

APPENDIX A SIGNAL INVENTORIES AND CLEARANCE CALCULATIONS

Clearance Time Calculations

City:	Hilton Head Island	District:	Six
County:	Beaufort	Sig. Inv. #	
NB Street:	Chamberlin Drive	Synchro Node #	
SB Street:	Squire Pope Road	Computed by:	SD
EB Street:	US 278	Checked by:	AE 3/13/18
WB Street:	US 278	Approved by:	

Movement	Street Name	Chamberlin Drive		Squire Pope Road		US 278		US 278	
	Orientation	Northbound		Southbound		Eastbound		Westbound	
	Turn movement	Left	Thru	Left	Thru	Left	Thru	Left	Thru

NEMA Phase #	Protected		8		4	5	2	1	6
	Permissive	8		4		2		6	
	FYA								

Speed	mph	20	30	20	40	20	45	20	45
	ft/sec	29.33	44.00	29.33	58.67	29.33	66.00	29.33	66.00

Grade	%	0%		0%		0%		0%	
	Grade at Stopbar, ft	0.0%		0.0%		0.0%		0.0%	
	Grade at Setback, ft	0.0%		0.0%		0.0%		0.0%	

Clear Distance	feet	74	91	78	103	77	71	75	61
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Ped Cross Dist	Crosswalk (feet)				82		72		45
	From B1 (feet)				28				
	From B2 (feet)				16				

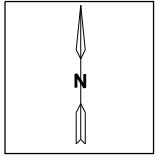
Parameters	Percept-React Time, sec	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	Decel Rate, ft/sec ²	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
	Walk Speed, fps	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	Walk Speed Bx, fps	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
	Walk Time, sec	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0

Movement Calcs	Yellow, sec	2.5	3.3	2.5	4.0	2.5	4.4	2.5	4.4
	All Red, sec	2.6	2.1	2.7	1.8	2.7	1.1	2.6	1.0
	Mitigated Red, sec	-	-	-	-	-	-	-	-
	Unadjusted FDW, sec				23.4		20.6		12.9
	Unadjusted B1 FDW, sec				2.3				
	Unadjusted B2 FDW, sec				-1.7				

Movement Results	Yellow, sec	3.0	3.3	3.0	4.0	3.0	4.4	3.0	4.4
	All Red, sec	2.6	2.1	2.7	1.8	2.7	1.1	2.6	1.0
	Total Clear, sec	5.6	5.4	5.7	5.8	5.7	5.5	5.6	5.4

Shared Mvmt Calc	Yellow, sec	3.3		4.0		4.4		4.4	
	All Red, sec	2.3		1.8		1.3		1.2	
	Total Clear, sec	5.6		5.8		5.7		5.6	
	Unadjusted FDW, sec	0.0		23.4		20.6		12.9	
	Unadjusted B1 FDW, sec	0.0		2.3		0.0		0.0	
	Unadjusted B2 FDW, sec	0.0		-1.7		0.0		0.0	

Recommended:	Phase #	8		4		5		2		1		6	
Yellow	sec	3.3		4.0		3.0		4.4		3.0		4.4	
All Red	sec	2.3		1.8		2.7		1.3		2.6		1.2	
Walk	sec			7				7				7	
FDW	sec			24				21				13	

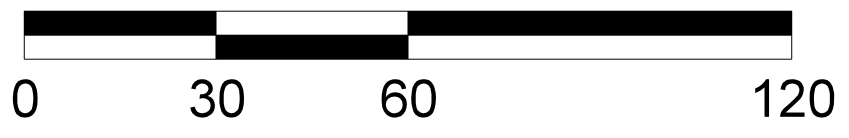


Squire Pope Rd

US 278 (William Hilton Pkwy)

Chamberlin Dr

SCALE IN FEET



Clearance Time Calculations

City:	Hilton Head Island	District:	Six
County:	Beaufort	Sig. Inv. #	
NB Street:	Spanish Wells Road	Synchro Node #	
SB Street:	Wild Horse Road	Computed by:	SD
EB Street:	US 278	Checked by:	AE 3/13/18
WB Street:	US 278	Approved by:	

Movement	Street Name	Spanish Wells Road		Wild Horse Road		US 278		US 278	
	Orientation	Northbound		Southbound		Eastbound		Westbound	
	Turn movement	Left	Thru	Left	Thru	Left	Thru	Left	Thru

NEMA Phase #	Protected		8		4	5	2	1	6
	Permissive	8		4					
	FYA								

Speed	mph	20	45	20	40	20	45	20	45
	ft/sec	29.33	66.00	29.33	58.67	29.33	66.00	29.33	66.00

