## **APPENDIX F**

## **Noise Analysis**

Appendix May 2022

## **Appendix E**

- Figure E.1: CEQR Table 22-1, Noise Emission Reference Levels (A-weighted decibels with RMS "slow" time constant)
- Figure E.2: Estimated SBPCR Packaging and Summary Construction Schedule
- Figure E.3: Construction Equipment Projections Barge Mobilization, Wagner Park-Site & MJH
- Figure E.4: Construction Equipment Projections Wagner Park-Pavilion, Pier A & The Battery
- Figure E.5: Construction Equipment Projections Tidegate and Near Surface Isolation

Figure E.1: CEQR Table 22-1, Noise Emission Reference Levels (A-weighted decibels with RMS "slow" time constant)

<u>ID</u> 1	Equipment Description All Other Equipment > 5 HP	Usage Factor (%)	
2		50	85 85
	Auger Drill Rig		
3	Backhoe	40	80
4	Bar Bender	20	80
5	Blasting	N/A	94
6	Boring Jack Power Unit	50	80
7	Chain Saw	20	85
8	Clam Shovel (dropping)	20	93
9	Compactor (ground)	20	80
10	Compressor (air, less than or equal to 350 cfm)	40	75
11	Compressor (air, greater than 350 cfm)	40	80
12	Concrete Batch Plant	15	83
13	Concrete Mixer Truck	40	85
14	Concrete Pump Truck	20	82
15	Concrete Saw	20	90
16	Crane	16	85
17	Dozer	40	85
18	Drill Rig Truck	20	84
19	Drum Mixer	50	80
20	Dump Truck	40	84
21	Dumpster/Rubbish Removal	20	78
22	Excavator	40	85
23	Flat Bed Truck	40	84
24	Front End Loader	40	80
25	Generator	50	82
26	Generator (< 25 KVA, VMS signs)	50	70
27	Gradall	40	85
28	Grader	40	85
29	Grapple (on Backhoe)	40	85
30	Horizontal Boring Hydr. Jack	25	80
31	Hydra Break Ram	10	90
32	Impact Pile Driver	20	95
33	Jackhammer	20	85
34	Man Lift	20	85
35	Mounted Impact Hammer (Hoe Ram)	20	90
36	Pavement Scarafier	20	85
37	Paver	50	85
38	Pickup Truck	40	55
39	Pneumatic Tools	50	85
40	Pumps	50	77
41	Refrigerator Unit	100	82
42	Rivet Buster / Chipping Gun	20	85
43	Rock Drill	20	85
44			
	Roller	20	85
45	Sand Blasting	20	85
46	Scraper	40	85
47	Shears (on Backhoe)	40	85
48	Slurry Plant	100	78
49	Slurry Trenching Machine	50	82
50	Soil Mix Drill Rig	50	80
51	Tractor	40	84
52	Vacuum Excavator (Vac-truck)	40	85
53	Vacuum Street Sweeper	10	80
54	Ventilation Fan	100	85
55	Vibrating Hopper	50	85
56	Vibratory Concrete Mixer	20	80
57	Vibratory Pile Driver	20	95
58	Warning Horn	5	85
59	Water Jet Deleading	20	85
60	Welder / Torch	40	73
	Local Law 113 of 2005, §24-228(a)(1) Construction, Exhausts, and	other Devices "Sound othe	

Notes: As per Local Law 113 of 2005, §24-228(a)(1) Construction, Exhausts, and other Devices, "Sound, other than impulsive sound, attributable to the source or sources, that exceeds 85 dBA as measured 50 or more feet from the source or sources at a point outside the property line where the source or sources are located or as measured 50 or more feet from the source or sources on a public right-of-way" is prohibited.

A Indicates the value is from Local Law 113; other values are from 15 RCNY §28-109, Appendix. Sources: Local Law 113 and the New York City Department of Environmental Protection Notice of Adoption of Rules for Citywide Construction Noise Mitigation: 15 RCNY 28-109, Appendix.

START Package 1: Barge Mobilization Finalize Bid Documents 4/26/2021 5/28/2021 Procurement 5/31/2021 7/30/2021 **Award Construction Contract** 8/2/2021 11/2/2021 Construction 5/3/2023 11/3/2021 Package 2: Site Work Wagner Park and MJH Finalize Bid Documents 4/26/2021 5/28/2021 Procurement 7/30/2021 5/31/2021 Award Construction Contract (assumed EIS process over 11/2/21) 8/2/2021 11/2/2021 Construction 11/3/2021 12/31/2023 Package 3: Pavilion Finalize Bid Documents 4/26/2021 5/28/2021 Procurement 5/31/2021 7/30/2021 Award Construction Contract (assumed EIS process over 11/2/21) 8/2/2021 11/2/2021 11/3/2021 12/31/2023 Package 4: Pier A Plaza and Battery\*\* Finalize Bid Documents 4/26/2021 5/28/2021 Procurement 5/31/2021 7/30/2021 Award Construction Contract (assumed EIS process over 11/2/21) 8/2/2021 11/2/2021 Construction 11/3/2021 6/30/2023 Packages 5+: Interior Drainage TBD \*\*To be updated based on revised design schedule

Figure E.2: Estimated SBPCR Packaging and Summary Construction Schedule

Source: LiRo, 20201124 SBPCAR Bid Packaging and Construction Schedule.pdf, 11/24/20.

Figure E.3: Construction Equipment Projections – Barge Mobilization, Wagner Park-Site & MJH

		1	Start	1 1				CEQR	May	CEQR _		2021	1				2022	2								2023				
Activity ID	Package II	D Work task	Start Date	End Date	Equip I	Equipment Equipment	CEQR Equivalent	ID	Qty	Usage			1 J-22	F-22 M-2	22 A-22	M-22			S-22 C	)-22 N-	22 D-22	J-23 F-	-23 M	1-23 A-23	M-23 J-2		A-23	S-23 (	O-23 N-23	D-23
	2	7	3	4		2	5	4	5		1	2	3	4 5	6	7	8	9 10	11	12 13	14	15	16	17 18	19 20	21	22	23	24 25	26
1	L1	Barge Mobilization		05/03/23	1	Auger Drill Rig	Auger Drill Rig	2	0		S																			
1	L1	Barge Mobilization		05/03/23	2	Backhoe	Backhoe	3	0		S																			
1	L1	Barge Mobilization		05/03/23	3		Mounted Impact Hammer (Hoe Ram)	35	0	20%	0 07	0 0 7/		0.05		4.00	4.00	4.00 0.45	0.45	45 0	0 00	0.00	45 0	45 045						
1	L1 L1	Barge Mobilization		05/03/23	4	Barge	Pickup Truck	38 30	1	40%	8 0.70	0.70	0.70	0.85 0.8	0.85	1.00	1.00	1.00 0.45	0.45	0.45 0.3	0.30	0.30 0	0.15 0	.15 0.15						-
1	11	Barge Mobilization Barge Mobilization		05/03/23 05/03/23	5	Boring Machine	Horizontal Boring Hydr. Jack  Compressor (air, less than or equal to 350 cfm)	10	0	25% 40%	5																			
1	L1	Barge Mobilization		05/03/23	7	Compressor, small Compressor, large	Compressor (air, ress than or equal to 350 clm)  Compressor (air, greater than 350 cfm)	11	0	40%	3																			
1	11	Barge Mobilization		05/03/23	ν 2	Concrete Pump	Concrete Pump Truck	14	0	20%	3																			+
1	11	Barge Mobilization		05/03/23	9	Concrete Saw. Walk Behind	Concrete Saw	15	0	20%	5																			_
1	L1	Barge Mobilization		05/03/23	10	Crane	Crane	16	1	16%	5 0.70	0 0 70	0.70	0.85 0.8	5 0.85	1.00	1.00	1.00 0.45	0.45	0.45 0.3	0.30	0.30 0	15 0	.15 0.15						
1	11	Barge Mobilization		05/03/23	11	Crane: Pile driving leads	Impact Pile Driver	32	0	20%	S	0.71	0	0.00	0.00	1.00		1.00	0.10		0.00	0.00								
1	L1	Barge Mobilization		05/03/23	12	Crane: Vibratory Hammer	Vibratory Pile Driver	57	0	20%	S																			
1	L1	Barge Mobilization		05/03/23	13	Crawler-type drill, 4"	Auger Drill Rig	2	0		S																			
1	L1	Barge Mobilization	11/03/21	05/03/23	14	Dump Truck	Dump Truck	20	0	40%	s																			
1	L1	Barge Mobilization		05/03/23	15	Forklift	Refrigerator Unit	41	0	100%	S																			
1	L1	Barge Mobilization	11/03/21	05/03/23	16	Front Loader	Front End Loader	24	0	40%	S																			
1	L1	Barge Mobilization	11/03/21	05/03/23	17	Gradall	Gradall	27	0	40%	S																			
1	L1	Barge Mobilization	11/03/21	05/03/23	18	Jackhammers, Pavement Breakers	Jackhammer	33	0		D																			
1	L1	Barge Mobilization		05/03/23	19	Jumping Jacks	Compactor (ground)	9	0	20%	S																			
1	L1	Barge Mobilization		05/03/23	20	Pavement removal bucket	Scraper	46	0	40%	S																			
1	L1	Barge Mobilization		05/03/23	21	Pump, Centrif. water pump, 6"	Pumps	40	0	50%	S																			
1	L1	Barge Mobilization		05/03/23	22	Safety Boat, OSHA	Pickup Truck	38	1	40%	S 0.70	0.70	0.70	0.85 0.8	5 0.85	1.00	1.00	1.00 0.45	0.45	0.45 0.3	0.30	0.30 0	).15 0	.15 0.15						
1	L1	Barge Mobilization		05/03/23	23	Skidsteer	Tractor	51	0	40%	S																			
1	L1	Barge Mobilization		05/03/23	24	Tug boat	All Other Equipment > 5 HP	1	1	50%	S 0.70	0.70	0.70	0.85 0.8	5 0.85	1.00	1.00	1.00 0.45	0.45	0.45 0.3	0.30	0.30 0	0.15 0	.15 0.15						
1	L1	Barge Mobilization		05/03/23	25	Vibratory Rollers	Roller	44	0	20%	S																			
2	L2	Wagner Park-Site		12/31/23	1	Auger Drill Rig	Auger Drill Rig	2	0	20%	S								4.00			0.45		45 000				0.45		0.15
2	L2	Wagner Park-Site		12/31/23	2	Backhoe	Backhoe	3	1	40%		0.70		0.70 0.8			0.85	0.85 1.00	1.00	.00 1.0	0.45	0.45 0	0.45 0	0.30	0.30 0.3	30 0.30	0.30	0.15	0.15 0.15	0.15
2	L2	Wagner Park-Site Wagner Park-Site		12/31/23 12/31/23	4	Backhoe: Hydraulic hammer attachment	Mounted Impact Hammer (Hoe Ram)	35 38	1	20% 40%	D 0.70	0.8	1.00	1.00 1.0	0 1.00	0.85														-
2	L2 L2	Wagner Park-Site		12/31/23	- 4	Barge Boring Machine	Pickup Truck	30	1	25%	5 07	0 0 7	0.70	0.70 0.8	5 0.85	0.85	0.05	0.85 1.00	1.00	.00 1.0	0 0 45	0.45 0	15 0	.45 0.30	0.30 0.3	30 0.30	0.30	0.15	0.15 0.15	0.15
2	1.2	Wagner Park-Site		12/31/23	6	Compressor, small	Horizontal Boring Hydr. Jack Compressor (air, less than or equal to 350 cfm)	10	0	40%	5 0.70	0.70	0.70	0.70 0.6	0.65	0.65	0.65	0.65 1.00	1.00	.00 1.0	0.45	0.45 0	1.45 0	1.45 0.30	0.30 0.	0.30	0.30	0.15	J. 15 U. 15	0.15
2	L2	Wagner Park-Site		12/31/23	7	Compressor, large	Compressor (air, greater than 350 cfm)	11	1	40%	S 0.70	0 0 70	0.70	0.70 0.9	5 0.95	0.85	0.85	0.95 1.00	1.00	.00 1.0	0 0.45	0.45 0	0.45 0	.45 0.30	0.30 0.3	20 0.30	1 0.30	0.15 (	0.15 0.15	0.15
2	L2	Wagner Park-Site		12/31/23	8	Concrete Pump	Concrete Pump Truck	14	1	20%	S 0.70			0.70 0.8	5 0.85	0.85	0.85	0.85 1.00		.00 1.0					0.30 0.3		0.30	0.15	0.15 0.15	0.15
2	L2	Wagner Park-Site		12/31/23	9	Concrete Saw. Walk Behind	Concrete Saw	15	1	20%	S 0.70			0.70 0.8				0.85 1.00		.00 1.0					0.30 0.3			0.15 (	0.15 0.15	0.15
2	L2	Wagner Park-Site		12/31/23	10	Crane	Crane	16	1	16%	S 0.70		_	0.70 0.8				0.85 1.00		.00 1.0					0.30 0.3			0.15 (	0.15 0.15	0.15
2	12	Wagner Park-Site		12/31/23	11	Crane: Pile driving leads	Impact Pile Driver	32	1		S 0.70			0.70 0.8				0.85 1.00		.00 1.0					0.30 0.3			0.15	0.15 0.15	0.15
2	L2	Wagner Park-Site		12/31/23	12	Crane: Vibratory Hammer	Vibratory Pile Driver	57	2		S 1.40			1.40 1.7				1.70 2.00				0.90 0			0.60 0.6				0.30 0.30	
2	L2	Wagner Park-Site		12/31/23	13	Crawler-type drill, 4"	Auger Drill Rig	2	0		S																			
2	L2	Wagner Park-Site		12/31/23	14	Dump Truck	Dump Truck	20	11	40%	S 7.70	0 7.70	7.70	7.70 9.3	5 9.35	9.35	9.35	9.35 11.00	11.00 1	1.00 11.	00 4.95	4.95 4	.95 4	.95 3.30	3.30 3.3	30 3.30	3.30	1.65	1.65 1.65	1.65
2	L2	Wagner Park-Site		12/31/23	15	Forklift	Refrigerator Unit	41	1	100%	S 0.70	0.70	0.70	0.70 0.8	5 0.85	0.85	0.85	0.85 1.00	1.00	.00 1.0	0 0.45	0.45 0	.45 0	.45 0.30	0.30 0.3	0.30	0.30	0.15 0	0.15 0.15	0.15
2	L2	Wagner Park-Site	11/03/21	12/31/23	16	Front Loader	Front End Loader	24	1	40%	S 0.70	0.70	0.70	0.70 0.8	5 0.85	0.85	0.85	0.85 1.00	1.00	.00 1.0	0.45	0.45 0	.45 0	.45 0.30	0.30 0.3	0.30	0.30	0.15 0	0.15 0.15	0.15
2	L2	Wagner Park-Site	11/03/21	12/31/23	17	Gradall	Gradall	27	0	40%	S																			
2	L2	Wagner Park-Site	11/03/21	12/31/23	18	Jackhammers, Pavement Breakers	Jackhammer	33	2	20%	D 1.40	0 1.70	2.00	2.00 2.0	0 2.00	1.70														
2	L2	Wagner Park-Site		12/31/23	19	Jumping Jacks	Compactor (ground)	9	2	20%	S 1.40	0 1.40	1.40	1.40 1.7	0 1.70	1.70	1.70	1.70 2.00	2.00	2.00 2.0	0.90	0.90 0	.90 0	.90 0.60	0.60 0.6	0.60	0.60	0.30	0.30 0.30	0.30
2	L2	Wagner Park-Site		12/31/23	20	Pavement removal bucket	Scraper	46	0	40%	S																			
2	L2	Wagner Park-Site		12/31/23	21	Pump, Centrif. water pump, 6"	Pumps	40	0	50%	S																			
2	L2	Wagner Park-Site		12/31/23	22	Safety Boat, OSHA	Pickup Truck	38	0	40%	S																			
2	L2	Wagner Park-Site		12/31/23	23	Skidsteer	Tractor	51	1	40%	S 0.70	0.70	0.70	0.70 0.8	5 0.85	0.85	0.85	0.85 1.00	1.00	.00 1.0	0 0.45	0.45 0	0.45 0	.45 0.30	0.30 0.3	30 0.30	0.30	0.15	0.15 0.15	0.15
2	L2	Wagner Park-Site		12/31/23	24		All Other Equipment > 5 HP	1	0	50%	S																			
2	L2	Wagner Park-Site		12/31/23	25	Vibratory Rollers	Roller	44	1	20,0	S 0.70	0.70	0.70	0.70 0.8	0.85	0.85	0.85	0.85 1.00	1.00	.00 1.0	0.45	0.45 0	0.45 0	0.45 0.30	0.30 0.3	30 0.30	0.30	0.15	0.15 0.15	0.15
3	L2	Museum of Jewish Heritage		12/31/23	1	Auger Drill Rig	Auger Drill Rig	2	0	20% 40%	S 0.70	0 0.70		0.70 0.8		0.05	0.05	0.05 4.00	4.00	00 47	0 0 45	0.45	45 0	45 0.00	0.00 0.0	0 00	0.00	0.45	0.15 0.15	0.45
