.8	D
Westbound								
L	178	1335	0.21	0.13	46.9	D		
TR	229	1714	0.32	0.13	47.9	D	47.6	D
Northbound								
L	240	316	0.14	0.76	4.2	A		
TR	1394	1838	0.93	0.76	23.8	C	23.3	C
Southbound								
L	77	102	0.45	0.76	9.6	A		
TR	1396	1841	0.77	0.76	11.0	B	11.0	B

Intersection Delay = 19.6 (sec/veh) Intersection LOS = B

CAPACITY ANALYSIS SUMMARY TABLE

4/16/2014

INTERSECTION: Rt 15 and Meadows/Morris Farm
 PEAK HOUR: PM Peak

APPROACH MOVEMENT	NO BUILD CONDITIONS				BUILD CONDITIONS				CHANGE IN DELAY				BUILD WITH MITIGATION				CHANGE IN DELAY					
	# LANES	VOLUME	GREEN TIME	DELAY	LOS	# LANES	VOLUME	GREEN TIME	DELAY	LOS	ALLOWED	COMPUTED	EXCEEDED	# LANES	VOLUME	GREEN TIME	DELAY	LOS	ALLOWED	COMPUTED	EXCEEDED	
EB	LEFT	0.33	13	19	45.0	D	0.33	13	19	45.0	D	8.8	0.0	NO								
	THRU	0.33	31	19	45.0	D	0.33	31	19	45.0	D	8.8	0.0	NO								
	RIGHT	0.33	21	19	45.0	D	0.33	21	19	45.0	D	8.8	0.0	NO								
	OVERALL	1	65	19	45.0	D	1	65	19	45.0	D	8.8	0.0	NO								
WB	LEFT	0.33	27	19	45.3	D	0.33	27	19	45.3	D	8.7	0.0	NO								
	THRU	0.33	18	19	45.3	D	0.33	18	19	45.3	D	8.7	0.0	NO								
	RIGHT	0.33	21	19	45.3	D	0.33	21	19	45.3	D	8.7	0.0	NO								
	OVERALL	1	66	19	45.3	D	1	66	19	45.3	D	8.7	0.0	NO								
NB	LEFT	0.33	46	89	27.5	C	0.33	46	89	32.9	C	13.1	5.4	NO								
	THRU	0.33	1145	89	27.5	C	0.33	1177	89	32.9	C	13.1	5.4	NO								
	RIGHT	0.33	37	89	27.5	C	0.33	37	89	32.9	C	13.1	5.4	NO								
	OVERALL	1	1162	89	27.5	C	1	1214	89	32.9	C	13.1	5.4	NO								
SB	LEFT	0.33	17	89	6.1	A	0.33	17	89	6.3	A	18.5	0.2	NO								
	THRU	0.33	507	89	6.1	A	0.33	540	89	6.3	A	18.5	0.2	NO								
	RIGHT	0.33	14	89	6.1	A	0.33	14	89	6.3	A	18.5	0.2	NO								
	OVERALL	1	521	89	6.1	A	1	554	89	6.3	A	18.5	0.2	NO								

HCS+: Signalized Intersections Release 5.5

Analyst: djp

Inter.: Rt 15 and Meadows Rd

Agency: dd

Area Type: All other areas

Date: 12-10-2013

Jurisd:

Period: pm

Year: nb

Project ID: Dykstra - Sparta

E/W St: Meadows Rd/Morris Farm

N/S St: Meadows Rd / Morris Farm Rd

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	1	0	0	1	0	0	1	0	0	1	0
LGConfig	LTR			LTR			LTR			LTR		
Volume	13	31	21	27	18	21	46	1145	37	17	507	14
Lane Width	11.0			12.0			14.0			14.0		
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					Peds			
WB Left	A				SB Left	A		
Thru	A				Thru	A		
Right	A				Right	A		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	19.0				89.0			
Yellow	4.0				4.0			
All Red	2.0				2.0			

Cycle Length: 120.0 secs

Intersection Performance Summary

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

Eastbound

LTR	258	1628	0.28	0.16	45.0	D	45.0	D
-----	-----	------	------	------	------	---	------	---

Westbound

LTR	243	1535	0.30	0.16	45.3	D	45.3	D
-----	-----	------	------	------	------	---	------	---

Northbound

LTR	1420	1915	0.95	0.74	27.5	C	27.5	C
-----	------	------	------	------	------	---	------	---

Southbound

LTR	1388	1871	0.43	0.74	6.1	A	6.1	A
-----	------	------	------	------	-----	---	-----	---

Intersection Delay = 22.6 (sec/veh) Intersection LOS = C

HCS+: Signalized Intersections Release 5.5

Analyst: djp

Inter.: Rt 15 and Meadows Rd

Agency: dd

Area Type: All other areas

Date: 4-16-2014

Jurisd:

Period: pm

Year : b

Project ID: Dykstra - Sparta

E/W St: Meadows Rd/Morris Farm

N/S St: Meadows Rd / Morris Farm Rd

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	1	0	0	1	0	0	1	0	0	1	0
LGConfig	LTR			LTR			LTR			LTR		
Volume	13	31	21	27	18	21	46	1177	37	17	540	14
Lane Width	11.0			12.0			14.0			14.0		
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					Peds			
WB Left	A				SB Left	A		
Thru	A				Thru	A		
Right	A				Right	A		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	19.0				89.0			
Yellow	4.0				4.0			
All Red	2.0				2.0			

Cycle Length: 120.0 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

LTR	258	1628	0.28	0.16	45.0	D	45.0	D
-----	-----	------	------	------	------	---	------	---

Westbound

LTR	243	1535	0.30	0.16	45.3	D	45.3	D
-----	-----	------	------	------	------	---	------	---

Northbound

LTR	1419	1913	0.98	0.74	32.9	C	32.9	C
-----	------	------	------	------	------	---	------	---

Southbound

LTR	1389	1873	0.45	0.74	6.3	A	6.3	A
-----	------	------	------	------	-----	---	-----	---

Intersection Delay = 26.0 (sec/veh) Intersection LOS = C

HCS+: Signalized Intersections Release 5.5

Analyst: djp

Agency: dd

Date: 12-10-2013

Period: sat

Project ID: Dykstra - Sparta

E/W St: Meadows Rd/Morris Farm

Inter.: Rt 15 and Meadows Rd

Area Type: All other areas

Jurisd:

Year : nb

N/S St: Meadows Rd / Morris Farm Rd

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	1	0	0	1	0	0	1	0	0	1	0
LGConfig	LTR			LTR			LTR			LTR		
Volume	5	25	31	9	44	20	25	525	20	19	508	23
Lane Width	11.0			12.0			14.0			14.0		
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					Peds			
WB	Left	A				SB Left	A		
	Thru	A				Thru	A		
	Right	A				Right	A		
	Peds					Peds			
NB	Right					EB Right			
SB	Right					WB Right			
Green		19.0					89.0		
Yellow		4.0					4.0		
All Red		2.0					2.0		

Cycle Length: 120.0 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								
LTR	265	1676	0.25	0.16	44.7	D	44.7	D
Westbound								
LTR	279	1760	0.28	0.16	45.1	D	45.1	D
Northbound								
LTR	1438	1939	0.43	0.74	6.1	A	6.1	A
Southbound								
LTR	1453	1959	0.41	0.74	5.9	A	5.9	A

Intersection Delay = 10.1 (sec/veh) Intersection LOS = B

HCS+: Signalized Intersections Release 5.5

Analyst: djp

Inter.: Rt 15 and Meadows Rd

Agency: dd

Area Type: All other areas

Date: 4-16-2014

Jurisd:

Period: sat

Year : b

Project ID: Dykstra - Sparta

E/W St: Meadows Rd/Morris Farm

N/S St: Meadows Rd / Morris Farm Rd

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	1	0	0	1	0	0	1	0	0	1	0
LGConfig	LTR			LTR			LTR			LTR		
Volume	5	25	31	9	44	20	25	568	20	19	555	23
Lane Width	11.0			12.0			14.0			14.0		
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					Peds			
WB Left	A				SB Left	A		
Thru	A				Thru	A		
Right	A				Right	A		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	19.0				89.0			
Yellow	4.0				4.0			
All Red	2.0				2.0			

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group	Adj Sat Flow Rate (s)	Ratios		Lane Group		Approach	
	Capacity		v/c	g/c	Delay	LOS	Delay	LOS
Eastbound								
LTR	265	1676	0.25	0.16	44.7	D	44.7	D
Westbound								
LTR	279	1760	0.28	0.16	45.1	D	45.1	D
Northbound								
LTR	1438	1939	0.46	0.74	6.3	A	6.3	A
Southbound								
LTR	1454	1960	0.44	0.74	6.2	A	6.2	A

Intersection Delay = 10.1 (sec/veh) Intersection LOS = B

CAPACITY ANALYSIS SUMMARY TABLE

8/17/2014

INTERSECTION: Rt 15 and Route 94/CR 623
 PEAK HOUR: PM Peak

APPROACH MOVEMENT	NO BUILD CONDITIONS					BUILD CONDITIONS					CHANGE IN DELAY					BUILD WITH MITIGATION					CHANGE IN DELAY				
	# LANES	VOLUME	GREEN TIME	DELAY	LOS	# LANES	VOLUME	GREEN TIME	DELAY	LOS	ALLOWED	COMPUTED	EXCEEDED	# LANES	VOLUME	GREEN TIME	DELAY	LOS	ALLOWED	COMPUTED	EXCEEDED				
EB	LEFT	0.5	129	37	45.1	D	0.5	129	37	45.9	D	8.7	0.8	NO	0.5	129	35	52.4	D	8.7	7.3	NO			
	THRU	1	485	37	45.1	D	1	485	37	45.9	D	8.7	0.8	NO	1	485	35	52.4	D	8.7	7.3	NO			
	RIGHT	0.5	57	37	45.1	D	0.5	75	37	45.9	D	8.7	0.8	NO	0.5	75	35	52.4	D	8.7	7.3	NO			
	OVERALL	2	681		45.1	D	2	689		45.9	D	8.7	0.8	NO	2	689		52.4	D	8.7	7.3	NO			
WB	LEFT	0.5	40	37	36.5	D	0.5	40	37	36.7	D	10.9	0.2	NO	0.5	40	35	41.2	D	10.9	4.7	NO			
	THRU	0.5	123	37	36.5	D	0.5	123	37	36.7	D	10.9	0.2	NO	0.5	123	35	41.2	D	10.9	4.7	NO			
	RIGHT	1	258	37	34.9	C	1	258	37	34.9	C	11.3	0.0	NO	1	258	35	37.0	D	11.3	2.1	NO			
	OVERALL	2	421		36.6	D	2	421		35.7	D	11.1	0.1	NO	2	421		38.7	D	11.1	3.1	NO			
NB	LEFT	0.5	54	71	73.6	E	0.5	61	71	111.8	F	1.6	38.2	YES	0.5	61	73	15.9	B	1.6	-57.7	NO			
	THRU	0.5	973	71	73.6	E	0.5	1045	71	111.8	F	1.6	38.2	YES	1.5	1045	73	15.9	B	1.6	-57.7	NO			
	RIGHT																								
	OVERALL	1	973		73.6	E	1	1106		111.8	F	1.6	38.2	YES	2	1106		15.9	B	1.6	-57.7	NO			
SB	LEFT																								
	THRU	1.5	534	71	12.2	B	1.5	610	71	12.6	B	17.0	0.4	NO	1.5	610	73	11.5	B	17.0	-0.7	NO			
	RIGHT	0.5	37	71	12.2	B	0.5	37	71	12.6	B	17.0	0.4	NO	0.5	37	73	11.5	B	17.0	-0.7	NO			
	OVERALL	2	571		12.2	B	2	647		12.6	B	17.0	0.4	NO	2	647		11.5	B	17.0	-0.7	NO			

