APPENDIX E

NOISE DATA

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Construction Calculations

Phase: Demolition

Equipment	Reference (dBA) 50 ft Lmax	Usage Factor[1]	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA) Lmax	Noise Level (dBA) Leq
Dozer	80	40	50	0.5	80	76
Backhoe	85	16	50	0.5	85	77
Backhoe	85	16	50	0.5	85	77
Tractor	80	40	50	0.5	80	76
Front Loader	79	40	50	0.5	79	75
Saws	78	4	50	0.5	78	64
				Combined at 50 feet	**90**	**83**
				Combined at Receptor 410 feet	**72**	**65**

Site Prep

Equipment	Reference (dBA) 50 ft Lmax	Usage Factor[1]	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA) Lmax	Noise Level (dBA) Leq
Grader	85	8	50	0.5	85	74
Scraper	88	40	50	0.5	88	84
Backhoe	85	16	50	0.5	85	77
				Combined at 50 feet	**91**	**85**
				Combined at Receptor 410 feet	**73**	**67**

Phase: Grading

Equipment	Reference (dBA) 50 ft Lmax	Usage Factor[1]	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA) Lmax	Noise Level (dBA) Leq
Grader	85	8	50	0.5	85	74
Backhoe	85	16	50	0.5	85	77
Backhoe	85	16	50	0.5	85	77
Dozer	80	40	50	0.5	80	76
				Combined at 50 feet	**90**	**82**
				Combined at Receptor 410 feet	**72**	**64**

Phase:Building Construstion

Equipment	Reference (dBA) 50 ft Lmax	Usage Factor[1]	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA) Lmax	Noise Level (dBA) Leq
Crane	83	16	50	0.5	83	75
Forklift	75	20	50	0.5	75	68
Forklift	75	20	50	0.5	75	68
Generator	78	100	50	0.5	78	78
Backhoe	85	16	50	0.5	85	77
Welder	74	40	50	0.5	74	70
Welder	74	40	50	0.5	74	70
Welder	74	40	50	0.5	74	70
				Combined at 50 feet	**88**	**82**
				Combined at Receptor 410 feet	**70**	**64**

Phase: Paving

Equipment	Reference (dBA) 50 ft Lmax	Usage Factor[1]	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA) Lmax	Noise Level (dBA) Leq
Concrete Mixer	85	40	50	0.5	85	81
Paver	89	10	50	0.5	89	79
Roller	80	20	50	0.5	80	73
Roller	80	20	50	0.5	80	73
Backhoe	85	16	50	0.5	85	77
				Combined at 50 feet	**92**	**85**
				Combined at Receptor 410 feet	**74**	**66**

Phase: Architectural Coating

Equipment	Reference (dBA) 50 ft Lmax	Usage Factor[1]	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA) Lmax	Noise Level (dBA) Leq
Compressor	81	100	50	0.5	81	81
				Combined at 50 feet	**81**	**81**
				Combined at Receptor 410 feet	**63**	**63**

Sources: Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances (USEPA

[1]- Percentage of time that a piece of equipment is operating at full power

dBA – A-weighted Decibels

Lmax- Maximum Level

Leq- Equivalent Level

Construction Calculations

Phase: Demolition

Equipment	Reference (dBA) 50 ft Lmax	Usage Factor[1]	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA) Lmax	Noise Level (dBA) Leq
Dozer	80	40	50	0.5	80	76
Backhoe	85	16	50	0.5	85	77
Backhoe	85	16	50	0.5	85	77
Tractor	80	40	50	0.5	80	76
Front Loader	79	40	50	0.5	79	75
Saws	78	4	50	0.5	78	64
			Combined at 50 feet		**90**	**83**
			Combined at Receptor 675 feet		**67**	**61**

Site Prep

Equipment	Reference (dBA) 50 ft Lmax	Usage Factor[1]	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA) Lmax	Noise Level (dBA) Leq
Grader	85	8	50	0.5	85	74
Scraper	88	40	50	0.5	88	84
Backhoe	85	16	50	0.5	85	77
			Combined at 50 feet		**91**	**85**
			Combined at Receptor 675 feet		**68**	**63**

Phase: Grading

Equipment	Reference (dBA) 50 ft Lmax	Usage Factor[1]	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA) Lmax	Noise Level (dBA) Leq
Grader	85	8	50	0.5	85	74
Backhoe	85	16	50	0.5	85	77
Backhoe	85	16	50	0.5	85	77
Dozer	80	40	50	0.5	80	76
			Combined at 50 feet		**90**	**82**
			Combined at Receptor 675 feet		**68**	**60**

Phase:Building Construstion

Equipment	Reference (dBA) 50 ft Lmax	Usage Factor[1]	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA) Lmax	Noise Level (dBA) Leq
Crane	83	16	50	0.5	83	75
Forklift	75	20	50	0.5	75	68
Forklift	75	20	50	0.5	75	68
Generator	78	100	50	0.5	78	78
Backhoe	85	16	50	0.5	85	77
Welder	74	40	50	0.5	74	70
Welder	74	40	50	0.5	74	70
Welder	74	40	50	0.5	74	70
			Combined at 50 feet		**88**	**82**
			Combined at Receptor 675 feet		**66**	**60**

Phase: Paving

Equipment	Reference (dBA) 50 ft Lmax	Usage Factor[1]	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA) Lmax	Noise Level (dBA) Leq
Concrete Mixer	85	40	50	0.5	85	81
Paver	89	10	50	0.5	89	79
Roller	80	20	50	0.5	80	73
Roller	80	20	50	0.5	80	73
Backhoe	85	16	50	0.5	85	77
			Combined at 50 feet		**92**	**85**
			Combined at Receptor 675 feet		**70**	**62**

Phase: Architectural Coating

Equipment	Reference (dBA) 50 ft Lmax	Usage Factor[1]	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA) Lmax	Noise Level (dBA) Leq
Compressor	81	100	50	0.5	81	81
			Combined at 50 feet		**81**	**81**
			Combined at Receptor 675 feet		**58**	**58**

Sources: Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances (USEPA

[1]- Percentage of time that a piece of equipment is operating at full power

dBA – A-weighted Decibels

Lmax- Maximum Level

Leq- Equivalent Level

Construction Calculations

Phase: Demolition

Equipment	Reference (dBA) 50 ft Lmax	Usage Factor[1]	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA) Lmax	Noise Level (dBA) Leq
Dozer	80	40	50	0.5	80	76
Backhoe	85	16	50	0.5	85	77
Backhoe	85	16	50	0.5	85	77
Tractor	80	40	50	0.5	80	76
Front Loader	79	40	50	0.5	79	75
Saws	78	4	50	0.5	78	64
				Combined at 50 feet	**90**	**83**
				Combined at Receptor 7 feet	**107**	**100**

Site Prep

Equipment	Reference (dBA) 50 ft Lmax	Usage Factor[1]	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA) Lmax	Noise Level (dBA) Leq
Grader	85	8	50	0.5	85	74
Scraper	88	40	50	0.5	88	84
Backhoe	85	16	50	0.5	85	77
				Combined at 50 feet	**91**	**85**
				Combined at Receptor 9 feet	**106**	**100**

Phase: Grading

Equipment	Reference (dBA) 50 ft Lmax	Usage Factor[1]	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA) Lmax	Noise Level (dBA) Leq
Grader	85	8	50	0.5	85	74
Backhoe	85	16	50	0.5	85	77
Backhoe	85	16	50	0.5	85	77
Dozer	80	40	50	0.5	80	76
				Combined at 50 feet	**90**	**82**
				Combined at Receptor 7 feet	**107**	**99**

Phase:Building Construstion

Equipment	Reference (dBA) 50 ft Lmax	Usage Factor[1]	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA) Lmax	Noise Level (dBA) Leq
Crane	83	16	50	0.5	83	75
Forklift	75	20	50	0.5	75	68
Forklift	75	20	50	0.5	75	68
Generator	78	100	50	0.5	78	78
Backhoe	85	16	50	0.5	85	77
Welder	74	40	50	0.5	74	70
Welder	74	40	50	0.5	74	70
Welder	74	40	50	0.5	74	70
				Combined at 50 feet	**88**	**82**
				Combined at Receptor 7 feet	**105**	**99**

Phase: Paving

Equipment	Reference (dBA) 50 ft Lmax	Usage Factor[1]	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA) Lmax	Noise Level (dBA) Leq
Concrete Mixer	85	40	50	0.5	85	81
Paver	89	10	50	0.5	89	79
Roller	80	20	50	0.5	80	73
Roller	80	20	50	0.5	80	73
Backhoe	85	16	50	0.5	85	77
				Combined at 50 feet	**92**	**85**
				Combined at Receptor 9 feet	**107**	**100**

Phase: Architectural Coating

Equipment	Reference (dBA) 50 ft Lmax	Usage Factor[1]	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA) Lmax	Noise Level (dBA) Leq
Compressor	81	100	50	0.5	81	81
				Combined at 50 feet	**81**	**81**
				Combined at Receptor 6 feet	**99**	**99**

Sources: Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances (USEPA

[1]- Percentage of time that a piece of equipment is operating at full power

dBA – A-weighted Decibels

Lmax- Maximum Level

Leq- Equivalent Level

Noise Measurement Survey – 24 HR

Project Number: CFS2101
Project Name: 388 Vintage Park

Test Personnel: Jordan Roberts
Equipment: Larson Davis Spark 706RC

Site Number: LT-1 Dates: 6/17/21 – 6/18/21 Time: From 10:30 AM To 11:00 AM

Site Location: Northwest portion of site adjacent to Home Depot parking lot near garden center. Approximately 400 feet from nearest lanes of Chess Drive.

Primary Noise Sources: Home Depot activity, rooftop mechanical equipment (tonal) from Gilead buildings, distant traffic.

Location Photo:

Noise Measurement Survey – 24 HR

Project Number: CFS2101
Project Name: 388 Vintage Park

Test Personnel: Jordan Roberts
Equipment: Larson Davis Spark 706RC

Site Number: LT-2 Dates: 6/17/21 – 6/18/21 Time: From 11:00 AM To 11:00 AM

Site Location: Southeast corner of existing building on-site, 110 feet from center of Vintage Park Drive.

Primary Noise Sources: Traffic along Vintage Park Drive and Chess Drive.

Location Photos: