Appendix G
# Noise Data

# FIELD NOISE MEASUREMENT DATA

PROJECT: Alpine Park PROJ. # 000 98.20

SITE IDENTIFICATION: ST 1 OBSERVER(S): JCR

ADDRESS: Near 2501 Engelmann Oak Ln

START DATE / TIME: 3/31/20 - 9:45 AM END DATE / TIME: 3/31/20 - 10:05 AM

**METEROLOGICAL CONDITIONS:**

TEMP: 62 °F HUMIDITY: 70.0 %R.H. WIND: (CALM) LIGHT MODERATE VARIABLE

WINDSPEED: 0-1 MPH DIR: N NE E SE S SW W NW STEADY GUSTY

SKY: SUNNY CLEAR (OVRCST) PRTLY CLOUDY FOG RAIN OTHER:

**ACOUSTIC MEASUREMENTS:**

INSTRUMENT: LD LXT TYPE: (G) 2 SERIAL #: 4005

CALIBRATOR: CAL 200 SERIAL #: 2916

CALIBRATION CHECK, BEFORE: 114.0 AFTER 113.98 WINDSCREEN X

SETTINGS: (A-WEIGHTED) (SLOW) FAST FRONTAL (RANDOM) (ANSI) OTHER:

| FILE / MEAS # | START TIME | END TIME | $L_{eq}$ | max | 1.67 | 8.33 | L 25 | 50 | 90 | 99 | min |
|---|---|---|---|---|---|---|---|---|---|---|---|
| .814 | 9:45 AM | 10:05 AM | 46.5 | 57.3 | 55.4 | 51.5 | 46.6 | 41.7 | 34.7 | 31.7 | 29.6 |
| | | | | | | | | | | | |
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COMMENTS:

**NOISE SOURCE INFO:**

PRIMARY NOISE SOURCE: (TRAFFIC) AIRCRAFT RAIL INDUSTRIAL (AMBIENT) OTHER:

ROADWAY TYPE:

OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / (BIRDS) / DIST. INDUSTRIAL

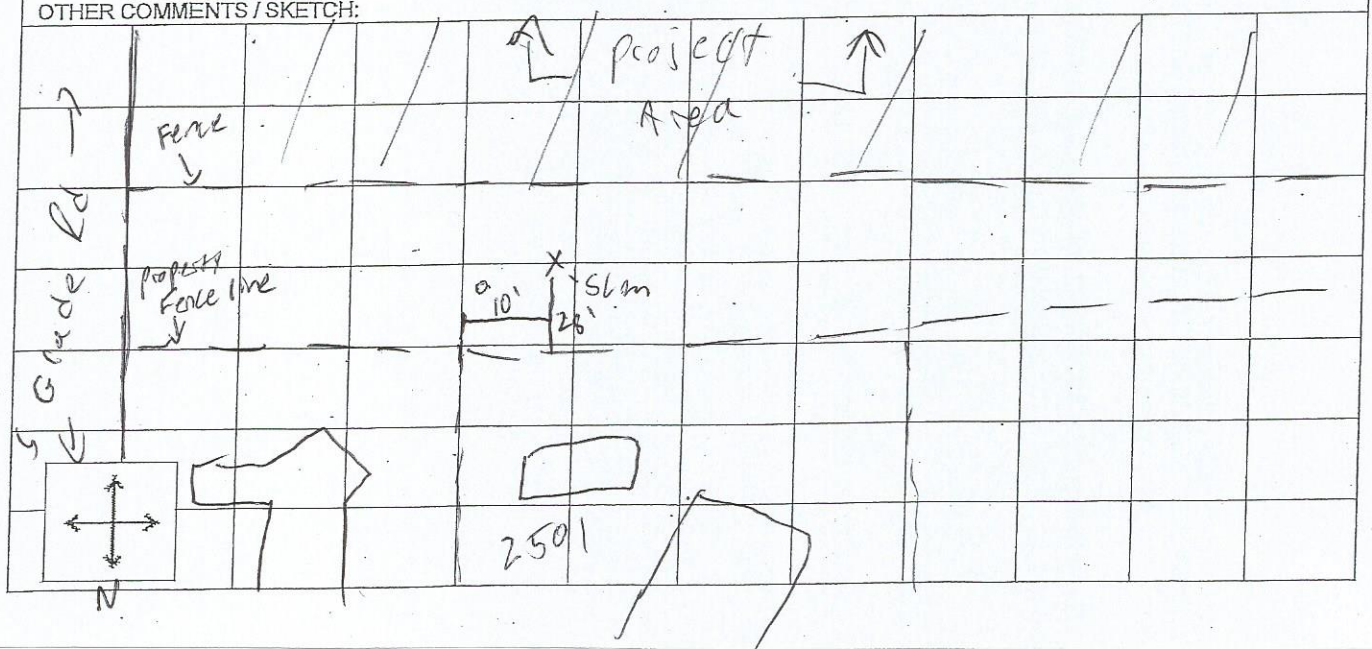
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. (LANDSCAPING ACTIVITIES) / OTHER:

**DESCRIPTION / SKETCH:**

TERRAIN: HARD SOFT MIXED FLAT OTHER:

PHOTOS:

OTHER COMMENTS / SKETCH:



# FIELD NOISE MEASUREMENT DATA

PROJECT: Alpine Park PROJ. #00098.20

SITE IDENTIFICATION: ST2 OBSERVER(S): JCR

ADDRESS: near 2620 via Viejas

START DATE / TIME: 3/31/20 10:48 Am END DATE / TIME: 3/31/20 11:08 Am

**METEROLOGICAL CONDITIONS:**

TEMP: 68 °F HUMIDITY: 52.0 %R.H. WIND: (CALM) LIGHT MODERATE VARIABLE

WINDSPEED: 0-1 MPH DIR: N NE E SE S SW W NW STEADY GUSTY

SKY: SUNNY CLEAR (OVRCST) PRTLY CLOUDY FOG RAIN OTHER:

**ACOUSTIC MEASUREMENTS:**

INSTRUMENT: LD LXT TYPE: (1) 2 SERIAL #: 4005

CALIBRATOR: CAL 200 SERIAL #: 2916

CALIBRATION CHECK, BEFORE: 114.0 AFTER 113.96 WINDSCREEN X

SETTINGS: A-WEIGHTED (SLOW) FAST FRONTAL RANDOM (ANSI) OTHER:

| FILE / MEAS # | START TIME | END TIME | $L_{eq}$ | max | 1.67 | 8.33 | 25 | 50 | 90 | 99 | min |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | L | | | | |
| 815 | 10:48 Am | 11:08 | 51.2 | 68.5 | 61.8 | 54.6 | 50.3 | 45.3 | 37.7 | 35.3 | 33.1 |
| | | | | | | | | | | | |
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COMMENTS:

**NOISE SOURCE INFO:**

PRIMARY NOISE SOURCE: (TRAFFIC) AIRCRAFT RAIL INDUSTRIAL (AMBIENT) OTHER:

ROADWAY TYPE:

