

**Appendix F:  
Noise Supporting Information**

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Traffic Count

Small  
127

Medium  
3

Large  
4

Project Number: 4673.0012  
 Project Name: Hercules Willow Ave.  
 Test Personnel: Spencer

Sheet \_\_\_ of \_\_\_

### Noise Measurement Survey

Site Number: ST-2 Date: 1/26/18 Time: From 12:55pm To 1:10 PM

Site Location: In preschool playground/open space area 30 feet from center of Willow Ave.

Primary Noise Sources: Traffic from Willow Ave.

#### Measurement Results

	dB(A)
Leq	62.4
Lmax	74.9
Lmin	43.8
Lpeak	—
L5	67.4
L10	66.0
L50	59.2
L90	48.1
SEL	—

#### Observed Noise Sources/Events

Time	Noise Source/Event	dB(A)

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Equipment: LXT-1  
 Settings: A-Weighted  Other

Measured Difference: 0.18 dB(A)  
 Slow  Fast  Windscreen

#### Atmospheric Conditions:

Maximum Wind Velocity (mph)	Average Wind Velocity (mph)	Temperature (F)	Relative Humidity (%)
3.3	1.2	58.6	
Comments: <u>Sunny day, minimal wind</u>			

Photos Taken:

Photo Number	Location/Description

Traffic Description:

Roadway	# Lanes	Posted Speed	Average Speed	NB/EB Counts	SB/WB Counts
Willow Ave	2	35 mph			

Diagram/Further Comments:

<u>Traffic Count</u>		
<u>Small</u>	<u>Medium</u>	<u>Large</u>
110	1	3



Traffic Count

Small

112

Medium

2

Large

1



Photograph 1: View from ST-1 facing north



Photograph 2: View from ST-1 facing east



Photograph 3: View from ST-1 facing south



Photograph 4: View from ST-1 facing west



Photograph 5: View from ST-2 facing north



Photograph 6: View from ST-2 facing east



Photograph 7: View from ST-2 facing south



Photograph 8: View from ST-2 facing west



Photograph 9: View from ST-3 facing north



Photograph 10: View from ST-3 facing east



Photograph 11: View from ST-3 facing south



Photograph 12: View from ST-3 facing west

TABLE Existing-01  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 01/24/2018  
ROADWAY SEGMENT: Willow Avenue - north of SR-4  
NOTES: Willow Avenue Commercial Project - Existing

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\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 5600      SPEED (MPH): 35      GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24      SITE CHARACTERISTICS: SOFT

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\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.17

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	75.8	156.6

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TABLE Existing-02  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 01/24/2018  
ROADWAY SEGMENT: Willow Avenue - SR-4 to East Church Driveway  
NOTES: Willow Avenue Commercial Project - Existing

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 8100      SPEED (MPH): 35      GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.28

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	92.3	198.4

TABLE Existing-03  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 01/24/2018  
ROADWAY SEGMENT: Willow Avenue - east Church Driveway to middle Church Driveway  
NOTES: Willow Avenue Commercial Project - Existing

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 8100      SPEED (MPH): 35      GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.28

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	92.3	198.4

TABLE Existing-04  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 01/24/2018  
ROADWAY SEGMENT: Willow Avenue - middle Church Driveway to west Church Driveway  
NOTES: Willow Avenue Commercial Project - Existing

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 8000      SPEED (MPH): 35      GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.22

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	91.5	196.8

TABLE Existing-05  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 01/24/2018  
ROADWAY SEGMENT: Willow Avenue - west Church Driveway to Palm Avenue  
NOTES: Willow Avenue Commercial Project - Existing

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\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 8100      SPEED (MPH): 35      GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6      SITE CHARACTERISTICS: SOFT

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\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.28

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	92.3	198.4

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TABLE Existing-06  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 01/24/2018  
ROADWAY SEGMENT: Willow Avenue - Palm Avenue to I-80  
NOTES: Willow Avenue Commercial Project - Existing

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 4100      SPEED (MPH): 35      GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.32

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	58.8	126.1

TABLE Existing-07  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 01/24/2018  
ROADWAY SEGMENT: Palm Avenue - Willow Avenue to Sycamore Avenue  
NOTES: Willow Avenue Commercial Project - Existing

