APPENDIX Q

Traffic Based Noise Analysis Calculations

Noise Calculations - No Build Condition Friday PM									
	Existing Total PCE (E PCE)Future No Build TotalLog10 * 10 = F NLE NLF NLPCE (FE PCE PCE)Log10(dBA)(dBA)(dBA)								
Noise Location #1 Friday PM									
St. Joseph's Road	62	78	1.26	0.10	1.00				
	51.1 52.10								
Total No	oise Increase	e for Noise L	ocation #1,	Friday PM =	1.00				

F NL = 10 * log10 (F PCE/E PCE) + E NL F NL IN = 10 * Log10 (F PCE/E PCE)

E PCE - Existing Passenger Car Equivalent (From Previous Existing Traffic Table)

F PCE - Future Passenger Car Equivalent (From previous No Build Traffic Tables)

F NL IN - Future Noise Level Increase

E NL - Existing Noise Level (collected by TMA on June 17, 2009 - Weekday)

Noise Ca	Noise Calculations - Interim 2016 No Build Condition Friday PM								
	Existing Total PCE (E PCE)Future No Build Total PCE (FF PCE/ E PCELog10 * 10 = F NLE NLF NLIncrease (dBA)(dBA)(dBA)(dBA)(dBA)								
Noise Location #1	-								
Friday Pivi									
St. Joseph's Road	62	64	1.03	0.01	0.14				
						51.1	51.24		
Total No	bise Increase	e for Noise L	ocation #1,	Friday PM =	0.14				

F NL = 10 * log10 (F PCE/E PCE) + E NL F NL IN = 10 * Log10 (F PCE/E PCE)

E PCE - Existing Passenger Car Equivalent (From Previous Existing Traffic Table)

F PCE - Future Passenger Car Equivalent (From previous No Build Traffic Tables)

F NL IN - Future Noise Level Increase

E NL - Existing Noise Level (collected by TMA on June 17, 2009 - Weekday)

F NL - Future Noise Level (Calculating)

Noise C	Noise Calculations - Interim 2016 Build Condition Friday PM									
	Existing Total PCE (E PCE)	Existing otal PCE (E PCE)Future Build Total PCE (FE PCE/ E PCELog10 * 10 = F NLE NLF NLLog10= F NLE NLF NLIncrease(dBA)(dBA)								
Noise Location #1 Friday PM	-									
St. Joseph's Road	62	79	1.27	0.11	1.05					
		51.1 52.15								
Total No	oise Increase	e for Noise L	ocation #1,	Friday PM =	1.05					

F NL = 10 * log10 (F PCE/E PCE) + E NL F NL IN = 10 * Log10 (F PCE/E PCE)

E PCE - Existing Passenger Car Equivalent (From Previous Existing Traffic Table)

F PCE - Future Passenger Car Equivalent (From previous No Build Traffic Tables)

F NL IN - Future Noise Level Increase

E NL - Existing Noise Level (collected by TMA on June 17, 2009 - Weekday)

F NL - Future Noise Level (Calculating)

Noise Calculations - Full Build 2021 Condition Friday PM									
	Existing Total PCE (E PCE)Future Build Total PCE (FF PCE/ E PCELog10 * 10 = F NLE NLF NLLog10Increase (dBA)(dBA)(dBA)(dBA)								
Noise Location #1 Friday PM									
St. Joseph's Road	62	110	1.77	0.25	2.49				
51.1 53.59									
Total No	oise Increase	e for Noise L	ocation #1, l	Friday PM =	2.49				

F NL = 10 * log10 (F PCE/E PCE) + E NL F NL IN = 10 * Log10 (F PCE/E PCE)

E PCE - Existing Passenger Car Equivalent (From Previous Existing Traffic Table)

F PCE - Future Passenger Car Equivalent (From previous No Build Traffic Tables)

F NL IN - Future Noise Level Increase

E NL - Existing Noise Level (collected by TMA on June 17, 2009 - Weekday)

Noise Calculations - No Build Condition Sunday									
	Existing Total PCE (E PCE)Future No Build Total PCE (FF PCE/ E PCELog10Log10 * 10 = F NLE NLF NLIncrease (dBA)(dBA)(dBA)(dBA)(dBA)(dBA)								
Noise Location #1 Sunday									
St. Joseph's Road	14	16	1.14	0.06	0.58				
Total	Noise Increa	ase for Noise	e Location #	1, Sunday =	0.58	51.1	51.68		

F NL = 10 * log10 (F PCE/E PCE) + E NL F NL IN = 10 * Log10 (F PCE/E PCE)

E PCE - Existing Passenger Car Equivalent (From Previous Existing Traffic Table)

F PCE - Future Passenger Car Equivalent (From previous No Build Traffic Tables)

F NL IN - Future Noise Level Increase

E NL - Existing Noise Level (collected by TMA on June 17, 2009 - Weekday)

Noise Calculations - Interim 2016 No Build Condition Sunday										
	Existing Total PCE (E PCE)	xisting btal PCEFuture No Build TotalLog10 * 10 = F NLPCE (FE PCELog10PCE)PCE)(dBA)								
Noise Location #1 Sunday										
St. Joseph's Road	14	16	1.14	0.06	0.58					
	Total Nois	e Increase fo	or Site Acces	ss Sunday =	0.58	51.1	51.68			

F NL = 10 * log10 (F PCE/E PCE) + E NL F NL IN = 10 * Log10 (F PCE/E PCE)

E PCE - Existing Passenger Car Equivalent (From Previous Existing Traffic Table)

F PCE - Future Passenger Car Equivalent (From previous No Build Traffic Tables)

F NL IN - Future Noise Level Increase

E NL - Existing Noise Level (collected by TMA on June 17, 2009 - Weekday)

F NL - Future Noise Level (Calculating)

Noise Calculations - Interium 2016 Build Condition Sunday											
	Existing Total PCE (E PCE)	Existing otal PCE (E PCE)Future Build TotalLog10 * 10 = F NL IncreaseE NLF NLDescriptionPCE (FE PCE PCE)Log10= F NL 									
Noise Location #1											
Sunday											
St. Joseph's Road	14	32	2.29	0.36	3.59						
						51.1	54.69				
	Total Nois	e Increase fo	or Site Acces	s Sunday =	3.59						

F NL = 10 * log10 (F PCE/E PCE) + E NL F NL IN = 10 * Log10 (F PCE/E PCE)

E PCE - Existing Passenger Car Equivalent (From Previous Existing Traffic Table)

F PCE - Future Passenger Car Equivalent (From previous No Build Traffic Tables)

F NL IN - Future Noise Level Increase

E NL - Existing Noise Level (collected by TMA on June 17, 2009 - Weekday)

F NL - Future Noise Level (Calculating)

Noise Calculations - Full Build 2021 Condition Sunday										
	Existing Total PCE (E PCE)	Existing otal PCEFuture Build TotalF PCE/ F PCE/Log10 * 10 = F NL IncreaseE NLF NL(E PCE)PCE (FE PCELog10(dBA)(dBA)								
Noise Location #1										
Sunday										
St. Joseph's Road	14	62	4.43	0.65	6.46					
	51.1 57.56									
	Total Nois	e Increase fo	or Site Acces	ss Sunday =	6.46					

F NL = 10 * log10 (F PCE/E PCE) + E NL F NL IN = 10 * Log10 (F PCE/E PCE)

E PCE - Existing Passenger Car Equivalent (From Previous Existing Traffic Table)

F PCE - Future Passenger Car Equivalent (From previous No Build Traffic Tables)

F NL IN - Future Noise Level Increase

E NL - Existing Noise Level (collected by TMA on June 17, 2009 - Weekday)

Noise Calculations - No Build Condition Friday PM									
	Existing Total PCE (E PCE)Future No Build TotalLog10 * 10 = F NLE NLF NLPCE (FE PCELog10Increase(dBA)(dBA)								
Noise Location #2 Friday PM									
St. Joseph's Road	62	78	1.26	0.10	1.00				
52.6 53.60									
Total No	oise Increase	e for Noise L	ocation #1, I	Friday PM =	1.00				

F NL = 10 * log10 (F PCE/E PCE) + E NL F NL IN = 10 * Log10 (F PCE/E PCE)

E PCE - Existing Passenger Car Equivalent (From Previous Existing Traffic Table)

F PCE - Future Passenger Car Equivalent (From previous No Build Traffic Tables)

F NL IN - Future Noise Level Increase

E NL - Existing Noise Level (collected by TMA on June 17, 2009 - Weekday)

Noise Calculations - Interim 2016 No Build Condition Friday PM										
	Existing Total PCE (E PCE)	Existing otal PCE (E PCE)Future No Build Total PCE (F PCE)F PCE/ E PCELog10Cog10 * 10 								
Noise Location #2 Friday PM										
St. Joseph's Road	62	64	1.03	0.01	0.14					
Total No	Total Noise Increase for Noise Location #1 Friday PM = 0.14									

F NL = 10 * log10 (F PCE/E PCE) + E NL F NL IN = 10 * Log10 (F PCE/E PCE)

E PCE - Existing Passenger Car Equivalent (From Previous Existing Traffic Table)

F PCE - Future Passenger Car Equivalent (From previous No Build Traffic Tables)

F NL IN - Future Noise Level Increase

E NL - Existing Noise Level (collected by TMA on June 17, 2009 - Weekday)