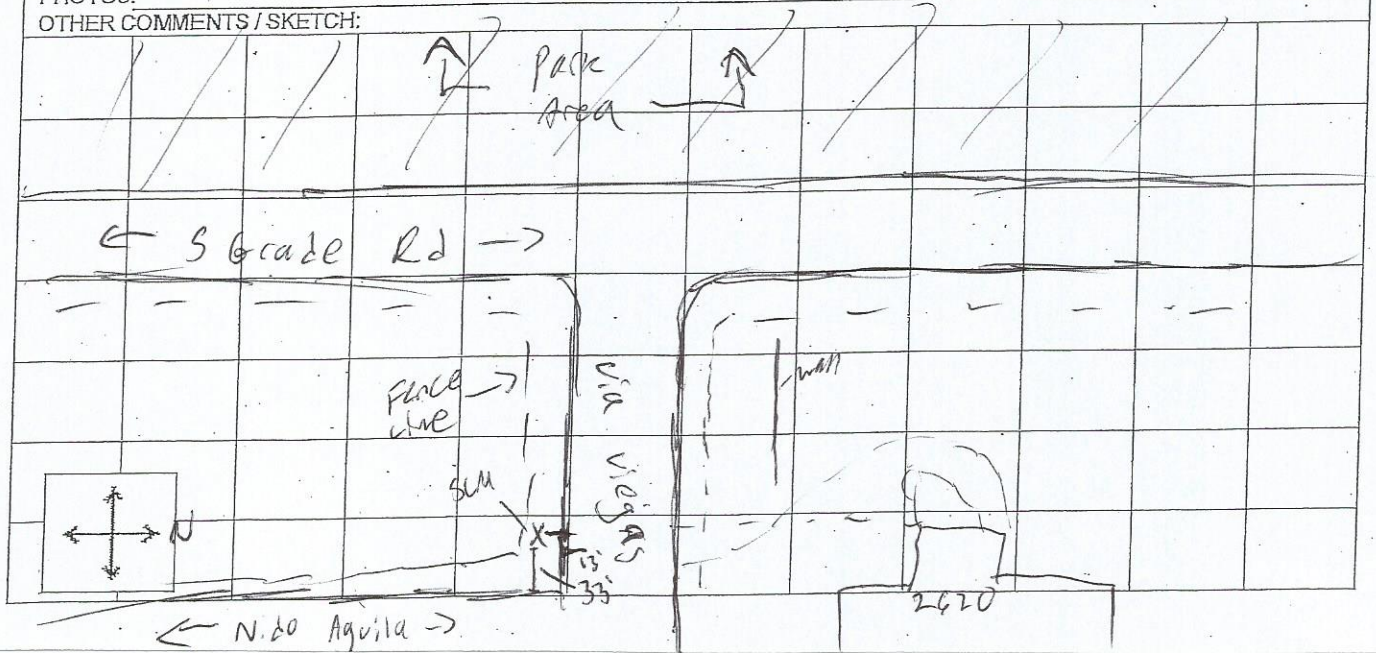
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / (BIRDS) / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

**DESCRIPTION / SKETCH:**

TERRAIN: (HARD) SOFT MIXED FLAT OTHER:

PHOTOS:

OTHER COMMENTS / SKETCH:



# FIELD NOISE MEASUREMENT DATA

PROJECT: Alpine Park PROJ. # 000 98.20

SITE IDENTIFICATION: ST3 OBSERVER(S): JCR

ADDRESS: Park Area North of Grade Rd

START DATE / TIME: 3/31/20 · 11:48 am END DATE / TIME: 3/31/20 · 12:08 pm

**METEROLOGICAL CONDITIONS:**

TEMP: 68 °F HUMIDITY: 49.0 %R.H. WIND: CALM LIGHT MODERATE VARIABLE

WINDSPEED: 0-1 MPH DIR: N NE E SE S SW W NW STEADY GUSTY

SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

**ACOUSTIC MEASUREMENTS:**

INSTRUMENT: LD LXT TYPE: 1 2 SERIAL #: 4605

CALIBRATOR: CAL 200 SERIAL #: 2916

CALIBRATION CHECK, BEFORE: 114.0 AFTER 113.93 WINDSCREEN X

SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER:

| FILE / MEAS # | START TIME | END TIME | $L_{eq}$ | max | 1.67 | 8.33 | L 25 | 50 | 90 | 99 | min |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1816 | 11:48 | 12:08 | 45.6 | 55.1 | 52.5 | 50.2 | 46.8 | 42.1 | 37.7 | 34.4 | 32.3 |
| | | | | | | | | | | | |
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COMMENTS:

**NOISE SOURCE INFO:**

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER:

ROADWAY TYPE:

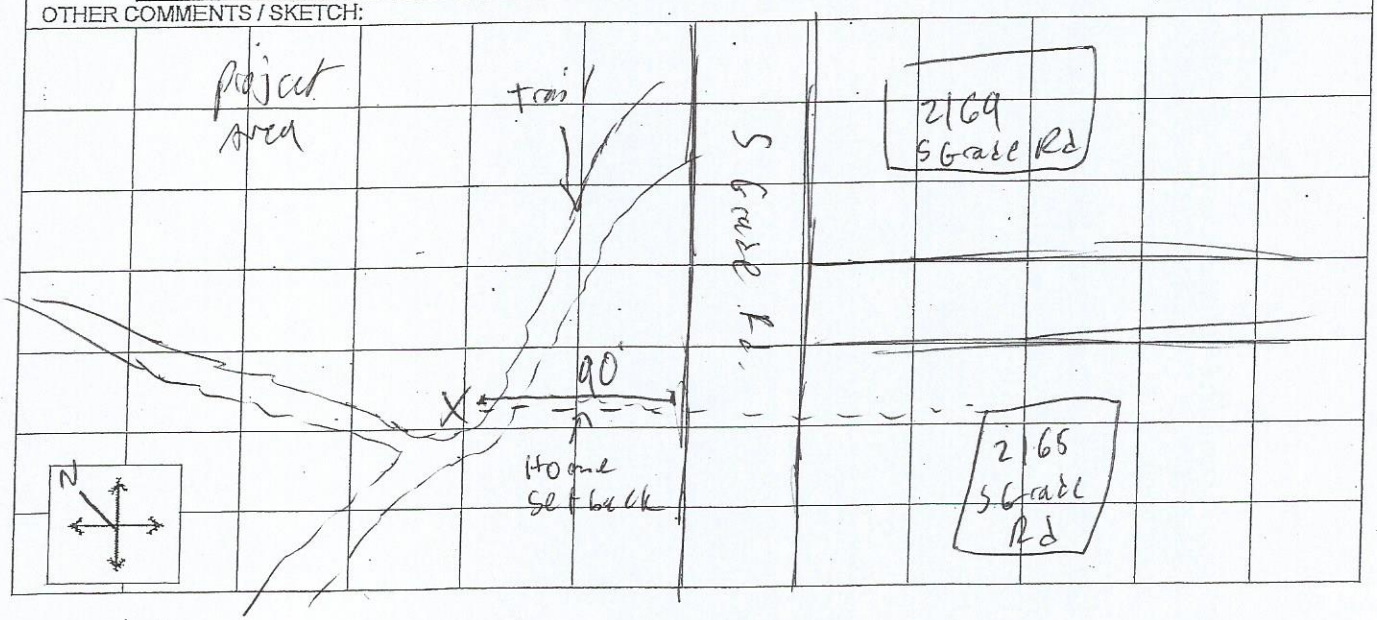
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

**DESCRIPTION / SKETCH:**

TERRAIN: HARD SOFT MIXED FLAT OTHER:

PHOTOS:

OTHER COMMENTS / SKETCH:



# FIELD NOISE MEASUREMENT DATA

PROJECT: Alpine Park PROJ. # 00098.20

SITE IDENTIFICATION: LT1 OBSERVER(S): JCK

ADDRESS: Ofer park near Grass Rd & Calle de compadres

START DATE / TIME: 3/27/20 - 11:05 AM END DATE / TIME: 3/31/20 · 10:20 Am

**METEROLOGICAL CONDITIONS:**

TEMP: ____ °F HUMIDITY: ____ %R.H. WIND: CALM LIGHT MODERATE VARIABLE

WINDSPEED: ____ MPH DIR: N NE E SE S SW W NW STEADY GUSTY

SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

**ACOUSTIC MEASUREMENTS:**

INSTRUMENT: ~~Piccolo~~ Piccolo II - D TYPE: 1 (2) SERIAL #: 2602

CALIBRATOR: CAL 200 SERIAL #: 2916

CALIBRATION CHECK, BEFORE: 94.0 AFTER 94.2 WINDSCREEN X

SETTINGS: ~~A-WEIGHTED~~ ~~SLOW~~ FAST FRONTAL ~~RANDOM~~ ~~ANSI~~ OTHER: ____

| FILE / MEAS # | START TIME | END TIME | $L_{eq}$ | max | 1.67 | 8.33 | 25 | L 50 | 90 | 99 | min |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | |
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COMMENTS: mounted @ 11:40, Cleared @ 11:50 Am
pick up: 10:20 Am