3	L2 L2	Museum of Jewish Heritage		12/31/23 12/31/23	2	Backhoe Hydraulia hammar attachment	Backhoe Mounted Impact Hammer (Hee Bem)	3 35	1			0.70		1.00 1.0			0.85	0.85 1.00	1.00	1.00	0.45	0.45 0	0.45 0	0.45 0.30	0.30 0.	30 0.30	0.30	0.15	J.15 U.15	0.15
3	1.2	Museum of Jewish Heritage  Museum of Jewish Heritage		12/31/23	<u>ه</u>	Backhoe: Hydraulic hammer attachment Barge	Mounted Impact Hammer (Hoe Ram) Pickup Truck	38	0	40%	0.70	0.00	1.00	1.00 1.0	1.00	0.65														_
3	12	Museum of Jewish Heritage		12/31/23		Boring Machine	Horizontal Boring Hydr. Jack	30	1	25%	S 0.70	0 0.70	0.70	0.70 0.8	5 0.85	0.85	0.85	0.85 1.00	1.00	.00 1.0	0 0.45	0.45 0	145 0	.45 0.30	0.30 0.3	30 0.30	0.30	0.15 0	0.15 0.15	0.15
3	1.2	Museum of Jewish Heritage		12/31/23	6	Compressor, small	Compressor (air, less than or equal to 350 cfm)	10	0	40%	5 0.70	0.70	0.70	0.70 0.0	0.00	0.00	0.00	0.00	1.00	1.00	0.45	0.40	.45 0	.45 0.50	0.00 0.0	0.50	0.00	0.10	3.13 0.13	0.10
3	L2	Museum of Jewish Heritage		12/31/23	7	Compressor, large	Compressor (air, ress than or equal to 666 cim)	11	1		S 0.70	0 0 70	0.70	0.70 0.8	5 0.85	0.85	0.85	0.85 1.00	1.00	00 10	0 0 45	0.45 0	45 0	45 0.30	0.30 0.3	30 0.30	0.30	0.15 (	0.15 0.15	0.15
3	L2	Museum of Jewish Heritage		12/31/23	8	Concrete Pump	Concrete Pump Truck	14	1	20%		0 0.70																	0.15 0.15	
3	L2	Museum of Jewish Heritage		12/31/23	9	Concrete Saw, Walk Behind	Concrete Saw	15	1									0.85 1.00											0.15 0.15	
3	L2	Museum of Jewish Heritage		12/31/23	10		Crane	16	1																				0.15 0.15	
3	L2	Museum of Jewish Heritage		12/31/23	11	Crane: Pile driving leads	Impact Pile Driver	32	1	20%	S 0.70	0 0.70	0.70	0.70 0.8	5 0.85	0.85	0.85	0.85 1.00	1.00	.00 1.0	0 0.45	0.45 0	.45 0	.45 0.30	0.30 0.3	30 0.30	0.30	0.15	0.15 0.15	0.15
3	L2	Museum of Jewish Heritage		12/31/23	12	Crane: Vibratory Hammer	Vibratory Pile Driver	57	0	20%	S																			
3	L2	Museum of Jewish Heritage		12/31/23	13	Crawler-type drill, 4"	Auger Drill Rig	2	0	20%	S																			
3	L2	Museum of Jewish Heritage		12/31/23	14	Dump Truck	Dump Truck	20	3.5	40%	S 2.45	5 2.45	2.45	2.45 2.9	8 2.98	2.98	2.98	2.98 3.50	3.50	3.50 3.5	0 1.58	1.58 1	.58 1	.58 1.05	1.05 1.0	05 1.05	1.05	0.53 0	0.53 0.53	0.53
3	L2	Museum of Jewish Heritage	11/03/21	12/31/23	15	Forklift	Refrigerator Unit	41	1	100%	S 0.70	0.70	0.70	0.70 0.8	5 0.85	0.85	0.85	0.85 1.00	1.00	.00 1.0	0.45	0.45 0	.45 0	.45 0.30	0.30 0.3	0.30	0.30	0.15	0.15 0.15	0.15
3	L2	Museum of Jewish Heritage	11/03/21	12/31/23	16	Front Loader	Front End Loader	24	1	40%	S 0.70	0.70	0.70	0.70 0.8	5 0.85	0.85	0.85	0.85 1.00	1.00	.00 1.0	0.45	0.45 0	.45 0	.45 0.30	0.30 0.3	30 0.30	0.30	0.15	0.15 0.15	0.15
3	L2	Museum of Jewish Heritage		12/31/23	17	Gradall	Gradall	27	0	40%	S																			
3	L2	Museum of Jewish Heritage		12/31/23	18	Jackhammers, Pavement Breakers	Jackhammer	33	2	2070	D 1.40			2.00 2.0																
3	L2	Museum of Jewish Heritage		12/31/23	19	Jumping Jacks	Compactor (ground)	9	2	20%	S 1.40	0 1.40	1.40	1.40 1.7	0 1.70	1.70	1.70	1.70 2.00	2.00	2.00 2.0	0.90	0.90 0	.90 0	.90 0.60	0.60 0.6	0.60	0.60	0.30	0.30 0.30	0.30
3	L2	Museum of Jewish Heritage		12/31/23	20	Pavement removal bucket	Scraper	46	0	40%	S																			
3	L2	Museum of Jewish Heritage		12/31/23	21		Pumps	40	0		S																			
3	L2	Museum of Jewish Heritage		12/31/23	22	Safety Boat, OSHA	Pickup Truck	38	0		S																			
		Museum of Jewish Heritage	11/03/21	12/31/23	23	Skidsteer	Tractor	51	1	40%	S 0.70	0 0 70	1 0 70	0.70 0.8	5 0.85	0.85	0.85	0.85   1.00	1.00	00 10	0.45	0.45	145 0	45 0 30	0.30 0.1	30 D 30	0.30	0.15 (	0.15 0.15	0.15
3	L2											0.70				0.00	0.00	0.00 1.00	1.00	1.0	0.40	0.40	7.45	.45 0.50	0.30 0.	0.50	0.50	0.10		
3	L2 L2 L2	Museum of Jewish Heritage  Museum of Jewish Heritage	11/03/21	12/31/23	24		All Other Equipment > 5 HP Roller	1 44	0	50%	S																		0.15 0.15	