F NL - Future Noise Level (Calculating)

Noise Calculations - Interim 2016 Build Condition Friday PM										
	Existing Total PCE (E PCE)	Existing total PCE (E PCE)Future Build Total PCE (FLog10 * 10 = F NLPCE (FE PCE PCE)Log10= F NLE NLIncrease 								
Noise Location #2 Friday PM										
St. Joseph's Road	62	79	1.27	0.11	1.05					
	<u> </u>	52.6 53.65								
Total No	oise Increase	e for Noise L	ocation #1,	Friday PM =	1.05					

F NL = 10 * log10 (F PCE/E PCE) + E NL F NL IN = 10 * Log10 (F PCE/E PCE)

E PCE - Existing Passenger Car Equivalent (From Previous Existing Traffic Table)

F PCE - Future Passenger Car Equivalent (From previous No Build Traffic Tables)

F NL IN - Future Noise Level Increase

E NL - Existing Noise Level (collected by TMA on June 17, 2009 - Weekday)

F NL - Future Noise Level (Calculating)

Noise Calculations - Full Build 2021Condition Friday PM									
	Existing Total PCE (E PCE)Future Build TotalLog10 * 10 = F NLE NLPCE (FE PCE PCE)Log10= F NLE NLIncrease (dBA)(dBA)(dBA)(dBA)								
Noise Location #2 Friday PM									
St. Joseph's Road	62	110	1.77	0.25	2.49				
	52.6 55.09								
Total No	oise Increase	e for Noise L	ocation #1, l	Friday PM =	2.49				

F NL = 10 * log10 (F PCE/E PCE) + E NL F NL IN = 10 * Log10 (F PCE/E PCE)

E PCE - Existing Passenger Car Equivalent (From Previous Existing Traffic Table)

F PCE - Future Passenger Car Equivalent (From previous No Build Traffic Tables)

F NL IN - Future Noise Level Increase

E NL - Existing Noise Level (collected by TMA on June 17, 2009 - Weekday)

Noise Calculations - No Build Condition Sunday									
	Existing Total PCE (E PCE)Future No Build Total PCE (FF PCE/ E PCELog10Log10 * 10 = F NLE NLF NLIncrease (dBA)(dBA)(dBA)(dBA)(dBA)(dBA)								
Noise Location #2 Sunday									
St. Joseph's Road	14	16	1.14	0.06	0.58				
Total	Noise Increa	ase for Noise	e Location #	1, Sunday =	0.58	52.6	53.18		

F NL = 10 * log10 (F PCE/E PCE) + E NL F NL IN = 10 * Log10 (F PCE/E PCE)

E PCE - Existing Passenger Car Equivalent (From Previous Existing Traffic Table)

F PCE - Future Passenger Car Equivalent (From previous No Build Traffic Tables)

F NL IN - Future Noise Level Increase

E NL - Existing Noise Level (collected by TMA on June 17, 2009 - Weekday)

Noise Calculations - Interim 2016 No Build Condition Sunday										
	Existing Total PCE (E PCE)	Existing total PCE (E PCE)Future No Build Total PCE (FE PCE/ E PCELog10 * 10 = F NLE NLF NLLog10PCE (FE PCELog10Increase(dBA)(dBA)(dBA)(dBA)(dBA)(dBA)(dBA)(dBA)								
Noise Location #2										
Sunday										
St. Joseph's Road	14	16	1.14	0.06	0.58					
	52.6 53.18									
	Total Nois	e Increase fo	or Site Acces	ss Sunday =	0.58					

F NL = 10 * log10 (F PCE/E PCE) + E NL F NL IN = 10 * Log10 (F PCE/E PCE)

E PCE - Existing Passenger Car Equivalent (From Previous Existing Traffic Table)

F PCE - Future Passenger Car Equivalent (From previous No Build Traffic Tables)

F NL IN - Future Noise Level Increase

E NL - Existing Noise Level (collected by TMA on June 17, 2009 - Weekday)

F NL - Future Noise Level (Calculating)

Noise Calculations - Interim 2016 Build Condition Sunday										
	Existing Total PCE (E PCE)Future Build TotalLog10 * 10 = F NL IncreaseE NL (dBA)FNL (dBA)									
Noise Location #2										
Sunday										
St. Joseph's Road	14	32	2.29	0.36	3.59					
	52.6 56.19									
	Total Nois	e Increase fo	or Site Acces	s Sunday =	3.59					

F NL = 10 * log10 (F PCE/E PCE) + E NL F NL IN = 10 * Log10 (F PCE/E PCE)

E PCE - Existing Passenger Car Equivalent (From Previous Existing Traffic Table)

F PCE - Future Passenger Car Equivalent (From previous No Build Traffic Tables)

F NL IN - Future Noise Level Increase

E NL - Existing Noise Level (collected by TMA on June 17, 2009 - Weekday)

F NL - Future Noise Level (Calculating)

Noise Calculations - Full 2021 Build Condition Sunday										
	Existing Total PCE (E PCE)	Existing otal PCE (E PCE)Future Build Total E PCE PCE (FF PCE/ E PCELog10 * 10 								
Noise Location #2										
Sunday										
St. Joseph's Road	14	62	4.43	0.65	6.46					
						52.6	59.06			
	Total Nois	e Increase fo	or Site Acces	s Sunday =	6.46					

F NL = 10 * log10 (F PCE/E PCE) + E NL F NL IN = 10 * Log10 (F PCE/E PCE)

E PCE - Existing Passenger Car Equivalent (From Previous Existing Traffic Table)

F PCE - Future Passenger Car Equivalent (From previous No Build Traffic Tables)

F NL IN - Future Noise Level Increase

E NL - Existing Noise Level (collected by TMA on June 17, 2009 - Weekday)

Noise Calculations - No Build Condition Friday PM									
	Existing Total PCE (E PCE)Future No Build TotalLog10 * 10 = F NLE NLF NLPCE (FE PCE PCE)Log10(dBA)(dBA)(dBA)								
Noise Location #3 Friday PM									
St. Joseph's Road	62	78	1.26	0.10	1.00				
56.0 57.00									
Total No	oise increase	e for Noise L	ocation #1,	Friday PM =	1.00				

F NL = 10 * log10 (F PCE/E PCE) + E NL F NL IN = 10 * Log10 (F PCE/E PCE)

E PCE - Existing Passenger Car Equivalent (From Previous Existing Traffic Table)

F PCE - Future Passenger Car Equivalent (From previous No Build Traffic Tables)

F NL IN - Future Noise Level Increase

E NL - Existing Noise Level (collected by TMA on June 17, 2009 - Weekday)

Noise Calculations - Interim 2016 No Build Condition Friday PM										
	Existing Total PCE (E PCE)	xisting ball PCE E PCE) Future No Build Total PCE (F PCE) FUture No E PCE/ Log10 * 10 = F NL Increase (dBA) (dBA)								
Noise Location #3 Friday PM										
St. Joseph's Road	62	64	1.03	0.01	0.14					
Total No	Total Noise Increase for Noise Location #1. Friday PM = 0.14									

F NL = 10 * log10 (F PCE/E PCE) + E NL F NL IN = 10 * Log10 (F PCE/E PCE)

E PCE - Existing Passenger Car Equivalent (From Previous Existing Traffic Table)

F PCE - Future Passenger Car Equivalent (From previous No Build Traffic Tables)

F NL IN - Future Noise Level Increase

E NL - Existing Noise Level (collected by TMA on June 17, 2009 - Weekday)

F NL - Future Noise Level (Calculating)

Noise C	Noise Calculations - Interim 2016 Build Condition Friday PM									
	Existing Total PCE (E PCE)	Existing btal PCE E PCE)Future Build Total PCE (FLog10 * 10 = F NLLog10 * 10 = F NLF NL 								
Noise Location #3 Friday PM	-									
St. Joseph's Road	62	79	1.27	0.11	1.05					
		56.0 57.05								
Total No	bise Increase	e for Noise L	ocation #1, I	Friday PM =	1.05					

F NL = 10 * log10 (F PCE/E PCE) + E NL F NL IN = 10 * Log10 (F PCE/E PCE)

E PCE - Existing Passenger Car Equivalent (From Previous Existing Traffic Table)

F PCE - Future Passenger Car Equivalent (From previous No Build Traffic Tables)

F NL IN - Future Noise Level Increase

E NL - Existing Noise Level (collected by TMA on June 17, 2009 - Weekday)

F NL - Future Noise Level (Calculating)

Noise	Noise Calculations - Full Build 2021 Condition Friday PM								
	Existing Total PCE (E PCE)Future Build Total PCE (FF PCE/ E PCELog10 * 10 = F NLE NLF NLLog10E NLF NLIncrease(dBA)(dBA)								
Noise Location #3 Friday PM									
St. Joseph's Road	62	110	1.77	0.25	2.49				
						56.0	58.49		
Total No	oise Increase	e for Noise L	ocation #1, I	Friday PM =	2.49				

F NL = 10 * log10 (F PCE/E PCE) + E NL F NL IN = 10 * Log10 (F PCE/E PCE)

E PCE - Existing Passenger Car Equivalent (From Previous Existing Traffic Table)

F PCE - Future Passenger Car Equivalent (From previous No Build Traffic Tables)

F NL IN - Future Noise Level Increase

E NL - Existing Noise Level (collected by TMA on June 17, 2009 - Weekday)