Grade	%	0%		0%		0%		0%	
	Grade at Stopbar, ft	0.0%		0.0%		0.0%		0.0%	
	Grade at Setback, ft	0.0%		0.0%		0.0%		0.0%	

Clear Distance	feet	94	129	101	134	133	125	81	72
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Ped Cross Dist	Crosswalk (feet)				117				73
	From B1 (feet)				6				
	From B2 (feet)				8				

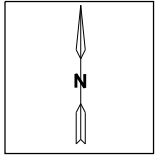
Parameters	Percept-React Time, sec	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	Decel Rate, ft/sec ²	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
	Walk Speed, fps	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	Walk Speed Bx, fps	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
	Walk Time, sec	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0

Movement Calcs	Yellow, sec	2.5	4.4	2.5	4.0	2.5	4.4	2.5	4.4
	All Red, sec	3.3	2.0	3.5	2.3	4.6	1.9	2.8	1.1
	Mitigated Red, sec	3.2	-	3.3	-	3.8	-	-	-
	Unadjusted FDW, sec				33.4				20.9
	Unadjusted B1 FDW, sec				-5.0				
	Unadjusted B2 FDW, sec				-4.3				

Movement Results	Yellow, sec	3.0	4.4	3.0	4.0	3.0	4.4	3.0	4.4
	All Red, sec	3.2	2.0	3.3	2.3	3.8	1.9	2.8	1.1
	Total Clear, sec	6.2	6.4	6.3	6.3	6.8	6.3	5.8	5.5

Shared Mvmt Calc	Yellow, sec	4.4		4.0		None		None	
	All Red, sec	2.0		2.3		None		None	
	Total Clear, sec	6.4		6.3		None		None	
	Unadjusted FDW, sec	0.0		33.4		None		None	
	Unadjusted B1 FDW, sec	0.0		-5.0		None		None	
	Unadjusted B2 FDW, sec	0.0		-4.3		None		None	

Recommended:	Phase #	8		4	5	2	1	6
Yellow	sec	4.4		4.0	3.0	4.4	3.0	4.4
All Red	sec	2.0		2.3	3.8	1.9	2.8	1.1
Walk	sec			7				7
FDW	sec			34				21

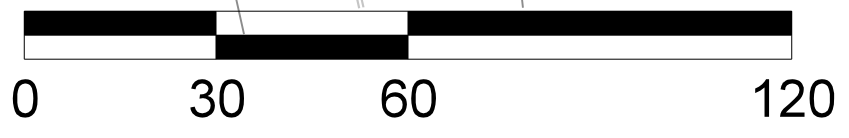


Wild Horse Rd

US 278 (William Hilton Pkwy)

Spanish Wells Rd

SCALE IN FEET



Clearance Time Calculations

City:	Hilton Head Island	District:	Six
County:	Beaufort	Sig. Inv. #	
NB Street:	Sol Blatt Jr. Exp	Synchro Node #	
SB Street:	Gumtree Road	Computed by:	SD
EB Street:	US 278	Checked by:	AE 3/13/18
WB Street:	US 278	Approved by:	

Movement	Street Name	Sol Blatt Jr. Exp		Gumtree Road		US 278		US 278	
	Orientation	Northbound		Southbound		Eastbound		Westbound	
	Turn movement	Left	Thru	Left	Thru	Left	Thru	Left	Thru

NEMA Phase #	Protected	8	8	7	7	5	2	1	6
	Permissive								
	FYA								

Speed	mph	20	35	20	40	20	45	20	45
	ft/sec	29.33	51.33	29.33	58.67	29.33	66.00	29.33	66.00

Grade	%	0%		0%		0%		0%	
	Grade at Stopbar, ft	0.0%		0.0%		0.0%		0.0%	
	Grade at Setback, ft	0.0%		0.0%		0.0%		0.0%	

Clear Distance	feet	124	164	169	169	156	98	133	93
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Ped Cross Dist	Crosswalk (feet)				140		52		77
	From B1 (feet)				13				
	From B2 (feet)				15				

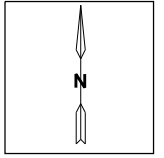
Parameters	Percept-React Time, sec	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	Decel Rate, ft/sec ²	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
	Walk Speed, fps	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	Walk Speed Bx, fps	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
	Walk Time, sec	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0

Movement Calcs	Yellow, sec	2.5	3.6	2.5	4.0	2.5	4.4	2.5	4.4
	All Red, sec	4.3	3.2	5.8	2.9	5.4	1.5	4.6	1.5
	Mitigated Red, sec	3.7	3.1	4.4	-	4.2	-	3.8	-
	Unadjusted FDW, sec				40.0		14.9		22.0
	Unadjusted B1 FDW, sec				-2.7				
	Unadjusted B2 FDW, sec				-2.0				

Movement Results	Yellow, sec	3.0	3.6	3.0	4.0	3.0	4.4	3.0	4.4
	All Red, sec	3.7	3.1	4.4	2.9	4.2	1.5	3.8	1.5
	Total Clear, sec	6.7	6.7	7.4	6.9	7.2	5.9	6.8	5.9

Shared Mvmt Calc	Yellow, sec	3.6		4.0		None		None	
	All Red, sec	3.1		3.4		None		None	
	Total Clear, sec	6.7		7.4		None		None	
	Unadjusted FDW, sec	0.0		40.0		None		None	
	Unadjusted B1 FDW, sec	0.0		-2.7		None		None	
	Unadjusted B2 FDW, sec	0.0		-2.0		None		None	

Recommended:	Phase #	8	8	7	7	5	2	1	6
Yellow	sec	3.6	3.6	4.0	4.0	3.0	4.4	3.0	4.4
All Red	sec	3.1	3.1	3.4	3.4	4.2	1.5	3.8	1.5
Walk	sec				7		7		7
FDW	sec				40		15		22

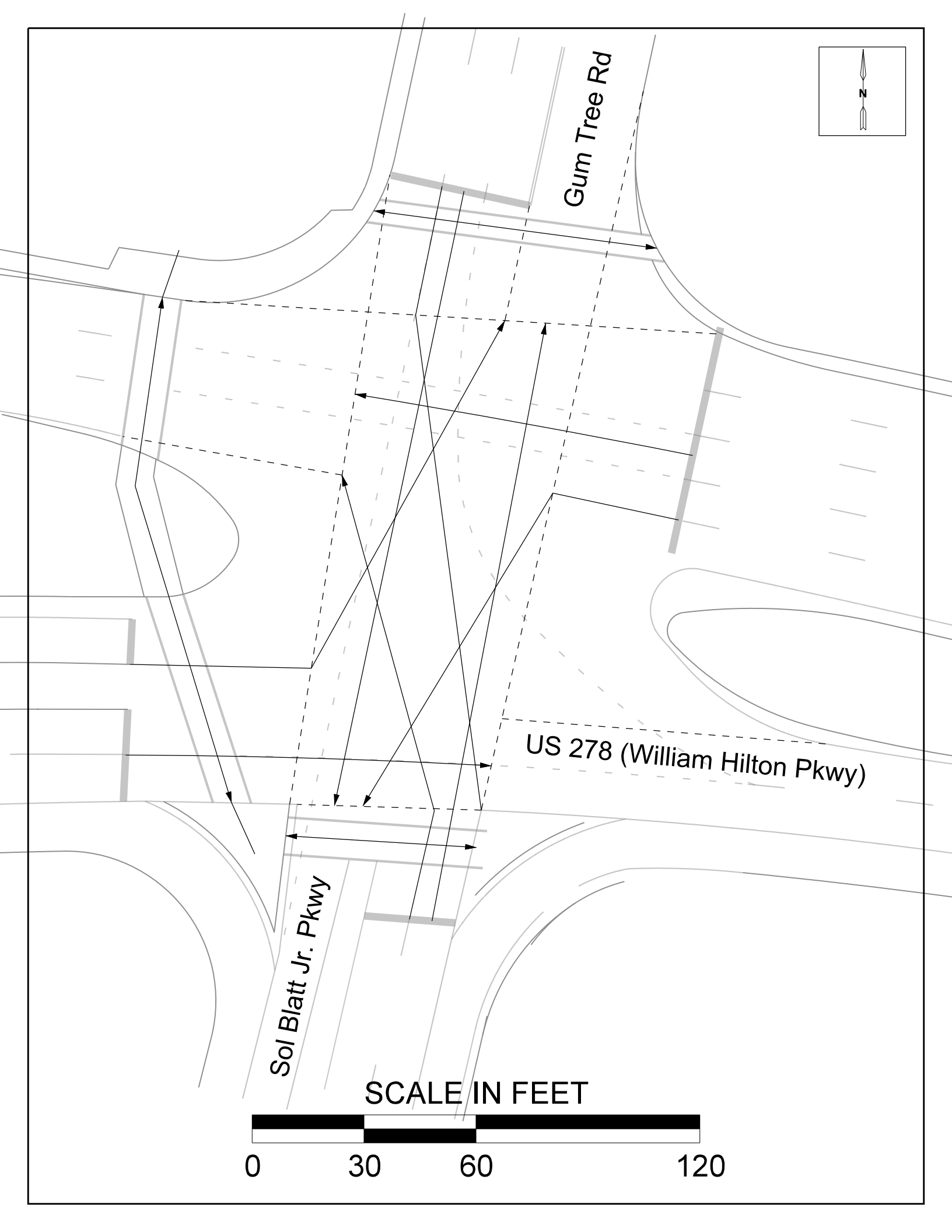
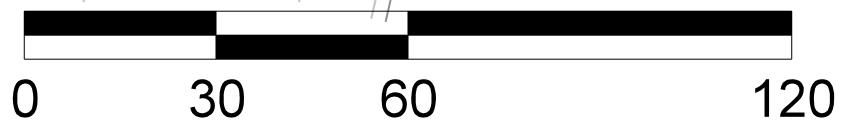