Appendix E-3 May 2022

Figure E.4: Construction Equipment Projections – Wagner Park-Pavilion, Pier A & The Battery

		T.	Start	1 1				CEQR	May	CEQR		2021	1				202	2				1				2023				
Activity ID	ackage ID	Work task	Date	End Date	Equip I	D Equipment	CEQR Equivalent	ID	Qty	Usage			21 J-22	F-22 N	1-22 A-22	2 M-22			2 S-22	O-22 I	N-22 D-22	J-23	F-23	M-23 A-23	M-23		3 A-2	3 S-23	O-23	N-23 D-23
	2	7	3	4		2	5	4	5		1	2	? 3	4	5 6	7	8	9 10	11	12	13 14	15	16	17 18	19	20 21	22	23	24	25 26
4	L3	Wagner Park-New Pavilion		12/31/23	1	Auger Drill Rig	Auger Drill Rig	2	0	20%	S									4.00		0.45								
4	L3 L3	Wagner Park-New Pavilion Wagner Park-New Pavilion		12/31/23 12/31/23	2	Backhoo: Hydraulic hammer attachment	Backhoe  Mounted Impact Hammer (Hoe Ram)	3 35	1	40% 20%	S 0.7	70 0.1	70   0.70	0.70	0.85	0.85	0.85	0.85 1.0	0 1.00	1.00	1.00 0.45	0.45	0.45	0.45 0.30	0.30	0.30 0.3	0 0.3	0 0.15	0.15	0.15 0.15
4	13	Wagner Park-New Pavilion Wagner Park-New Pavilion		12/31/23	3	Backhoe: Hydraulic hammer attachment Barge	Pickup Truck	38	0	40%	0																			
4	L3	Wagner Park-New Pavilion		12/31/23	5	Boring Machine	Horizontal Boring Hydr. Jack	30	1	25%	S 07	70 0	70 0 70	0.70	0.85 0.85	5 0.85	0.85	0.85 1.0	0 1.00	1.00	1.00 0.45	0.45	0.45	0.45 0.30	0.30	0.30 0.3	0 0.3	0.15	0.15	0.15 0.15
4	L3	Wagner Park-New Pavilion		12/31/23	6	Compressor, small	Compressor (air, less than or equal to 350 cfm)	10	0	40%	S	0	0.70	0.70		0.00	0.00	0.00	1.00	1.00	1.00 0.40	0.40	0.40	0.40	0.00		0.0	0.10	0.10	0.10
4	L3	Wagner Park-New Pavilion		12/31/23	7	Compressor, large	Compressor (air, greater than 350 cfm)	11	1	40%	S 0.7	70 0.7	70 0.70	0.70	0.85 0.85	0.85	0.85	0.85 1.0	0 1.00	1.00	1.00 0.45	0.45	0.45	0.45 0.30	0.30	0.30 0.3	0 0.3	0.15	0.15	0.15 0.15
4	L3	Wagner Park-New Pavilion		12/31/23	8	Concrete Pump	Concrete Pump Truck	14	1	20%	S 0.7	70 0.	70 0.70	0.70	0.85	0.85	0.85	0.85 1.0	0 1.00		1.00 0.45			0.45 0.30		0.30 0.3	0 0.3	0.15	0.15	0.15 0.15
4	L3	Wagner Park-New Pavilion	11/03/21	12/31/23	9	Concrete Saw, Walk Behind	Concrete Saw	15	0	20%	S																			
4	L3	Wagner Park-New Pavilion		12/31/23	10	Crane	Crane	16	1	16%	S 0.7				0.85			0.85 1.0			1.00 0.45			0.45 0.30		0.30				0.15 0.15
4	L3	Wagner Park-New Pavilion		12/31/23	11	Crane: Pile driving leads	Impact Pile Driver	32	1	20%	S 0.7				0.85			0.85 1.0			1.00 0.45			0.45 0.30		0.30 0.3				0.15 0.15
4	L3	Wagner Park-New Pavilion		12/31/23	12	Crane: Vibratory Hammer	Vibratory Pile Driver	57	1	20%	S 0.7	70 0.	70 0.70	0.70	0.85	0.85	0.85	0.85 1.0	0 1.00	1.00	1.00 0.45	0.45	0.45	0.45 0.30	0.30	0.30 0.3	0.3	0.15	0.15	0.15 0.15
4	L3	Wagner Park-New Pavilion		12/31/23	13	Crawler-type drill, 4"	Auger Drill Rig	2 20	0	20% 40%	S 5.6	.0 5		5.00	. 00 . 00		C 00	C 00 0 0	0 000	0.00	200 200	2.00	2.00	2.00 0.40	0.40	10 04	0 0 4	0 400	4.00	4.00 4.00
4	L3 L3	Wagner Park-New Pavilion Wagner Park-New Pavilion		12/31/23 12/31/23	14 15	Dump Truck Forklift	Dump Truck Refrigerator Unit	41	1	100%	S 0.7				6.80 6.80 0.85 0.85			6.80 8.0 0.85 1.0			3.60 1.00 0.45			3.60 2.40 0.45 0.30		2.40 2.4 0.30 0.3				1.20 1.20 0.15 0.15
4	L3	Wagner Park-New Pavilion		12/31/23	16	Front Loader	Front End Loader	24	1	40%		70 0.		0.70				0.85 1.0			1.00 0.45			0.45 0.30		0.30 0.3				0.15 0.15
4	L3	Wagner Park-New Pavilion		12/31/23	17	Gradall	Gradall	27	0	40%	S 0.7	0 0.	10 0.70	0.70	7.00	0.00	0.03	0.00	0 1.00	1.00	1.00 0.40	0.43	0.43	0.45 0.50	0.30	7.30 0.3	0.3	0.13	0.13	0.13 0.13
4	L3	Wagner Park-New Pavilion		12/31/23	18	Jackhammers, Pavement Breakers	Jackhammer	33	0	20%	D																			
4	L3	Wagner Park-New Pavilion		12/31/23	19	Jumping Jacks	Compactor (ground)	9	2	20%		10 1.4	40 1.40	1.40	.70 1.70	1.70	1.70	1.70 2.0	0 2.00	2.00	2.00 0.90	0.90	0.90	0.90 0.60	0.60	0.60 0.6	0.6	0.30	0.30	0.30 0.30
4	L3	Wagner Park-New Pavilion		12/31/23	20	Pavement removal bucket	Scraper	46	0	40%	S																			
4	L3	Wagner Park-New Pavilion	11/03/21	12/31/23	21	Pump, Centrif. water pump, 6"	Pumps	40	0	50%	S																			
4	L3	Wagner Park-New Pavilion	11/03/21	12/31/23	22	Safety Boat, OSHA	Pickup Truck	38	0	40%	S																			
4	L3	Wagner Park-New Pavilion		12/31/23	23	Skidsteer	Tractor	51	1	40%	S 0.7	70 0.7	70 0.70	0.70	0.85	0.85	0.85	0.85 1.0	0 1.00	1.00	1.00 0.45	0.45	0.45	0.45 0.30	0.30	0.30 0.3	0.3	0 0.15	0.15	0.15 0.15
4	L3	Wagner Park-New Pavilion		12/31/23	24	Tug boat	All Other Equipment > 5 HP	1	0	50%	S																			
4	L3	Wagner Park-New Pavilion		12/31/23	25	Vibratory Rollers	Roller	44	0	20%	S																			
5	L4	Pier A Plaza		06/30/23	1	Auger Drill Rig	Auger Drill Rig	2	0	20%	S																			
5	L4	Pier A Plaza		06/30/23	2	Backhoe	Backhoe	3	1	40%		70 0.			0.85		1.00	1.00 1.0	0 0.45	0.45	0.45	0.30	0.30	0.30 0.15	0.15	).15				
5	L4	Pier A Plaza		06/30/23	3	Backhoe: Hydraulic hammer attachment	Mounted Impact Hammer (Hoe Ram)	35 38	1	20%	D 0.7	70 0.8	85   1.00	1.00	.00 1.00	0.85														
5	L4 1.4	Pier A Plaza Pier A Plaza		06/30/23	4	Barge	Pickup Truck	38	0	40% 25%	8	70 0	70 0 70	0.85	0.00	5 0.85	1.00	1.00 1.0	0 0.45	0.45	0.45 0.30	0.20	0.20	0.30 0.15	0.15	45				
5	L4	Pier A Plaza Pier A Plaza		06/30/23 06/30/23	5	Boring Machine Compressor, small	Horizontal Boring Hydr. Jack  Compressor (air, less than or equal to 350 cfm)	10	0	40%	5 0.7	0.	70 0.70	0.85	0.85	0.85	1.00	1.00 1.0	0 0.45	0.45	J.45 U.3C	0.30	0.30	0.30 0.15	0.15	1.15				
5	14	Pier A Plaza		06/30/23	7	Compressor, small	Compressor (air, ress than or equal to 350 cfm)	11	1	40%	S 0.7	70 0	70 0.70	0.85	0.85 0.85	5 0.85	1.00	1.00 1.0	0 0.45	0.45	0.45 0.30	0.30	0.30	0.30 0.15	0.15	15				
5	14	Pier A Plaza		06/30/23	8	Concrete Pump	Concrete Pump Truck	14	1	20%	S 0.7				0.85 0.85			1.00 1.0			0.45 0.30			0.30 0.15	0.15					
5	14	Pier A Plaza		06/30/23	9	Concrete Saw. Walk Behind	Concrete Saw	15	1	20%	S 0.7				0.85 0.85			1.00 1.0			0.45 0.30			0.30 0.15	0.15					
5	L4	Pier A Plaza		06/30/23	10	Crane	Crane	16	1	16%	S 0.7				0.85 0.85			1.00 1.0			0.45 0.30	_		0.30 0.15	0.15					
5	L4	Pier A Plaza		06/30/23	11	Crane: Pile driving leads	Impact Pile Driver	32	1	20%	S 0.7	70 0.	70 0.70		0.85			1.00 1.0			0.45 0.30			0.30 0.15	0.15					
5	L4	Pier A Plaza	11/03/21	06/30/23	12	Crane: Vibratory Hammer	Vibratory Pile Driver	57	1	20%	S 0.7	70 0.	70 0.70	0.85	0.85	0.85	1.00	1.00 1.0	0 0.45	0.45	0.30	0.30	0.30	0.30 0.15	0.15	).15				
5	L4	Pier A Plaza	11/03/21	06/30/23	13	Crawler-type drill, 4"	Auger Drill Rig	2	0	20%	S																			
5	L4	Pier A Plaza		06/30/23	14	Dump Truck	Dump Truck	20	3	40%	S 2.1				2.55 2.55			3.00 3.0			1.35 0.90									
5	L4	Pier A Plaza		06/30/23	15	Forklift	Refrigerator Unit	41	1	100%	S 0.7				0.85			1.00 1.0			0.30			0.30 0.15	0.15					
5	L4	Pier A Plaza		06/30/23	16	Front Loader	Front End Loader	24	1	40%	S 0.7	70 0.7	70 0.70	0.85	0.85	0.85	1.00	1.00 1.0	0 0.45	0.45	0.30	0.30	0.30	0.30 0.15	0.15	).15				
5	L4	Pier A Plaza		06/30/23	17	Gradall	Gradall	27	0	40%	S																			
5	L4	Pier A Plaza		06/30/23	18	Jackhammers, Pavement Breakers	Jackhammer	33	2	20%		10 1.7		2.00 2			0.00	0.00		0.00		0.00	0.00	0.00	0.00					
5	L4	Pier A Plaza Pier A Plaza		06/30/23 06/30/23	19 20	Jumping Jacks Pavement removal bucket	Compactor (ground) Scraper	9 46	2	20% 40%	S 1.4	10 1.4	40   1.40	1.70	.70 1.70	1.70	2.00	2.00 2.0	0.90	0.90	J.90 0.60	0.60	0.60	0.60 0.30	0.30	1.30				
5	14	Pier A Plaza		06/30/23	21	Pump, Centrif. water pump, 6"	Pumps	40	0	50%	9																			
5	14	Pier A Plaza		06/30/23	22	Safety Boat, OSHA	Pickup Truck	38	0	40%	S																			
5	L4	Pier A Plaza		06/30/23	23	Skidsteer	Tractor	51	1	40%	S 0.7	70 0.	70 0.70	0.85	.85 0.85	5 0.85	1.00	1.00 1.0	0 0.45	0.45	0.45 0.30	0.30	0.30	0.30 0.15	0.15	).15				
5	L4	Pier A Plaza		06/30/23	24	Tug boat	All Other Equipment > 5 HP	1	0	50%	S																			
5	L4	Pier A Plaza		06/30/23	25	Vibratory Rollers	Roller	44	1	20%	S 0.7	70 0.1	70 0.70	0.85	0.85	0.85	1.00	1.00 1.0	0 0.45	0.45	0.45 0.30	0.30	0.30	0.30 0.15	0.15	).15				
6	L4	The Battery	11/03/21	06/30/23	1	Auger Drill Rig	Auger Drill Rig	2	0	20%	S																			
6	L4	The Battery	11/03/21	06/30/23	2	Backhoe	Backhoe	3	1	40%		70 0.		0.85			1.00	1.00 1.0	0 0.45	0.45	0.30	0.30	0.30	0.30 0.15	0.15	).15				
6	L4	The Battery		06/30/23	3	Backhoe: Hydraulic hammer attachment	Mounted Impact Hammer (Hoe Ram)	35	1	20%	D 0.7	70 0.8	85 1.00	1.00	.00 1.00	0.85														
6	L4	The Battery		06/30/23	4	Barge	Pickup Truck	38	0	40%	S																			
6	L4	The Battery		06/30/23	5	Boring Machine	Horizontal Boring Hydr. Jack	30	1	25%	S 0.7	70 0.7	70 0.70	0.85	0.85	0.85	1.00	1.00 1.0	0 0.45	0.45	0.45	0.30	0.30	0.30 0.15	0.15	).15				
6	L4	The Battery		06/30/23	6	Compressor, small	Compressor (air, less than or equal to 350 cfm)	10	0	40%	S																			
6	L4 L4	The Battery		06/30/23		Compressor, large	Compressor (air, greater than 350 cfm)	11	1	40%														0.30 0.15 0.30 0.15						
6	L4 L4	The Battery The Battery		06/30/23 06/30/23	9	Concrete Pump Concrete Saw, Walk Behind	Concrete Pump Truck Concrete Saw	14 15	1	20% 20%		70 0.7												0.30 0.15						
6	L4 L4	The Battery		06/30/23	10	Crane	Crane	16	1	16%														0.30 0.15						
6	L4	The Battery		06/30/23	11		Impact Pile Driver	32	1	20%	S 0.7	70 0.	70 0.70	0.85	1.85 0.85	5 0.85	1.00	1.00 1.0	0 0.45	0.45	1.45 0.30			0.30 0.15						
6	L4	The Battery		06/30/23	12		Vibratory Pile Driver	57	1	20%														0.30 0.15						
6	L4	The Battery		06/30/23	13	Crawler-type drill, 4"	Auger Drill Rig	2	0	20%	S	0		0.00		0.00			0.10	0.10	0.00	0.00	0.00	0.00	0.10					
6	L4	The Battery		06/30/23	14	Dump Truck	Dump Truck	20	4	40%	S 2.8	30 2.8	80 2.80	3.40	3.40 3.40	3.40	4.00	4.00 4.0	0 1.80	1.80	1.80 1.20	1.20	1.20	1.20 0.60	0.60	0.60				
6	L4	The Battery		06/30/23	15	Forklift	Refrigerator Unit	41	1	100%	S 0.7	70 0.7	70 0.70	0.85	0.85	0.85	1.00	1.00 1.0	0 0.45	0.45	0.45 0.30	0.30	0.30	0.30 0.15	0.15	).15				
6	L4	The Battery		06/30/23	16	Front Loader	Front End Loader	24	1	40%	S 0.7	70 0.	70 0.70	0.85	0.85	0.85	1.00	1.00 1.0	0 0.45	0.45	0.30	0.30	0.30	0.30 0.15	0.15	).15				
6	L4	The Battery	11/03/21	06/30/23	17	Gradall	Gradall	27	0	40%	S																			
6	L4	The Battery		06/30/23	18	Jackhammers, Pavement Breakers	Jackhammer	33	2	20%				2.00 2																
6	L4	The Battery		06/30/23	19	Jumping Jacks	Compactor (ground)	9	2	20%	S 1.4	10 1.4	40 1.40	1.70	.70 1.70	1.70	2.00	2.00 2.0	0.90	0.90	0.60	0.60	0.60	0.60 0.30	0.30	0.30				
6	L4	The Battery		06/30/23	20	Pavement removal bucket	Scraper	46	0	40%	S																			
6	L4	The Battery		06/30/23	21	Pump, Centrif. water pump, 6"	Pumps	40	0	50%	S																			
6	L4	The Battery		06/30/23	22	Safety Boat, OSHA	Pickup Truck	38	0	40%	S			0.05			4.55	4.00		0.45	. 45	0.00	0.00	0.00	0.45					
6	L4	The Battery		06/30/23	23	Skidsteer	Tractor	51	1	40%	S 0.7	νυ 0.	/U   0.70	0.85 (	0.85	0.85	1.00	1.00 1.0	U U.45	0.45	J.45 0.30	0.30	0.30	0.30 0.15	0.15	1.15				
6	L4 L4	The Battery The Battery		06/30/23	24	Tug boat Vibratory Rollers	All Other Equipment > 5 HP Roller	1 44	0	50% 20%	_	70 0	70 0 70	0.05	05 00	0.05	1.00	1.00 4.0	0 045	0.45	145 000	0.20	0.30	0.30 0.15	0.15	15				
ъ	L4	THE DAILETY	11/03/21	06/30/23	25	VIDIALUI y ROIIEIS	IVOIIEI	44	- 1	∠∪%	S   U.1	U U.	10   0.70	0.00	U.85	0.65	1.00	1.00   1.0	0.45	0.40	J.40 U.30	0.30	0.30	0.30 0.15	U. 10	i. 10			$\bot$	

Appendix E-4 May 2022

Figure E.5: Construction Equipment Projections – Tidegate and Near Surface Isolation

Activity F	ackage	Vork task	Start	End	Equip	Fourier	CEGR Equivalent	CEQR M	az	CEQR	Туре	PL	2021				-		2022						_			-		2023				
ID	ID	WOIK TASK	Date	Date	iD	Equipment	CEGR Equivalent			Usage	i gpe	50 N	J-21 D-21	J-22	F-22	M-22 A	-22 M-2	2 J-2	22 J-2	2 A-22	S-22	0-22	N-22	D-22	J-23	F-23	M-23 A	-23 M-2	3 J-2	3 J-23	A-23	S-23 O-	23 N-2	3 D-23
	2	V	5	- 6		2	2	V	5	3		V	// IT	10	19	200	27 22	2.	3 20	25	2%	27	270	29	.391	39	32	33 3V	.39	.39	37	38 3	9 40	- 47
9	L5	Tidegate	12/03/21	12/02/22	1	Auger Drill Rig	Auger Drill Rig	2	1	20%	S	85	0.70	0.70	0.85	0.85 1	.00 1.0	0.4	5 0.4	5 0.30	0.30	0.15	0.15											
9	L5	Tidegate	12/03/21	12/02/22	2	Backhoe	Backhoe	3	1	40%	S	80	0.70	0.70	0.85	0.85 1	.00 1.0	0.4	5 0.4	5 0.30	0.30	0.15	0.15											
9	L5	Tidegate	12/03/21	12/02/22	3	Backhoe: Hydraulic hammer attachment	Mounted Impact Hammer (Hoe Ram)	35	0	20%		90																						
9	L5	Tidegate	12/03/21	12/02/22	4	Barge	Pickup Truck	38	0	40%		55																						
9	L5	Tidegate	12/03/21	12/02/22	5	Boring Machine	Horizontal Boring Hydr. Jack	30	0	25%	S	80																						
9	L5	Tidegate	12/03/21	12/02/22	6	Compressor, small	Compressor (air, less than or equal to 350 cfm)	10	1	40%	S	75	0.70	0.70	0.85	0.85	.00 1.0	0.4	5 0.4	5 0.30	0.30	0.15	0.15											
9	L5	Tidegate	12/03/21	12/02/22	7	Compressor, large	Compressor (air, greater than 350 cfm)	11	1	40%	S :	80	0.70	0.70	0.85	0.85	.00 1.0	0.4	5 0.4	5 0.30	0.30	0.15	0.15											
9	L5	Tidegate	12/03/21	12/02/22	8	Concrete Pump	Concrete Pump Truck	14	0	20%		82																						
9	L5	Tidegate	12/03/21	12/02/22	9	Concrete Saw, Walk Behind	Concrete Saw	15	0	20%	S	90																						
9	L5	Tidegate	12/03/21	12/02/22	10	Crane	Crane	16	0	16%	S :	85																						
9	L5	Tidegate	12/03/21	12/02/22	11	Crane: Pile driving leads	Împact Pile Driver	32	0	20%	S	95																						
9	L5	Tidegate	12/03/21	12/02/22	12	Crane: Vibratory Hammer	Vibratory Pile Driver	57	0	20%	S	95																						
9	L5	Tidegate	12/03/21	12/02/22	13	Crawler-type drill, 4"	Auger Drill Rig	2	1	20%	S	85	0.70	0.70	0.85	0.85	.00 1.0	0.4	5 0.4	5 0.30	0.30	0.15	0.15											
9	L5	Tidegate	12/03/21	12/02/22	14	Dump Truck	Dump Truck	20	1	40%	S :	84	0.70	0.70	0.85	0.85	.00 1.0	0.4	5 0.4	5 0.30	0.30	0.15	0.15											
9	L5	Tidegate	12/03/21	12/02/22	15	Forklift	Refrigerator Unit	41	0	100%		82																						
9	L5	Tidegate	12/03/21	12/02/22	16	Front Loader	Front End Loader	24	1	40%		80	0.70	0.70	0.85	0.85	.00 1.0	0.4	5 0.4	5 0.30	0.30	0.15	0.15											
9	L5	Tidegate	12/03/21	12/02/22	17	Gradall	Gradall	27	0	40%	S :	85																						
9	L5	Tidegate	12/03/21	12/02/22	18	Jackhammers, Pavement Breakers	Jackhammer	33	0	20%	D :	85																						
9	L5	Tidegate	12/03/21	12/02/22	19	Jumping Jacks	Compactor (ground)	9	1	20%	S	80	0.70	0.70	0.85	0.85	.00 1.0	0.4	5 0.4	5 0.30	0.30	0.15	0.15											
9	L5	Tidegate	12/03/21	12/02/22	20	Pavement removal bucket	Scraper	46	0	40%		85																						
9	L5	Tidegate	12/03/21	12/02/22	21	Pump, Centrif. water pump, 6"	Pumps	40	1	50%	S	77	0.70	0.70	0.85	0.85	.00 1.0	0.4	5 0.4	5 0.30	0.30	0.15	0.15											
9	L5	Tidegate	12/03/21	12/02/22	22	Safety Boat, OSHA	Pickup Truck	38	0	40%	S !	55																						
9	L5	Tidegate	12/03/21	12/02/22	23	Skidsteer	Tractor	51	0	40%	S :	84																						
9	L5	Tidegate	12/03/21	12/02/22	24	Tug boat	All Other Equipment > 5 HP	1	0	50%	S	85																						
9	L5	Tidegate	12/03/21	12/02/22	25	Vibratory Rollers	Roller	44	0	20%	S	85																						
10	0	Near Surface Isolation	06/03/22			Auger Drill Rig	Auger Drill Rig	2	1	20%		85																						
10	0	Near Surface Isolation	06/03/22			Backhoe	Backhoe	3	1	40%		80						0.7	70 0.8	5 1.00	1.00	0.85	0.45											
10	0	Near Surface Isolation	06/03/22			Backhoe: Hydraulic hammer attachment	Mounted Impact Hammer (Hoe Ram)	**	0	20%		90																						
10	0	Near Surface Isolation	06/03/22				Pickup Truck		0	40%		55																						
10	0	Near Surface Isolation		12/02/22		Boring Machine	Horizontal Boring Hydr. Jack	30	0	25%		80																						
10	0	Near Surface Isolation	06/03/22			Compressor, small	Compressor (air, less than or equal to 350 cfm)	10	1	40%		75						0.7	70 0.8	5 1.00	1.00	0.85	0.45											
10	0	Near Surface Isolation	06/03/22			Compressor, large	Compressor (air, greater than 350 cfm)	11	1	40%		80																						
10	0	Near Surface Isolation	06/03/22			Concrete Pump	Concrete Pump Truck		0	20%		82																						
10	0	Near Surface Isolation	06/03/22			Concrete Saw, Walk Behind	Concrete Saw	10	0	20%		90						0.7	70 0.8	5 1.00	1.00	0.85	0.45											
10	0	Near Surface Isolation	06/03/22			Crane	Crane	10	0	16%		85																						
10	0	Near Surface Isolation	06/03/22			Crane: Pile driving leads	Impact Pile Driver		0	20%		95																						
10	0	Near Surface Isolation		12/02/22		Crane: Vibratory Hammer	Vibratory Pile Driver	57	0	20%		95																						
10	0	Near Surface Isolation		12/02/22		Crawler-type drill, 4"	Auger Drill Rig	2	1	20%		85																						
10	0	Near Surface Isolation	06/03/22			Dump Truck	Dump Truck	20	1	40%	_	84						0.7	70 0.8	5 1.00	1.00	0.85	0.45											
10	0	Near Surface Isolation	06/03/22			Forklift	Refrigerator Unit		0	100%		82																						
10	0	Near Surface Isolation	06/03/22			Front Loader	Front End Loader	24	1	40%		80							70 0.8															
10	0	Near Surface Isolation	06/03/22			Gradall	Gradall		0	40%		85						0.7	70 0.8	5 1.00	1.00	0.85	0.45											
10	0	Near Surface Isolation	06/03/22			Jackhammers, Pavement Breakers	Jackhammer	33	0	20%	_	85																						
10	0	Near Surface Isolation	06/03/22			Jumping Jacks	Compactor (ground)	9	1	20%		80																						
10	0	Near Surface Isolation	06/03/22			Pavement removal bucket	Scraper	10	0	40%		85																						
10	0	Near Surface Isolation	06/03/22			Pump, Centrif. water pump, 6"	Pumps	40	1	50%		77						0.7	70 0.8	5 1.00	1.00	0.85	0.45										$\perp$	$\perp$
10	0	Near Surface Isolation	06/03/22			Safety Boat, OSHA	Pickup Truck		0	40%		55																						
10	0	Near Surface Isolation	06/03/22			Skidsteer	Tractor		0	40%	_	84																						
10	0	Near Surface Isolation		12/02/22			All Other Equipment > 5 HP		0	50%		85																						
10	0	Near Surface Isolation	06/03/22	12/02/22	25	Vibratory Rollers	Roller	44	0	20%	S :	85		ı																				

Appendix E-5 May 2022