**NOISE SOURCE INFO:**

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER: ____

ROADWAY TYPE: ____

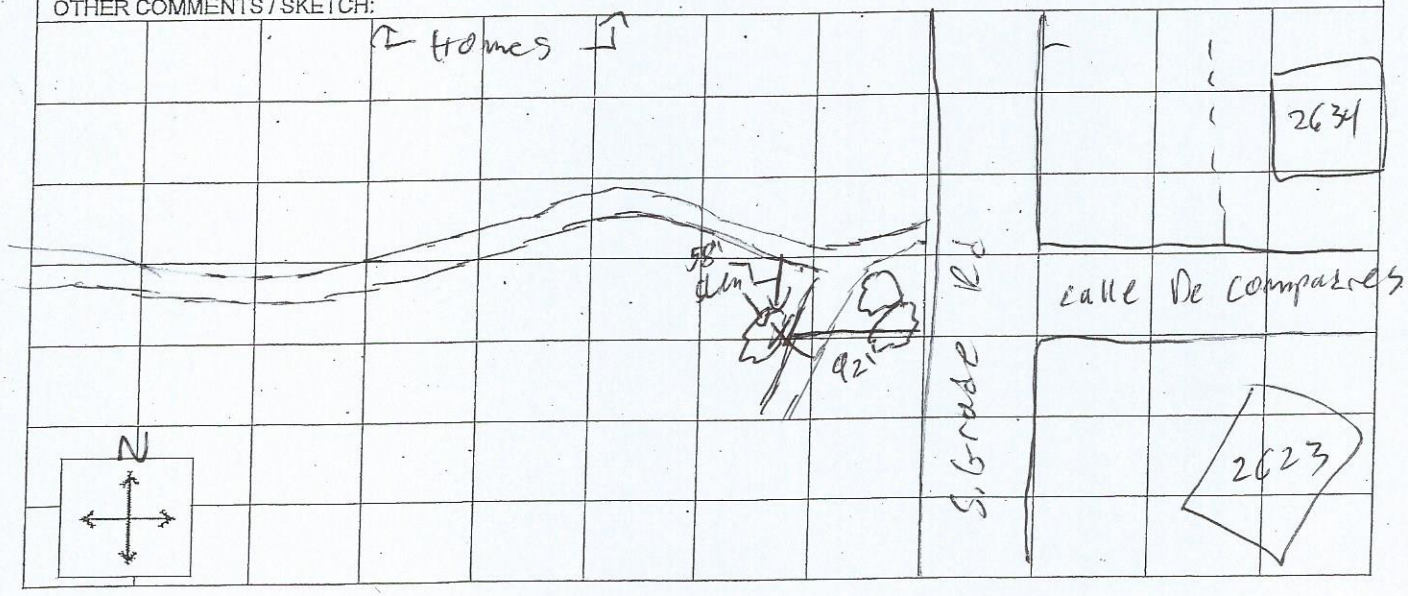
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

**DESCRIPTION / SKETCH:**

TERRAIN: HARD ~~SOFT~~ MIXED FLAT OTHER: ____

PHOTOS: ____

OTHER COMMENTS / SKETCH:



# FIELD NOISE MEASUREMENT DATA

PROJECT: Alpine park PROJ. # 00098.20

SITE IDENTIFICATION: LT2 OBSERVER(S): JCK

ADDRESS: Near 2387 S Grade Rd

START DATE / TIME: 3/27/20 11:07 am END DATE / TIME: 3/31/20 11:28

**METEROLOGICAL CONDITIONS:**

TEMP: ____ °F HUMIDITY: ____ %R.H. WIND: CALM LIGHT MODERATE VARIABLE

WINDSPEED: ____ MPH DIR: N NE E SE S SW W NW STEADY GUSTY

SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

**ACOUSTIC MEASUREMENTS:**

INSTRUMENT: Piccolo II - E TYPE: 1 (2) SERIAL #: 2502

CALIBRATOR: CAL200 SERIAL #: 2916

CALIBRATION CHECK, BEFORE: 94.0 AFTER 94.2 WINDSCREEN X

SETTINGS: A-WEIGHTED (SLOW) FAST FRONTAL RANDOM (ANSI) OTHER: ____

| FILE / MEAS # | START TIME | END TIME | $L_{eq}$ | max | 1.67 | 8.33 | $L_{25}$ | $L_{50}$ | $L_{90}$ | $L_{99}$ | min |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | |
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| | | | | | | | | | | | |
| | | | | | | | | | | | |

COMMENTS: clears @ 1:30

pick up: 11:20 am

**NOISE SOURCE INFO:**

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER: ____

ROADWAY TYPE: ____

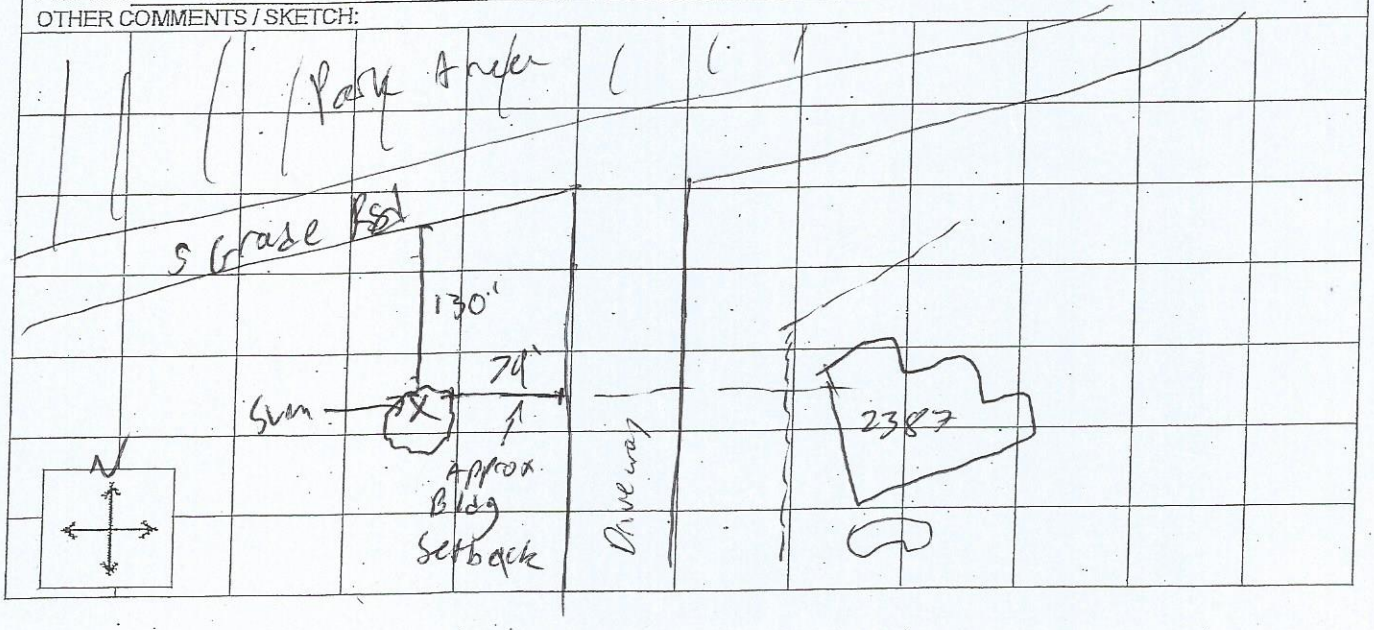
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

**DESCRIPTION / SKETCH:**

TERRAIN: HARD (SOFT) MIXED FLAT OTHER: ____

PHOTOS:

OTHER COMMENTS / SKETCH:



General

1st measurement - Reference Measurement 131

11:49 Am start

- 10:00 am session Ended @ 11:45 Am, Skate park was cleared for Sanitation and 12pm session

Skate park is empty

- noise sources: Traffic on 241, music from skate park sound system, Distant skate activity near parking lot, Birds

SLM is positioned at the eastern end (least amount of traffic noise from lake forest and parking lot, various rails and ledges, skaters ride or grind across these features)

Start - 11:49 Am Pre-cal 114.0

End - 12:00 pm

- Measured empty skate park as a reference

| Leq | Max | 1.67 | 8.33 | 25 | 50 | 90 | 99 min |
|---|---|---|---|---|---|---|---|
| 57.0 | 65.5 | 61.5 | 59.5 | 57.9 | 56.4 | 53.5 | 51.2 | 49.3 |

File #: .131

Measurement 2 - active park

Pre cal : 114.0

Notes: 12:00 pm session
SLM placed on eastern end
~ 15 active skaters in park

12:08 pm start ~ 4 active skaters at this end of the park

12:09. Skaters riding up ramp and jumping over bench. Talking / shouting. Music / speech from speakers
Skater landing ~ 69-71 dBA

12:11 : | limited activity, skaters preparing for tricks

12:13: multiple skaters attempting the same trick. Riding up a ramp and jumping over a bench. Skater starts near the middle of the park, heads toward SLM, lands near sewer cap.

12:14: Group of skaters passed near SLM, outside of the park.