N	Noise Calculations - No Build Condition Sunday								
	Existing Total PCE (E PCE)Future No Build Total PCE (FF PCE/ E PCELog10Log10 * 10 = F NLE NLF NLIncrease (dBA)(dBA)(dBA)(dBA)(dBA)								
Noise Location #3 Sunday	-								
St. Joseph's Road	14	16	1.14	0.06	0.58				
Total	Noise Increa	ase for Noise	e Location #	1, Sunday =	0.58	56.0	56.58		

F NL = 10 * log10 (F PCE/E PCE) + E NL F NL IN = 10 * Log10 (F PCE/E PCE)

E PCE - Existing Passenger Car Equivalent (From Previous Existing Traffic Table)

F PCE - Future Passenger Car Equivalent (From previous No Build Traffic Tables)

F NL IN - Future Noise Level Increase

E NL - Existing Noise Level (collected by TMA on June 17, 2009 - Weekday)

Noise C	Noise Calculations - Interim 2016 No Build Condition Sunday									
	Existing Total PCE (E PCE)	xisting tal PCEFuture No Build TotalLog10 * 10 = F NLtal PCE E PCEPCE (FE PCE E PCELog10= F NLE NLF NL IncreaseGBA)(dBA)(dBA)								
Noise Location #3 Sunday										
St. Joseph's Road	14	16	1.14	0.06	0.58					
	Total Nois	e Increase fo	or Site Acces	s Sunday =	0.58	56.0	56.58			

F NL = 10 * log10 (F PCE/E PCE) + E NL F NL IN = 10 * Log10 (F PCE/E PCE)

E PCE - Existing Passenger Car Equivalent (From Previous Existing Traffic Table)

F PCE - Future Passenger Car Equivalent (From previous No Build Traffic Tables)

F NL IN - Future Noise Level Increase

E NL - Existing Noise Level (collected by TMA on June 17, 2009 - Weekday)

F NL - Future Noise Level (Calculating)

Noise Calculations - Interim 2016 Build Condition Sunday										
	Existing Total PCE (E PCE)	Existing Total PCE (E PCE)Future Build Total PCE (FF PCE/ E PCELog10 * 10 = F NL 								
Noise Location #3										
Sunday										
St. Joseph's Road	14	32	2.29	0.36	3.59					
	56.0 59.59									
	Total Nois	e Increase fo	or Site Acces	s Sunday =	3.59					

F NL = 10 * log10 (F PCE/E PCE) + E NL F NL IN = 10 * Log10 (F PCE/E PCE)

E PCE - Existing Passenger Car Equivalent (From Previous Existing Traffic Table)

F PCE - Future Passenger Car Equivalent (From previous No Build Traffic Tables)

F NL IN - Future Noise Level Increase

E NL - Existing Noise Level (collected by TMA on June 17, 2009 - Weekday)

F NL - Future Noise Level (Calculating)

Noise Calculations - Full Build 2021 Condition Sunday										
	Existing Total PCE (E PCE)	Existing otal PCE (E PCE)Future Build TotalLog10 * 10 = F NL IncreaseE NLF NLDescriptionPCE (FE PCELog10= F NL Increase(dBA)(dBA)								
Noise Location #3										
Sunday										
St. Joseph's Road	14	62	4.43	0.65	6.46					
	56.0 62.46									
	Total Nois	e Increase fo	or Site Acces	s Sunday =	6.46					

F NL = 10 * log10 (F PCE/E PCE) + E NL F NL IN = 10 * Log10 (F PCE/E PCE)

E PCE - Existing Passenger Car Equivalent (From Previous Existing Traffic Table)

F PCE - Future Passenger Car Equivalent (From previous No Build Traffic Tables)

F NL IN - Future Noise Level Increase

E NL - Existing Noise Level (collected by TMA on June 17, 2009 - Weekday)

Nc	Noise Calculations - No Build Condition Friday PM									
	Existing Total PCE (E PCE)Future No Build TotalLog10 * 10 = F NLE NLF NLPCE (FE PCELog10Increase(dBA)(dBA)									
Noise Location #4 Friday PM	-									
Cold Spring Road	157	189	1.20	0.08	0.81					
Tota	al Noise Incr	ease for Site	Access We	ekday PM =	0.81	46.0	46.81			

F NL = 10 * log10 (F PCE/E PCE) + E NL F NL IN = 10 * Log10 (F PCE/E PCE)

E PCE - Existing Passenger Car Equivalent (From Previous Existing Traffic Table)

F PCE - Future Passenger Car Equivalent (From previous No Build Traffic Tables)

F NL IN - Future Noise Level Increase

E NL - Existing Noise Level (collected by TMA on June 17, 2009 - Weekday)