HCS+: Signalized Intersections Release 5.5

Analyst: djp Inter.: Rt 15 & Rt 94/CR623
 Agency: D&D Area Type: All other areas
 Date: 12-10-2013 Jurisd:
 Period: PM Year : no build
 Project ID: Dykstra - Sparta
 E/W St: Rt 94/CR 623 N/S St: Rt 15

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	0	0	1	1	0	1	0	0	2	0
LGConfig	LTR			LT R			LT			TR		
Volume	129	485	67	40	123	258	54	973		534	37	
Lane Width	12.0			12.0 12.0			12.0			12.0		
RTOR Vol	10			27						2		

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		
	Peds						Peds		
WB	Left	A				SB	Left		
	Thru	A					Thru	A	
	Right	A					Right	A	
	Peds						Peds		
NB	Right					EB	Right		
SB	Right					WB	Right		
Green		37.0					71.0		
Yellow		4.0					4.0		
All Red		2.0					2.0		

Cycle Length: 120.0 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								
LTR	857	2778	0.82	0.31	45.1	D	45.1	D
Westbound								
LT	314	1018	0.54	0.31	36.5	D	35.6	D
R	479	1553	0.51	0.31	34.9	C		
Northbound								
LT	1010	1707	1.07	0.59	73.6	E	73.6	E
Southbound								
TR	2039	3446	0.29	0.59	12.2	B	12.2	B

Intersection Delay = 47.7 (sec/veh) Intersection LOS = D

HCS+: Signalized Intersections Release 5.5

Analyst: djp Inter.: Rt 15 & Rt 94/CR623
 Agency: D&D Area Type: All other areas
 Date: 4-22-2014 Jurisd:
 Period: PM Year : b
 Project ID: Dykstra - Sparta
 E/W St: Rt 94/CR 623 N/S St: Rt 15

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	0	0	1	1	0	1	0	0	2	0
LGConfig	LTR			LT R			LT			TR		
Volume	129	485	75	40	123	258	61	1045		610	37	
Lane Width	12.0			12.0 12.0			12.0			12.0		
RTOR Vol	10			27						2		

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		
	Peds						Peds		
WB	Left	A				SB	Left		
	Thru	A					Thru	A	
	Right	A					Right	A	
	Peds						Peds		
NB	Right					EB	Right		
SB	Right					WB	Right		
Green		37.0					71.0		
Yellow		4.0					4.0		
All Red		2.0					2.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group	Adj Sat Flow Rate (s)	Ratios		Lane Group		Approach	
	Capacity		v/c	g/c	Delay LOS		Delay LOS	
Eastbound								
LTR	856	2777	0.84	0.31	45.9	D	45.9	D
Westbound								
LT	310	1005	0.55	0.31	36.7	D	35.7	D
R	479	1553	0.51	0.31	34.9	C		
Northbound								
LT	995	1682	1.17	0.59	111.8	F	111.8	F
Southbound								
TR	2041	3450	0.33	0.59	12.6	B	12.6	B

Intersection Delay = 62.7 (sec/veh) Intersection LOS = E

HCS+: Signalized Intersections Release 5.5

Analyst: djp
 Agency: D&D
 Date: 4-22-2014
 Period: PM
 Project ID: Dykstra - Sparta
 E/W St: Rt 94/CR 623

Inter.: Rt 15 & Rt 94/CR623
 Area Type: All other areas
 Jurisd:
 Year : b WITH MIT
 N/S St: Rt 15

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	0	0	1	1	0	2	0	0	2	0
LGConfig	LTR			LT R			LT			TR		
Volume	129	485	75	40	123	258	61	1045		610	37	
Lane Width	12.0			12.0 12.0			12.0			12.0		
RTOR Vol	10			27						2		

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		
	Peds						Peds		
WB	Left	A				SB	Left		
	Thru	A					Thru	A	
	Right	A					Right	A	
	Peds						Peds		
NB	Right					EB	Right		
SB	Right					WB	Right		
Green		35.0						73.0	
Yellow		4.0						4.0	
All Red		2.0						2.0	

Cycle Length: 120.0 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								
LTR	806	2764	0.89	0.29	52.4	D	52.4	D
Westbound								
LT	274	939	0.62	0.29	41.2	D	38.7	D
R	453	1553	0.54	0.29	37.0	D		
Northbound								
LT	1809	2973	0.64	0.61	15.9	B	15.9	B
Southbound								
TR	2099	3450	0.32	0.61	11.5	B	11.5	B

Intersection Delay = 26.9 (sec/veh) Intersection LOS = C

CAPACITY ANALYSIS SUMMARY TABLE

6/17/2014

INTERSECTION: Rt 15 and Route 94/CR 623
 PEAK HOUR: SAT Peak

APPROACH MOVEMENT	NO BUILD CONDITIONS				BUILD CONDITIONS				CHANGE IN DELAY				BUILD WITH MITIGATION				CHANGE IN DELAY					
	# LANES	VOLUME	GREEN TIME	DELAY	LOS	# LANES	VOLUME	GREEN TIME	DELAY	LOS	ALLOWED	COMPUTED	EXCEEDED	# LANES	VOLUME	GREEN TIME	DELAY	LOS	ALLOWED	COMPUTED	EXCEEDED	
EB	LEFT	0.5	87	37	41.8	D	0.5	87	37	42.4	D	9.6	0.6	NO	0.5	87	38	40.6	D	9.6	-1.2	NO
	THRU	1	478	37	41.8	D	1	478	37	42.4	D	9.6	0.6	NO	1	478	38	40.6	D	9.6	-1.2	NO
	RIGHT	0.5	62	37	41.8	D	0.5	73	37	42.4	D	9.6	0.6	NO	0.5	73	38	40.6	D	17.3	-1.2	NO
	OVERALL	2	627		41.8	D	2	638		42.4	D	9.6	0.6	NO	2	638		40.6	D	9.6	-1.2	NO
WB	LEFT	0.5	95	37	126.7	F	0.5	95	37	135.7	F	-11.7	9.0	YES	0.5	95	38	116.4	F	-11.7	-10.3	NO
	THRU	0.5	132	37	126.7	F	0.5	132	37	135.7	F	-11.7	9.0	YES	0.5	132	38	116.4	F	-11.7	-10.3	NO
	RIGHT	1	380	37	39.8	D	1	380	37	39.8	D	10.1	0.0	NO	1	380	38	38.4	D	10.1	-1.4	NO
	OVERALL	2	607		76.0	E	2	607		79.8	E	1.0	3.8	YES	2	607		70.9	E	1.0	-5.1	NO
NB	LEFT	0.5	36	71	30.8	C	0.5	45	71	56.6	E	12.3	25.8	YES	0.5	45	70	16.2	B	12.3	-14.6	NO
	THRU	0.5	868	71	30.8	C	0.5	965	71	56.6	E	12.3	25.8	YES	1.5	965	70	16.2	B	12.3	-14.6	NO
	RIGHT											20.0	0.0	NO						20.0	0.0	NO
	OVERALL	1	904		30.8	C	1	1010		56.6	E	12.3	25.8	YES	2	1010		16.2	B	12.3	-14.6	NO
SB	LEFT											20.0	0.0	NO						20.0	0.0	NO
	THRU	1.5	636	71	12.5	B	1.5	745	71	13.1	B	16.9	0.6	NO	1.5	745	70	13.6	B	16.9	1.1	NO
	RIGHT	0.5	34	71	12.5	B	0.5	34	71	13.1	B	16.9	0.6	NO	0.5	34	70	13.6	B	16.9	1.1	NO
	OVERALL	2	670		12.5	B	2	779		13.1	B	16.9	0.6	NO	2	779		13.6	B	16.9	1.1	NO

