ROADWAY CONSTRUCTION NOISE MODELING OUTPUTS

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 1/24/2024
Case Description: Site Preparation

Description	**Land Use**
Site Preparation	Residential

Description	**Impact Device**	**Usage(%)**	**Equipment Spec Lmax (dBA)**	**Actual Lmax (dBA)**	**Receptor Distance (feet)**
Grader	No	40	85		150
Tractor	No	40	84		150

Calculated (dBA)

Equipment		***Lmax**	**Leq**
Grader		75.5	71.5
Tractor		74.5	70.5
	Total	**75.5**	**74**

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 1/24/2024
Case Description: Grading

Description	**Land Use**
Grading	Residential

Description	**Impact Device**	**Usage(%)**	**Equipment Spec Lmax (dBA)**	**Actual Lmax (dBA)**	**Receptor Distance (feet)**
Grader	No	40	85		150
Tractor	No	40	84		150
Dozer	No	40		81.7	150

Calculated (dBA)

Equipment		***Lmax**	**Leq**
Grader		75.5	71.5
Tractor		74.5	70.5
Dozer		72.1	68.1
	Total	**75.5**	**75**

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 1/17/2024
Case Description: Well Construction - Daytime

Description
Well Construction - Daytime

Land Use
Residential

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)
Crane	No	16		80.6	10
Gradall	No	40		83.4	10
Gradall	No	40		83.4	10
Tractor	No	40	84		10
Tractor	No	40	84		10
Well Auger Drill	No	80		84.4	10
Generator	No	50		80.6	10
Pumps	No	50		80.9	10
Compressor (air)	No	40		77.7	10

Calculated (dBA)

Equipment		*Lmax	Leq
Crane		94.5	86.6
Gradall		97.4	93.4
Gradall		97.4	93.4
Tractor		98	94
Tractor		98	94
Well Auger Drill		98.4	97.4
Generator		94.6	91.6
Pumps		94.9	91.9
Compressor (air)		91.6	87.7
	Total	**98.4**	**102.8**

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 1/17/2024
Case Description: Nighttime drilling

Description	**Land Use**
Well Drilling - Nighttime	Residential

Description	**Impact Device**	**Usage(%)**	**Equipment Spec Lmax (dBA)**	**Actual Lmax (dBA)**	**Receptor Distance (feet)**
Well Auger Drill	No	80		84.4	10

Calculated (dBA)

Equipment		***Lmax**	**Leq**
Well Auger Drill		98.4	97.4
	Total	**98.4**	**97.4**

*Calculated Lmax is the Loudest value.

SOUNDPLAN MODELING OUTPUTS

SoundPLAN
Output Source Information

Number	Reciever Name	Floor	Daytime Level at Receiver	Nighttime Level at Reciver
1	Residence north of Project Site	Ground Floor	40.3 dBA	35.6 dBA
2	Residence northwest of Project Site	Ground Floor	40.8 dBA	36.0 dBA
3	Residence northwest of Project Site	Ground Floor	43.3 dBA	37.7 dBA
4	Residence west of Project Site	Ground Floor	44.8 dBA	39.3 dBA
5	Residence west of Project Site	Ground Floor	44.1 dBA	38.4 dBA
6	Residence south of Project Site	Ground Floor	40.5 dBA	34.4 dBA

Number	Noise Source Information	Citation	Level at Source	
1	Daytime Well Construction Equipment	RCNM	102.8 dBA	-
2	Nighttime Well Construction (Auger Drill Rig only)	RCNM	-	97.4 dBA

