Appendix I
Noise Modeling

Roadway Traffic Noise - Existing

Street	Roadway Segment	Existing Land Uses Located Along Roadway Segment	Traffic Noise Levels (dBA CNEL)			
			Existing (2020)	Existing with Project	Increase over Existing	Significant Impact?
Crawford Canyon Road	n/o Newport Avenue	Residential	67.8	68.2	0.3	No
Newport Avenue	at Project Driveway	Residential	73.5	73.8	0.3	No

TRAFFIC NOISE ANALYSIS TOOL

Project: Crooked Creek
Scenario: Existing (2020)
Source: Translutions

Roadway	Segment	Ground Type	Distance from Roadway to Receiver (feet)	Speed (mph)			Peak Hour Volume			Peak Hour Noise Level (Leq(h) dBA)	Noise Level dBA CNEL
				Auto	MT	HT	Auto	MT	HT		
Crawford Canyon Road	n/o Newport Avenue	Hard	20	35	35	30	783	16	8	67.8	68.1
Newport Avenue	at Project Driveway	Hard	30	50	50	45	1556	32	16	73.5	73.8

Model Notes:
The calculation is based on the methodology described in FHWA Traffic Noise Model Technical Manual (1998).
The peak hour noise level at 50 feet was validated with the results from FHWA Traffic Noise Model Version 2.5.
Accuracy of the calculation is within ±0.1 dB when comparing to TNM results.
Noise propagation greater than 50 feet is based on the following assumptions:
Vehicles are assumed to be on a long straight roadway with cruise speed.
Roadway grade is less than 1.5%.
CNEL levels were obtained based on Figure 2-19, on page 2-58 Caltran's TeNS 2013.

TRAFFIC NOISE ANALYSIS TOOL

Project: Crooked Creek
Scenario: Existing (2020) with Project
Source: Translutions

Roadway	Segment	Ground Type	Distance from Roadway to Receiver (feet)	Speed (mph)			Peak Hour Volume			Peak Hour Noise Level (Leq(h) dBA)	Noise Level dBA CNEL
				Auto	MT	HT	Auto	MT	HT		
Crawford Canyon Road	n/o Newport Avenue	Hard	20	35	35	30	786	16	8	67.9	68.2
Newport Avenue	at Project Driveway	Hard	30	50	50	45	1567	32	16	73.5	73.8

Model Notes:
The calculation is based on the methodology described in FHWA Traffic Noise Model Technical Manual (1998).
The peak hour noise level at 50 feet was validated with the results from FHWA Traffic Noise Model Version 2.5.
Accuracy of the calculation is within ±0.1 dB when comparing to TNM results.
Noise propagation greater than 50 feet is based on the following assumptions:
Vehicles are assumed to be on a long straight roadway with cruise speed.
Roadway grade is less than 1.5%.
CNEL levels were obtained based on Figure 2-19, on page 2-58 Caltran's TeNS 2013.

Summary

File Name on Meter	R1
File Name on PC	SLM_0004983_LxT_Data_063.01.ldbin
Serial Number	0004983
Model	SoundTrack LxT®
Firmware Version	2.302
User	
Location	Crawford Canyon Park
Job Description	
Note	

Measurement

Description	
Start	2020-09-10 08:49:44
Stop	2020-09-10 09:04:44
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre Calibration	2020-09-10 08:43:43
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Slow
Preamp	PRMLxT2B
Microphone Correction	Off
Integration Method	Exponential
Overload	144.5 dB

	A	C	Z
Under Range Peak	**100.8**	97.8	102.8 dB
Under Range Limit	**49.8**	47.8	55.8 dB
Noise Floor	36.7	37.3	44.9 dB

Results

L_{ASeq}	52.2	dB
LASE	81.8	dB
EAS	16.740	µPa²h
EAS8	535.666	µPa²h
EAS40	2.678	mPa²h
$L_{Apeak\ (max)}$	2020-09-10 08:58:46	89.1 dB
L_{ASmax}	2020-09-10 08:54:57	59.8 dB
L_{ASmin}	2020-09-10 09:01:43	41.4 dB
SEA	-99.9	dB

LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s
L_{Apeak} > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s
L_{Apeak} > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s
L_{Apeak} > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s

L_{CSeq}	64.4	dB
L_{ASeq}	52.2	dB
L_{CSeq} - L_{ASeq}	12.1	dB
L_{AIeq}	59.3	dB
L_{Aeq}	52.2	dB
L_{AIeq} - L_{Aeq}	7.1	dB

	A		C		Z	
	dB	**Time Stamp**	**dB**	**Time Stamp**	**dB**	**Time Stamp**
L_{eq}	52.2					
$L_{S(max)}$	59.8	2020/09/10 8:54:57				
$L_{S(min)}$	41.4	2020/09/10 9:01:43				
$L_{Peak(max)}$	89.1	2020/09/10 8:58:46				