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 7900      SPEED (MPH): 35      GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.17

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	90.7	195.1

TABLE Existing-08  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 01/24/2018  
ROADWAY SEGMENT: State Route 4 - east of I-80  
NOTES: Willow Avenue Commercial Project - Existing

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 43000      SPEED (MPH): 65      GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 75.78

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
171.6	366.8	788.8	1698.4

TABLE Existing + Project-01  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 01/24/2018  
ROADWAY SEGMENT: Willow Avenue - north of SR-4  
NOTES: Willow Avenue Commercial Project - Existing + Project

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\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 6100      SPEED (MPH): 35      GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	----	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24      SITE CHARACTERISTICS: SOFT

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\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.54

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	79.8	165.6

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TABLE Existing + Project-02  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 01/24/2018  
ROADWAY SEGMENT: Willow Avenue - SR-4 to East Church Driveway  
NOTES: Willow Avenue Commercial Project - Existing + Project

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 8700      SPEED (MPH): 35      GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.59

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	96.7	208.1

TABLE Existing + Project-03  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 01/24/2018  
ROADWAY SEGMENT: Willow Avenue - east Church Driveway to middle Church Driveway  
NOTES: Willow Avenue Commercial Project - Existing + Project

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 9300      SPEED (MPH): 35      GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.88

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	101.1	217.5

TABLE Existing + Project-04  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 01/24/2018  
ROADWAY SEGMENT: Willow Avenue - middle Church Driveway to west Church Driveway  
NOTES: Willow Avenue Commercial Project - Existing + Project

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 9300      SPEED (MPH): 35      GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.88

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	101.1	217.5

TABLE Existing + Project-05  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 01/24/2018  
ROADWAY SEGMENT: Willow Avenue - west Church Driveway to Palm Avenue  
NOTES: Willow Avenue Commercial Project - Existing + Project

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 9300      SPEED (MPH): 35      GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.88

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	101.1	217.5

TABLE Existing + Project-06  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 01/24/2018  
ROADWAY SEGMENT: Willow Avenue - Palm Avenue to I-80  
NOTES: Willow Avenue Commercial Project - Existing + Project

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\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 5000      SPEED (MPH): 35      GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6      SITE CHARACTERISTICS: SOFT

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\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.18

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	67.0	143.9

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TABLE Existing + Project-07  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 01/24/2018  
ROADWAY SEGMENT: Palm Avenue - Willow Avenue to Sycamore Avenue  
NOTES: Willow Avenue Commercial Project - Existing + Project

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 8200      SPEED (MPH): 35      GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	----	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.33

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	93.0	200.0

TABLE Existing + Project-08  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 01/24/2018  
ROADWAY SEGMENT: State Route 4 - east of I-80  
NOTES: Willow Avenue Commercial Project - Existing + Project

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\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 43000      SPEED (MPH): 65      GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24      SITE CHARACTERISTICS: SOFT

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\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 75.78

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
171.6	366.8	788.8	1698.4

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TABLE Cumulative-01  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 01/24/2018  
ROADWAY SEGMENT: Willow Avenue - north of SR-4  
NOTES: Willow Avenue Commercial Project - Cumulative

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\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 9900      SPEED (MPH): 35      GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24      SITE CHARACTERISTICS: SOFT

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\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.65

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	107.8	227.5

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TABLE Cumulative-02  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 01/24/2018  
ROADWAY SEGMENT: Willow Avenue - SR-4 to East Church Driveway  
NOTES: Willow Avenue Commercial Project - Cumulative

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 23100      SPEED (MPH): 35      GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.83

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	86.1	185.2	398.8

TABLE Cumulative-03  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 01/24/2018  
ROADWAY SEGMENT: Willow Avenue - east Church Driveway to middle Church Driveway  
NOTES: Willow Avenue Commercial Project - Cumulative

---

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 23000      SPEED (MPH): 35      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6      SITE CHARACTERISTICS: SOFT

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\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.81

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	85.9	184.7	397.6

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TABLE Cumulative-04  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 01/24/2018  
ROADWAY SEGMENT: Willow Avenue - middle Church Driveway to west Church Driveway  
NOTES: Willow Avenue Commercial Project - Cumulative

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 23000      SPEED (MPH): 35      GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.81

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	85.9	184.7	397.6

TABLE Cumulative-05  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 01/24/2018  
ROADWAY SEGMENT: Willow Avenue - west Church Driveway to Palm Avenue  
NOTES: Willow Avenue Commercial Project - Cumulative

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 23000      SPEED (MPH): 35      GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.81

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	85.9	184.7	397.6

TABLE Cumulative-06  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 01/24/2018  
ROADWAY SEGMENT: Willow Avenue - Palm Avenue to I-80  
NOTES: Willow Avenue Commercial Project - Cumulative

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 14100      SPEED (MPH): 35      GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.69

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	62.1	133.3	287.0

TABLE Cumulative-07  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 01/24/2018  
ROADWAY SEGMENT: Palm Avenue - Willow Avenue to Sycamore Avenue  
NOTES: Willow Avenue Commercial Project - Cumulative

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 11500      SPEED (MPH): 35      GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.80

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	54.3	116.4	250.5

TABLE Cumulative-08  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 01/24/2018  
ROADWAY SEGMENT: State Route 4 - east of I-80  
NOTES: Willow Avenue Commercial Project - Cumulative

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 43000      SPEED (MPH): 65      GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 75.78

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
171.6	366.8	788.8	1698.4

TABLE Cumulative + Project-01  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 01/24/2018  
ROADWAY SEGMENT: Willow Avenue - north of SR-4  
NOTES: Willow Avenue Commercial Project - Cumulative + Project

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\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 10400      SPEED (MPH): 35      GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24      SITE CHARACTERISTICS: SOFT

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\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.86

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	55.8	111.2	235.0

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TABLE Cumulative + Project-02  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 01/24/2018  
ROADWAY SEGMENT: Willow Avenue - SR-4 to East Church Driveway  
NOTES: Willow Avenue Commercial Project - Cumulative + Project

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\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 24100      SPEED (MPH): 35      GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6      SITE CHARACTERISTICS: SOFT

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\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.01

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	88.6	190.5	410.2

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TABLE Cumulative + Project-03  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 01/24/2018  
 ROADWAY SEGMENT: Willow Avenue - east Church Driveway to middle Church Driveway  
 NOTES: Willow Avenue Commercial Project - Cumulative + Project

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 27800      SPEED (MPH): 35      GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.63

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	97.4	209.5	451.2

TABLE Cumulative + Project-04  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 01/24/2018

ROADWAY SEGMENT: Willow Avenue - middle Church Driveway to west Church Driveway

NOTES: Willow Avenue Commercial Project - Cumulative + Project

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\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 27800      SPEED (MPH): 35      GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6      SITE CHARACTERISTICS: SOFT

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\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.63

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	97.4	209.5	451.2

TABLE Cumulative + Project-05  
 FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 01/24/2018  
 ROADWAY SEGMENT: Willow Avenue - west Church Driveway to Palm Avenue  
 NOTES: Willow Avenue Commercial Project - Cumulative + Project

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 27800      SPEED (MPH): 35      GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.63

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	97.4	209.5	451.2

TABLE Cumulative + Project-06  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 01/24/2018  
ROADWAY SEGMENT: Willow Avenue - Palm Avenue to I-80  
NOTES: Willow Avenue Commercial Project - Cumulative + Project

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 14800      SPEED (MPH): 35      GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.90

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	64.1	137.7	296.4

TABLE Cumulative + Project-07  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 01/24/2018  
ROADWAY SEGMENT: Palm Avenue - Willow Avenue to Sycamore Avenue  
NOTES: Willow Avenue Commercial Project - Cumulative + Project

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\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 11600      SPEED (MPH): 35      GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6      SITE CHARACTERISTICS: SOFT

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\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.84

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	54.6	117.1	252.0

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TABLE Cumulative + Project-08  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 01/24/2018  
ROADWAY SEGMENT: State Route 4 - east of I-80  
NOTES: Willow Avenue Commercial Project - Cumulative + Project

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\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 43000      SPEED (MPH): 65      GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24      SITE CHARACTERISTICS: SOFT

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\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 75.78

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
171.6	366.8	788.8	1698.4

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