12:15 - Skaters attempt tricks on the flat surface part of the grease park

General note
Primary noise sources are skateboards landing or sliding across flat concrete, ledges or metal rails.
- music is present, some traffic noise and talking / shouting

Weather Data

68°F 49% humidity Sunny, clear

wind: 3-4 mph SSW

12:21 pm

10 active skaters at eastern end, near SLM
- skater is instructing younger skaters. having them jump off a short ledge.

12:24

~ 6 skaters jumping and landing near SLM
~ 12-15 ft from SLM
- some talking and shouting
$t_{eq}$(10s) Range 65-72 dBA at skaters jumping off ledge near SLM

12:28 ~ 19-20 total skaters in park.
~ 7 skaters active near SLM

12:30 less activity
~ 3 skaters attempting to jump and land off ledge

12:32 - Skaters pass near SLM, outside of park.

12:33 - low activity at eastern end
~ 3 active skaters attempting various tricks
- music is constant, ~ 57 - 58 dBA
- traffic nearly inaudible

12:35
~ 5 skaters, similar activity

12:36 - Roller skaters show up
~ 4 Roller skaters, activity not very loud.

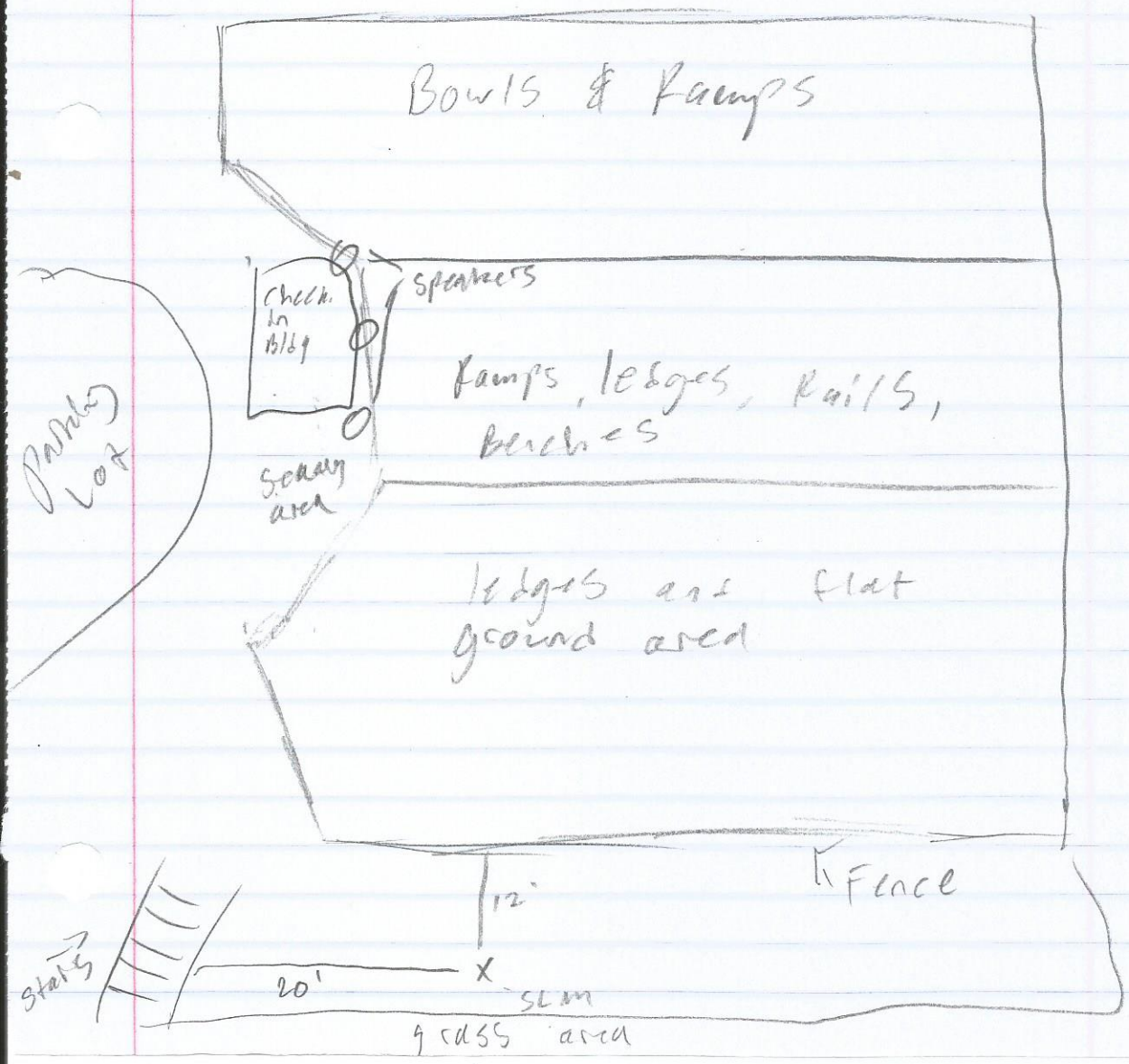
12:37 - limited activity 1 skater near SLM

12:38pm measurement stopped

File #: .132

Leq: 66.5
Max: 85.0
min: 53.0

70'
12'



weather
65°F
wind: 2-6 mph SSE
Ladera Ranch

63% hum.
Sunny, clear

5

Start 1:30 pm pre-cal 114.0

- 1:30
3 scooters & 2 skate boarders
scooters are very quiet, nearly inaudible
- skateboarders occasionally pass by slow

noise sources include traffic noise (~53-56 dBA)

1:32 - 1 additional skate boarder (3 total)
- skaters start skating from southern side into northern side, where there are bowls

1:34
- active skateboarder skating in bowl for about 1 min

notes
skaters drop into and out of bowls, creating wheel on concrete noise and noise from the board landing on pavement

1:36 - 1:37
Single skater riding inside bowl

1:39 pm limited to no activity, single skater to riding around the whole park
1:40 pm

1:41 - 2 active skaters in the bowl area

1:42 - more scooters showed up. 5 total.

1:43 - limited activity, talking and shouting from visitors.

1:44 - limited activity, 1 skateboarder left the park

1:46 activity is calm, mostly scooters near SLM

1:47 - 2 skateboarders active at southern end of park, further from SLM

1:47 to 1:52.
skateboarders are active near southern end.
4 scooters active near SLM but activity is quiet. occasional scooter noise occurs when the body strikes the metal rail on the bowl

1:52 - 1:54
Motor bike active behind SLM

1:55 8 scooters active near SLM in bowl area. Some scooter noise, mostly speech, traffic noise

1:56 - another skateboarder arrived 3 total
11 active visitors total.

1:57 - 1:58 - contaminated, spoke with park visitor

End at 2:00 pm
File# .133.
Leq 37.1
max: 54.1
min: 44.2

111

2nd measurement - southern end
2:02pm start

- 2 active skateboarders riding around the ramp/ledge/rail area.

Noise sources: skateboards impacting with the ground, boards sliding on ground, ledges and rails, boards landing on rails, skate activity is the primary noise source.

2:06 1 active skateboarder, 3-4 scooters riding around creating minimal noise.

2:07 - motor bike passed SLM.

2:09 - single skateboarder doing tricks near south corner of skate park, occasional scooter noise.

2:12 - motor bike passes by SLM

2:13 - 2 scooters exit park
- 3 skateboarders enter park, passing near SLM.

2:15 - 1 skater leaves and 1 arrives,
2 scooters leave

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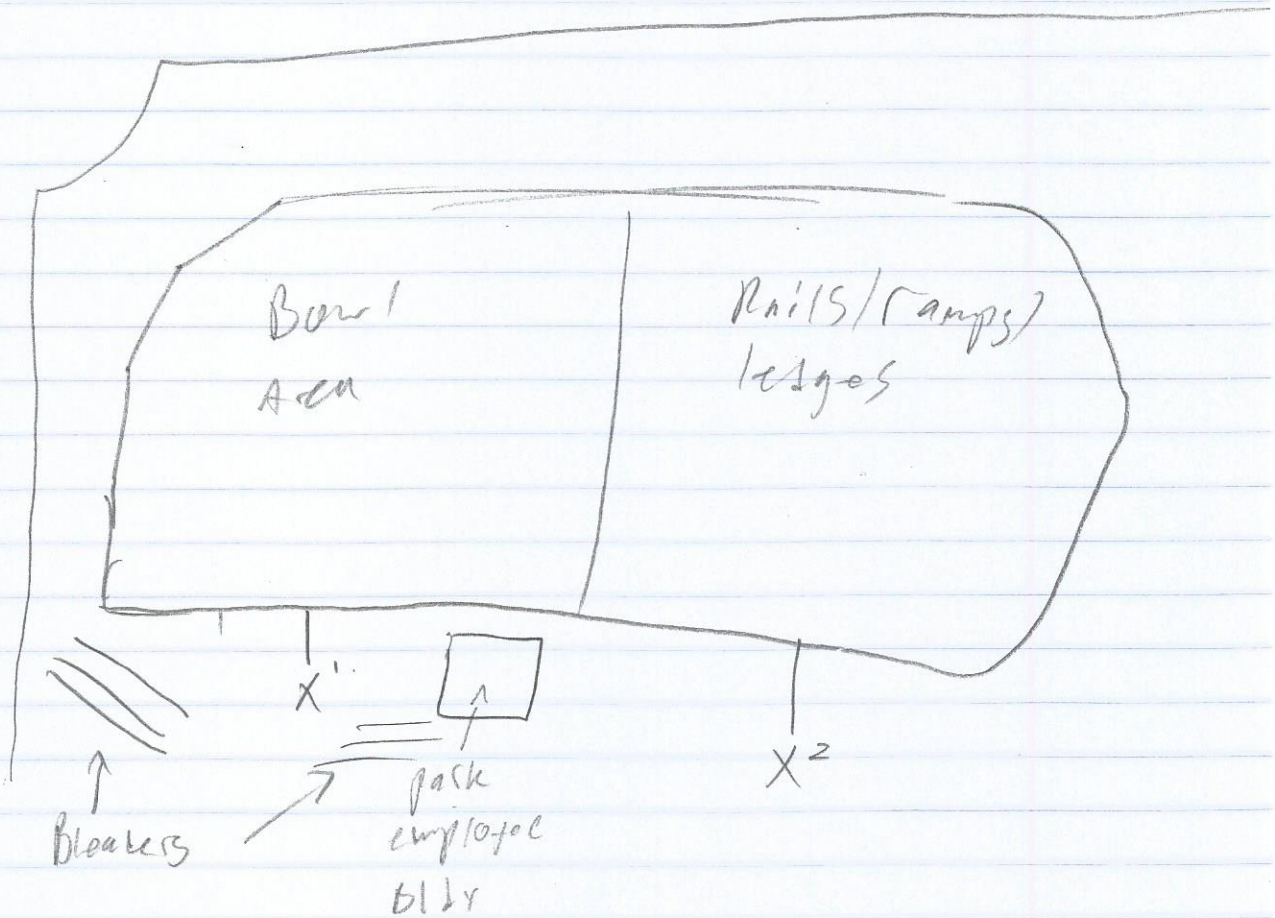
2:17 landscaping activity started near SLM. Stopped measurement
File #: 134
Leq 59.6
Lmax 75.1
Lmin 46.3

Post Cal: 113.9



## Noise Measurement Photographs

LT01 Looking North

LT01 Looking East

LT01 Looking South

LT01 Looking West

## Noise Measurement Photographs

LT02 Looking North

LT02 Looking East

LT02 Looking South

LT02 Looking West

## Noise Measurement Photographs

ST1 Looking North

ST01 Looking East

ST01 Looking South

ST01 Looking West

## Noise Measurement Photographs

ST02 Looking North

ST02 Looking East

ST02 Looking South

ST02 Looking West

## Noise Measurement Photographs

ST03 Looking Northeast

ST03 Looking Northwest

ST03 Looking Southeast

ST03 Looking Southwest

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 9/3/2021
Case Description: Grubbing

| | | | ---- Receptor #1 ---- | | |
|---|---|---|---|---|---|
| | | Baselines (dBA) | | | |
| Description | Land Use | Daytime | Evening | Night | |
| North | Residential | 1 | 1 | 1 | |

| | | | Equipment | | | |
|---|---|---|---|---|---|---|
| | | | Spec | Actual | Receptor | Estimated |
| | | Impact | Lmax | Lmax | Distance | Shielding |
| Description | | Device | Usage(%) | (dBA) | (dBA) | (feet) | (dBA) |
| Dozer | | No | 40 | 81.7 | 310 | 0 |
| Dozer | | No | 40 | 81.7 | 310 | 0 |
| Dozer | | No | 40 | 81.7 | 310 | 0 |
| Excavator | | No | 40 | 80.7 | 310 | 0 |

| | | | | Results | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Calculated (dBA) | | Noise Limits (dBA) | | | | | | Noise Limit Exceedance (dBA) | | | | | | |
| | | | | Day | | Evening | | Night | | Day | | Evening | | Night | | |
| Equipment | | *Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | |
| Dozer | | 65.8 | 61.8 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| Dozer | | 65.8 | 61.8 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| Dozer | | 65.8 | 61.8 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| Excavator | | 64.9 | 60.9 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| | Total | 65.8 | 67.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

| Description | Land Use | Baselines (dBA) Daytime | Evening | Night |
|---|---|---|---|---|
| East | Residential | 1 | 1 | 1 |

| Description | Impact Device | Usage(%) | Equipment Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Dozer | No | 40 | | 81.7 | 225 | 0 |
| Dozer | No | 40 | | 81.7 | 225 | 0 |
| Dozer | No | 40 | | 81.7 | 225 | 0 |
| Excavator | No | 40 | | 80.7 | 225 | 0 |

Results

| | | Calculated (dBA) | | Noise Limits (dBA) | | | | | | Noise Limit Exceedance (dBA) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Day | | Evening | | Night | | Day | | Evening | | Night | |
| Equipment | | *Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Dozer | | 68.6 | 64.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dozer | | 68.6 | 64.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dozer | | 68.6 | 64.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Excavator | | 67.6 | 63.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Total | 68.6 | 70.4 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

| | | Baselines (dBA) | | |
|---|---|---|---|---|
| Description | Land Use | Daytime | Evening | Night |
| South | Residential | 1 | 1 | 1 |

| | | | Equipment | | | |
|---|---|---|---|---|---|---|
| | | | Spec | Actual | Receptor | Estimated |
| | Impact | | Lmax | Lmax | Distance | Shielding |
| Description | Device | Usage(%) | (dBA) | (dBA) | (feet) | (dBA) |
| Dozer | No | 40 | | 81.7 | 283 | 0 |
| Dozer | No | 40 | | 81.7 | 283 | 0 |
| Dozer | No | 40 | | 81.7 | 283 | 0 |
| Excavator | No | 40 | | 80.7 | 283 | 0 |

| | | | | Results | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Calculated (dBA) | | Noise Limits (dBA) | | | | | | Noise Limit Exceedance (dBA) | | | | | |
| | | | | Day | | Evening | | Night | | Day | | Evening | | Night | |
| Equipment | | *Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Dozer | | 66.6 | 62.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dozer | | 66.6 | 62.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dozer | | 66.6 | 62.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Excavator | | 65.7 | 61.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Total | 66.6 | 68.4 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

| | | Baselines (dBA) | | |
|---|---|---|---|---|
| Description | Land Use | Daytime | Evening | Night |
| 50' | Residential | 1 | 1 | 1 |

| | | | Equipment | | | |
|---|---|---|---|---|---|---|
| | | | Spec | Actual | Receptor | Estimated |
| | Impact | | Lmax | Lmax | Distance | Shielding |
| Description | Device | Usage(%) | (dBA) | (dBA) | (feet) | (dBA) |
| Dozer | No | 40 | | 81.7 | 50 | 0 |
| Dozer | No | 40 | | 81.7 | 50 | 0 |
| Dozer | No | 40 | | 81.7 | 50 | 0 |
| Excavator | No | 40 | | 80.7 | 50 | 0 |

| | | | | Results | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Calculated (dBA) | | | Noise Limits (dBA) | | | | | | Noise Limit Exceedance (dBA) | | | | | |
| | | | | Day | | Evening | | Night | | Day | | Evening | | Night | |
| Equipment | | *Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Dozer | | 81.7 | 77.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dozer | | 81.7 | 77.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dozer | | 81.7 | 77.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Excavator | | 80.7 | 76.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Total | 81.7 | 83.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 9/3/2021
Case Description Grading

---- Receptor #1 ----

| Description | Land Use | Baselines (dBA) Daytime | Evening | Night |
|---|---|---|---|---|
| North | Residential | 1 | 1 | 1 |

| Description | Impact Device | Usage(%) | Equipment Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Dozer | No | 40 | | 81.7 | 310 | 0 |
| Dozer | No | 40 | | 81.7 | 310 | 0 |
| Dozer | No | 40 | | 81.7 | 310 | 0 |
| Excavator | No | 40 | | 80.7 | 310 | 0 |
| Roller | No | 20 | | 80 | 310 | 0 |
| Front End Loader | No | 40 | | 79.1 | 310 | 0 |
| Backhoe | No | 40 | | 77.6 | 310 | 0 |
| Scraper | No | 40 | | 83.6 | 310 | 0 |

| | Results Calculated (dBA) | | Noise Limits (dBA) Day | | Evening | | Night | | Noise Limit Exceedance (dBA) Day | | Evening | | Night | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Equipment | *Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Dozer | 65.8 | 61.8 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dozer | 65.8 | 61.8 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dozer | 65.8 | 61.8 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Excavator | 64.9 | 60.9 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Roller | 64.2 | 57.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Front End Loader | 63.3 | 59.3 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 61.7 | 57.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Scraper | 67.7 | 63.8 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 67.7 | 70.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

| Description | Land Use | Baselines (dBA) Daytime | Evening | Night |
|---|---|---|---|---|
| East | Residential | 1 | 1 | 1 |

| Description | Impact Device | Usage(%) | Equipment Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Dozer | No | 40 | | 81.7 | 225 | 0 |
| Dozer | No | 40 | | 81.7 | 225 | 0 |
| Dozer | No | 40 | | 81.7 | 225 | 0 |
| Excavator | No | 40 | | 80.7 | 225 | 0 |
| Roller | No | 20 | | 80 | 225 | 0 |
| Front End Loader | No | 40 | | 79.1 | 225 | 0 |
| Backhoe | No | 40 | | 77.6 | 225 | 0 |
| Scraper | No | 40 | | 83.6 | 225 | 0 |

Results

| | Calculated (dBA) | | Noise Limits (dBA) | | | | | | Noise Limit Exceedance (dBA) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Day | | Evening | | Night | | Day | | Evening | | Night | |
| Equipment | *Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Dozer | 68.6 | 64.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dozer | 68.6 | 64.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dozer | 68.6 | 64.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Excavator | 67.6 | 63.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Roller | 66.9 | 59.9 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Front End Loader | 66 | 62.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 64.5 | 60.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Scraper | 70.5 | 66.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 70.5 | 72.8 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

| | | Baselines (dBA) | | |
|---|---|---|---|---|
| Description | Land Use | Daytime | Evening | Night |
| South | Residential | 1 | 1 | 1 |

| | | | Equipment | | | |
|---|---|---|---|---|---|---|
| | | | Spec | Actual | Receptor | Estimated |
| | Impact | | Lmax | Lmax | Distance | Shielding |
| Description | Device | Usage(%) | (dBA) | (dBA) | (feet) | (dBA) |
| Dozer | No | 40 | | 81.7 | 283 | 0 |
| Dozer | No | 40 | | 81.7 | 283 | 0 |
| Dozer | No | 40 | | 81.7 | 283 | 0 |
| Excavator | No | 40 | | 80.7 | 283 | 0 |
| Roller | No | 20 | | 80 | 283 | 0 |
| Front End Loader | No | 40 | | 79.1 | 283 | 0 |
| Backhoe | No | 40 | | 77.6 | 283 | 0 |
| Scraper | No | 40 | | 83.6 | 283 | 0 |

| | | | Results | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Calculated (dBA) | | Noise Limits (dBA) | | | | | | Noise Limit Exceedance (dBA) | | | | | |
| | | | Day | | Evening | | Night | | Day | | Evening | | Night | |
| Equipment | *Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Dozer | 66.6 | 62.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dozer | 66.6 | 62.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dozer | 66.6 | 62.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Excavator | 65.7 | 61.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Roller | 64.9 | 58 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Front End Loader | 64.1 | 60.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 62.5 | 58.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Scraper | 68.5 | 64.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 68.5 | 70.9 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

| | | Baselines (dBA) | | |
|---|---|---|---|---|
| Description | Land Use | Daytime | Evening | Night |
| 50' | Residential | 1 | 1 | 1 |

| | | | Equipment | | | |
|---|---|---|---|---|---|---|
| | | | Spec | Actual | Receptor | Estimated |
| | Impact | | Lmax | Lmax | Distance | Shielding |
| Description | Device | Usage(%) | (dBA) | (dBA) | (feet) | (dBA) |
| Dozer | No | 40 | | 81.7 | 50 | 0 |
| Dozer | No | 40 | | 81.7 | 50 | 0 |
| Dozer | No | 40 | | 81.7 | 50 | 0 |
| Excavator | No | 40 | | 80.7 | 50 | 0 |
| Roller | No | 20 | | 80 | 50 | 0 |
| Front End Loader | No | 40 | | 79.1 | 50 | 0 |
| Backhoe | No | 40 | | 77.6 | 50 | 0 |
| Scraper | No | 40 | | 83.6 | 50 | 0 |

| | | | Results | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Calculated (dBA) | | Noise Limits (dBA) | | | | | | Noise Limit Exceedance (dBA) | | | | | |
| | | | Day | | Evening | | Night | | Day | | Evening | | Night | |
| Equipment | *Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Dozer | 81.7 | 77.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dozer | 81.7 | 77.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dozer | 81.7 | 77.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Excavator | 80.7 | 76.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Roller | 80 | 73 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Front End Loader | 79.1 | 75.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 77.6 | 73.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Scraper | 83.6 | 79.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 83.6 | 85.9 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 9/3/2021
Case Description: Drainage

---- Receptor #1 ----

| Description | Land Use | Baselines (dBA) Daytime | Evening | Night |
|---|---|---|---|---|
| North | Residential | 1 | 1 | 1 |

| Description | Impact Device | Usage(%) | Equipment Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Dozer | No | 40 | | 81.7 | 310 | 0 |
| Dozer | No | 40 | | 81.7 | 310 | 0 |
| Dozer | No | 40 | | 81.7 | 310 | 0 |
| Compressor (air) | No | 40 | 80 | | 310 | 0 |
| Backhoe | No | 40 | | 77.6 | 310 | 0 |

Results

| | Calculated (dBA) | | Noise Limits (dBA) | | | | | | Noise Limit Exceedance (dBA) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Day | | Evening | | Night | | Day | | Evening | | Night | |
| Equipment | *Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Dozer | 65.8 | 61.8 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dozer | 65.8 | 61.8 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dozer | 65.8 | 61.8 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Compressor (air) | 64.2 | 60.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 61.7 | 57.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 65.8 | 67.9 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Baselines (dBA)

| Description | Land Use | Daytime | Evening | Night |
|---|---|---|---|---|
| East | Residential | 1 | 1 | 1 |

Equipment

| Description | Impact Device | Usage(%) | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Dozer | No | 40 | | 81.7 | 225 | 0 |
| Dozer | No | 40 | | 81.7 | 225 | 0 |
| Dozer | No | 40 | | 81.7 | 225 | 0 |
| Compressor (air) | No | 40 | 80 | | 225 | 0 |
| Backhoe | No | 40 | | 77.6 | 225 | 0 |

Results

| | | Calculated (dBA) | | Noise Limits (dBA) | | | | | | Noise Limit Exceedance (dBA) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Day | | Evening | | Night | | Day | | Evening | | Night | |
| Equipment | | *Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Dozer | | 68.6 | 64.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dozer | | 68.6 | 64.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dozer | | 68.6 | 64.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Compressor (air) | | 66.9 | 63 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | | 64.5 | 60.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Total | 68.6 | 70.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Baselines (dBA)

| Description | Land Use | Daytime | Evening | Night |
|---|---|---|---|---|
| South | Residential | 1 | 1 | 1 |

Equipment

| Description | Impact Device | Usage(%) | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Dozer | No | 40 | | 81.7 | 283 | 0 |
| Dozer | No | 40 | | 81.7 | 283 | 0 |
| Dozer | No | 40 | | 81.7 | 283 | 0 |
| Compressor (air) | No | 40 | 80 | | 283 | 0 |
| Backhoe | No | 40 | | 77.6 | 283 | 0 |