Gum Tree Rd

US 278 (William Hilton Pkwy)

Sol Blatt Jr. Pkwy

SCALE IN FEET



Clearance Time Calculations

City:	Hilton Head Island	District:	Six
County:	Beaufort	Sig. Inv. #	
NB Street:	Jarvis Park Road	Synchro Node #	
SB Street:	Wilborn Road	Computed by:	SD
EB Street:	US 278	Checked by:	AE 3/13/18
WB Street:	US 278	Approved by:	

Movement	Street Name	Jarvis Park Road		Wilborn Road		US 278		US 278	
	Orientation	Northbound		Southbound		Eastbound		Westbound	
	Turn movement	Left	Thru	Left	Thru	Left	Thru	Left	Thru

NEMA Phase #	Protected		8		4	5	2		6
	Permissive	8		4		2		6	
	FYA								

Speed	mph	20	25	20	30	20	45	20	45
	ft/sec	29.33	36.67	29.33	44.00	29.33	66.00	29.33	66.00

Grade	%	0%		0%		0%		0%	
	Grade at Stopbar, ft	0.0%		0.0%		0.0%		0.0%	
	Grade at Setback, ft	0.0%		0.0%		0.0%		0.0%	

Clear Distance	feet	93	112	111	108	80	59	93	56
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Ped Cross Dist	Crosswalk (feet)		96						74
	From B1 (feet)		1						
	From B2 (feet)		17						

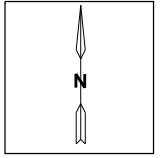
Parameters	Percept-React Time, sec	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	Decel Rate, ft/sec ²	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
	Walk Speed, fps	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	Walk Speed Bx, fps	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
	Walk Time, sec	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0

Movement Calcs	Yellow, sec	2.5	2.9	2.5	3.3	2.5	4.4	2.5	4.4
	All Red, sec	3.2	3.1	3.8	2.5	2.8	0.9	3.2	0.9
	Mitigated Red, sec	3.1	3.1	3.4	-	-	-	3.1	-
	Unadjusted FDW, sec		27.4						21.1
	Unadjusted B1 FDW, sec		-6.7						
	Unadjusted B2 FDW, sec		-1.3						

Movement Results	Yellow, sec	3.0	3.0	3.0	3.3	3.0	4.4	3.0	4.4
	All Red, sec	3.1	3.1	3.4	2.5	2.8	1.0	3.1	1.0
	Total Clear, sec	6.1	6.1	6.4	5.8	5.8	5.4	6.1	5.4

Shared Mvmt Calc	Yellow, sec	3.0		3.3		4.4		4.4	
	All Red, sec	3.1		3.1		1.4		1.7	
	Total Clear, sec	6.1		6.4		5.8		6.1	
	Unadjusted FDW, sec	27.4		0.0		0.0		21.1	
	Unadjusted B1 FDW, sec	-6.7		0.0		0.0		0.0	
	Unadjusted B2 FDW, sec	-1.3		0.0		0.0		0.0	

Recommended:	Phase #	8		4	5	2		6	
Yellow	sec	3.0		3.3	3.0	4.4		4.4	
All Red	sec	3.1		3.1	2.8	1.4		1.7	
Walk	sec	7						7	
FDW	sec	28						22	

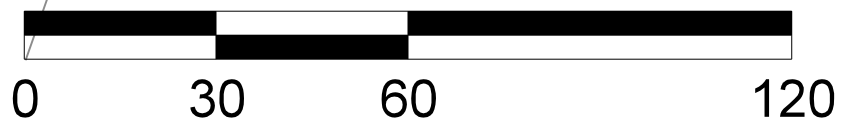


Wilborn Rd

US 278 (William Hilton Pkwy)

Jarvis Park Rd

SCALE IN FEET



Clearance Time Calculations

City:	Hilton Head Island	District:	Six
County:	Beaufort	Sig. Inv. #	
NB Street:	Pembroke Drive	Synchro Node #	
SB Street:	Museum Street	Computed by:	SD
EB Street:	US 278	Checked by:	AE 3/13/18
WB Street:	US 278	Approved by:	

Movement	Street Name	Pembroke Drive		Museum Street		US 278		US 278	
	Orientation	Northbound		Southbound		Eastbound		Westbound	
	Turn movement	Left	Thru	Left	Thru	Left	Thru	Left	Thru

NEMA Phase #	Protected		8		4		2		6
	Permissive	8		4		2		6	
	FYA								

Speed	mph	20	35	20	30	20	45	20	45
	ft/sec	29.33	51.33	29.33	44.00	29.33	66.00	29.33	66.00

Grade	%	0%		0%		0%		0%	
	Grade at Stopbar, ft	0.0%		0.0%		0.0%		0.0%	
	Grade at Setback, ft	0.0%		0.0%		0.0%		0.0%	

Clear Distance	feet	137	125	99	115	79	81	85	81
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Ped Cross Dist	Crosswalk (feet)		105				51		76
	From B1 (feet)		9				7		12
	From B2 (feet)		17				8		7

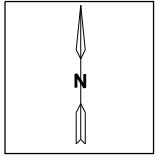
Parameters	Percept-React Time, sec	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	Decel Rate, ft/sec ²	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
	Walk Speed, fps	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	Walk Speed Bx, fps	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
	Walk Time, sec	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0

Movement Calcs	Yellow, sec	2.5	3.6	2.5	3.3	2.5	4.4	2.5	4.4
	All Red, sec	4.7	2.5	3.4	2.7	2.7	1.3	2.9	1.3
	Mitigated Red, sec	3.9	-	3.2	-	-	-	-	-
	Unadjusted FDW, sec		30.0				14.6		21.7
	Unadjusted B1 FDW, sec		-4.0				-4.7		-3.0
	Unadjusted B2 FDW, sec		-1.3				-4.3		-4.7

Movement Results	Yellow, sec	3.0	3.6	3.0	3.3	3.0	4.4	3.0	4.4
	All Red, sec	3.9	2.5	3.2	2.7	2.7	1.3	2.9	1.3
	Total Clear, sec	6.9	6.1	6.2	6.0	5.7	5.7	5.9	5.7

Shared Mvmt Calc	Yellow, sec	3.6		3.3		4.4		4.4	
	All Red, sec	3.3		2.9		1.3		1.5	
	Total Clear, sec	6.9		6.2		5.7		5.9	
	Unadjusted FDW, sec	30.0		0.0		14.6		21.7	
	Unadjusted B1 FDW, sec	-4.0		0.0		-4.7		-3.0	
	Unadjusted B2 FDW, sec	-1.3		0.0		-4.3		-4.7	

Recommended:	Phase #	8		4		2		6	
Yellow	sec	3.6		3.3		4.4		4.4	
All Red	sec	3.3		2.9		1.3		1.5	
Walk	sec	7				7		7	
FDW	sec	30				15		22	