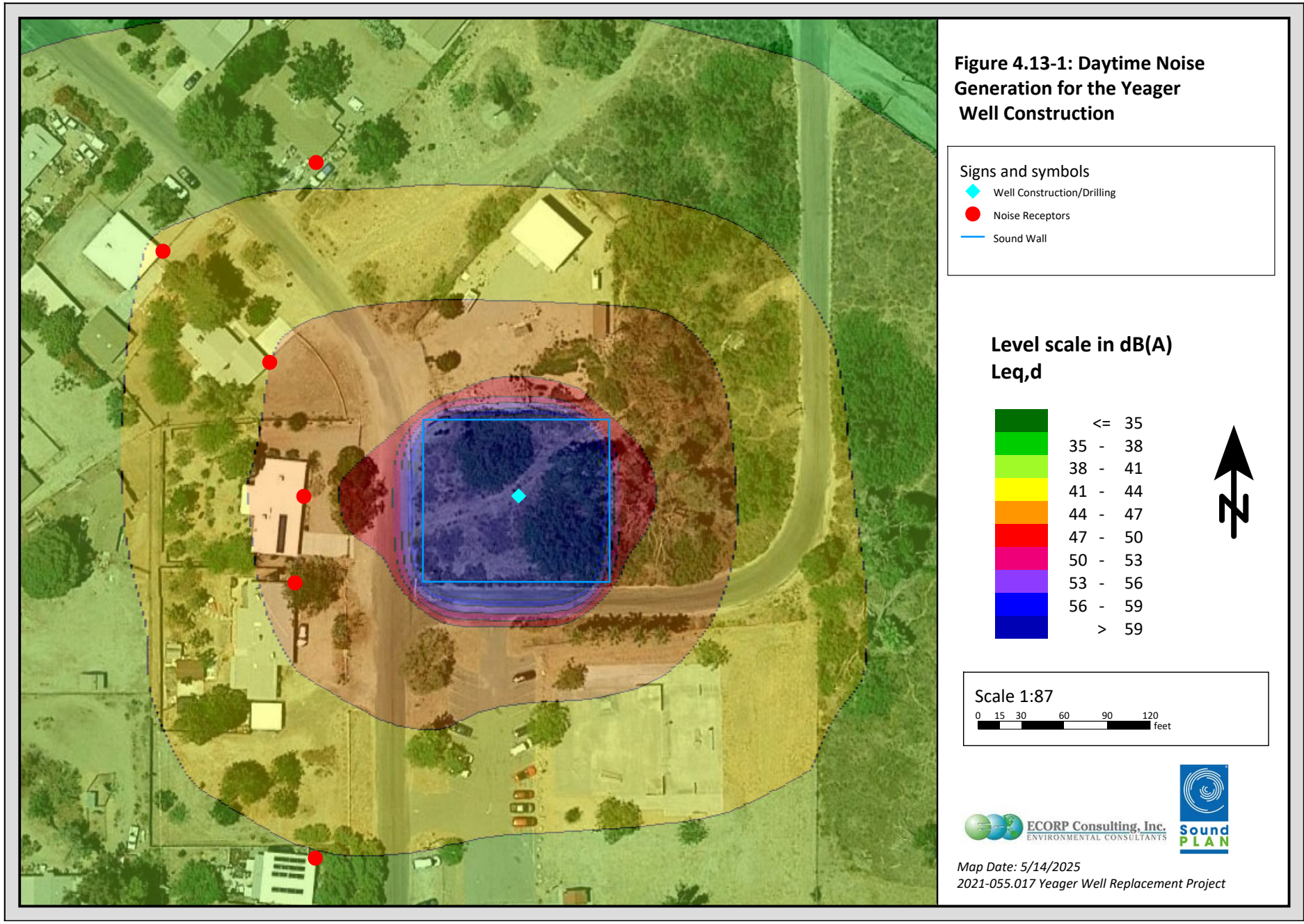
Figure 4.13-1: Daytime Noise Generation for the Yeager Well Construction
Signs and symbols
Well Construction/Drilling
Noise Receptors
Sound Wall
Level scale in dB(A) Leq,d
<= 35
35 - 38
38 - 41
41 - 44
44 - 47
47 - 50
50 - 53
53 - 56
56 - 59
> 59
N
Scale 1:87
0 15 30 60 90 120 feet
ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS
Sound PLAN
Map Date: 5/14/2025
2021-055.017 Yeager Well Replacement Project


Figure 4.13-2: Nighttime Noise Generation for the Yeager Well Construction
Signs and symbols
Well Construction/Drilling
Noise Receptors
Sound Wall
Level scale in dB(A) Leq,d
<= 35
35 - 38
38 - 41
41 - 44
44 - 47
47 - 50
50 - 53
53 - 56
56 - 59
> 59
N
Scale 1:87
0 15 30 60 90 120 feet
ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS
Sound PLAN
Map Date: 5/14/2025
2021-055.017 Yeager Well Replacement Project