# Overloads	0
Overload Duration	0.0 s

Summary

File Name on Meter	R2
File Name on PC	SLM_0004983_LxT_Data_064.01.ldbin
Serial Number	0004983
Model	SoundTrack LxT®
Firmware Version	2.302
User	
Location	Crawford Canyon Park
Job Description	
Note	

Measurement

Description	
Start	2020-09-10 09:07:57
Stop	2020-09-10 09:22:57
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre Calibration	2020-09-10 08:43:42
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting			
Peak Weight	A Weighting			
Detector	Slow			
Preamp	PRMLxT2B			
Microphone Correction	Off			
Integration Method	Exponential			
Overload	144.5 dB			
	A		**C**	**Z**
Under Range Peak	**100.8**		97.8	102.8 dB
Under Range Limit	**49.8**		47.8	55.8 dB
Noise Floor	36.7		37.3	44.9 dB

Results

L_{ASeq}	55.6 dB			
LASE	85.1 dB			
EAS	36.327 µPa²h			
EAS8	1.162 mPa²h			
EAS40	5.812 mPa²h			
$L_{Apeak\ (max)}$	2020-09-10 09:13:26		90.7 dB	
L_{ASmax}	2020-09-10 09:15:05		71.6 dB	
L_{ASmin}	2020-09-10 09:20:11		43.6 dB	
SEA	-99.9 dB			
LAS > 85.0 dB (Exceedance Counts / Duration)	0		0.0 s	
LAS > 115.0 dB (Exceedance Counts / Duration)	0		0.0 s	
L_{Apeak} > 135.0 dB (Exceedance Counts / Duration)	0		0.0 s	
L_{Apeak} > 137.0 dB (Exceedance Counts / Duration)	0		0.0 s	
L_{Apeak} > 140.0 dB (Exceedance Counts / Duration)	0		0.0 s	
L_{CSeq}	67.0 dB			
L_{ASeq}	55.6 dB			
L_{CSeq} - L_{ASeq}	11.3 dB			
L_{AIeq}	59.0 dB			
L_{Aeq}	55.6 dB			
L_{AIeq} - L_{Aeq}	3.4 dB			

	A		C		Z	
	dB	**Time Stamp**	**dB**	**Time Stamp**	**dB**	**Time Stamp**
L_{eq}	55.6					
$L_{S(max)}$	71.6	2020/09/10 9:15:05				
$L_{S(min)}$	43.6	2020/09/10 9:20:11				
$L_{Peak(max)}$	90.7	2020/09/10 9:13:26				

# Overloads	0	
Overload Duration	0.0 s	

Dose Settings

Dose Name	OSHA-1	OSHA-2	
Exchange Rate	5	5 dB	
Threshold	90	80 dB	
Criterion Level	90	90 dB	
Criterion Duration	8	8 h	

Results

Dose	-99.9	-99.9 %	
Projected Dose	-99.9	-99.9 %	
TWA (Projected)	-99.9	-99.9 dB	
TWA (t)	-99.9	-99.9 dB	
Lep (t)	40.6	40.6 dB	

Statistics

LAS5.00	59.4 dB	
LAS10.00	58.3 dB	
LAS33.30	55.1 dB	
LAS50.00	53.4 dB	
LAS66.60	51.5 dB	
LAS90.00	47.9 dB	

Summary

File Name on Meter	R3
File Name on PC	SLM_0004983_LxT_Data_065.01.ldbin
Serial Number	0004983
Model	SoundTrack LxT®
Firmware Version	2.302
User	
Location	Crawford Canyon Park
Job Description	
Note	

Measurement

Description	
Start	2020-09-10 09:24:42
Stop	2020-09-10 09:39:42
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre Calibration	2020-09-10 08:43:42
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting			
Peak Weight	A Weighting			
Detector	Slow			
Preamp	PRMLxT2B			
Microphone Correction	Off			
Integration Method	Exponential			
Overload	144.5 dB			
	A		**C**	**Z**
Under Range Peak	**100.8**		97.8	102.8 dB
Under Range Limit	**49.8**		47.8	55.8 dB
Noise Floor	36.7		37.3	44.9 dB

Results

LA_{eq}	68.0 dB			
LASE	97.6 dB			
EAS	633.370 µPa²h			
EAS8	20.268 mPa²h			
EAS40	101.339 mPa²h			
$LA_{peak\ (max)}$	2020-09-10 09:29:52		100.1 dB	
LAS_{max}	2020-09-10 09:32:37		85.8 dB	
LAS_{min}	2020-09-10 09:34:05		42.1 dB	
SEA	-99.9 dB			
LAS > 85.0 dB (Exceedance Counts / Duration)	1		1.6 s	
LAS > 115.0 dB (Exceedance Counts / Duration)	0		0.0 s	
LA_{peak} > 135.0 dB (Exceedance Counts / Duration)	0		0.0 s	
LA_{peak} > 137.0 dB (Exceedance Counts / Duration)	0		0.0 s	
LA_{peak} > 140.0 dB (Exceedance Counts / Duration)	0		0.0 s	
LC_{eq}	77.8 dB			
LA_{eq}	68.0 dB			
LC_{eq} - LA_{eq}	9.8 dB			
LAI_{eq}	70.6 dB			
LA_{eq}	68.0 dB			
LAI_{eq} - LA_{eq}	2.5 dB			