HCS+: Signalized Intersections Release 5.5

Analyst: djp Inter.: Rt 15 & Rt 94/CR623
 Agency: D&D Area Type: All other areas
 Date: 12-10-2013 Jurisd:
 Period: sat Year : no build
 Project ID: Dykstra - Sparta
 E/W St: Rt 94/CR 623 N/S St: Rt 15

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	0	0	1	1	0	1	0	0	2	0
LGConfig	LTR			LT R			LT			TR		
Volume	87	478	62	95	132	380	36	868		636	34	
Lane Width		12.0			12.0	12.0		12.0		12.0		
RTOR Vol			8			62						1

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			
Peds					Peds			
WB Left	A				SB Left			
Thru	A				Thru	A		
Right	A				Right	A		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	37.0				71.0			
Yellow	4.0				4.0			
All Red	2.0				2.0			

Cycle Length: 120.0 secs

Intersection Performance Summary

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

Eastbound

LTR 837 2715 0.76 0.31 41.8 D 41.8 D

Westbound

LT 216 702 1.08 0.31 126.7 F 76.0 E
 R 488 1583 0.67 0.31 39.8 D

Northbound

LT 1047 1770 0.89 0.59 30.8 C 30.8 C

Southbound

TR 2083 3520 0.33 0.59 12.5 B 12.5 B

Intersection Delay = 37.8 (sec/veh) Intersection LOS = D

HCS+: Signalized Intersections Release 5.5

Analyst: djp
 Agency: D&D
 Date: 6-17-2014
 Period: sat
 Project ID: Dykstra - Sparta
 E/W St: Rt 94/CR 623

Inter.: Rt 15 & Rt 94/CR623
 Area Type: All other areas
 Jurisd:
 Year : b
 N/S St: Rt 15

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	0	0	1	1	0	1	0	0	2	0
LGConfig	LTR			LT R			LT			TR		
Volume	87	478	73	95	132	380	45	965		745	34	
Lane Width		12.0			12.0	12.0		12.0		12.0		
RTOR Vol			8			62					1	

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		
	Peds						Peds		
WB	Left	A				SB	Left		
	Thru	A					Thru	A	
	Right	A					Right	A	
	Peds						Peds		
NB	Right					EB	Right		
SB	Right					WB	Right		
Green		37.0					71.0		
Yellow		4.0					4.0		
All Red		2.0					2.0		

Cycle Length: 120.0 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								
LTR	837	2713	0.78	0.31	42.4	D	42.4	D
Westbound								
LT	211	685	1.11	0.31	135.7	F	79.8	E
R	488	1583	0.67	0.31	39.8	D		
Northbound								
LT	1025	1733	1.02	0.59	56.6	E	56.6	E
Southbound								
TR	2085	3524	0.38	0.59	13.1	B	13.1	B

Intersection Delay = 46.4 (sec/veh) Intersection LOS = D

HCS+: Signalized Intersections Release 5.5

Analyst: djp

Agency: D&D

Date: 6-17-2014

Period: sat

Project ID: Dykstra - Sparta

E/W St: Rt 94/CR 623

Inter.: Rt 15 & Rt 94/CR623

Area Type: All other areas

Jurisd:

Year : b WITH MIT

N/S St: Rt 15

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	0	0	1	1	0	2	0	0	2	0
LGConfig	LTR			LT R			LT			TR		
Volume	87	478	73	95	132	380	45	965		745	34	
Lane Width	12.0			12.0 12.0			12.0			12.0		
RTOR Vol	8			62						1		

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			
Peds					Peds			
WB Left	A				SB Left			
Thru	A				Thru	A		
Right	A				Right	A		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	38.0				70.0			
Yellow	4.0				4.0			
All Red	2.0				2.0			

Cycle Length: 120.0 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								
LTR	863	2725	0.75	0.32	40.6	D	40.6	D
Westbound								
LT	222	702	1.05	0.32	116.4	F	70.9	E
R	501	1583	0.65	0.32	38.4	D		
Northbound								
LT	1796	3079	0.58	0.58	16.2	B	16.2	B
Southbound								
TR	2056	3524	0.39	0.58	13.6	B	13.6	B

Intersection Delay = 30.8 (sec/veh) Intersection LOS = C

CAPACITY ANALYSIS SUMMARY TABLE 6/17/2014

 INTERSECTION: Rt 15 and Wilson White Lake
 PEAK HOUR: PM Peak

APPROACH MOVEMENT	NO BUILD CONDITIONS				BUILD CONDITIONS				CHANGE IN DELAY				BUILD WITH MITIGATION				CHANGE IN DELAY					
	# LANES	VOLUME	GREEN TIME	DELAY	LOS	# LANES	VOLUME	GREEN TIME	DELAY	LOS	ALLOWED	COMPUTED	EXCEEDED	# LANES	VOLUME	GREEN TIME	DELAY	LOS	ALLOWED	COMPUTED	EXCEEDED	
EB	LEFT	1	122	18	51.6	D	1	122	18	61.7	E	7.1	10.1	YES	1	122	23	40.5	D	7.1	-11.1	NO
	THRU	0.5	85	11	199.4	F	0.5	90	11	213.9	F	-29.9	14.5	YES	0.5	90	14	113.7	F	-29.9	-85.7	NO
	RIGHT	0.5	71	11	199.4	F	0.5	71	11	213.9	F	-29.9	14.5	YES	0.5	71	14	113.7	F	-29.9	-85.7	NO
	OVERALL	2	278		134.6	F	2	283		148.3	F	-13.7	13.7	YES	2	283		82.2	F	-13.7	-52.4	NO
	LEFT	1	198	18	296.2	F	1	248	18	457.9	F	-54.1	161.7	YES	1	248	23	277.3	F	-54.1	-18.9	NO
WB	THRU	0.5	35	11	62.3	E	0.5	35	11	97.7	F	4.4	35.4	YES	0.5	35	14	61.9	E	4.4	-0.4	NO
	RIGHT	0.5	47	11	62.3	E	0.5	75	11	97.7	F	4.4	35.4	YES	0.5	75	14	61.9	E	4.4	-0.4	NO
	OVERALL	2	280		227.6	F	2	353		347.2	F	-36.9	119.6	YES	2	358		211.1	F	-36.9	-16.5	NO
	LEFT	1	30	83	6.4	A	1	35	83	6.8	A	18.4	0.4	NO	1	35	78	9.1	A	18.4	2.7	NO
	THRU	0.5	897	83	56.0	E	0.5	948	83	72.8	E	6.0	16.8	YES	1.5	948	78	12.7	B	6.0	-43.3	NO
NB	RIGHT	0.5	159	83	56.0	E	0.5	159	83	72.8	E	6.0	16.8	YES	0.5	159	78	12.7	B	6.0	-43.3	NO
	OVERALL	2	1056		54.6	D	2	1107		70.7	E	6.4	16.1	YES	3	1107		12.6	B	6.4	-42.0	NO
	LEFT	1	36	83	45.4	D	1	50	83	133.7	F	8.7	88.3	YES	1	50	78	10.6	B	8.7	-34.8	NO
	THRU	0.5	642	83	12.1	B	0.5	712	83	14.0	B	17.0	1.9	NO	0.5	712	78	18.7	B	17.0	6.6	NO
	RIGHT	0.5	47	83	12.1	B	0.5	47	83	14.0	B	17.0	1.9	NO	0.5	47	78	18.7	B	17.0	6.6	NO
SB	OVERALL	2	689		13.7	B	2	759		21.4	B	16.6	7.7	NO	2	759		18.2	B	16.6	4.5	NO

HCS+: Signalized Intersections Release 5.5

Analyst: djp

Inter.: Rt15&White Lk Rd / Wilson Dr

Agency: D&D

Area Type: All other areas

Date: 12-10-2013

Jurisd:

Period: PM Peak

Year : nobuild

Project ID: Dykstra - Sparta

E/W St: White Lake Rd / Wilson Dr

N/S St: Route 15

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	1	1	0	1	1	0	1	1	0
LGConfig	L	TR		L	TR		L	TR		L	TR	
Volume	122	85	71	198	35	47	30	897	159	36	642	47
Lane Width	12.0	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	A			NB	Left	A	
	Thru		A				Thru	A	
	Right		A				Right	A	
	Peds						Peds		
WB	Left	A	A			SB	Left	A	
	Thru		A				Thru	A	
	Right		A				Right	A	
	Peds						Peds		
NB	Right					EB	Right		
SB	Right					WB	Right		
Green		7.0	11.0				83.0		
Yellow		5.0	3.0				5.0		
All Red		0.0	4.0				2.0		

Cycle Length: 120.0 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	223	1736	0.67	0.21	51.6	D		
TR	156	1702	1.22	0.09	199.4	F	134.6	F
Westbound								
L	162	1736	1.49	0.21	296.2	F		
TR	153	1671	0.65	0.09	62.3	E	227.6	F
Northbound								
L	307	444	0.12	0.69	6.4	A		
TR	1235	1786	1.04	0.69	56.0	E	54.6	D
Southbound								
L	61	88	0.72	0.69	45.4	D		
TR	1251	1808	0.67	0.69	12.1	B	13.7	B

Intersection Delay = 71.9 (sec/veh) Intersection LOS = E

HCS+: Signalized Intersections Release 5.5

Analyst: djp Inter.: Rt15&White Lk Rd / Wilson Dr
 Agency: D&D Area Type: All other areas
 Date: 6-17-2014 Jurisd:
 Period: PM Peak Year: b
 Project ID: Dykstra - Sparta
 E/W St: White Lake Rd / Wilson Dr N/S St: Route 15

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	1	1	0	1	1	0	1	1	0
LG Config	L	TR		L	TR		L	TR		L	TR	
Volume	122	90	71	248	35	75	35	948	159	50	712	47
Lane Width	12.0	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	A			NB	Left	A	
	Thru		A				Thru	A	
	Right		A				Right	A	
	Peds						Peds		
WB	Left	A	A			SB	Left	A	
	Thru		A				Thru	A	
	Right		A				Right	A	
	Peds						Peds		
NB	Right					EB	Right		
SB	Right					WB	Right		
Green		7.0	11.0				83.0		
Yellow		5.0	3.0				5.0		
All Red		0.0	4.0				2.0		

Cycle Length: 120.0 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	195	1736	0.76	0.21	61.7	E		
TR	156	1706	1.26	0.09	213.9	F	148.3	F
Westbound								
L	162	1736	1.86	0.21	457.9	F		
TR	150	1641	0.89	0.09	97.7	F	347.2	F
Northbound								
L	250	362	0.17	0.69	6.8	A		
TR	1237	1788	1.09	0.69	72.8	E	70.7	E
Southbound								
L	61	88	1.00	0.69	133.7	F		
TR	1252	1810	0.74	0.69	14.0	B	21.4	C

Intersection Delay = 102.0 (sec/veh) Intersection LOS = F

HCS+: Signalized Intersections Release 5.5

Analyst: djp

Agency: D&D

Date: 6-17-2014

Period: PM Peak

Project ID: Dykstra - Sparta

E/W St: White Lake Rd / Wilson Dr

Inter.: Rt15&White Lk Rd / Wilson Dr

Area Type: All other areas

Jurisd:

Year : b WITH MITIGATION

N/S St: Route 15

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	1	1	0	1	2	0	1	1	0
LGConfig	L	TR		L	TR		L	TR		L	TR	
Volume	122	90	71	248	35	75	35	948	159	50	712	47
Lane Width	12.0	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	A			NB Left	A		
Thru		A			Thru	A		
Right		A			Right	A		
Peds					Peds			
WB Left	A	A			SB Left	A		
Thru		A			Thru	A		
Right		A			Right	A		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	9.0	14.0				78.0		
Yellow	5.0	3.0				5.0		
All Red	0.0	4.0				2.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group	Adj Sat Flow Rate (s)	Ratios		Lane Group		Approach	
	Capacity		v/c	g/c	Delay	LOS	Delay	LOS
Eastbound								
L	257	1736	0.58	0.25	40.5	D		
TR	199	1706	0.99	0.12	113.7	F	82.2	F
Westbound								
L	207	1736	1.46	0.25	277.3	F		
TR	191	1641	0.70	0.12	61.9	E	211.1	F
Northbound								
L	200	307	0.22	0.65	9.1	A		
TR	2212	3403	0.61	0.65	12.7	B	12.6	B
Southbound								
L	178	274	0.34	0.65	10.6	B		
TR	1176	1810	0.79	0.65	18.7	B	18.2	B

Intersection Delay = 49.3 (sec/veh) Intersection LOS = D

CAPACITY ANALYSIS SUMMARY TABLE

6/17/2014

INTERSECTION: Rt 15 and Wilson White Lake
 PEAK HOUR: SAT Peak

APPROACH MOVEMENT	NO BUILD CONDITIONS				BUILD CONDITIONS				CHANGE IN DELAY				BUILD WITH MITIGATION				CHANGE IN DELAY					
	# LANES	VOLUME	GREEN TIME	LOS	# LANES	VOLUME	GREEN TIME	LOS	ALLOWED	COMPUTED	EXCEEDED	LOS	# LANES	VOLUME	GREEN TIME	LOS	ALLOWED	COMPUTED	EXCEEDED	LOS		
EB	LEFT	1	24	18	38.4	D	1	24	18	38.5	D	10.4	0.1	NO	1	24	22	35.3	D	10.4	-3.1	NO
	THRU	0.5	9	11	51.6	D	0.5	16	11	52.1	D	7.1	0.5	NO	0.5	16	13	49.8	D	7.1	-1.8	NO
	RIGHT	0.5	25	11	51.6	D	0.5	25	11	52.1	D	7.1	0.5	NO	0.5	25	13	49.8	D	7.1	-1.8	NO
	OVERALL	2	58		46.1	D	2	65		47.1	D	8.5	1.0	NO	2	65		44.4	D	8.5	-1.7	NO
WB	LEFT	1	155	18	47.7	D	1	222	18	105.4	F	8.1	57.7	YES	1	222	22	53.5	D	8.1	5.8	NO
	THRU	0.5	7	11	51.3	D	0.5	7	11	59.3	E	7.2	8.0	YES	0.5	7	13	51.8	D	7.2	0.5	NO
	RIGHT	0.5	23	11	51.3	D	0.5	60	11	59.3	E	7.2	8.0	YES	0.5	60	13	51.8	D	7.2	0.5	NO
	OVERALL	2	185		48.3	D	2	289		94.1	F	7.9	45.8	YES	2	289		53.1	D	7.9	4.8	NO
NB	LEFT	1	36	83	6.3	A	1	42	83	6.8	A	18.4	0.5	NO	1	42	79	8.4	A	18.4	2.1	NO
	THRU	0.5	797	83	15.4	B	0.5	866	83	21.8	C	15.9	5.4	NO	1.5	866	79	10.3	B	15.9	-6.1	NO
	RIGHT	0.5	103	83	15.4	B	0.5	103	83	21.8	C	15.9	5.4	NO	0.5	103	79	10.3	B	15.9	-6.1	NO
	OVERALL	2	900		16.0	B	2	969		21.2	C	16.0	5.2	NO	3	969		10.2	B	16.0	-5.8	NO
SB	LEFT	1	24	83	6.6	A	1	44	83	10.4	B	18.4	3.8	NO	1	44	79	8.2	A	18.4	-12.8	NO
	THRU	0.5	665	83	10.5	B	0.5	765	83	13.1	B	17.4	2.6	NO	0.5	765	79	15.3	B	17.4	4.8	NO
	RIGHT	0.5	15	83	10.5	B	0.5	15	83	13.1	B	17.4	2.6	NO	0.5	15	79	15.3	B	17.4	4.8	NO
	OVERALL	2	680		10.3	B	2	780		13.0	B	17.4	2.7	NO	2	780		14.9	B	17.4	4.6	NO

HCS+: Signalized Intersections Release 5.5

Analyst: djp Inter.: Rt15&White Lk Rd / Wilson Dr
 Agency: D&D Area Type: All other areas
 Date: 6-14-2014 Jurisd:
 Period: sat Peak Year : b WIHT MITIGATION
 Project ID: Dykstra - Sparta
 E/W St: White Lake Rd / Wilson Dr N/S St: Route 15

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	1	1	0	1	2	0	1	1	0
LGConfig	L	TR		L	TR		L	TR		L	TR	
Volume	24	16	25	222	7	60	42	866	103	44	765	15
Lane Width	12.0	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	A			NB	Left	A	
	Thru		A				Thru	A	
	Right		A				Right	A	
	Peds						Peds		
WB	Left	A	A			SB	Left	A	
	Thru		A				Thru	A	
	Right		A				Right	A	
	Peds						Peds		
NB	Right					EB	Right		
SB	Right					WB	Right		
Green		9.0	13.0				79.0		
Yellow		5.0	3.0				5.0		
All Red		0.0	4.0				2.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group	Adj Sat Flow Rate (s)	Ratios		Lane Group		Approach	
	Capacity		v/c	g/C	Delay	LOS	Delay	LOS
Eastbound								
L	298	1752	0.09	0.24	35.3	D		
TR	182	1676	0.25	0.11	49.8	D	44.4	D
Westbound								
L	323	1752	0.76	0.24	53.5	D		
TR	173	1597	0.43	0.11	51.8	D	53.1	D
Northbound								
L	251	382	0.19	0.66	8.4	A		
TR	2275	3456	0.47	0.66	10.3	B	10.2	B
Southbound								
L	275	418	0.18	0.66	8.2	A		
TR	1211	1839	0.72	0.66	15.3	B	14.9	B

Intersection Delay = 18.7 (sec/veh) Intersection LOS = B

HCS+: Signalized Intersections Release 5.5

Analyst: djp Inter.: Rt15&White Lk Rd / Wilson Dr
 Agency: D&D Area Type: All other areas
 Date: 12-10-2013 Jurisd:
 Period: sat Peak Year: nobuild
 Project ID: Dykstra - Sparta
 E/W St: White Lake Rd / Wilson Dr N/S St: Route 15

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	1	1	0	1	1	0	1	1	0
LGConfig	L	TR		L	TR		L	TR		L	TR	
Volume	24	9	25	155	7	23	36	797	103	24	665	15
Lane Width	12.0	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	A			NB	Left	A	
	Thru		A				Thru	A	
	Right		A				Right	A	
	Peds						Peds		
WB	Left	A	A			SB	Left	A	
	Thru		A				Thru	A	
	Right		A				Right	A	
	Peds						Peds		
NB	Right					EB	Right		
SB	Right					WB	Right		
Green		7.0	11.0				83.0		
Yellow		5.0	3.0				5.0		
All Red		0.0	4.0				2.0		

Cycle Length: 120.0 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	282	1752	0.10	0.21	38.4	D		
TR	150	1641	0.25	0.09	51.6	D	46.1	D
Westbound								
L	278	1752	0.62	0.21	47.7	D		
TR	150	1633	0.23	0.09	51.3	D	48.3	D
Northbound								
L	368	532	0.11	0.69	6.3	A		
TR	1254	1813	0.80	0.69	16.4	B	16.0	B
Southbound								
L	203	293	0.13	0.69	6.6	A		
TR	1271	1838	0.59	0.69	10.5	B	10.3	B

Intersection Delay = 18.0 (sec/veh) Intersection LOS = B

HCS+: Signalized Intersections Release 5.5

Analyst: djp

Inter.: Rt15&White Lk Rd / Wilson Dr

Agency: D&D

Area Type: All other areas

Date: 6-14-2014

Jurisd:

Period: sat Peak

Year : b

Project ID: Dykstra - Sparta

E/W St: White Lake Rd / Wilson Dr

N/S St: Route 15

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	1	1	0	1	1	0	1	1	0
LGConfig	L	TR		L	TR		L	TR		L	TR	
Volume	24	16	25	222	7	60	42	866	103	44	765	15
Lane Width	12.0	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	A			NB	Left	A	
	Thru		A				Thru	A	
	Right		A				Right	A	
	Peds						Peds		
WB	Left	A	A			SB	Left	A	
	Thru		A				Thru	A	
	Right		A				Right	A	
	Peds						Peds		
NB	Right					EB	Right		
SB	Right					WB	Right		
Green		7.0	11.0				83.0		
Yellow		5.0	3.0				5.0		
All Red		0.0	4.0				2.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group	Adj Sat Flow Rate (s)	Ratios		Lane Group		Approach	
	Capacity		v/c	g/C	Delay	LOS	Delay	LOS
Eastbound								
L	246	1752	0.11	0.21	38.5	D		
TR	154	1676	0.30	0.09	52.0	D	47.0	D
Westbound								
L	271	1752	0.91	0.21	80.0	E		
TR	146	1597	0.51	0.09	55.1	E	74.2	E
Northbound								
L	292	422	0.16	0.69	6.7	A		
TR	1255	1815	0.86	0.69	20.1	C	19.6	B
Southbound								
L	151	218	0.32	0.69	8.6	A		
TR	1272	1839	0.68	0.69	12.3	B	12.1	B

Intersection Delay = 24.8 (sec/veh) Intersection LOS = C

HCS+: Signalized Intersections Release 5.5

Analyst: djp

Agency: D&D

Date: 6-17-2014

Period: PM Peak

Project ID: site access

E/W St: Proposed Market Street

Inter.: Rt 15 & Market Street

Area Type: All other areas

Jurisd:

Year : b

N/S St: Route 15

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	1	0	1	1	1	1	0
LGConfig				L		R		T	R	L		T
Volume				130		44		1120	78	99		932
Lane Width				12.0		12.0		12.0	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			
Thru					Thru	A		
Right					Right	A		
Peds					Peds			
WB Left		A			SB Left	A	A	
Thru					Thru	A	A	
Right		A			Right			
Peds					Peds			
NB Right		A			EB Right			
SB Right					WB Right	A		
Green	18.0				9.0	78.0		
Yellow	3.0				3.0	5.0		
All Red	2.0				0.0	2.0		

Cycle Length: 120.0 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	271	1805	0.53	0.15	49.1	D	45.1	D
---	-----	------	------	------	------	---	------	---

R	431	1615	0.11	0.27	33.4	C		
---	-----	------	------	------	------	---	--	--

Northbound

T	1235	1900	1.01	0.65	48.4	D	45.3	D
---	------	------	------	------	------	---	------	---

R	1386	1615	0.06	0.86	1.3	A		
---	------	------	------	------	-----	---	--	--

Southbound

L	198	1805	0.56	0.78	39.2	D		
---	-----	------	------	------	------	---	--	--

T	1425	1900	0.73	0.75	10.1	B	12.9	B
---	------	------	------	------	------	---	------	---

Intersection Delay = 31.4 (sec/veh) Intersection LOS = C

HCS+: Signalized Intersections Release 5.5

Analyst: djp
 Agency: D&D
 Date: 6-17-2014
 Period: sat Peak
 Project ID: site access
 E/W St: Proposed Market Street

Inter.: Rt 15 & Market Street
 Area Type: All other areas
 Jurisd:
 Year : b
 N/S St: Route 15

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	1	0	1	1	1	1	0
LG Config				L		R		T	R	L	T	
Volume				180		63	982	115		144	868	
Lane Width				12.0		12.0	12.0	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			
Thru					Thru	A		
Right					Right	A		
Peds					Peds			
WB Left	A				SB Left	A	A	
Thru					Thru	A	A	
Right	A				Right			
Peds					Peds			
NB Right	A				EB Right			
SB Right					WB Right	A		
Green	21.0					10.0	74.0	
Yellow	3.0					3.0	5.0	
All Red	2.0					0.0	2.0	

Cycle Length: 120.0 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	316	1805	0.63	0.17	50.0	D	45.1	D
R	485	1615	0.14	0.30	30.9	C		

Northbound

T	1172	1900	0.93	0.62	33.7	C	30.3	C
R	1373	1615	0.09	0.85	1.5	A		

Southbound

L	213	1805	0.75	0.76	52.4	D		
T	1378	1900	0.70	0.73	10.8	B	16.7	B

Intersection Delay = 26.0 (sec/veh) Intersection LOS = C

APPENDIX D
SIGNAL WARRANT ANALYSIS.

New Jersey Department of Transportation

Daily Volume from 04/27/2009 through 04/29/2009

Site Names: 091901, NJ 15-15.02, 00000015, Sparta Twp
 County: SUSSEX
 Funct. Class: Rural Principal Arterial - Other
 Location: Between Layton Lane and Wilson Drive

Seasonal Factor Type: 3 Rural Other Roadways
 Daily Factor Type: 3 Rural Other Roadways
 Axle Factor Type: 2
 Growth Factor Type: 3 Rural Other Roadways

	04/26/2009			04/27/2009			04/28/2009			04/29/2009			04/30/2009			05/01/2009			
	Road	S	N	Road	S	N	Road	S	N	Road	S	N	Road	S	N	Road	S	N	
00:00																			
01:00																			
02:00																			
03:00																			
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22:00																			
23:00																			
Volume	12,928	5,518	7,610	26,622	13,879	12,743	13,084	8,290	4,794										
AM Peak Vol																			
AM Peak Fct																			
AM Peak Hr																			
PM Peak Vol																			
PM Peak Fct																			
PM Peak Hr																			
Seasonal Fct																			
Daily Fct	0.979	0.979	0.979	0.979	0.979	0.979	0.979	0.979	0.979	0.979	0.979	0.979	0.979	0.979	0.979	0.979	0.979	0.979	
Axle Fct	1.019	1.019	1.019	1.019	1.019	1.019	1.019	1.019	1.019	1.019	1.019	1.019	1.019	1.019	1.019	1.019	1.019	1.019	
Pulse Fct	0.486	0.486	0.486	0.486	0.486	0.486	0.486	0.486	0.486	0.486	0.486	0.486	0.486	0.486	0.486	0.486	0.486	0.486	
	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	

2009 = 1895 → 2013 Count = 1910
 0.6 Minimal growth

Table 1 Hourly Variation in Shopping Center Traffic						
Time	Average Weekday ^a		Average Saturday ^b		Average Sunday ^c	
	Percent of 24-Hour Entering Traffic	Percent of 24-Hour Exiting Traffic	Percent of 24-Hour Entering Traffic	Percent of 24-Hour Exiting Traffic	Percent of 24-Hour Entering Traffic	Percent of 24-Hour Exiting Traffic
6 a.m.-7 a.m.	0.8	0.3	0.2	0.2	0.2	0.1
7 a.m.-8 a.m.	2.0	0.9	0.9	0.4	0.4	0.3
8 a.m.-9 a.m.	3.1	1.2	2.7	1.0	0.9	0.5
9 a.m.-10 a.m.	5.5	2.0	5.5	2.2	1.7	1.1
10 a.m.-11 a.m.	7.0	4.3	8.6	4.8	3.8	2.5
11 a.m.-12 p.m.	8.4	6.2	10.8	7.5	10.0	4.6
12 p.m.-1 p.m.	9.4	8.3	11.8	9.3	15.1	7.9
1 p.m.-2 p.m.	8.2	8.6	12.1	10.3	16.7	12.0
2 p.m.-3 p.m.	7.7	8.9	11.8	11.8	15.8	14.7
3 p.m.-4 p.m.	7.8	8.8	10.7	12.5	13.0	15.6
4 p.m.-5 p.m.	8.0	8.9	8.8	12.5	9.4	15.8
5 p.m.-6 p.m.	8.4	9.2	5.3	11.3	5.1	13.0
6 p.m.-7 p.m.	8.0	7.5	3.3	6.7	2.8	4.6
7 p.m.-8 p.m.	7.9	7.2	2.7	2.9	1.7	1.9
8 p.m.-9 p.m.	4.3	7.7	1.8	2.2	1.1	1.3
9 p.m.-10 p.m.	1.8	7.2	1.0	1.6	0.7	1.1
10 p.m.-6 a.m.	1.7	2.8	2.0	2.8	2.1	3.0

Sites ranged in size from 11,000 to 1,750,000 square feet gross leasable area

^a Source numbers - 13, 73, 88, 190, 217, 220, 225 and 376; based on ten studies

^b Source numbers - 13, 73, 88, 190, 220, 225 and 376; based on nine studies

^c Source numbers - 13, 73, 88, 190, 220 and 225; based on eight studies

Based upon peak hour
egress at Rt. 15 access

MAR 10 2015