Noise Calculations - Interim 2016 No Build Condition Friday PM										
	Existing Total PCE (E PCE)	Existing Total PCE (E PCE)Future No Build Total PCE (FF PCE/ E PCELog10= F NLE NLF NLIncrease (dBA)PCE(F)E PCEIncrease(dBA)(dBA)(dBA)								
Noise Location #4 Friday PM										
Cold Spring Road	157	174	1.11	0.04	0.45					
Tota	al Noise Incr	ease for Site	Access We	ekday PM =	0.45	46.0	46.45			

F NL = 10 * log10 (F PCE/E PCE) + E NL F NL IN = 10 * Log10 (F PCE/E PCE)

E PCE - Existing Passenger Car Equivalent (From Previous Existing Traffic Table)

F PCE - Future Passenger Car Equivalent (From previous No Build Traffic Tables)

F NL IN - Future Noise Level Increase

E NL - Existing Noise Level (collected by TMA on June 17, 2009 - Weekday)

F NL - Future Noise Level (Calculating)

Noise C	Noise Calculations - Interim 2016 Build Condition Friday PM									
	Existing Total PCE (E PCE)	Existing Total PCE (E PCE)Future Build Total PCE (FF PCE/ E PCELog10= F NLE NLF NLIncrease (dBA)(dBA)(dBA)(dBA)(dBA)(dBA)								
Noise Location #4 Friday PM	-									
Cold Spring Road	157	381	2.43	0.39	3.85	10.0				
Tota	al Noise Incr	ease for Site	Access We	ekday PM =	3.85	46.0	49.85			

F NL = 10 * log10 (F PCE/E PCE) + E NL F NL IN = 10 * Log10 (F PCE/E PCE)

E PCE - Existing Passenger Car Equivalent (From Previous Existing Traffic Table)

F PCE - Future Passenger Car Equivalent (From previous No Build Traffic Tables)

F NL IN - Future Noise Level Increase

E NL - Existing Noise Level (collected by TMA on June 17, 2009 - Weekday)

F NL - Future Noise Level (Calculating)

Noise	Noise Calculations - Full Build 2021 Condition Friday PM									
	Existing Total PCE (E PCE)	Future Build Total PCE (F PCE)	F PCE/ E PCE	Log10	Log10 * 10 = F NL Increase (dBA)	E NL (dBA)	F NL (dBA)			
Noise Location #4 PM										
Cold Spring Road	157	635	4.04	0.61	6.07	10.0				
Tota	al Noise Incr	ease for Site	e Access We	ekday PM =	6.07	46.0	52.07			

F NL = 10 * log10 (F PCE/E PCE) + E NL F NL IN = 10 * Log10 (F PCE/E PCE)

E PCE - Existing Passenger Car Equivalent (From Previous Existing Traffic Table)

F PCE - Future Passenger Car Equivalent (From previous No Build Traffic Tables)

F NL IN - Future Noise Level Increase

E NL - Existing Noise Level (collected by TMA on June 17, 2009 - Weekday)

Noise Calculations - No Build Condition Sunday									
	Existing Total PCE (E PCE)	Future No Build Total PCE (F PCE)	F PCE/ E PCE	Log10	Log10 * 10 = F NL Increase (dBA)	E NL (dBA)	F NL (dBA)		
Noise Location #4 Sunday									
Cold Spring Road	94	111	1.18	0.07	0.72				
	Total Nois	e Increase fo	or Site Acces	ss Sunday =	0.72	46.0	46.72		

F NL = 10 * log10 (F PCE/E PCE) + E NL F NL IN = 10 * Log10 (F PCE/E PCE)

E PCE - Existing Passenger Car Equivalent (From Previous Existing Traffic Table)

F PCE - Future Passenger Car Equivalent (From previous No Build Traffic Tables)

F NL IN - Future Noise Level Increase

E NL - Existing Noise Level (collected by TMA on June 17, 2009 - Weekday)

Noise Calculations - Interim 2016 No Build Condition Sunday								
	Existing Total PCE (E PCE)	Future No Build Total PCE (F PCE)	F PCE/ E PCE	Log10	Log10 * 10 = F NL Increase (dBA)	E NL (dBA)	F NL (dBA)	
Noise Location #4 Sunday								
Cold Spring Road	94	110	1.17	0.07	0.68			
	Total Nois	e Increase fo	or Site Acces	s Sunday =	0.68	46.0	46.68	

F NL = 10 * log10 (F PCE/E PCE) + E NL F NL IN = 10 * Log10 (F PCE/E PCE)

E PCE - Existing Passenger Car Equivalent (From Previous Existing Traffic Table)

F PCE - Future Passenger Car Equivalent (From previous No Build Traffic Tables)

F NL IN - Future Noise Level Increase

E NL - Existing Noise Level (collected by TMA on June 17, 2009 - Weekday)

F NL - Future Noise Level (Calculating)

Noise Calculations - Interim 2016 Build Condition Sunday									
	Existing Total PCE (E PCE)	Future Build Total PCE (F PCE)	F PCE/ E PCE	Log10	Log10 * 10 = F NL Increase	E NL (dBA)	F NL (dBA)		
Noise Location #4									
Sunday									
Cold Spring Road	94	414	4.40	0.64	6.44				
						46.0	52.44		
Total Nois	e Increase f	or Peak East	of Site at In	tersection=	6.44				

F NL = 10 * log10 (F PCE/E PCE) + E NL F NL IN = 10 * Log10 (F PCE/E PCE)

E PCE - Existing Passenger Car Equivalent (From Previous Existing Traffic Table)

F PCE - Future Passenger Car Equivalent (From previous No Build Traffic Tables)

F NL IN - Future Noise Level Increase

E NL - Existing Noise Level (collected by TMA on June 17, 2009 - Weekday)

F NL - Future Noise Level (Calculating)

Noise Calculations - Full Build 2021 Condition Sunday									
	Existing Total PCE (E PCE)	Future Build Total PCE (F PCE)	F PCE/ E PCE	Log10	Log10 * 10 = F NL Increase	E NL (dBA)	F NL (dBA)		
Noise Location #4									
Sunday									
Cold Spring Road	94	794	8.45	0.93	9.27				
						46.0	55.27		
Total Nois	e Increase f	or Peak East	of Site at In	tersection=	9.27				

F NL = 10 * log10 (F PCE/E PCE) + E NL F NL IN = 10 * Log10 (F PCE/E PCE)

E PCE - Existing Passenger Car Equivalent (From Previous Existing Traffic Table)

F PCE - Future Passenger Car Equivalent (From previous No Build Traffic Tables)

F NL IN - Future Noise Level Increase

E NL - Existing Noise Level (collected by TMA on June 17, 2009 - Weekday)

Noise Calculations - No Build Condition Friday PM										
	Existing Total PCE (E PCE)Future No Build Total PCE (FF PCE/ E PCELog10 * 10 = F NLLog10 * 10 = F NLLog10 * 10 (dBA)F PCE/ (dBA)Log10 * 10 (dBA)F NL (dBA)									
Noise Location #5 Friday PM										
Site Access	413	413 461 1.12 0.05 0.48								
Tota	al Noise Incr	ease for Site	e Access We	ekday PM =	0.48	54.6	55.08			

F NL = 10 * log10 (F PCE/E PCE) + E NL F NL IN = 10 * Log10 (F PCE/E PCE)

E PCE - Existing Passenger Car Equivalent (From Previous Existing Traffic Table)

F PCE - Future Passenger Car Equivalent (From previous No Build Traffic Tables)

F NL IN - Future Noise Level Increase

E NL - Existing Noise Level (collected by TMA on June 17, 2009 - Weekday)

Noise Calculations - Interim 2016 No Build Condition Friday PM										
	Existing Total PCE (E PCE)	Existing otal PCE (E PCE)Future No Build Total PCE (FF PCE/ E PCELog10Log10 * 10 = F NLE NLF NLLog10PCE (FE PCELog10(dBA)(dBA)(dBA)								
Noise Location #5 Friday PM										
Site Access	413	432	1.05	0.02	0.20					
Tota	al Noise Incr	ease for Site	Access We	ekday PM =	0.20	54.6	54.80			

F NL = 10 * log10 (F PCE/E PCE) + E NL F NL IN = 10 * Log10 (F PCE/E PCE)

E PCE - Existing Passenger Car Equivalent (From Previous Existing Traffic Table)

F PCE - Future Passenger Car Equivalent (From previous No Build Traffic Tables)

F NL IN - Future Noise Level Increase

E NL - Existing Noise Level (collected by TMA on June 17, 2009 - Weekday)

F NL - Future Noise Level (Calculating)

Noise Calculations - Interim 2016 Build Condition Friday PM									
	Existing Total PCE (E PCE)Future Build TotalF PCE/ F PCE/ E PCELog10= F NL IncreaseE NL (dBA)F NL (dBA)								
Noise Location #5 Friday PM									
Site Access	413	1845	4.47	0.65	6.50				
Tota	al Noise Incr	ease for Site	Access We	ekday PM =	6.50	54.6	61.10		

F NL = 10 * log10 (F PCE/E PCE) + E NL F NL IN = 10 * Log10 (F PCE/E PCE)

E PCE - Existing Passenger Car Equivalent (From Previous Existing Traffic Table)

F PCE - Future Passenger Car Equivalent (From previous No Build Traffic Tables)

F NL IN - Future Noise Level Increase

E NL - Existing Noise Level (collected by TMA on June 17, 2009 - Weekday)

F NL - Future Noise Level (Calculating)

Noise Calculations - Full Build 2021 Condition Friday PM									
	Existing Total PCE (E PCE)Future Build Total PCE (FF PCE/ E PCELog10 * 10 = F NLE NLF NLIncrease (dBA)(dBA)(dBA)(dBA)(dBA)								
Noise Location #5 Friday PM									
Site Access	890	3900	4.38	0.64	6.42	- 4 - 0			
Tota	al Noise Incr	ease for Site	e Access We	ekday PM =	6.42	54.6	61.02		

F NL = 10 * log10 (F PCE/E PCE) + E NL F NL IN = 10 * Log10 (F PCE/E PCE)

E PCE - Existing Passenger Car Equivalent (From Previous Existing Traffic Table)

F PCE - Future Passenger Car Equivalent (From previous No Build Traffic Tables)

F NL IN - Future Noise Level Increase

E NL - Existing Noise Level (collected by TMA on June 17, 2009 - Weekday)

Noise Calculations - No Build Condition Sunday							
	Existing Total PCE (E PCE)	Future No Build Total PCE (F PCE)	F PCE/ E PCE	Log10	Log10 * 10 = F NL Increase (dBA)	E NL (dBA)	F NL (dBA)
Noise Location #5 Sunday	-						
Site Access	95	110	1.16	0.06	0.64	54.0	55.04
Total Noise Increase for Site Access Sunday =						J4.0	55.24

F NL = 10 * log10 (F PCE/E PCE) + E NL F NL IN = 10 * Log10 (F PCE/E PCE)

E PCE - Existing Passenger Car Equivalent (From Previous Existing Traffic Table)

F PCE - Future Passenger Car Equivalent (From previous No Build Traffic Tables)

F NL IN - Future Noise Level Increase

E NL - Existing Noise Level (collected by TMA on June 17, 2009 - Weekday)

Noise Calculations - Interim 2016 No Build Condition Sunday							
	Existing Total PCE (E PCE)	Future No Build Total PCE (F PCE)	F PCE/ E PCE	Log10	Log10 * 10 = F NL Increase (dBA)	E NL (dBA)	F NL (dBA)
Noise Location #5 Sunday							
Site Access	95	97	1.02	0.01	0.09		
						54.6	54.69
Total Noise Increase for Site Access Sunday =							

F NL = 10 * log10 (F PCE/E PCE) + E NL F NL IN = 10 * Log10 (F PCE/E PCE)

E PCE - Existing Passenger Car Equivalent (From Previous Existing Traffic Table)

F PCE - Future Passenger Car Equivalent (From previous No Build Traffic Tables)

F NL IN - Future Noise Level Increase

E NL - Existing Noise Level (collected by TMA on June 17, 2009 - Weekday)

F NL - Future Noise Level (Calculating)

Noise Calculations - Interim 2016 Build Condition Sunday							
	Existing Total PCE (E PCE)	Future Build Total PCE (F PCE)	F PCE/ E PCE	Log10	Log10 * 10 = F NL Increase	E NL (dBA)	F NL (dBA)
Noise Location #5 Sunday							
Site Access	95	2069	21.78	1.34	13.38		
						54.6	67.98
Total Noise Increase for Peak East of Site at Intersection=							

F NL = 10 * log10 (F PCE/E PCE) + E NL F NL IN = 10 * Log10 (F PCE/E PCE)

E PCE - Existing Passenger Car Equivalent (From Previous Existing Traffic Table)

F PCE - Future Passenger Car Equivalent (From previous No Build Traffic Tables)

F NL IN - Future Noise Level Increase

E NL - Existing Noise Level (collected by TMA on June 17, 2009 - Weekday)

F NL - Future Noise Level (Calculating)

Noise Calculations - Full Build 2021 Condition Sunday							
	Existing Total PCE (E PCE)	Future Build Total PCE (F PCE)	F PCE/ E PCE	Log10	Log10 * 10 = F NL Increase	E NL (dBA)	F NL (dBA)
Noise Location #5 Sunday							
Site Access	95	4840	50.95	1.71	17.07		
						54.6	71.67
Total Noise Increase for Peak East of Site at Intersection=							

F NL = 10 * log10 (F PCE/E PCE) + E NL F NL IN = 10 * Log10 (F PCE/E PCE)

E PCE - Existing Passenger Car Equivalent (From Previous Existing Traffic Table)

F PCE - Future Passenger Car Equivalent (From previous No Build Traffic Tables)

F NL IN - Future Noise Level Increase

E NL - Existing Noise Level (collected by TMA on June 17, 2009 - Weekday)