Results

| | | Calculated (dBA) | | Noise Limits (dBA) | | | | | | Noise Limit Exceedance (dBA) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Day | | Evening | | Night | | Day | | Evening | | Night | |
| Equipment | | *Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Dozer | | 66.6 | 62.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dozer | | 66.6 | 62.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dozer | | 66.6 | 62.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Compressor (air) | | 64.9 | 61 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | | 62.5 | 58.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Total | 66.6 | 68.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

| Description | Land Use | Baselines (dBA) Daytime | Evening | Night |
|---|---|---|---|---|
| 50' | Residential | 1 | 1 | 1 |

| Description | Impact Device | Usage(%) | Equipment Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Dozer | No | 40 | | 81.7 | 50 | 0 |
| Dozer | No | 40 | | 81.7 | 50 | 0 |
| Dozer | No | 40 | | 81.7 | 50 | 0 |
| Compressor (air) | No | 40 | 80 | | 50 | 0 |
| Backhoe | No | 40 | | 77.6 | 50 | 0 |

Results

| | | Calculated (dBA) | | Noise Limits (dBA) Day | | Evening | | Night | | Noise Limit Exceedance (dBA) Day | | Evening | | Night | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Equipment | | *Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Dozer | | 81.7 | 77.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dozer | | 81.7 | 77.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dozer | | 81.7 | 77.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Compressor (air) | | 80 | 76 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | | 77.6 | 73.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Total | 81.7 | 83.8 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 9/3/2021
Case Description: Construction

| | | ---- Receptor #1 ---- | | |
|---|---|---|---|---|
| | | Baselines (dBA) | | |
| Description | Land Use | Daytime | Evening | Night |
| North | Residential | 1 | 1 | 1 |

| | | | Equipment | | | |
|---|---|---|---|---|---|---|
| | | | Spec | Actual | Receptor | Estimated |
| | Impact | | Lmax | Lmax | Distance | Shielding |
| Description | Device | Usage(%) | (dBA) | (dBA) | (feet) | (dBA) |
| Dozer | No | 40 | | 81.7 | 310 | 0 |
| Dozer | No | 40 | | 81.7 | 310 | 0 |
| Crane | No | 16 | | 80.6 | 310 | 0 |
| Compressor (air) | No | 40 | 80 | | 310 | 0 |
| Generator | No | 50 | | 80.6 | 310 | 0 |
| Front End Loader | No | 40 | | 79.1 | 310 | 0 |
| Front End Loader | No | 40 | | 79.1 | 310 | 0 |
| Front End Loader | No | 40 | | 79.1 | 310 | 0 |

| | | | Results | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Calculated (dBA) | | Noise Limits (dBA) | | | | | | Noise Limit Exceedance (dBA) | | | | | |
| | | | | Day | | Evening | | Night | | Day | | Evening | | Night | |
| Equipment | | *Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Dozer | | 65.8 | 61.8 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dozer | | 65.8 | 61.8 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Crane | | 64.7 | 56.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Compressor (air) | | 64.2 | 60.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Generator | | 64.8 | 61.8 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Front End Loader | | 63.3 | 59.3 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Front End Loader | | 63.3 | 59.3 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Front End Loader | | 63.3 | 59.3 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Total | 65.8 | 69.4 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

| Description | Land Use | Baselines (dBA) Daytime | Evening | Night |
|---|---|---|---|---|
| East | Residential | 1 | 1 | 1 |

Equipment

| Description | Impact Device | Usage(%) | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Dozer | No | 40 | | 81.7 | 225 | 0 |
| Dozer | No | 40 | | 81.7 | 225 | 0 |
| Crane | No | 16 | | 80.6 | 225 | 0 |
| Compressor (air) | No | 40 | 80 | | 225 | 0 |
| Generator | No | 50 | | 80.6 | 225 | 0 |
| Front End Loader | No | 40 | | 79.1 | 225 | 0 |
| Front End Loader | No | 40 | | 79.1 | 225 | 0 |
| Front End Loader | No | 40 | | 79.1 | 225 | 0 |

Results

| | Calculated (dBA) | | Noise Limits (dBA) | | | | | | Noise Limit Exceedance (dBA) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Day | | Evening | | Night | | Day | | Evening | | Night | |
| Equipment | *Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Dozer | 68.6 | 64.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dozer | 68.6 | 64.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Crane | 67.5 | 59.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Compressor (air) | 66.9 | 63 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Generator | 67.6 | 64.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Front End Loader | 66 | 62.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Front End Loader | 66 | 62.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Front End Loader | 66 | 62.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 68.6 | 72.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

| | | Baselines (dBA) | | |
|---|---|---|---|---|
| Description | Land Use | Daytime | Evening | Night |
| South | Residential | 1 | 1 | 1 |

| | | | Equipment | | | |
|---|---|---|---|---|---|---|
| | | | Spec | Actual | Receptor | Estimated |
| | Impact | | Lmax | Lmax | Distance | Shielding |
| Description | Device | Usage(%) | (dBA) | (dBA) | (feet) | (dBA) |
| Dozer | No | 40 | | 81.7 | 283 | 0 |
| Dozer | No | 40 | | 81.7 | 283 | 0 |
| Crane | No | 16 | | 80.6 | 283 | 0 |
| Compressor (air) | No | 40 | 80 | | 283 | 0 |
| Generator | No | 50 | | 80.6 | 283 | 0 |
| Front End Loader | No | 40 | | 79.1 | 283 | 0 |
| Front End Loader | No | 40 | | 79.1 | 283 | 0 |
| Front End Loader | No | 40 | | 79.1 | 283 | 0 |

| | | | | Results | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Calculated (dBA) | | Noise Limits (dBA) | | | | | | Noise Limit Exceedance (dBA) | | | | | | |
| | | | | Day | | Evening | | Night | | Day | | Evening | | Night | | |
| Equipment | | *Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | |
| Dozer | | 66.6 | 62.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| Dozer | | 66.6 | 62.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| Crane | | 65.5 | 57.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| Compressor (air) | | 64.9 | 61 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| Generator | | 65.6 | 62.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| Front End Loader | | 64.1 | 60.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| Front End Loader | | 64.1 | 60.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| Front End Loader | | 64.1 | 60.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| | Total | 66.6 | 70.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

| Description | Land Use | Baselines (dBA) Daytime | Evening | Night |
|---|---|---|---|---|
| 50' | Residential | 1 | 1 | 1 |

| Description | Impact Device | Usage(%) | Equipment Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Dozer | No | 40 | | 81.7 | 50 | 0 |
| Dozer | No | 40 | | 81.7 | 50 | 0 |
| Crane | No | 16 | | 80.6 | 50 | 0 |
| Compressor (air) | No | 40 | 80 | | 50 | 0 |
| Generator | No | 50 | | 80.6 | 50 | 0 |
| Front End Loader | No | 40 | | 79.1 | 50 | 0 |
| Front End Loader | No | 40 | | 79.1 | 50 | 0 |
| Front End Loader | No | 40 | | 79.1 | 50 | 0 |

Results

| Equipment | Calculated (dBA) *Lmax | Leq | Noise Limits (dBA) Day Lmax | Day Leq | Evening Lmax | Evening Leq | Night Lmax | Night Leq | Noise Limit Exceedance (dBA) Day Lmax | Day Leq | Evening Lmax | Evening Leq | Night Lmax | Night Leq |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dozer | 81.7 | 77.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dozer | 81.7 | 77.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Crane | 80.6 | 72.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Compressor (air) | 80 | 76 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Generator | 80.6 | 77.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Front End Loader | 79.1 | 75.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Front End Loader | 79.1 | 75.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Front End Loader | 79.1 | 75.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 81.7 | 85.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 9/3/2021
Case Description: Trenching

| | | ---- Receptor #1 ---- | | |
|---|---|---|---|---|
| | | Baselines (dBA) | | |
| Description | Land Use | Daytime | Evening | Night |
| North | Residential | 1 | 1 | 1 |

| | | | Equipment | | | |
|---|---|---|---|---|---|---|
| | | | Spec | Actual | Receptor | Estimated |
| | Impact | | Lmax | Lmax | Distance | Shielding |
| Description | Device | Usage(%) | (dBA) | (dBA) | (feet) | (dBA) |
| Excavator | No | 40 | | 80.7 | 50 | 0 |
| Front End Loader | No | 40 | | 79.1 | 50 | 0 |

| | | | | Results | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Calculated (dBA) | | Noise Limits (dBA) | | | | | | Noise Limit Exceedance (dBA) | | | | | |
| | | | | Day | | Evening | | Night | | Day | | Evening | | Night | |
| Equipment | | *Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Excavator | | 80.7 | 76.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Front End Loader | | 79.1 | 75.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Total | 80.7 | 79 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

| Description | Land Use | Baselines (dBA) Daytime | Evening | Night |
|---|---|---|---|---|
| East | Residential | 1 | 1 | 1 |