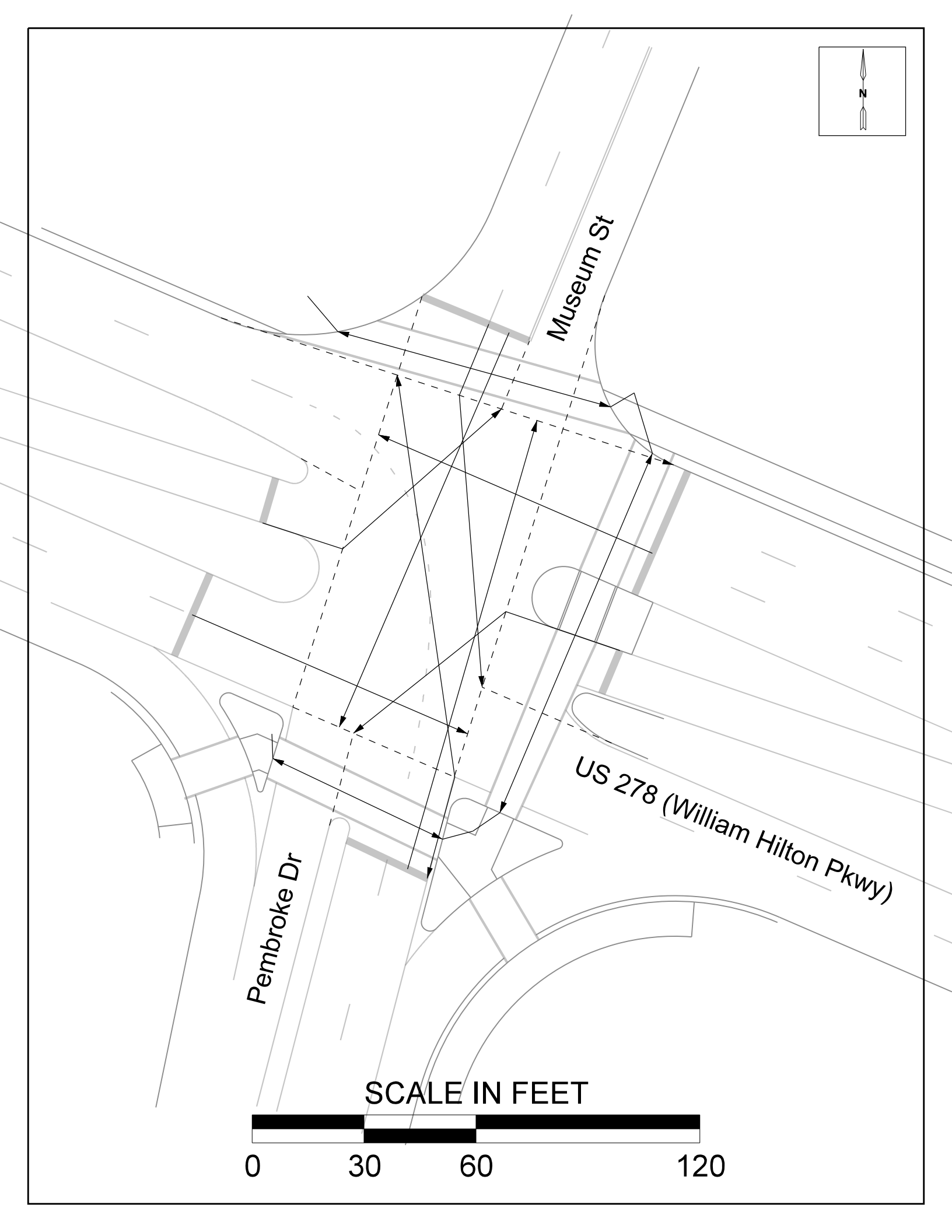
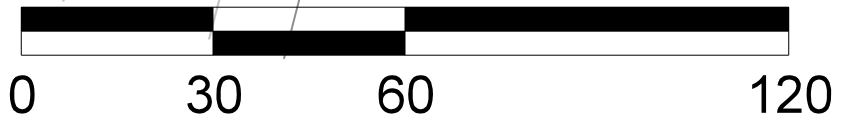


Museum St

US 278 (William Hilton Pkwy)

Pembroke Dr

SCALE IN FEET



Clearance Time Calculations

City:	Hilton Head Island	District:	Six
County:	Beaufort	Sig. Inv. #	
NB Street:	Indigo Run Pkwy	Synchro Node #	
SB Street:	Whooping Crane Way	Computed by:	SD
EB Street:	US 278	Checked by:	AE 3/13/18
WB Street:	US 278	Approved by:	

Movement	Street Name	Indigo Run Pkwy		Whooping Crane Way		US 278		US 278	
	Orientation	Northbound		Southbound		Eastbound		Westbound	
	Turn movement	Left	Thru	Left	Thru	Left	Thru	Left	Thru

NEMA Phase #	Protected	4	4	3	3	5	2	1	6
	Permissive					2			
	FYA								

Speed	mph	20	25	20	25	20	45	20	45
	ft/sec	29.33	36.67	29.33	36.67	29.33	66.00	29.33	66.00

Grade	%	0%		0%		0%		0%	
	Grade at Stopbar, ft	0.0%		0.0%		0.0%		0.0%	
	Grade at Setback, ft	0.0%		0.0%		0.0%		0.0%	

Clear Distance	feet	152	114	154	113	95	107	124	114
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Ped Cross Dist	Crosswalk (feet)								
	From B1 (feet)								
	From B2 (feet)								

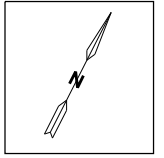
Parameters	Percept-React Time, sec	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	Decel Rate, ft/sec ²	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
	Walk Speed, fps	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	Walk Speed Bx, fps	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
	Walk Time, sec	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0

Movement Calcs	Yellow, sec	2.5	2.9	2.5	2.9	2.5	4.4	2.5	4.4
	All Red, sec	5.2	3.2	5.3	3.1	3.3	1.7	4.3	1.8
	Mitigated Red, sec	4.1	3.1	4.2	3.1	3.2	-	3.7	-
	Unadjusted FDW, sec								
	Unadjusted B1 FDW, sec								
	Unadjusted B2 FDW, sec								

Movement Results	Yellow, sec	3.0	3.0	3.0	3.0	3.0	4.4	3.0	4.4
	All Red, sec	4.1	3.1	4.2	3.1	3.2	1.7	3.7	1.8
	Total Clear, sec	7.1	6.1	7.2	6.1	6.2	6.1	6.7	6.2

Shared Mvmt Calc	Yellow, sec	3.0		3.0		4.4		None	
	All Red, sec	4.1		4.2		1.8		None	
	Total Clear, sec	7.1		7.2		6.2		None	
	Unadjusted FDW, sec	0.0		0.0		0.0		None	
	Unadjusted B1 FDW, sec	0.0		0.0		0.0		None	
	Unadjusted B2 FDW, sec	0.0		0.0		0.0		None	

Recommended:	Phase #	4	4	3	3	5	2	1	6
Yellow	sec	3.0	3.0	3.0	3.0	3.0	4.4	3.0	4.4
All Red	sec	4.1	4.1	4.2	4.2	3.2	1.8	3.7	1.8
Walk	sec								
FDW	sec								

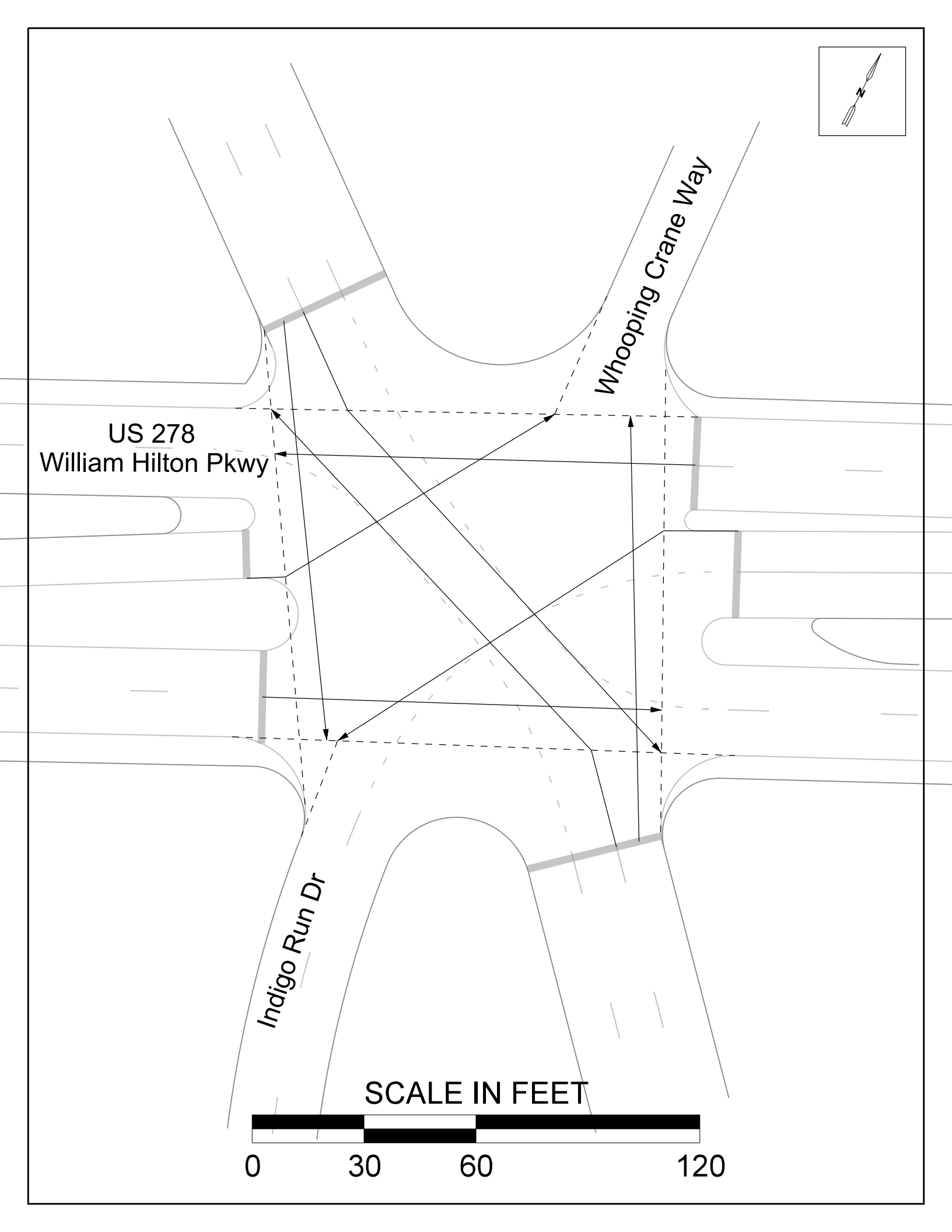
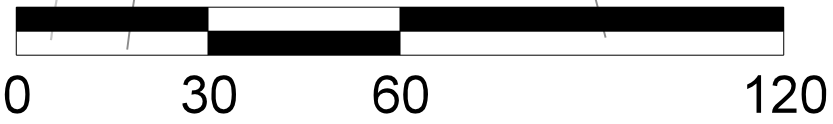


US 278
William Hilton Pkwy

Whooping Crane Way

Indigo Run Dr

SCALE IN FEET



Clearance Time Calculations

City:	Hilton Head Island	District:	Six
County:	Beaufort	Sig. Inv. #	
NB Street:	Gardner Drive	Synchro Node #	
SB Street:	Beach City Road	Computed by:	SD
EB Street:	US 278	Checked by:	AE 3/13/18
WB Street:	US 278	Approved by:	

Movement	Street Name	Gardner Drive		Beach City Road		US 278		US 278	
	Orientation	Northbound		Southbound		Eastbound		Westbound	
	Turn movement	Left	Thru	Left	Thru	Left	Thru	Left	Thru

NEMA Phase #	Protected		8		4	5	2	1	6
	Permissive	8		4				6	
	FYA								

Speed	mph	20	35	20	35	20	45	20	45
	ft/sec	29.33	51.33	29.33	51.33	29.33	66.00	29.33	66.00

Grade	%	0%		0%		0%		0%	
	Grade at Stopbar, ft	0.0%		0.0%		0.0%		0.0%	
	Grade at Setback, ft	0.0%		0.0%		0.0%		0.0%	

Clear Distance	feet	120	140	100	125	134	98	103	95
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Ped Cross Dist	Crosswalk (feet)		112				76		77
	From B1 (feet)		29						
	From B2 (feet)		15						

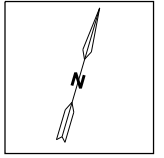
Parameters	Percept-React Time, sec	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	Decel Rate, ft/sec ²	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
	Walk Speed, fps	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	Walk Speed Bx, fps	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
	Walk Time, sec	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0

Movement Calcs	Yellow, sec	2.5	3.6	2.5	3.6	2.5	4.4	2.5	4.4
	All Red, sec	4.1	2.8	3.5	2.5	4.6	1.5	3.6	1.5
	Mitigated Red, sec	3.6	-	3.3	-	3.8	-	3.3	-
	Unadjusted FDW, sec		32.0				21.7		22.0
	Unadjusted B1 FDW, sec		2.7						
	Unadjusted B2 FDW, sec		-2.0						

Movement Results	Yellow, sec	3.0	3.6	3.0	3.6	3.0	4.4	3.0	4.4
	All Red, sec	3.6	2.8	3.3	2.5	3.8	1.5	3.3	1.5
	Total Clear, sec	6.6	6.4	6.3	6.1	6.8	5.9	6.3	5.9

Shared Mvmt Calc	Yellow, sec	3.6		3.6		None		4.4	
	All Red, sec	3.0		2.7		None		1.9	
	Total Clear, sec	6.6		6.3		None		6.3	
	Unadjusted FDW, sec	32.0		0.0		None		22.0	
	Unadjusted B1 FDW, sec	2.7		0.0		None		0.0	
	Unadjusted B2 FDW, sec	-2.0		0.0		None		0.0	

Recommended:	Phase #	8		4	5	2	1	6
Yellow	sec	3.6		3.6	3.0	4.4	3.0	4.4
All Red	sec	3.0		2.7	3.8	1.5	3.3	1.9
Walk	sec	7				7		7
FDW	sec	32				22		22



Beach City Rd

US 278

William Hilton Pkwy

Gardner Dr

SCALE IN FEET