	A		C		Z	
	dB	**Time Stamp**	**dB**	**Time Stamp**	**dB**	**Time Stamp**
L_{eq}	68.0					
$L_{S(max)}$	85.8	2020/09/10 9:32:37				
$L_{S(min)}$	42.1	2020/09/10 9:34:05				
$L_{Peak(max)}$	100.1	2020/09/10 9:29:52				

# Overloads	0	
Overload Duration	0.0 s	

Dose Settings

Dose Name	OSHA-1	OSHA-2
Exchange Rate	5	5 dB
Threshold	90	80 dB
Criterion Level	90	90 dB
Criterion Duration	8	8 h

Results

Dose	-99.9	0.01 %
Projected Dose	-99.9	0.21 %
TWA (Projected)	-99.9	45.6 dB
TWA (t)	-99.9	20.6 dB
Lep (t)	53.0	53.0 dB

Statistics

LAS5.00	74.0 dB
LAS10.00	71.8 dB
LAS33.30	66.0 dB
LAS50.00	62.4 dB
LAS66.60	57.2 dB
LAS90.00	46.9 dB

Summary

File Name on Meter	R4
File Name on PC	SLM_0004983_LxT_Data_066.02.ldbin
Serial Number	0004983
Model	SoundTrack LxT®
Firmware Version	2.302
User	
Location	Crawford Canyon Park
Job Description	
Note	

Measurement

Description	
Start	2020-09-10 09:47:21
Stop	2020-09-10 10:02:21
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre Calibration	2020-09-10 08:43:42
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting			
Peak Weight	A Weighting			
Detector	Slow			
Preamp	PRMLxT2B			
Microphone Correction	Off			
Integration Method	Exponential			
Overload	144.5 dB			
	A		**C**	**Z**
Under Range Peak	**100.8**		97.8	102.8 dB
Under Range Limit	**49.8**		47.8	55.8 dB
Noise Floor	36.7		37.3	44.9 dB

Results

L_{ASeq}	61.9 dB			
LASE	91.4 dB			
EAS	154.100 µPa²h			
EAS8	4.931 mPa²h			
EAS40	24.656 mPa²h			
$L_{Apeak\ (max)}$	2020-09-10 09:50:49		94.2 dB	
L_{ASmax}	2020-09-10 09:48:59		79.2 dB	
L_{ASmin}	2020-09-10 09:49:20		42.3 dB	
SEA	-99.9 dB			
LAS > 85.0 dB (Exceedance Counts / Duration)	0		0.0 s	
LAS > 115.0 dB (Exceedance Counts / Duration)	0		0.0 s	
L_{Apeak} > 135.0 dB (Exceedance Counts / Duration)	0		0.0 s	
L_{Apeak} > 137.0 dB (Exceedance Counts / Duration)	0		0.0 s	
L_{Apeak} > 140.0 dB (Exceedance Counts / Duration)	0		0.0 s	
L_{CSeq}	69.5 dB			
L_{ASeq}	61.9 dB			
L_{CSeq} - L_{ASeq}	7.6 dB			
L_{AIeq}	64.6 dB			
L_{Aeq}	61.9 dB			
L_{AIeq} - L_{Aeq}	2.7 dB			

	A		C		Z	
	dB	**Time Stamp**	**dB**	**Time Stamp**	**dB**	**Time Stamp**
L_{eq}	61.9					
$L_{S(max)}$	79.2	2020/09/10 9:48:59				
$L_{S(min)}$	42.3	2020/09/10 9:49:20				
$L_{Peak(max)}$	94.2	2020/09/10 9:50:49				

# Overloads	0	
Overload Duration	0.0 s	

Dose Settings

Dose Name	OSHA-1	OSHA-2	
Exchange Rate	5	5 dB	
Threshold	90	80 dB	
Criterion Level	90	90 dB	
Criterion Duration	8	8 h	

Results

Dose	-99.9	-99.9 %	
Projected Dose	-99.9	-99.9 %	
TWA (Projected)	-99.9	-99.9 dB	
TWA (t)	-99.9	-99.9 dB	
Lep (t)	46.8	46.8 dB	

Statistics

LAS5.00	68.6 dB	
LAS10.00	65.5 dB	
LAS33.30	57.9 dB	
LAS50.00	53.9 dB	
LAS66.60	50.7 dB	
LAS90.00	46.1 dB	