Equipment

| Description | Impact Device | Usage(%) | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Excavator | No | 40 | | 80.7 | 50 | 0 |
| Front End Loader | No | 40 | | 79.1 | 50 | 0 |

Results

| | Calculated (dBA) | | Noise Limits (dBA) | | | | | | Noise Limit Exceedance (dBA) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Day | | Evening | | Night | | Day | | Evening | | Night | |
| Equipment | *Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Excavator | 80.7 | 76.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Front End Loader | 79.1 | 75.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 80.7 | 79 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

| Description | Land Use | Baselines (dBA) Daytime | Evening | Night |
|---|---|---|---|---|
| South | Residential | 1 | 1 | 1 |

Equipment

| Description | Impact Device | Usage(%) | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Excavator | No | 40 | | 80.7 | 50 | 0 |
| Front End Loader | No | 40 | | 79.1 | 50 | 0 |

Results

| | Calculated (dBA) | | Noise Limits (dBA) | | | | | | Noise Limit Exceedance (dBA) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Day | | Evening | | Night | | Day | | Evening | | Night | |
| Equipment | *Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Excavator | 80.7 | 76.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Front End Loader | 79.1 | 75.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 80.7 | 79 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

| Description | Land Use | Baselines (dBA) Daytime | Evening | Night |
|---|---|---|---|---|
| 50' | Residential | 1 | 1 | 1 |

Equipment

| Description | Impact Device | Usage(%) | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Excavator | No | 40 | | 80.7 | 50 | 0 |
| Front End Loader | No | 40 | | 79.1 | 50 | 0 |

Results

| | | Calculated (dBA) | | Noise Limits (dBA) | | | | | | Noise Limit Exceedance (dBA) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Day | | Evening | | Night | | Day | | Evening | | Night | |
| Equipment | | *Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Excavator | | 80.7 | 76.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Front End Loader | | 79.1 | 75.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Total | 80.7 | 79 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

**Alpine Park Project Construction Assumptions**

| Phase | Equipment | CalEEMod Equivalent | Quantity | Start Date | End Date | # of Workdays | Personnel Ave Daily | Worker Trips per day (In/Out) | Total Haul Trucks | Total Haul Truck Trips (In/Out) | Haul Truck Trips per day (In/Out) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Grubbing/Land Clearing** | Crawler Tractors | Crawler Tractors | 3 | 10/1/2022 | 10/15/2022 | 10 | 8 | 16 | | | |
| **Grubbing/Land Clearing** | Excavators | Excavators | 1 | 10/1/2022 | 10/15/2022 | 10 | | | | | |
| **Grading/Excavation** | Crawler Tractors | Crawler Tractors | 3 | 10/1/2022 | 5/31/2023 | 173 | 18 | 36 | 518 | 1,036 | 6 |
| **Grading/Excavation** | Excavators | Excavators | 1 | 10/1/2022 | 5/31/2023 | 173 | | | | | |
| **Grading/Excavation** | Rollers | Rollers | 1 | 10/1/2022 | 5/31/2023 | 173 | | | | | |
| **Grading/Excavation** | Rubber Tired Loaders | Rubber Tired Loaders | 1 | 10/1/2022 | 5/31/2023 | 173 | | | | | |
| **Grading/Excavation** | Tractors/Loaders/Backhoes | Tractors/Loaders/Backhoes | 1 | 10/1/2022 | 5/31/2023 | 173 | | | | | |
| **Grading/Excavation** | Wheel Tractor Scraper | Scrapers | 2 | 10/1/2022 | 5/31/2023 | 173 | | | | | |
| **Drainage/Utilities/Subgrade** | Air Compressors | Air Compressors | 1 | 5/1/2023 | 8/31/2023 | 89 | 12 | 24 | | | |
| **Drainage/Utilities/Subgrade** | Generator Sets | Generator Sets | 1 | 5/1/2023 | 8/31/2023 | 89 | | | | | |
| **Drainage/Utilities/Subgrade** | Tractors/Loaders/Backhoes | Tractors/Loaders/Backhoes | 4 | 5/1/2023 | 8/31/2023 | 89 | | | | | |
| **Sewer Line Installation** | Excavators | Excavators | 1 | 10/1/2022 | 6/1/2023 | 174 | 6 | 12 | | | |
| **Sewer Line Installation** | Rollers | Rollers | 1 | 10/1/2022 | 6/1/2023 | 174 | | | | | |
| **Sewer Line Installation** | Tractors/Loaders/Backhoes | Tractors/Loaders/Backhoes | 1 | 10/1/2022 | 6/1/2023 | 174 | | | | | |
| **Construction** | Air Compressors | Air Compressors | 1 | 6/1/2023 | 1/31/2024 | 175 | 16 | 32 | 328 | 656 | 4 |
| **Construction** | Cranes | Cranes | 1 | 6/1/2023 | 1/31/2024 | 175 | | | | | |
| **Construction** | Forklifts | Forklifts | 3 | 6/1/2023 | 1/31/2024 | 175 | | | | | |
| **Construction** | Generator Sets | Generator Sets | 1 | 6/1/2023 | 1/31/2024 | 175 | | | | | |
| **Construction** | Tractors/Loaders/Backhoes | Tractors/Loaders/Backhoes | 2 | 6/1/2023 | 1/31/2024 | 175 | | | | | |
| **Paving** | Pavers | Pavers | 1 | 11/30/2023 | 1/31/2024 | 45 | 6 | 12 | | | |
| **Paving** | Paving Equipment | Paving Equipment | 1 | 11/30/2023 | 1/31/2024 | 45 | | | | | |
| **Paving** | Rollers | Rollers | 1 | 11/30/2023 | 1/31/2024 | 45 | | | | | |
| **Architectural Coating** | Air Compressors | Air Compressors | 1 | 12/14/2023 | 1/31/2024 | 35 | 2 | 4 | | | |

**This spreadsheet calculates traffic noise levels based on TNM Version 2.5 Lookup Tables.**

**** Type in yellow cells only.**

**Traffic Data:**

- ☐ Enter ADT Traffic
- ☐ Enter Loudest-hour Traffic

**Units:**

- ☐ Metric
- ☐ English

**Calculate**

ICF INTERNATIONAL®

| Link | Roadway | Segment Location | Hard or Soft Ground (H or S) | BARRIER | | | Total Daily Traffic Volumes **(ADT)** | Traffic Mix | | Vehicle Speed | Sound Levels at Receiver Locations | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Present 1=yes | Height min. 7 ft. max. 32 ft. | Distance 35 ft. or 100 ft. | | Number # | Description | mph max. 80 | Distance feet, min. 33 max. 1000 | dB Ldn | dB CNEL | dBA Leq1h (loudest hour) |
| 1 | Existing south Grade Rd | west of Via Viejas | S | | | | 4,042 | 4 | Generic - Local (From Local/Lodi) | 40 | 50 | 60.8 | 61.2 | 59.1 |
| 2 | Existing south Grade Rd | east of Via Viejas | S | | | | 3,097 | 4 | Generic - Local (From Local/Lodi) | 40 | 50 | 59.7 | 60.1 | 58.0 |
| 3 | Existing+project south Grade Rd | west of Via Viejas | S | | | | 4,282 | 4 | Generic - Local (From Local/Lodi) | 40 | 50 | 61.1 | 61.5 | 59.4 |
| 4 | Existing+project south Grade Rd | east of Via Viejas | S | | | | 3,337 | 4 | Generic - Local (From Local/Lodi) | 40 | 50 | 60.0 | 60.4 | 58.3 |
| 5 | near-term south Grade Rd | west of Via Viejas | S | | | | 4,130 | 4 | Generic - Local (From Local/Lodi) | 40 | 50 | 60.9 | 61.3 | 59.2 |
| 6 | near-term south Grade Rd | east of Via Viejas | S | | | | 3,185 | 4 | Generic - Local (From Local/Lodi) | 40 | 50 | 59.8 | 60.2 | 58.1 |
| 7 | near-term+project south Grade Rd | west of Via Viejas | S | | | | 4,370 | 4 | Generic - Local (From Local/Lodi) | 40 | 50 | 61.1 | 61.6 | 59.5 |
| 8 | near-term+project south Grade Rd | east of Via Viejas | S | | | | 3,425 | 4 | Generic - Local (From Local/Lodi) | 40 | 50 | 60.1 | 60.5 | 58.4 |
| 9 | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | |