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BOEM
Bureau of Ocean Energy
Management

**Appendix L Asbestos and Lead Contained Materials Report,
June 2018**

Asbestos and Lead Contained
Materials Report
269 37th Street
Brooklyn, New York

Red Hook Container Terminal, LLC
Brooklyn, New York

60558675

June 2018

Quality information

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1. Executive Summary

AECOM conducted asbestos and lead paint survey of the Tower Building, J-1, J-2 and N-2 Shed Building, Graffiti Building located at the South Brooklyn Marine Terminal (SBMT) in Brooklyn, New York. Observations for other environmental concerns were also noted. The building is potentially scheduled to be renovated in the near future. The J-1 shed building was surveyed on March 23, March 26 and March 29, 2018; the J-2 shed building was surveyed on February 27, 2018; N-2 shed building was surveyed on March 25, 2018 and March 29, 2018; Graffiti Building was surveyed on March 27, 2018 and March 29, 2018; the Tower Building was surveyed on several occasions from March 19, 2018 through March 29, 2018 by AECOM personnel and specifically focused on each level of the buildings for potential upcoming renovation. The building is comprised of one large open Warehouse area, Men's and Women's restrooms, Boiler Room, Water Meter/Pump Room, Voltage Room, Janitor's Closet, small shed, various offices, Sprinkler Pump Room, two (2) Sprinkler Control Valve Rooms (north and south sides), storage rooms, an old bathroom area, one (1) story truck weight booth area, two (2) story warehouse area and a four (4) story tower building section.

The AECOM inspection team included Mr. Mark Reed with assistance by Mr. Mark Connors. Mr. Reed and Mr. Connors are both New York State Department of Labor (NYSDOL) certified asbestos inspectors as well as New York City certified asbestos investigators. Mr. Reed is also a New York State certified Lead inspector. Certifications can be found in Appendix C of this report.

2. Asbestos and Lead Sampling Methodology and Analysis

2.1 J-1 Shed Building

During the sampling, the suspect material was sprayed with amended water to minimize any airborne dust generated during the sampling. A utility knife/screwdriver or coring tool was then used to penetrate each suspect asbestos material to extract a bulk sample. The samples are then placed in sample bags, sealed and labeled with a sample number, material type description and location. The sampling instrument is then subsequently wiped with a clean moist cloth to decontaminate the tool and to reduce the possibility of a potential release of asbestos fibers or contamination of subsequent samples. Data pertinent to each collected sample such as sample number, location, and material description are then recorded on a chain of custody sheet and sample location plan.

Samples and laboratory chain-of-custody submittal sheets were then delivered to EMSL Analytical, Inc. (EMSL); EMSL is approved by the National Voluntary Laboratory Accreditation Program (NVLAP) and New York State Department of Health's Environmental Laboratory Accreditation Program (NYS ELAP) for asbestos and lead analysis. The samples for asbestos analysis were analyzed using Polarized Light Microscopy (PLM) and/or Transmission Electron Microscopy (TEM) as necessary to determine asbestos content. Materials containing greater than one percent (>1%) asbestos are considered to be asbestos-containing materials (ACM).

Paint samples were also collected throughout the building and analyzed by Flame Atomic Absorption Spectroscopy (AAS) to determine lead content.

The following suspect materials sampled during the inspection were determined via laboratory analysis to be non-asbestos containing materials (non ACM):

- Tan spray-on fireproofing (w/vermiculite);
- Black joint caulking material;
- Green wall paint/plaster material;
- 1'x1' White/tan hidden spline ceiling tile;
- Tan roof material;
- Black tar paper wall material;
- Gray/brown terrazzo flooring material;
- Brown fire alarm box insulation;
- Gray exterior caulking material (at foundation walls);
- Brown fire alarm box insulation material;
- White/tan sheetrock ceiling material

ACM identified at the site through laboratory analysis or those suspect materials that were presumed to be asbestos-containing material (ACM) and not sampled include the following:

ACM Material Location	ACM Material Description	Estimated Quantity of ACM		Sample Nos.	Comments
		LF	SF		
Exterior Roof – entire roof	Dark gray built-up roofing material		130,000	J1-12A	-
Exterior Roof – around perimeter of roof	Black roof flashing material		1,800	J1-15A	Remove 12" away from roof edge

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ACM Material Location	ACM Material Description	Estimated Quantity of ACM		Sample Nos.	Comments
		LF	SF		
Exterior Sides of Building – on north and south sides of building (nine doors)	Gray exterior door caulking material	180		J1-18A	-
Exterior Sides of Building – on north and south sides of building (at 1'x1' windows)	Gray exterior window caulking material	1,600		J1-20A	-
1 st Floor – Men's and Women's Restroom - at perimeter of glass blown windows (total)	Gray interior window caulking sample	120		J1-01A/01B	-
1 st Floor – Main Open Warehouse area - at north and south side windows	Gray interior bracket joint caulking	600		J1-10A	At metal bracket joints of windows
1 Floor – Main Open Warehouse area - at north and south side windows	Gray interior window glazing material	4,800		J1-11A	-
1 st Floor – Main Open Warehouse area - throughout, inside electrical panels and conduit	Braided wire insulation	3,500		Assumed	Possible live electric
1 st Floor – Main Open Warehouse area - throughout inside electrical panels	Black/gray transite electrical backing board		15	Assumed	Possible live electric
1 st Floor – Main Open Warehouse area - roof of small wooden shed in middle of Warehouse	Black tar roofing material		300	J1-16B	-
1 st Floor – Main Open Warehouse area – on floor of small wooden shed in middle of Warehouse	9"x9" Dark green vinyl floor tile and mastic material		280	J1-08A	-
1 st Floor – NE Corner Enclosed Area - on piping throughout enclosed area	Gray aircell pipe insulation	60		Assumed	Some insulation floor debris
1 st Floor – NE Corner Enclosed Area - inside electrical panels in area	Braided wire insulation	500		Assumed	Possible live electric
1 st Floor – NE Corner Enclosed Area - inside electrical panels in area	Black/gray transite electrical board		20	Assumed	Possible live electric
1 st Floor – Sprinkler/Valve Room (Room 115A) - throughout	Solid white (4-6" o.d.) pipe insulation	65		Assumed	Homogenous (J1-03A)
1 st Floor – Sprinkler/Valve Room (Room 115A) - throughout	Braided wire insulation	700		Assumed	In electrical panels and conduit

Asbestos and Lead Contained Materials Report

South Brooklyn Marine Terminal

ACM Material Location	ACM Material Description	Estimated Quantity of ACM		Sample Nos.	Comments
		LF	SF		
1 st Floor – Sprinkler/Valve Room (Room 115A) - throughout	Solid white (14-16" o.d.) pipe insulation	40		Assumed	Homogenous (J1-03A)
1 st Floor – Janitor's Closet - throughout	Solid white (14-16" o.d.) pipe insulation	40		Assumed	Homogenous (J1-03A)
1 st Floor – Northside Office - throughout	Solid white (14-16" o.d.) pipe insulation	60		Assumed	Homogenous (J1-03A)
1 st Floor – Boiler Room - throughout	Solid white/gray pipe insulation/fittings	320		J1-14A	
1 st Floor – Boiler Room - throughout	Gray duct insulation		800	J1-13A	
1 st Floor – Hallway (outside Rm. 114) - throughout	Solid white/gray pipe insulation/fittings	350		J1-03A	Contaminated ACM floor debris
1 st Floor – Voltage Room - throughout	Solid white/gray pipe insulation/fittings	30			Homogenous (J1-03A)
	Black/gray transite electrical board		20		
1 st Floor – Bathroom - throughout	Solid white/gray pipe insulation/fittings	30			Homogenous (J1-03A)
1 st Floor – Storage Room (Rm. 111) - throughout	Solid white/gray pipe insulation/fittings	120			Homogenous (J1-03A)
1 st Floor – Rm. 112 - throughout	Solid white/gray pipe insulation	135			Homogenous (J1-03A)
1 st Floor – Pump Room - throughout	Solid white/gray pipe insulation	120			Homogenous (J1-03A)
1 st Floor – Room adjacent to Pump Room - throughout	Solid white/gray pipe insulation	70			Homogenous (J1-03A)
	Totals	13,470 LF	133,235 SF		

Cost Estimate for abatement and remediation are as follows:

ACM Material Location and Description	Quantity	Unit	Unit Price	Total
Decontamination Chamber	1	1	3,500.00	\$3,200.00
Exterior Roof Level – Dark gray built-up roofing material	167,000	SF	\$ 10.00	\$1,670,000.00
Exterior Roof Level - Black Roof Flashing material	1,800	SF	\$ 10.00	\$18,000.00
Exterior Sides of Building – Gray exterior door caulking material around doors on north and south sides of building (total nine doors)	180	LF	\$ 15.00	\$2,700.00
Exterior Sides of Building – Gray exterior window caulking material around 1'x1' windows on north and south sides of building	1,600	LF	\$ 15.00	\$24,000.00
1 st Floor – Men's and Women's Restrooms in Warehouse area - Gray interior window caulking around perimeter of glass blown windows of both rooms (total)	120	LF	\$ 15.00	\$1,800.00
1 st Floor – Main Open Warehouse area - Gray interior bracket joint caulking at north and south side windows	600	LF	\$ 15.00	\$9,000.00
1 st Floor – Main Open Warehouse area - Gray interior window glazing material at north and south side windows	4,800	LF	\$ 15.00	\$72,000.00
1 st Floor – Main Open Warehouse area - Braided wire insulation inside electrical panels and conduit throughout	3,500	LF	\$ 10.00	\$35,000.00
1 st Floor – Main Open Warehouse area - Black/gray electrical backing board inside electrical panels throughout	15	SF	\$ 50.00	\$750.00
1 st Floor – Main Open Warehouse area - Black tar roofing material on top of small shed in middle of	300	SF	\$ 20.00	\$6,000.00

ACM Material Location and Description	Quantity	Unit	Unit Price	Total
Warehouse				
1 st Floor – Main Open Warehouse area - 9"x9" Dark green vinyl floor tile and mastic on floor of small shed in middle of Warehouse	280	SF	\$ 20.00	\$5,600.00
1 st Floor – NE Corner Enclosed area - Gray aircell pipe insulation on piping throughout the area	60	LF	\$ 50.00	\$3,000.00
1 st Floor – NE Corner Enclosed area - Braided electrical wire insulation inside electrical panels throughout area	500	LF	\$ 10.00	\$5,000.00
1 st Floor – NE Corner Enclosed area - Black/gray transite electrical backing board material inside electrical panels throughout area	20	SF	\$ 50.00	\$1,000.00
1 st Floor – Sprinkler/Valve Room (Room 115A) - Solid white (4-6" o.d.) pipe insulation throughout room	65	LF	\$ 50.00	\$3,250.00
1 st Floor – Sprinkler/Valve Room (Room 115A) - Braided wire insulation inside electrical panels and conduit throughout room	700	LF	\$ 10.00	\$7,000.00
1 st Floor – Sprinkler/Valve Room (Room 115A) - Solid white (14-16" o.d.) pipe insulation throughout room	40	LF	\$ 50.00	\$2,000.00
1 st Floor – Janitor's Closet - Solid white (14-16" o.d.) pipe insulation throughout room	40	LF	\$ 50.00	\$2,000.00
1 st Floor – Northside Office - Solid white (14-16" o.d.) pipe insulation throughout room	60	LF	\$ 50.00	\$3,000.00
1 st Floor – Boiler Room - Solid white (various sizes) pipe and pipe fitting insulation throughout room	320	LF	\$ 50.00	\$16,000.00
1 st Floor – Boiler Room - Gray boiler and duct insulation throughout room	800	SF	\$ 50.00	\$40,000.00
1 st Floor – Hallway (outside Room 114) - Solid white/gray (various sizes) pipe and pipe fitting	350	LF	\$ 50.00	\$17,500.00

ACM Material Location and Description	Quantity	Unit	Unit Price	Total
insulation throughout hallway along ceiling				
1 st Floor – Voltage Room - Solid white/gray (various sizes) pipe and pipe fitting insulation throughout room	30	LF	\$ 50.00	\$1,500.00
1 st Floor – Voltage Room - Black/gray transite electrical backing board inside electrical panels throughout room	20	SF	\$ 50.00	\$1,000.00
1 st Floor – Bathroom - Solid white/gray (various sizes) pipe and pipe fitting insulation throughout room	30	LF	\$ 50.00	\$1,500.00
1 st Floor – Storage Room (Room 111)- Solid white/gray (various sizes) pipe and pipe fitting insulation throughout room	120	LF	\$ 50.00	\$6,000.00
1 st Floor – Room 112 - Solid white/gray (various sizes) pipe and pipe fitting insulation throughout room	135	LF	\$ 50.00	\$6,750.00
1 st Floor – Pump Room- Solid white/gray (various sizes) pipe and pipe fitting insulation throughout room	120	LF	\$ 50.00	\$6,000.00
1 st Floor – Room adjacent to Pump Room - Solid white/gray (various sizes) pipe and pipe fitting insulation throughout room	70	LF	\$ 50.00	\$1,500.00
ABATEMENT SUBTOTAL				\$1,972,050.00
Abatement Oversight				\$493,012.50
TOTAL				\$2,465,062.50

2.2 J-2 Shed Building

During the sampling, the suspect material was sprayed with amended water to minimize any airborne dust generated during the sampling. A utility knife/screwdriver or coring tool was then used to penetrate each suspect asbestos material to extract a bulk sample. The samples are then placed in sample bags, sealed and labeled with a sample number, material type description and location. The sampling instrument is then subsequently wiped with a clean moist cloth to decontaminate the tool and to reduce the possibility of a

potential release of asbestos fibers or contamination of subsequent samples. Data pertinent to each collected sample such as sample number, location, and material description are then recorded on a chain of custody sheet and sample location plan.

Samples and laboratory chain-of-custody submittal sheets were then delivered to EMSL Analytical, Inc. (EMSL); EMSL is approved by the National Voluntary Laboratory Accreditation Program (NVLAP) and New York State Department of Health's Environmental Laboratory Accreditation Program (NYS ELAP) for asbestos and lead analysis. The samples for asbestos analysis were analyzed using Polarized Light Microscopy (PLM) and/or Transmission Electron Microscopy (TEM) as necessary to determine asbestos content. Materials containing greater than one percent (>1%) asbestos are considered to be asbestos-containing materials (ACM).

Paint samples were also collected throughout the building and analyzed by Flame Atomic Absorption Spectroscopy (AAS) to determine lead content.

The following suspect materials sampled during the inspection were determined via laboratory analysis to be non-asbestos containing materials (non ACM):

- Black built-up roofing material;
- Gray transite/slate wall panel material

ACM identified at the site through laboratory analysis or those suspect materials that were presumed to be asbestos-containing material (ACM) and not sampled include the following:

ACM Material Location	ACM Material Description	Estimated Quantity of ACM		Sample Nos.	Comments
		LF	SF		
Exterior Roof – around perimeter of roof edge	Black roof flashing material		1,200	J2-01A (3/23/18)	Remove 12" away from roof edge
1 st Floor – Water Meter/Pump Room – inside main electrical panel	Gray braided wire insulation	100		Assumed	Possible live electric
1 st Floor – Water Meter/Pump Room – inside main electrical panel	Black electrical transite backing board		6	Assumed	Possible live electric
1 st Floor – Water Meter/Pump Room – inside red S2 electrical panel (480 volt)	Braided wire insulation	80		Assumed	Possible live electric
1 st Floor – Water Meter/Pump Room – inside electrical conduit throughout room	Braided wire insulation	1,000		Assumed	Possible live electric
	Totals	1,180 LF	1,206 SF		

Cost Estimate for abatement and remediation are as follows:

ACM Material Location and Description	Quantity	Unit	Unit Price	Total
Decontamination Chamber	1	1	\$3,200.00	\$3,200.00
Roof Level - Black Roof Flashing material around perimeter of roof	1,200	SF	\$ 15.00	\$18,000.00
1 st Floor – Water Meter/Pump Room – Gray braided wire insulation inside main electrical panel	100	LF	\$ 10.00	\$1,000.00
1 st Floor – Water Meter/Pump Room – Black transite electrical backing board inside main electrical panel	6	SF	\$ 50.00	\$300.00
1 st Floor – Water Meter/Pump Room – Gray braided wire insulation inside red S2 electrical panel (480 Volt)	80	LF	\$ 10.00	\$800.00
1 st Floor – Water Meter/Pump Room – Gray braided wire insulation inside electrical conduit throughout room	1,000	LF	\$ 10.00	\$10,000.00
ABATEMENT SUBTOTAL				\$33,300.00
Abatement Oversight				\$8,325.00
TOTAL				\$41,625.00

2.3 N-2 Shed Building

During the sampling, the suspect material was sprayed with amended water to minimize any airborne dust generated during the sampling. A utility knife/screwdriver or coring tool was then used to penetrate each suspect asbestos material to extract a bulk sample. The samples are then placed in sample bags, sealed and labeled with a sample number, material type description and location. The sampling instrument is then subsequently wiped with a clean moist cloth to decontaminate the tool and to reduce the possibility of a potential release of asbestos fibers or contamination of subsequent samples. Data pertinent to each collected sample such as sample number, location, and material description are then recorded on a chain of custody sheet and sample location plan.

Samples and laboratory chain-of-custody submittal sheets were then delivered to EMSL Analytical, Inc. (EMSL); EMSL is approved by the National Voluntary Laboratory Accreditation Program (NVLAP) and New York State Department of Health's Environmental Laboratory Accreditation Program (NYS ELAP) for asbestos and lead analysis. The samples for asbestos analysis were analyzed using Polarized Light Microscopy (PLM) and/or Transmission Electron Microscopy (TEM) as necessary to determine asbestos content. Materials containing greater than one percent (>1%) asbestos are considered to be asbestos-containing materials (ACM).

Paint samples were also collected throughout the building and analyzed by Flame Atomic Absorption

Spectroscopy (AAS) to determine lead content.

The following suspect materials sampled during the inspection were determined via laboratory analysis to be non-asbestos containing materials (non ACM):

- Sprinkler pipe gasket material;
- Gray exterior door caulking material;
- Black tar paper roofing material;
- Gray pipe fitting/elbow insulation;
- Gray interior window glazing material;
- Black/brown concrete joint filler material;
- White/tan sheetrock ceiling material

ACM identified at the site through laboratory analysis or those suspect materials that were presumed to be asbestos-containing material (ACM) and not sampled include the following:

ACM Material Location	ACM Material Description	Estimated Quantity of ACM		Sample Nos.	Comments
		LF	SF		
Exterior Roof – entire roof	Black built-up roofing material		128,400	N2-11B	
Exterior Roof – around perimeter of roof	Black roof flashing material		1,600	N2-12A	Remove 12" away from roof edge
Exterior Sides of Building – on north, south and west sides of building	Gray exterior transite material			N2-04A	
1 st Floor – Men's Restroom, behind sink/urinals	Tan layered paper pipe insulation	15		N2-02A	
1 st Floor – Men's Restroom, on floor	Gray transite board material		10		
1 st Floor – Men's Restroom, back of wall heaters in room	Gray wall heater backing board		6	Assumed	2 heaters (3SF each)
1 st Floor – Warehouse Open Area, on south side wall, inside electrical panel	Braided wire insulation	200		Assumed	Possible live electric; recommend sampling prior to work
1 st Floor – Warehouse Open Area, inside SE corner electrical panel	Black/gray transite electrical board		3	Assumed	Possible live electric
1 st Floor – Warehouse Open Area, interior window bracket caulking, between brackets of windows	Gray interior window bracket caulking	1,650		Assumed	Only on north, south and west sides of building
1 st Floor – Sprinkler Pump Room, inside Acme Fire Alarm panel	Black/gray transite electrical board		14	Assumed	
1 st Floor – Sprinkler Control Valve	Metal pipe gaskets		60	Assumed	Inaccessible for

ACM Material Location	ACM Material Description	Estimated Quantity of ACM		Sample Nos.	Comments
		LF	SF		
Room (north and south sides)					sampling
	Totals	1,865 LF	130,093 SF		

Cost Estimate for abatement and remediation are as follows:

ACM Material Location and Description	Quantity	Unit	Unit Price	Total
Decontamination Chamber	1	1	\$3,200.00	3,200.00
Roof Level - Black Built-Up Roofing and Roof Flashing material (entire roof)	102,000	SF	\$10.00	1020000
Exterior Sides of Building – Gray corrugated exterior transite wall panel material on north, south and west sides of building	16,000	SF	\$ 10.00	160,000.00
1 st Floor Men's Restroom – tan layered paper pipe insulation from behind sink/urinals in restroom	15	LF	\$ 50.00	750
1 st Floor Men's Restroom – gray transite board debris on floor of restroom	10	SF	\$ 10.00	100
1 st Floor Men's Restroom – gray wall heater backing board on walls of restroom (2 heaters, 3 SF each)	6	SF	\$ 50.00	300
1 st Floor Warehouse Open area – braided electrical wire insulation inside electrical panel on south side wall of Warehouse	200	LF	\$ 10.00	2,000.00
1 st Floor Warehouse Open area – Black/gray transite electrical backing board inside SE corner electrical panel of Warehouse	3	SF	\$ 50.00	150
1 st Floor Warehouse Open area – Gray interior window bracket caulking between brackets of windows in Warehouse	1,650	LF	\$ 15.00	24,750.00
1 st Floor Sprinkler Pump Room – Black/gray transite electrical backing board inside "Acme" fire alarm	14	SF	\$ 50.00	700

ACM Material Location and Description	Quantity	Unit	Unit Price	Total
panel				
1 st Floor Sprinkler Control Valve Room – Gray/tan metal pipe gasket material between joints of piping	60	SF	\$ 50.00	3,000.00
ABATEMENT SUBTOTAL				\$1,214,950.00
Abatement Oversight				\$303,737.50.00
TOTAL				\$1,518,687.50

2.4 Graffiti Building

During the sampling, the suspect material was sprayed with amended water to minimize any airborne dust generated during the sampling. A utility knife/screwdriver or coring tool was then used to penetrate each suspect asbestos material to extract a bulk sample. The samples are then placed in sample bags, sealed and labeled with a sample number, material type description and location. The sampling instrument is then subsequently wiped with a clean moist cloth to decontaminate the tool and to reduce the possibility of a potential release of asbestos fibers or contamination of subsequent samples. Data pertinent to each collected sample such as sample number, location, and material description are then recorded on a chain of custody sheet and sample location plan.

Samples and laboratory chain-of-custody submittal sheets were then delivered to EMSL Analytical, Inc. (EMSL); EMSL is approved by the National Voluntary Laboratory Accreditation Program (NVLAP) and New York State Department of Health's Environmental Laboratory Accreditation Program (NYS ELAP) for asbestos and lead analysis. The samples for asbestos analysis were analyzed using Polarized Light Microscopy (PLM) and/or Transmission Electron Microscopy (TEM) as necessary to determine asbestos content. Materials containing greater than one percent (>1%) asbestos are considered to be asbestos-containing materials (ACM).

Paint samples were also collected throughout the building and analyzed by Flame Atomic Absorption Spectroscopy (AAS) to determine lead content.

The following suspect materials sampled during the inspection were determined via laboratory analysis to be non-asbestos containing materials (non ACM):

- Black built-up roofing material;
- 2'x4' White/tan fissured lay-in ceiling tile;
- Gray interior window glazing material;
- Gray exterior door caulking material;
- Gray exterior window caulking material;
- Gray interior door caulking material;
- Gray pipe fitting insulation (on fiberglass insulated piping)

ACM identified at the site through laboratory analysis or those suspect materials that were presumed to be asbestos-containing material (ACM) and not sampled include the following:

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South Brooklyn Marine Terminal

ACM Material Location	ACM Material Description	Estimated Quantity of ACM		Sample Nos.	Comments
		LF	SF		
Exterior Roof – around perimeter of roof	Black roof flashing material		540	G-02A	Remove 12" away from roof edge
Exterior Roof – around perimeter of equipment on roof	Black equipment flashing material		150	G-03A	Remove 12" away from equipment
Exterior Roof – around ductwork on roof	Black asphalt duct insulation material		1,750	G-04A	
Exterior Foundation – around each side of building foundation	Gray exterior foundation plaster material		2,800	G-07A	
1 st Floor – Warehouse Area, inside east side old electrical panels	Braided wire insulation	500		Assumed	Possible live electric
1 st Floor – Warehouse Area, Smoke Detection Control board on wall outside Sprinkler Room	Black transite electrical backing board		6	Assumed	Possible live electric
	Totals	500 LF	5,246 SF		

Cost Estimate for abatement and remediation are as follows:

ACM Material Location and Description	Quantity	Unit	Unit Price	Total
Decontamination Chamber	1	1	\$3,200.00	\$3,200.00
Roof Level - Black Roof Flashing material	540	SF	\$15.00	\$8,100.00
Roof Level - Black Roof Equipment Flashing material	150	SF	\$15.00	\$2,250.00
Roof Level - Black asphalt duct insulation material	1,750	SF	\$15.00	\$26,250.00
1 st Floor – Gray exterior foundation wall paint/plaster material	2,800	SF	\$12.00	\$33,600.00
1 st Floor – Warehouse area, East side - Braided wire insulation inside east side old electrical panels and conduit	500	LF	\$10.00	\$5,000.00
1 st Floor – Warehouse area – Black transite electrical backing board inside Smoke Detection Control board outside Sprinkler Room	6	SF	\$50.00	\$300.00
ABATEMENT SUBTOTAL				\$78,700.00
Abatement Oversight				\$19,675.00
TOTAL				\$98,375.00

2.5 Tower Building

During the sampling, the suspect material was sprayed with amended water to minimize any airborne dust generated during the sampling. A utility knife/screwdriver or coring tool was then used to penetrate each suspect asbestos material to extract a bulk sample. The samples are then placed in sample bags, sealed and labeled with a sample number, material type description and location. The sampling instrument is then subsequently wiped with a clean moist cloth to decontaminate the tool and to reduce the possibility of a potential release of asbestos fibers or contamination of subsequent samples. Data pertinent to each collected sample such as sample number, location, and material description are then recorded on a chain of custody sheet and sample location plan.

Samples and laboratory chain-of-custody submittal sheets were then delivered to EMSL Analytical, Inc. (EMSL); EMSL is approved by the National Voluntary Laboratory Accreditation Program (NVLAP) and New York State Department of Health's Environmental Laboratory Accreditation Program (NYS ELAP) for asbestos and lead analysis. The samples for asbestos analysis were analyzed using Polarized Light Microscopy (PLM) and/or Transmission Electron Microscopy (TEM) as necessary to determine asbestos content. Materials containing greater than one percent (>1%) asbestos are considered to be asbestos-containing materials (ACM).

Paint samples were also collected throughout the building and analyzed by Flame Atomic Absorption Spectroscopy (AAS) to determine lead content.

The following suspect materials sampled during the inspection were determined via laboratory analysis to be non-asbestos containing materials (non ACM):

- Black built-up roofing material;
- 2'x4' White/tan fissured lay-in ceiling tile;
- Gray interior window glazing material;
- Gray exterior door caulking material;
- Gray exterior window caulking material;
- Gray interior door caulking material;
- Gray pipe fitting insulation (on fiberglass insulated piping)

ACM identified at the site through laboratory analysis or those suspect materials that were presumed to be asbestos-containing material (ACM) and not sampled include the following:

ACM Material Location	ACM Material Description	Estimated Quantity of ACM		Sample Nos.	Comments
		LF	SF		
Exterior Roof – around perimeter of roof	Black roof flashing material		540	G-02A	Remove 12" away from roof edge
Exterior Roof – around perimeter of equipment on roof	Black equipment flashing material		150	G-03A	Remove 12" away from equipment
Exterior Roof – around ductwork on roof	Black asphalt duct insulation material		1,750	G-04A	
Exterior Foundation – around	Gray exterior foundation plaster		2,800	G-07A	

ACM Material Location	ACM Material Description	Estimated Quantity of ACM		Sample Nos.	Comments
		LF	SF		
each side of building foundation	material				
1 st Floor – Warehouse Area, inside east side old electrical panels	Braided wire insulation	500		Assumed	Possible live electric
1 st Floor – Warehouse Area, Smoke Detection Control board on wall outside Sprinkler Room	Black transite electrical backing board		6	Assumed	Possible live electric
	Totals	500 LF	5,246 SF		

Cost Estimate for abatement and remediation are as follows:

ACM Material Location and Description	Quantity	Unit	Unit Price	Total
Decontamination Chamber	1	1	1	3,200.00
Exterior of Building – Gray exterior window caulking around window frames on all four sides of building	102,000	1,300	LF	\$ 15.00
4 th Floor Exterior Tower Roof Level – Black roof flashing material	16,000	120	SF	\$ 15.00
4 th Floor Tower Level – Black interior window caulking material	15	120	LF	\$ 15.00
2nd Floor Exterior Tower Main Roof Level – Black roof flashing material around perimeter of Main Roof	10	600	SF	\$ 15.00
2nd Floor Exterior Tower Main Roof Level – Black roof flashing material around perimeter of equipment on Main Roof	6	100	SF	\$ 15.00
2nd Floor Exterior Tower Main Roof Level – Black roof flashing material around perimeter of metal structural beams on Main Roof	200	60	SF	\$ 15.00
2 nd Floor Tower Level – White/gray exterior door caulking material around perimeter of access door to	3	20	LF	\$ 15.00

ACM Material Location and Description	Quantity	Unit	Unit Price	Total
2 nd Floor roof				
2nd Floor Stairwell Roof – Black/gray roofing material on top of stairwell	1,650	160	SF	\$ 15.00
2nd Floor IT Room – 12"x12" Beige w/ streaks vinyl floor tile and mastic on floor of IT Room	14	360	SF	\$ 20.00
1 st Floor Exterior Weight Booth Roof Level – Black roof flashing material		600	SF	\$ 15.00
1 st Floor Boiler Room (off Open Warehouse area) – White/gray boiler insulation material		620	SF	\$ 50.00
1 st Floor Boiler Room (off Open Warehouse area) – White/gray pipe/pipe fitting insulation material		100	LF	\$ 50.00
1 st Floor Fire Pump Room (inside Controller Panel) – Gray transite electrical backing board material		10	SF	\$ 50.00
1 st Floor Fire Pump Room (inside Controller Panel and electrical conduit in room) – Gray/brown electrical wire insulation		200	LF	\$ 10.00
1 st Floor Fire Pump Room – Gray pipe valve gasket material between joints of metal piping in room		100	SF	\$ 50.00
1 st Floor Fire Pump Room – Gray pipe fitting insulation on fiberglass insulated piping in room		2	LF	\$ 50.00
1 st Floor Warehouse/Garage Area – Gray pipe fitting insulation on fiberglass insulated piping in room	60	5	LF	\$ 200.00
ABATEMENT SUBTOTAL				\$01,200.00
Abatement Oversight				\$23,300.00
TOTAL				\$126,500.50

3. Conclusions and Recommendations

3.1 J-1 Shed Building

ACM has been identified in the areas outlined in the above table. It is recommended that a licensed New York State Department of Labor (NYSDOL) asbestos abatement contractor be retained to remove and dispose of the ACM materials prior to upcoming building renovation work scheduled for this project. Removal procedures will need to be conducted in accordance with Title 15 of New York City's Asbestos Control Program.

Lead has also been identified in painted surfaces throughout the building ranging from <0.010% to .68% lead content. Removal procedures will need to be conducted in accordance with the Occupational Safety and Health Administration's (OSHA) Lead in Construction Rule under 29 CFR 1926.62.

There were also observations of many light fixtures on each of the floors throughout the survey that may contain ballasts that contain Polychlorinated Biphenyls (PCBs) as well as mercury containing fluorescent bulbs; it is recommended that these fixtures be disposed of properly. In addition, there was also many lead containing batteries (total 35) observed near the main entrance (stacked adjacent to IT Room) that should also be disposed of properly in accordance with State and Federal law.

3.2 J-2 Shed Building

ACM has been identified in the areas outlined in the above table. It is recommended that a licensed New York State Department of Labor (NYSDOL) asbestos abatement contractor be retained to remove and dispose of the ACM materials prior to upcoming building renovation work scheduled for this project. Removal procedures will need to be conducted in accordance with Title 15 of New York City's Asbestos Control Program.

Lead has also been identified in painted surfaces throughout the building ranging from 0.11% to 2.2% lead content. Removal procedures will need to be conducted in accordance with the Occupational Safety and Health Administration's (OSHA) Lead in Construction Rule under 29 CFR 1926.62.

There were also observations of many light fixtures on each of the floors throughout the survey that may contain ballasts that contain Polychlorinated Biphenyls (PCBs) as well as mercury containing fluorescent bulbs; it is recommended that these fixtures be disposed of properly.

3.3 N-2 Shed Building

ACM has been identified in the areas outlined in the above table. It is recommended that a licensed New York State Department of Labor (NYSDOL) asbestos abatement contractor be retained to remove and dispose of the ACM materials prior to upcoming building renovation work scheduled for this project. Removal procedures will need to be conducted in accordance with Title 15 of New York City's Asbestos Control Program.

Lead has also been identified in painted surfaces throughout the building ranging from <0.010% to 2.0% lead content. Removal procedures will need to be conducted in accordance with the Occupational Safety and Health Administration's (OSHA) Lead in Construction Rule under 29 CFR 1926.62.

There were also observations of many light fixtures on each of the floors throughout the survey that may contain ballasts that contain Polychlorinated Biphenyls (PCBs) as well as mercury containing fluorescent bulbs; it is recommended that these fixtures be disposed of properly. There was also a transformer observed along the east wall of the Warehouse open area that may contain fluid that is PCB containing.

3.4 Graffiti Building

ACM has been identified in the areas outlined in the above table. It is recommended that a licensed New York State Department of Labor (NYSDOL) asbestos abatement contractor be retained to remove and dispose of the ACM materials prior to upcoming building renovation work scheduled for this project. Removal procedures will need to be conducted in accordance with Title 15 of New York City's Asbestos Control Program.

Lead has also been identified in painted surfaces throughout the building ranging from 0.015% to 2.2% lead content. Removal procedures will need to be conducted in accordance with the Occupational Safety and Health Administration's (OSHA) Lead in Construction Rule under 29 CFR 1926.62.

There were also observations of many light fixtures on each of the floors throughout the survey that may contain ballasts that contain Polychlorinated Biphenyls (PCBs) as well as mercury containing fluorescent bulbs; it is recommended that these fixtures be disposed of properly.

3.5 Tower Building

ACM has been identified in the areas outlined in the above table. It is recommended that a licensed New York State Department of Labor (NYSDOL) asbestos abatement contractor be retained to remove and dispose of the ACM materials prior to upcoming building renovation work scheduled for this project. Removal procedures will need to be conducted in accordance with Title 15 of New York City's Asbestos Control Program.

Lead has also been identified in painted surfaces throughout the building ranging from 0.015% to 2.2% lead content. Removal procedures will need to be conducted in accordance with the Occupational Safety and Health Administration's (OSHA) Lead in Construction Rule under 29 CFR 1926.62.

There were also observations of many light fixtures on each of the floors throughout the survey that may contain ballasts that contain Polychlorinated Biphenyls (PCBs) as well as mercury containing fluorescent bulbs; it is recommended that these fixtures be disposed of properly.

4. Assumptions and Limitations

The scope of work conducted by AECOM included a limited survey for asbestos-containing and lead containing materials in the areas noted above. In addition observations of other environmental hazards were also noted.

AECOM's conclusions and recommendations are based on the accessible conditions that existed within the areas surveyed at the time the investigation was conducted. Every reasonable effort was made by the inspection team to access the suspect materials observed without jeopardizing the health and safety of the team and without damaging building materials in occupied areas. No exploratory demolition of walls, ceilings, column enclosures, etc. was conducted during the survey work; ACM may still exist in these voids/inaccessible areas.

Appendix M Construction Equipment Activity Resource Inputs for Air and Noise Modeling

Construction Equipment Activity Inputs Used for
Air Emissions and Impact Modeling

Dredging	10	CAT 385C Crawler Large Exca	137.86	530	-	-	-	-	-	-	138	-	-	-	-	-	-	-	0	138	0	0	
		CAT 950G Wheel Loader 4CY	346.0625	180	-	-	-	-	-	-	-	347	-	-	-	-	-	-	-	0	347	0	0
		CAT 980K Wheel Loader 7 CY	138.425	367.44	-	-	-	-	-	-	-	139	-	-	-	-	-	-	-	0	139	0	0
		CAT D6M XL Dozer	415.275	153	-	-	-	-	-	-	-	416	-	-	-	-	-	-	-	0	416	0	0
		Clamshell 10CY Rehandling	275.72	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	0	0	0
		Elec Chain Hoist 10T 25spd	137.86	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	0	0	0
		Flat Deck Barge - 3102 Ton	137.86	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	0	0	0
		Generator 50 kW Enclosed	138.425	68	-	-	-	-	-	-	-	139	-	-	-	-	-	-	-	0	139	0	0
		On-Hwy Dump - 18 CY Triax	1937.95	310	-	-	-	-	-	-	-	1938	-	-	-	-	-	-	-	0	1938	0	0
		Pressure Washer 3,000 psi	137.86	11	-	-	-	-	-	-	-	138	-	-	-	-	-	-	-	0	138	0	0
Pump 3 in Subm 6HP	138.425	6	-	-	-	-	-	-	-	139	-	-	-	-	-	-	-	0	139	0	0		
PUSH BOAT 21-FT 435HP	275.72	150	-	-	-	-	-	-	-	276	-	-	-	-	-	-	-	0	276	0	0		
SCOW 8,000 CY	551.44	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	0	0	0		
Suct & Disch 3" Hose 25 ft	2214.8	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	0	0	0		
VOLVO A25F 6x6 Articulated 15-19CY	138.425	315	-	-	-	-	-	-	-	139	-	-	-	-	-	-	-	0	139	0	0		
Welding Machine 400 Amp	137.86	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	0	0	0		
Clamshell 10CY Rehandling	467.1753	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	0	0	0		
CAT 330F Crawler Medium Exc	199.7547	239	-	-	-	-	-	-	-	200	-	-	-	-	-	-	-	0	200	0	0		
CAT 385C Crawler Large Exca	233.5947	530	-	-	-	-	-	-	-	234	-	-	-	-	-	-	-	0	234	0	0		
Generator 50 kW Enclosed	199.7547	68	-	-	-	-	-	-	-	200	-	-	-	-	-	-	-	0	200	0	0		
Flat Deck Barge - 3102 Ton	233.5947	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	0	0	0		
SCOW 8,000 CY	934.3647	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	0	0	0		
PUSH BOAT 21-FT 435HP	467.1753	150	-	-	-	-	-	-	-	468	-	-	-	-	-	-	-	0	468	0	0		
BAKER TANK 21K GAL	399.4953	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	0	0	0		
Suct & Disch 3" Hose 25 ft	3196.0047	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	0	0	0		
Pump 3 in Subm 6HP	199.7547	6	-	-	-	-	-	-	-	200	-	-	-	-	-	-	-	0	200	0	0		
Burning Outfit	233.5947	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	0	0	0		
Elec Chain Hoist 10T 25spd	233.5947	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	0	0	0		
Pressure Washer 3,000 psi	233.5947	11	-	-	-	-	-	-	-	234	-	-	-	-	-	-	-	0	234	0	0		
Welding Machine 400 Amp	233.5947	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	0	0	0		
VOLVO A25F 6x6 Articulated 15-19CY	199.7547	315	-	-	-	-	-	-	-	200	-	-	-	-	-	-	-	0	200	0	0		
On-Hwy Dump - 18 CY Triax	2796.4953	310	-	-	-	-	-	-	-	2797	-	-	-	-	-	-	-	0	2797	0	0		
Air Compressor 375 cfm	523.9197	117	-	-	-	-	-	-	-	524	-	-	-	-	-	-	-	0	524	218	0		
CAT D6M XL Dozer	599.25	153	-	-	-	-	-	-	-	600	-	-	-	-	-	-	-	0	600	0	0		
CAT 950G Wheel Loader 4CY	499.3797	180	-	-	-	-	-	-	-	500	-	-	-	-	-	-	-	0	500	0	0		
CAT 980K Wheel Loader 7 CY	199.7547	367.44	-	-	-	-	-	-	-	200	-	-	-	-	-	-	-	0	200	0	0		
Air Compressor 375 cfm	681.42	117	-	-	-	-	-	-	-	682	-	-	-	-	-	-	-	0	0	682	0		
BAKER TANK 21K GAL	434.9599	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	0	0	0		
Burning Outfit	355.47	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	0	0	0		
CAT 330F Crawler Medium Exc	217.3041	239	-	-	-	-	-	-	-	218	-	-	-	-	-	-	-	0	0	218	0		
CAT 385C Crawler Large Exca	355.47	530	-	-	-	-	-	-	-	356	-	-	-	-	-	-	-	0	0	356	0		
CAT 950G Wheel Loader 4CY	543.2541	180	-	-	-	-	-	-	-	544	-	-	-	-	-	-	-	0	0	544	0		
CAT 980K Wheel Loader 7 CY	217.3041	367.44	-	-	-	-	-	-	-	218	-	-	-	-	-	-	-	0	0	218	0		
CAT D6M XL Dozer	651.9	153	-	-	-	-	-	-	-	652	-	-	-	-	-	-	-	0	0	652	0		
Clamshell 10CY Rehandling	710.94	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	0	0	0		
Elec Chain Hoist 10T 25spd	355.47	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	0	0	0		
Flat Deck Barge - 3102 Ton	355.47	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	0	0	0		
Generator 50 kW Enclosed	217.3041	68	-	-	-	-	-	-	-	218	-	-	-	-	-	-	-	0	0	218	0		
On-Hwy Dump - 18 CY Triax	3042.1959	310	-	-	-	-	-	-	-	3043	-	-	-	-	-	-	-	0	0	3043	0		
Pressure Washer 3,000 psi	355.47	11	-	-	-	-	-	-	-	356	-	-	-	-	-	-	-	0	0	356	0		
Pump 3 in Subm 6HP	217.3041	6	-	-	-	-	-	-	-	218	-	-	-	-	-	-	-	0	0	218	0		
PUSH BOAT 21-FT 435HP	710.94	150	-	-	-	-	-	-	-	711	-	-	-	-	-	-	-	0	0	711	0		
SCOW 8,000 CY	1421.88	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	0	0	0		
Suct & Disch 3" Hose 25 ft	3476.8041	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	0	0	0		
VOLVO A25F 6x6 Articulated 15-19CY	217.3041	315	-	-	-	-	-	-	-	218	-	-	-	-	-	-	-	0	0	218	0		
Welding Machine 400 Amp	355.47	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	0	0	0		
Air Compressor 375 cfm	1246.5	117	-	-	-	-	-	-	-	1247	-	-	-	-	-	-	-	0	0	1247	0		
BAKER TANK 21K GAL	799.9925	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	0	0	0		
Burning Outfit	650.25	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	0	0	0		
CAT 330F Crawler Medium Exc	397.5075	239	-	-	-	-	-	-	-	398	-	-	-	-	-	-	-	0	0	398	0		
CAT 385C Crawler Large Exca	650.25	530	-	-	-	-	-	-	-	651	-	-	-	-	-	-	-	0	0	651	0		
CAT 950G Wheel Loader 4CY	993.7575	180	-	-	-	-	-	-	-	994	-	-	-	-	-	-	-	0	0	994	0		
CAT 980K Wheel Loader 7 CY	397.5075	367.44	-	-	-	-	-	-	-	398	-	-	-	-	-	-	-	0	0	398	0		
CAT D6M XL Dozer	1192.5	153	-	-	-	-	-	-	-	1193	-	-	-	-	-	-	-	0	0	1193	0		
Clamshell 10CY Rehandling	1300.5	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	0	0	0		
Elec Chain Hoist 10T 25spd	650.25	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	0	0	0		
Flat Deck Barge - 3102 Ton	650.25	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	0	0	0		
Generator 50 kW Enclosed	397.5075	68	-	-	-	-	-	-	-	398	-	-	-	-	-	-	-	0	0	398	0		
On-Hwy Dump - 18 CY Triax	5564.9925	310	-	-	-	-	-	-	-	5565	-	-	-	-	-	-	-	0	0	5565	0		
Pressure Washer 3,000 psi	650.25	11	-	-	-	-	-	-	-	651	-	-	-	-	-	-	-	0	0	651	0		
Pump 3 in Subm 6HP	397.5075	6	-	-	-	-	-	-	-	398	-	-	-	-	-	-	-	0	0	398	0		
PUSH BOAT 21-FT 435HP	1300.5	150	-	-	-	-	-	-	-	1301	-	-	-	-	-	-	-	0	0	1301	0		
SCOW 8,000 CY	2601	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	0	0	0		
Suct & Disch 3" Hose 25 ft	6360.0075	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	0	0	0		
VOLVO A25F 6x6 Articulated 15-19CY	397.507																						

		GroveRT 700B 36.3MT RT Crane	103.56	177.1	-	-	41	57	23	-	-	-	-	-	-	-	-	-	-	0	121	0	0	
		GroveRT 750E 50MT RT Crane	83.45	200	-	-	33	46	19	-	-	-	-	-	-	-	-	-	-	-	0	98	0	0
		I.C.E. 1412B Vibratory Hamme	48.23	350	-	-	19	27	11	-	-	-	-	-	-	-	-	-	-	-	0	51	0	0
		I.C.E. 44-30 Vibratory Hammer	79.56	325	-	-	31	44	18	-	-	-	-	-	-	-	-	-	-	-	0	93	0	0
		I.L.G 400S MANLIFT	32.77	82	-	-	13	18	8	-	-	-	-	-	-	-	-	-	-	-	0	39	0	0
		Manitowoc 999 250 MT	48.22	400	-	-	19	27	11	-	-	-	-	-	-	-	-	-	-	-	0	57	0	0
		On-Hwy PU 4x4 - 1.25T Crew	181.5	300	-	-	71	99	41	-	-	-	-	-	-	-	-	-	-	-	0	211	0	0
		OSR SLURRY MIXER 5CYD W/SILO	181.5	27	-	-	71	99	41	-	-	-	-	-	-	-	-	-	-	-	0	211	0	0
		OSR SLURRY TANK (10MG-15MG)	181.5	0	-	-	0	0	0	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0
		OSR TECHNIWELL PUMP	181.5	36	-	-	71	99	41	-	-	-	-	-	-	-	-	-	-	-	0	211	0	0
		Pump 3 in Centr 20k gph	142.7	5	-	-	56	78	32	-	-	-	-	-	-	-	-	-	-	-	0	166	0	0
		Schwing2525 on Trk (181 y/hr	29.52	432	-	-	12	17	7	-	-	-	-	-	-	-	-	-	-	-	0	36	0	0
		Suct & Disch 3" Hose 25 ft	856.23	0	-	-	0	0	0	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0
		SWEEPER ATTACH	8	0	-	-	0	0	0	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0
		TT 50K w/21CY Dump Trailer	96	8	-	-	38	53	22	-	-	-	-	-	-	-	-	-	-	-	0	113	0	0
		WALK-BEHIND FLOOR TROWEL36"	48	5.5	-	-	19	27	11	-	-	-	-	-	-	-	-	-	-	-	0	57	0	0
		Welding Machine 400 Amp	88.69	0	-	-	0	0	0	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0
		Air Compressor 185 cfm	0.9	49	-	-	1	1	1	-	-	-	-	-	-	-	-	-	-	-	0	3	0	0
		BOBCAT S130 Skid Steer	4.64	49	-	-	2	2	2	-	-	-	-	-	-	-	-	-	-	-	0	6	0	0
		Burning Outfit	234.21	0	-	-	0	0	0	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0
		CASAGRANDE B250 CRAWLER MP RIG	33	451	-	-	9	13	12	-	-	-	-	-	-	-	-	-	-	-	0	34	0	0
		CAT 320 Crawler Medium Exc	16.76	164	-	-	5	7	6	-	-	-	-	-	-	-	-	-	-	-	0	18	0	0
		CAT 330F Crawler Medium Exc	4.64	239	-	-	2	2	2	-	-	-	-	-	-	-	-	-	-	-	0	6	0	0
		CAT 430E 4WD Backhoe	27.23	111	-	-	8	11	10	-	-	-	-	-	-	-	-	-	-	-	0	29	0	0
		CAT 950G Wheel Loader 4CY	16.8	180	-	-	5	7	6	-	-	-	-	-	-	-	-	-	-	-	0	18	0	0
		CAT 980K Wheel Loader 7 CY	3.2	367.44	-	-	1	2	2	-	-	-	-	-	-	-	-	-	-	-	0	5	0	0
		CAT D3K LGP Dozer	4.64	81	-	-	2	2	2	-	-	-	-	-	-	-	-	-	-	-	0	6	0	0
		CAT H120CS Hydr Impact 3000 FTLB	1.6	0	-	-	0	0	0	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0
		Concrete Saw to 6"(wo Blade)	9.75	11	-	-	3	4	4	-	-	-	-	-	-	-	-	-	-	-	0	11	0	0
		Concrete Work Tools	193.14	0	-	-	0	0	0	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0
		Delmag D80-23 212K FT-LB	124.4	55	-	-	33	49	44	-	-	-	-	-	-	-	-	-	-	-	0	126	0	0
		Flat Deck Barge - 1074 Ton	319.61	0	-	-	0	0	0	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0
		Flatbed Truck - 15 Ton	33	0	-	-	0	0	0	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0
		FLEX SHAFT CONC VIBRSHIP	43	0	-	-	0	0	0	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0
		Flexfloat - 5' x 10' x 40'	98.77	0	-	-	0	0	0	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0
		Generator 5000 w	54.6	7.5	-	-	15	22	20	-	-	-	-	-	-	-	-	-	-	-	0	57	0	0
		Genie GTH-842 ToleLift 8000P	46.55	99	-	-	13	19	17	-	-	-	-	-	-	-	-	-	-	-	0	49	0	0
		GroveRT 700B 36.3MT RT Crane	46.61	177.1	-	-	8	12	11	-	-	-	-	-	-	-	-	-	-	-	0	57	0	0
		GroveRT 750E 50MT RT Crane	58.44	200	-	-	16	23	21	-	-	-	-	-	-	-	-	-	-	-	0	60	0	0
		Hydraulic Jack 50 Ton	6	0	-	-	0	0	0	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0
		I.C.E. 1412B Vibratory Hamme	179.12	550	-	-	47	70	63	-	-	-	-	-	-	-	-	-	-	-	0	180	0	0
		I.L.G 400S MANLIFT	87.26	82	-	-	23	34	31	-	-	-	-	-	-	-	-	-	-	-	0	88	0	0
		Manitowoc 555 136 MT	28.95	340	-	-	8	12	11	-	-	-	-	-	-	-	-	-	-	-	0	21	0	0
		Manitowoc 999 250 MT	124.4	400	-	-	33	49	44	-	-	-	-	-	-	-	-	-	-	-	0	126	0	0
		On-Hwy PU 4x4 - 1.25T Crew	33	300	-	-	9	13	12	-	-	-	-	-	-	-	-	-	-	-	0	34	0	0
		OSR SLURRY MIXER 5CYD W/SILO	33	27	-	-	9	13	12	-	-	-	-	-	-	-	-	-	-	-	0	34	0	0
		OSR SLURRY TANK (10MG-15MG)	33	0	-	-	0	0	0	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0
		OSR TECHNIWELL PUMP	33	36	-	-	9	13	12	-	-	-	-	-	-	-	-	-	-	-	0	24	0	0
		Pump 3 in Centr 20k gph	25.95	5	-	-	7	11	10	-	-	-	-	-	-	-	-	-	-	-	0	28	0	0
		Schwing2525 on Trk (181 y/hr	18.33	432	-	-	5	8	7	-	-	-	-	-	-	-	-	-	-	-	0	20	0	0
		Suct & Disch 3" Hose 25 ft	155.68	0	-	-	0	0	0	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0
		SWEEPER ATTACH	1.28	0	-	-	0	0	0	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0
		TT 50K w/21CY Dump Trailer	98	8	-	-	5	8	7	-	-	-	-	-	-	-	-	-	-	-	0	20	0	0
		WALK-BEHIND FLOOR TROWEL36"	8	5.5	-	-	3	4	3	-	-	-	-	-	-	-	-	-	-	-	0	10	0	0
		Welding Machine 400 Amp	210.43	0	-	-	0	0	0	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0
		Air Compressor 185 cfm	122.935	49	-	-	29	29	29	-	-	-	-	-	-	-	-	-	-	-	0	58	66	0
		Bomag 65S-2 WalkBnd Roller 26	52.949385	0	-	-	13	13	13	-	-	-	-	-	-	-	-	-	-	-	0	26	30	0
		Burning Outfit	1740.9279	0	-	-	0	0	0	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0
		CAT 320 Crawler Medium Exc	8.95822	164	-	-	3	3	3	-	-	-	-	-	-	-	-	-	-	-	0	6	7	0
		CAT 330F Crawler Medium Exc	104.82614	239	-	-	25	25	25	-	-	-	-	-	-	-	-	-	-	-	0	50	57	0
		CAT 345D Crawler Large Exca	104.82614	380	-	-	25	25	25	-	-	-	-	-	-	-	-	-	-	-	0	50	57	0
		CAT 434D Tandem Roller 59"	53.00385	83	-	-	13	13	13	-	-	-	-	-	-	-	-	-	-	-	0	26	30	0
		CAT 950G Wheel Loader 4CY	153.74385	180	-	-	9	13	12	-	-	-	-	-	-	-	-	-	-	-	0	24	82	0
		CAT 963D LGP Track Loader	104.82614	110	-	-	25	25	25	-	-	-	-	-	-	-	-	-	-	-	0	50	57	0
		CAT D3K LGP Dozer	87.21385	81	-	-	21	21	21	-	-	-	-	-	-	-	-	-	-	-	0	42	48	0
		CAT D4G XL Dozer	23.14385	87	-	-	6	6	6	-	-	-	-	-	-	-	-	-	-	-	0	12	14	0
		Concrete Saw to 11"(wo Blade)	431.876	11	-	-	101	101	101	-	-	-	-	-	-	-	-	-	-	-	0	202	231	0
		Concrete Work Tools	502.46	0	-	-	0	0	0	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0
		Delmag D100-13 265K FT-LB	555.88	55	-	-	130	130	130	-	-	-	-	-	-	-	-	-	-	-	0	260	297	0
		Delmag D80-23 212K FT-LB	891	55	-	-	209	209	209	-	-	-	-	-	-	-	-	-	-	-	0	418	476	0
		Flat Deck Barge - 1074 Ton	1066.5918	0	-	-	0	0	0	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0
		Flexfloat - 5' x 10' x 40'	304.67	0	-	-	0	0	0	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0
		Genie GTH-842 ToleLift 8000P	78.625	99	-	-	13	19	17	-	-	-	-	-	-	-	-	-	-	-	0	49	0	0
		GroveRT 700B 36.3MT RT Crane	986	177.1	-	-	67	67	67	-	-	-	-	-	-	-	-	-	-	-	0	134	153	0
		GroveRT 750E 50MT RT Crane	340.1608	200	-	-	80	80	80	-	-	-	-	-	-	-	-	-	-	-	0	160	183	0
		Hilti Tools, Misc.	245.87	0	-	-	0	0	0	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0
		Hydraulic Jack 50 Ton	164	0	-	-	0	0	0	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0
		I.C.E. 1412B Vibratory Hamme	257.965	550	-	-	129	129	129	-	-	-	-	-	-	-	-	-	-	-	0	258	0	0
		I.L.G 400S MANLIFT	245.87	82	-	-	58	58	58	-	-	-	-	-	-	-	-	-	-	-	0	116	132	0
		Man																						

14	CAT 950G Wheel Loader 4CY	987	180	-	-	-	-	226	254	254	254	-	-	-	-	0	226	762	0
	CAT 953C LGP Track Loader	577	110	-	-	-	-	132	149	149	149	-	-	-	-	0	132	447	0
	CAT C850 CRUSHER	14,671	0	-	-	-	-	0	0	0	0	-	-	-	-	0	0	0	0
	CAT D4G XL Dozer	577	87	-	-	-	-	132	149	149	149	-	-	-	-	0	132	447	0
	CAT D6M XL Dozer	577	153	-	-	-	-	132	149	149	149	-	-	-	-	0	132	447	0
	CAT H90C3 Hydr Impact 1000FTLB	14,95	0	-	-	-	-	0	0	0	0	-	-	-	-	0	0	0	0
	CAT M318F WHEEL LMTD EXCAV	132	171	-	-	-	-	31	34	34	34	-	-	-	-	0	31	102	0
	Concrete Saw to 11"(wo Blade)	33	11	-	-	-	-	8	9	9	9	-	-	-	-	0	8	27	0
	Concrete Work Tools	254	0	-	-	-	-	0	0	0	0	-	-	-	-	0	0	0	0
	Daily Opertd Rent-Grove130MT	52	300	-	-	-	-	12	14	14	14	-	-	-	-	0	12	42	0
	Flat Deck Barge - 1074 Ton	261.73	0	-	-	-	-	0	0	0	0	-	-	-	-	0	0	0	0
	Harbored Tractor/Trailer-38T	6	300	-	-	-	-	2	2	2	2	-	-	-	-	0	2	6	0
	Generator 100 kW Enclosed	7,959	169	-	-	-	-	174	196	196	196	-	-	-	-	0	174	588	0
	Generator 5000 w	291	7.5	-	-	-	-	58	65	65	65	-	-	-	-	0	58	195	0
	Genie G1H-842 Teletilt 8000#	18	99	-	-	-	-	5	5	5	5	-	-	-	-	0	5	15	0
	GroveRT700B 36.3MT RT Crane	6	177.1	-	-	-	-	2	2	2	2	-	-	-	-	0	2	6	0
	GroveRT1890E 81.6MT RT Crane	189	275	-	-	-	-	44	49	49	49	-	-	-	-	0	44	147	0
	Hillit Tools Misc	238	0	-	-	-	-	0	0	0	0	-	-	-	-	0	0	0	0
	I.C.E. 44-30 Vibratory Hammer	189	325	-	-	-	-	44	49	49	49	-	-	-	-	0	44	147	0
	ID 710L 4WD (2011) Backhoe	154	148	-	-	-	-	36	40	40	40	-	-	-	-	0	36	120	0
	Light Plant 30' 4 Lts	12	11.7	-	-	-	-	3	4	4	4	-	-	-	-	0	3	12	0
	LITE SHORING BOX	479.46	0	-	-	-	-	0	0	0	0	-	-	-	-	0	0	0	0
	Manitowoc 555 136 MT	279	340	-	-	-	-	64	72	72	72	-	-	-	-	0	64	216	0
	MED SHORING BOX	594.07	0	-	-	-	-	0	0	0	0	-	-	-	-	0	0	0	0
	Mobe Crane for Daily Rental	1.5	0	-	-	-	-	0	0	0	0	-	-	-	-	0	0	0	0
	On-Hwy Dump - 16 CY dbl ax	194	300	-	-	-	-	45	50	50	50	-	-	-	-	0	45	150	0
	Plate Compactor 25 in 11HP	1639	4.8	-	-	-	-	375	422	422	422	-	-	-	-	0	375	1266	0
	Portable Mixer 110G	254	0	-	-	-	-	0	0	0	0	-	-	-	-	0	0	0	0
	Pump 4 in Centr 40k gph	6	10	-	-	-	-	2	2	2	2	-	-	-	-	0	2	6	0
	PUSH BOAT 21-FT 435HP	279	150	-	-	-	-	64	72	72	72	-	-	-	-	0	64	216	0
	Putzmeister TK30 (31cy/hr) T	68	40	-	-	-	-	16	18	18	18	-	-	-	-	0	16	54	0
	Pvmt Breaker 35-45 lbs	14,95	0	-	-	-	-	0	0	0	0	-	-	-	-	0	0	0	0
	Pvmt Breaker 60-85 lbs	14,95	0	-	-	-	-	0	0	0	0	-	-	-	-	0	0	0	0
	Suct & Disch 3" Hose 25 ft	12	0	-	-	-	-	0	0	0	0	-	-	-	-	0	0	0	0
	Welding Machine 400 Amp	480.11	0	-	-	-	-	0	0	0	0	-	-	-	-	0	0	0	0
	Bomag 655-2 WalkBhdn Roller 26	91.7	5.9	-	-	-	-	14	40	40	40	-	-	-	-	0	14	80	0
	Burning Outfit	1899.95	0	-	-	-	-	0	0	0	0	-	-	-	-	0	0	0	0
	CAT 320 Crawler Medium Exc	16.35	164	-	-	-	-	3	8	8	8	-	-	-	-	0	3	16	0
	CAT 330F Crawler Medium Exc	141.3	239	-	-	-	-	21	61	61	61	-	-	-	-	0	21	122	0
	CAT 345D Crawler Large Exca	141.3	380	-	-	-	-	21	61	61	61	-	-	-	-	0	21	122	0
	CAT 434D Tandem Roller 59"	91.7	83	-	-	-	-	14	40	40	40	-	-	-	-	0	14	80	0
	CAT 950G Wheel Loader 4CY	292.6	180	-	-	-	-	42	126	126	126	-	-	-	-	0	42	252	0
	CAT 963D LGP Track Loader	141.3	110	-	-	-	-	21	61	61	61	-	-	-	-	0	21	122	0
	CAT D3K LGP Dozer	146.6	81	-	-	-	-	21	63	63	63	-	-	-	-	0	21	126	0
	CAT D4G XL Dozer	37.2	87	-	-	-	-	6	16	16	16	-	-	-	-	0	6	32	0
Concrete Saw to 11"(wo Blade)	673.4	11	-	-	-	-	97	289	289	289	-	-	-	-	0	97	578	0	
Concrete Work Tools	400	0	-	-	-	-	0	0	0	0	-	-	-	-	0	0	0	0	
Delmag D100-13 265K FT-LB	700	55	-	-	-	-	100	300	300	300	-	-	-	-	0	100	600	0	
Delmag D80-23 212K FT-LB	489.95	55	-	-	-	-	70	210	210	210	-	-	-	-	0	70	420	0	
Flat Deck Barge - 1074 Ton	734.95	0	-	-	-	-	0	0	0	0	-	-	-	-	0	0	0	0	
GroveRT700B 36.3MT RT Crane	100	177.1	-	-	-	-	15	43	43	43	-	-	-	-	0	15	86	0	
GroveRT750E 50MT RT Crane	486.35	200	-	-	-	-	70	209	209	209	-	-	-	-	0	70	418	0	
Manitowoc 777 181.4 MT	1189.95	340	-	-	-	-	170	510	510	510	-	-	-	-	0	170	1020	0	
Plate Compactor 25 in 11HP	54.5	4.8	-	-	-	-	8	24	24	24	-	-	-	-	0	8	48	0	
Schwing2525 on Trk (181 y/hr	300	432	-	-	-	-	43	129	129	129	-	-	-	-	0	43	258	0	
WALK BEHIND FLOOR TROWEL36"	400	5.5	-	-	-	-	58	172	172	172	-	-	-	-	0	58	344	0	
Welding Machine 400 Amp	1189.95	0	-	-	-	-	0	0	0	0	-	-	-	-	0	0	0	0	
Bomag 655-2 WalkBhdn Roller 26	46,089.75	5.9	-	-	-	-	9	9	9	9	-	-	-	-	0	9	36	18	
Burning Outfit	626,344.79	0	-	-	-	-	0	0	0	0	-	-	-	-	0	0	0	0	
CAT 320 Crawler Medium Exc	6,195.34	164	-	-	-	-	1.5	1.5	1.5	1.5	-	-	-	-	0	4.5	6	3	
CAT 330F Crawler Medium Exc	72,495.758	239	-	-	-	-	13.5	13.5	13.5	13.5	-	-	-	-	0	40.5	54	27	
CAT 345D Crawler Large Exca	72,495.758	380	-	-	-	-	13.5	13.5	13.5	13.5	-	-	-	-	0	40.5	54	27	
CAT 434D Tandem Roller 59"	46,089.75	83	-	-	-	-	9	9	9	9	-	-	-	-	0	27	36	18	
CAT 950G Wheel Loader 4CY	131,798.75	180	-	-	-	-	22.5	22.5	22.5	22.5	-	-	-	-	0	67.5	90	45	
CAT 963D LGP Track Loader	72,495.758	110	-	-	-	-	13.5	13.5	13.5	13.5	-	-	-	-	0	40.5	54	27	
CAT D3K LGP Dozer	83,688.75	81	-	-	-	-	15	15	15	15	-	-	-	-	0	45	60	30	
CAT D4G XL Dozer	25,438.75	87	-	-	-	-	4.5	4.5	4.5	4.5	-	-	-	-	0	13.5	18	9	
Concrete Saw to 11"(wo Blade)	367,236	11	-	-	-	-	61.5	61.5	61.5	61.5	-	-	-	-	0	184.5	246	123	
Concrete Work Tools	218.16	0	-	-	-	-	0	0	0	0	-	-	-	-	0	0	0	0	
Delmag D100-13 265K FT-LB	199.992	55	-	-	-	-	34.5	34.5	34.5	34.5	-	-	-	-	0	103.5	138	69	
Delmag D80-23 212K FT-LB	226,344.79	55	-	-	-	-	39	39	39	39	-	-	-	-	0	117	156	78	
Flat Deck Barge - 1074 Ton	339,517.19	0	-	-	-	-	0	0	0	0	-	-	-	-	0	0	0	0	
GroveRT700B 36.3MT RT Crane	54.54	177.1	-	-	-	-	10.5	10.5	10.5	10.5	-	-	-	-	0	31.5	42	21	
GroveRT750E 50MT RT Crane	289,248.8	200	-	-	-	-	49.5	49.5	49.5	49.5	-	-	-	-	0	148.5	198	99	
Manitowoc 777 181.4 MT	426,344.79	340	-	-	-	-	72	72	72	72	-	-	-	-	0	216	288	144	
Plate Compactor 25 in 11HP	20,648.649	4.8	-	-	-	-	4.5	4.5	4.5	4.5	-	-	-	-	0	13.5	18	9	
Schwing2525 on Trk (181 y/hr	163.62	432	-	-	-	-	28.5	28.5	28.5	28.5	-	-	-	-	0	85.5	114	57	
WALK BEHIND FLOOR TROWEL36"	218.16	5.5	-	-	-	-	37.5	37.5	37.5	37.5	-	-	-	-	0	112.5	150	75	
Welding Machine 400 Amp	426,344.79	0	-	-	-	-	0	0	0	0	-	-	-	-	0	0	0	0	

Added buffer of 50% more hours for OMF activity

O&M Facility Construction

OMF

FUGITIVES

	W Average Weight (tons)	k PM10 (lb/VMT)	k PM2.5 (lb/VMT)	sL Short Term (g/m ²)	sL Annual (g/m ²)	Control Efficiency (%)	Short Term		Annual	Max Number of Truck Trips per Day	VMT per Truck Trip	VMT per Day	VMT per Year	Short Term		Annual	Number of Volume Srcs	Short Term		Annual
							E PM ₁₀ (lb/VMT)	E PM _{2.5} (lb/VMT)	E PM _{2.5} (lb/VMT)					PM ₁₀ (g/s)	PM _{2.5} (g/s)	PM _{2.5} (g/s)		PM ₁₀ g/s per Volume Src	PM _{2.5} g/s per Volume Src	PM _{2.5} g/s per Volume Src
Trucks	17.5	0.0022	0.00054	2.4	0.6	50%	0.045	0.011	0.003	88	0.19	16.67	4333	0.0040	0.0010	0.0002	35	1.13E-04	2.77E-05	5.14E-06

Short Term:

Paved Roadway Equation (AP-42 Section 13.2.1)

$$E \text{ (lb/VMT)} = k * sL^{0.91} * W^{1.02} * \text{Control Efficiency}$$

k = 0.0022 for PM₁₀, 0.00054 for PM_{2.5}

sL = silt loading (g/m²)

W = average vehicle weight

Annual:

Paved Roadway Equation (AP-42 Section 13.2.1)

$$E \text{ (lb/VMT)} = [k * sL^{0.91} * W^{1.02}] * (1-P/4N) * \text{Control Efficiency}$$

k = 0.0022 for PM₁₀, 0.00054 for PM_{2.5}

sL = silt loading (g/m²)

W = average vehicle weight

P = number of "wet" days with at least 0.254 mm (0.01 in) of precipitation during the averaging period 120

N = number of days in the averaging period 365 (annual)

Assumptions:

44	trips	44 trucks one-way trips a day
88	trips	88 total truck trips a day [accounting for round trips]
1000	feet	1,000 foot one-way route
260	annual days	Operates M-F, 7am-4pm
17.5	tons	Average truck weight is 17.5 tons
50%		Control efficiency from dust control

AERMOD - AREA SOURCES				Modeled Emission Rate (g/s/m2)				
Model ID	Location	Description	Area (m2)	CO_ST	NOx_ANN	PM10_ST	PM25_ST	PM25_ANN
DEMO16A	16	Demo	17971.1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
DEMO16B	16	Demo	3718.5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
DEMO17	17	Demo	7662.1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.14E-09
DEMO18	18	Demo	12469.1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-08
PAVE	314112 - 314138	Pavement Improvements	237679.3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.31E-09
BULK4	4	Bulkhead Improvements	25494	7.07E-06	1.41E-06	1.20E-06	1.16E-06	8.39E-08
DREDGE8	8	Dredging	8035.6	0.00E+00	4.75E-06	0.00E+00	0.00E+00	2.44E-07
DREDGE9	9	Dredging	6551.3	1.74E-05	6.88E-06	3.09E-06	3.00E-06	3.54E-07
DREDGE10	10	Dredging	5012.7	2.28E-05	2.44E-06	4.03E-06	3.92E-06	1.22E-07
DREDGE11	11	Dredging	6559.9	1.74E-05	2.94E-06	3.08E-06	2.99E-06	1.42E-07
DREDGE12	12	Dredging	18755.2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
DREDGE12	12A	Dredging	18755.2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MARINE2	2	Marine Improvements	3637.9	9.35E-05	2.20E-06	1.58E-05	1.53E-05	1.80E-07
MARINE7A	7A	Marine Improvements	1152.2	2.20E-04	3.12E-06	3.70E-05	3.59E-05	2.99E-07
MARINE7B	7B	Marine Improvements	1397.1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
LAND1	1	Land Improvements	1699	9.12E-05	1.08E-05	1.52E-05	1.47E-05	3.86E-07
LAND3	3	Land Improvements	4782	3.24E-05	2.62E-06	5.39E-06	5.23E-06	1.01E-07
LAND13	13	Land Improvements	83180	0.00E+00	6.97E-08	0.00E+00	0.00E+00	4.91E-09
LAND14	14	Land Improvements	117862.1	1.57E-06	1.58E-07	2.89E-07	2.81E-07	5.86E-09
LAND15	15	Land Improvements	5607.9	2.47E-05	3.19E-06	4.21E-06	4.08E-06	9.89E-08
OMF	OMF	O&M Facility Construction	9030.8	1.53E-05	5.95E-07	2.61E-06	2.54E-06	3.25E-08

General Conformity Emissions

CO

Emission Rate (tons/year)

Annual Total (tons/year)

Resource	Sub Phase	Estimated Horsepower	Model Location	Emission Rate (tons/year)												Annual Total (tons/year)			
				Q4 2023	Q1 2024	Q2 2024	Q3 2024	Q4 2024	Q1 2025	Q2 2025	Q3 2025	Q4 2025	Q1 2026	Q2 2026	Q3 2026	2024	2025	2026	
Demo - Sub Phase 16			DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Burning Outfit	16	0	DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 320 Crawler Medium Exc	16	164	DEMO	-	1.28E-03	-	-	-	-	-	-	-	-	-	-	-	1.28E-03	0.00E+00	0.00E+00
CAT 345D Crawler Large Exca	16	380	DEMO	-	4.79E-03	-	-	-	-	-	-	-	-	-	-	-	4.79E-03	0.00E+00	0.00E+00
CAT 385C Crawler Large Exca	16	530	DEMO	-	2.00E-02	-	-	-	-	-	-	-	-	-	-	-	2.00E-02	0.00E+00	0.00E+00
CAT 980K Wheel Loader 7 CY	16	367.44	DEMO	-	2.22E-02	-	-	-	-	-	-	-	-	-	-	-	2.22E-02	0.00E+00	0.00E+00
CAT CR50 CRUSHER	16	0	DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT P60 PULVERIZER	16	0	DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT S365 Hyd Shear	16	0	DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
ELECTR SELF-PROR SCIS LIFT 32"	16	0	DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Genie GTH-842 TeleLift 8000#	16	99	DEMO	-	3.01E-04	-	-	-	-	-	-	-	-	-	-	-	3.01E-04	0.00E+00	0.00E+00
JD 710L 4WD (2011) Backhoe	16	148	DEMO	-	1.55E-03	-	-	-	-	-	-	-	-	-	-	-	1.55E-03	0.00E+00	0.00E+00
JLG 400S MANLIFT	16	82	DEMO	-	2.59E-03	-	-	-	-	-	-	-	-	-	-	-	2.59E-03	0.00E+00	0.00E+00
Welding Machine 400 Amp	16	0	DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Demo - Sub Phase 17			DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Burning Outfit	17	0	DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 320 Crawler Medium Exc	17	164	DEMO	-	2.71E-04	2.34E-04	-	-	-	-	-	-	-	-	-	-	5.04E-04	0.00E+00	0.00E+00
CAT 345D Crawler Large Exca	17	380	DEMO	-	1.01E-03	8.74E-04	-	-	-	-	-	-	-	-	-	-	1.89E-03	0.00E+00	0.00E+00
CAT 385C Crawler Large Exca	17	530	DEMO	-	4.11E-03	3.59E-03	-	-	-	-	-	-	-	-	-	-	7.70E-03	0.00E+00	0.00E+00
CAT 980K Wheel Loader 7 CY	17	367.44	DEMO	-	4.59E-03	4.06E-03	-	-	-	-	-	-	-	-	-	-	8.65E-03	0.00E+00	0.00E+00
CAT CR50 CRUSHER	17	0	DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT P60 PULVERIZER	17	0	DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT S365 Hyd Shear	17	0	DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
ELECTR SELF-PROR SCIS LIFT 32"	17	0	DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Genie GTH-842 TeleLift 8000#	17	99	DEMO	-	4.45E-05	3.95E-05	-	-	-	-	-	-	-	-	-	-	8.40E-05	0.00E+00	0.00E+00
JD 710L 4WD (2011) Backhoe	17	148	DEMO	-	4.37E-04	3.88E-04	-	-	-	-	-	-	-	-	-	-	8.25E-04	0.00E+00	0.00E+00
JLG 400S MANLIFT	17	82	DEMO	-	5.17E-04	4.60E-04	-	-	-	-	-	-	-	-	-	-	9.77E-04	0.00E+00	0.00E+00
Welding Machine 400 Amp	17	0	DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Demo - Sub Phase 18			DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Burning Outfit	18	0	DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 320 Crawler Medium Exc	18	164	DEMO	-	-	7.87E-04	-	-	-	-	-	-	-	-	-	-	7.87E-04	0.00E+00	0.00E+00
CAT 345D Crawler Large Exca	18	380	DEMO	-	-	2.95E-03	-	-	-	-	-	-	-	-	-	-	2.95E-03	0.00E+00	0.00E+00
CAT 385C Crawler Large Exca	18	530	DEMO	-	-	1.23E-02	-	-	-	-	-	-	-	-	-	-	1.23E-02	0.00E+00	0.00E+00
CAT 980K Wheel Loader 7 CY	18	367.44	DEMO	-	-	1.37E-02	-	-	-	-	-	-	-	-	-	-	1.37E-02	0.00E+00	0.00E+00
CAT CR50 CRUSHER	18	0	DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT P60 PULVERIZER	18	0	DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT S365 Hyd Shear	18	0	DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
ELECTR SELF-PROR SCIS LIFT 32"	18	0	DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Genie GTH-842 TeleLift 8000#	18	99	DEMO	-	-	1.19E-04	-	-	-	-	-	-	-	-	-	-	1.19E-04	0.00E+00	0.00E+00
JD 710L 4WD (2011) Backhoe	18	148	DEMO	-	-	7.77E-04	-	-	-	-	-	-	-	-	-	-	7.77E-04	0.00E+00	0.00E+00
JLG 400S MANLIFT	18	82	DEMO	-	-	1.38E-03	-	-	-	-	-	-	-	-	-	-	1.38E-03	0.00E+00	0.00E+00
Welding Machine 400 Amp	18	0	DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Demo - Pavement Sub Phase 314112-314			PAVE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Bomag 655-2 WalkBhdn Roller 26	4112 - 31413	5.9	PAVE	-	1.04E-04	3.03E-04	-	-	-	-	-	-	-	-	-	-	4.07E-04	0.00E+00	0.00E+00
Burning Outfit	4112 - 31413	0	PAVE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 320 Crawler Medium Exc	4112 - 31413	164	PAVE	-	1.03E-02	3.08E-02	-	-	-	-	-	-	-	-	-	-	4.11E-02	0.00E+00	0.00E+00
CAT 345D Crawler Large Exca	4112 - 31413	380	PAVE	-	1.84E-03	5.52E-03	-	-	-	-	-	-	-	-	-	-	7.36E-03	0.00E+00	0.00E+00
CAT 385C Crawler Large Exca	4112 - 31413	530	PAVE	-	5.97E-03	1.78E-02	-	-	-	-	-	-	-	-	-	-	2.38E-02	0.00E+00	0.00E+00
CAT 430E 4WD Backhoe	4112 - 31413	111	PAVE	-	3.64E-05	7.28E-05	-	-	-	-	-	-	-	-	-	-	1.09E-04	0.00E+00	0.00E+00
CAT 434D Tandem Roller 59"	4112 - 31413	83	PAVE	-	1.65E-04	4.40E-04	-	-	-	-	-	-	-	-	-	-	6.05E-04	0.00E+00	0.00E+00
CAT 950G Wheel Loader 4CY	4112 - 31413	180	PAVE	-	1.57E-04	4.36E-04	-	-	-	-	-	-	-	-	-	-	5.93E-04	0.00E+00	0.00E+00
CAT 980K Wheel Loader 7 CY	4112 - 31413	367.44	PAVE	-	4.86E-02	1.46E-01	-	-	-	-	-	-	-	-	-	-	1.94E-01	0.00E+00	0.00E+00
CAT CR50 CRUSHER	4112 - 31413	0	PAVE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT H120CS Hydr Impact 3000 FTLB	4112 - 31413	0	PAVE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT H160DS Hydr Impact 7500 FTLB	4112 - 31413	0	PAVE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT H90CS Hydr Impact 1000FTLB	4112 - 31413	0	PAVE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT P60 PULVERIZER	4112 - 31413	0	PAVE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT S365 Hyd Shear	4112 - 31413	0	PAVE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Chain Saw 43"	4112 - 31413	2.9	PAVE	-	1.28E-03	3.84E-03	-	-	-	-	-	-	-	-	-	-	5.11E-03	0.00E+00	0.00E+00
Daily Operdnt Rent-Grove130MT	4112 - 31413	300	PAVE	-	8.15E-05	2.45E-04	-	-	-	-	-	-	-	-	-	-	3.26E-04	0.00E+00	0.00E+00
ELECTR SELF-PROR SCIS LIFT 32"	4112 - 31413	0	PAVE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Flatbed Tractor/Trailer-38T	4112 - 31413	300	PAVE	-	1.61E-05	4.84E-05	-	-	-	-	-	-	-	-	-	-	6.46E-05	0.00E+00	0.00E+00
Genie GTH-842 TeleLift 8000#	4112 - 31413	99	PAVE	-	1.98E-05	5.93E-05	-	-	-	-	-	-	-	-	-	-	7.91E-05	0.00E+00	0.00E+00
GroveRT750E 50MT RT Crane	4112 - 31413	200	PAVE	-	4.35E-05	1.30E-04	-	-	-	-	-	-	-	-	-	-	1.74E-04	0.00E+00	0.00E+00
Hilti Tools, Misc.	4112 - 31413	0	PAVE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
JD 410G 4WD Backhoe	4112 - 31413	65	PAVE	-	1.79E-04	4.93E-04	-	-	-	-	-	-	-	-	-	-	6.72E-04	0.00E+00	0.00E+00
JD 710L 4WD (2011) Backhoe	4112 - 31413	148	PAVE	-	4.37E-04	1.26E-03	-	-	-	-	-	-	-	-	-	-	1.70E-03	0.00E+00	0.00E+00
JLG 400S MANLIFT	4112 - 31413	82	PAVE	-	3.45E-04	9.19E-04	-	-	-	-	-	-	-	-	-	-	1.26E-03	0.00E+00	0.00E+00
Plate Compactor 25 in 11HP	4112 - 31413	4.8	PAVE	-	6.46E-05	1.88E-04	-	-	-	-	-	-	-	-	-	-	2.53E-04	0.00E+00	0.00E+00
Welding Machine 400 Amp	4112 - 31413	0	PAVE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Bulkhead Improvement - Sub Phase 4			BULK	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Air Compressor 185 cfm	4	49	BULK	-	1.96E-04	1.96E-04	1.96E-04	1.96E-04	1.96E-04	1.96E-04	1.96E-04	1.96E-04	1.96E-04	1.96E-04	1.96E-04	7.04E-05	7.83E-04	6.57E-04	0.00E+00
BOBCAT S130 Skid Steer	4	49	BULK	-	2.68E-04	2.68E-04	2.68E-04	2.68E-04	2.68E-04	2.68E-04	2.68E-04	2.68E-04	2.68E-04	2.68E-04	2.68E-04	9.89E-05	1.07E-03	9.04E-04	0.00E+00
Burning Outfit	4	0	BULK	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 320 Crawler Medium Exc	4	164	BULK	-	6.15E-05	6.15E-05	6.15E-05	6.15E-05	6.15E-05	6.15E-05	6.15E-05	6.15E-05	6.15E-05	6.15E-05	6.15E-05	2.46E-05	2.46E-04	2.09E-04	0.00E+00
CAT 330F Crawler Medium Exc	4	239	BULK	-	6.01E-04	6.01E-04													

CAT 385C Crawler Large Exca	11	530	DREDGE	-	-	-	-	-	1.50E-02	-	-	-	-	-	-	-	-	1.50E-02	0.00E+00	0.00E+00
Generator 50 kW Enclosed	11	68	DREDGE	-	-	-	-	-	1.02E-02	-	-	-	-	-	-	-	-	1.02E-02	0.00E+00	0.00E+00
Flat Deck Barge - 3102 Ton	11	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
SCOW 8,000 CY	11	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
PUSH BOAT 21-FT 435HP	11	150	DREDGE	-	-	-	-	-	5.31E-02	-	-	-	-	-	-	-	-	5.31E-02	0.00E+00	0.00E+00
BAKER TANK 21K GAL	11	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Suct & Disch 3" Hose 25 ft	11	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Pump 3 in Subm 6HP	11	6	DREDGE	-	-	-	-	-	1.52E-03	-	-	-	-	-	-	-	-	1.52E-03	0.00E+00	0.00E+00
Burning Outfit	11	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Elec Chain Hoist 10T 2Spd	11	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Pressure Washer 3.000 psi	11	11	DREDGE	-	-	-	-	-	4.11E-03	-	-	-	-	-	-	-	-	4.11E-03	0.00E+00	0.00E+00
Welding Machine 400 Amp	11	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
VOLVO A25F 6x6 Articulated 15-19CY	11	315	DREDGE	-	-	-	-	-	2.79E-03	-	-	-	-	-	-	-	-	2.79E-03	0.00E+00	0.00E+00
On-Hwy Dump - 18 CY Triax	11	310	DREDGE	-	-	-	-	-	3.84E-02	-	-	-	-	-	-	-	-	3.84E-02	0.00E+00	0.00E+00
Air Compressor 375 cfm	11	117	DREDGE	-	-	-	-	-	7.83E-03	-	-	-	-	-	-	-	-	7.83E-03	0.00E+00	0.00E+00
CAT D6M XL Dozer	11	153	DREDGE	-	-	-	-	-	1.07E-02	-	-	-	-	-	-	-	-	1.07E-02	0.00E+00	0.00E+00
CAT 950G Wheel Loader 4CY	11	180	DREDGE	-	-	-	-	-	8.73E-03	-	-	-	-	-	-	-	-	8.73E-03	0.00E+00	0.00E+00
CAT 980K Wheel Loader 7 CY	11	367.44	DREDGE	-	-	-	-	-	2.14E-02	-	-	-	-	-	-	-	-	2.14E-02	0.00E+00	0.00E+00
Dredging - Sub Phase 12			DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Air Compressor 375 cfm	12	117	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	1.00E-02	-	0.00E+00	1.00E-02	0.00E+00
BAKER TANK 21K GAL	12	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Burning Outfit	12	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 330F Crawler Medium Exc	12	239	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	3.19E-03	-	0.00E+00	3.19E-03	0.00E+00
CAT 385C Crawler Large Exca	12	530	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	2.28E-02	-	0.00E+00	2.28E-02	0.00E+00
CAT 950G Wheel Loader 4CY	12	180	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	9.50E-03	-	0.00E+00	9.50E-03	0.00E+00
CAT 980K Wheel Loader 7 CY	12	367.44	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	2.33E-02	-	0.00E+00	2.33E-02	0.00E+00
CAT D6M XL Dozer	12	153	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	1.17E-02	-	0.00E+00	1.17E-02	0.00E+00
Clamshell 10CY Rehandling	12	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Elec Chain Hoist 10T 2Spd	12	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Flat Deck Barge - 3102 Ton	12	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Generator 50 kW Enclosed	12	68	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	1.11E-02	-	0.00E+00	1.11E-02	0.00E+00
On-Hwy Dump - 18 CY Triax	12	310	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	4.17E-02	-	0.00E+00	4.17E-02	0.00E+00
Pressure Washer 3.000 psi	12	11	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	6.25E-03	-	0.00E+00	6.25E-03	0.00E+00
Pump 3 in Subm 6HP	12	6	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	1.65E-03	-	0.00E+00	1.65E-03	0.00E+00
PUSH BOAT 21-FT 435HP	12	150	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	8.07E-02	-	0.00E+00	8.07E-02	0.00E+00
SCOW 8,000 CY	12	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Suct & Disch 3" Hose 25 ft	12	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
VOLVO A25F 6x6 Articulated 15-19CY	12	315	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	3.04E-03	-	0.00E+00	3.04E-03	0.00E+00
Welding Machine 400 Amp	12	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Pier 35 Dredging - Sub Phase 12A			DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Air Compressor 375 cfm	12A	117	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	1.83E-02	-	0.00E+00	1.83E-02	0.00E+00
BAKER TANK 21K GAL	12A	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Burning Outfit	12A	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 330F Crawler Medium Exc	12A	239	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	5.83E-03	-	0.00E+00	5.83E-03	0.00E+00
CAT 385C Crawler Large Exca	12A	530	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	4.18E-02	-	0.00E+00	4.18E-02	0.00E+00
CAT 950G Wheel Loader 4CY	12A	180	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	1.74E-02	-	0.00E+00	1.74E-02	0.00E+00
CAT 980K Wheel Loader 7 CY	12A	367.44	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	4.25E-02	-	0.00E+00	4.25E-02	0.00E+00
CAT D6M XL Dozer	12A	153	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	2.14E-02	-	0.00E+00	2.14E-02	0.00E+00
Clamshell 10CY Rehandling	12A	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Elec Chain Hoist 10T 2Spd	12A	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Flat Deck Barge - 3102 Ton	12A	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Generator 50 kW Enclosed	12A	68	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	2.02E-02	-	0.00E+00	2.02E-02	0.00E+00
On-Hwy Dump - 18 CY Triax	12A	310	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	7.63E-02	-	0.00E+00	7.63E-02	0.00E+00
Pressure Washer 3.000 psi	12A	11	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	1.14E-02	-	0.00E+00	1.14E-02	0.00E+00
Pump 3 in Subm 6HP	12A	6	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	3.02E-03	-	0.00E+00	3.02E-03	0.00E+00
PUSH BOAT 21-FT 435HP	12A	150	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	1.48E-01	-	0.00E+00	1.48E-01	0.00E+00
SCOW 8,000 CY	12A	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Suct & Disch 3" Hose 25 ft	12A	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
VOLVO A25F 6x6 Articulated 15-19CY	12A	315	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	5.55E-03	-	0.00E+00	5.55E-03	0.00E+00
Welding Machine 400 Amp	12A	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Marine Improvements - Sub Phase 2			MARINE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Air Compressor 185 cfm	2	49	MARINE	-	-	-	-	-	1.10E-04	1.10E-04	1.10E-04	1.10E-04	1.10E-04	1.10E-04	1.57E-05	-	-	4.38E-04	1.25E-04	0.00E+00
BAKER TANK 21K GAL	2	0	MARINE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Bomag 65S-2 WalkBhdn Roller 26	2	5.9	MARINE	-	-	-	-	-	9.48E-06	9.48E-06	9.48E-06	9.48E-06	9.48E-06	9.48E-06	9.48E-06	-	-	3.79E-05	1.90E-05	0.00E+00
Burning Outfit	2	0	MARINE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 320 Crawler Medium Exc	2	164	MARINE	-	-	-	-	-	1.23E-05	1.23E-05	1.23E-05	1.23E-05	1.23E-05	1.23E-05	1.23E-05	-	-	4.92E-05	2.46E-05	0.00E+00
CAT 330F Crawler Medium Exc	2	239	MARINE	-	-	-	-	-	5.86E-05	5.86E-05	5.86E-05	5.86E-05	5.86E-05	5.86E-05	1.46E-05	-	-	2.34E-04	7.32E-05	0.00E+00
CAT 345D Crawler Large Exca	2	380	MARINE	-	-	-	-	-	3.22E-04	3.22E-04	3.22E-04	3.22E-04	3.22E-04	3.22E-04	4.60E-05	-	-	1.29E-03	3.68E-04	0.00E+00
CAT 385C Crawler Large Exca	2	530	MARINE	-	-	-	-	-	9.63E-04	9.63E-04	9.63E-04	9.63E-04	9.63E-04	9.63E-04	1.28E-04	-	-	3.85E-03	1.09E-03	0.00E+00
CAT 430E 4WD Backhoe	2	111	MARINE	-	-	-	-	-	3.64E-05	3.64E-05	3.64E-05	3.64E-05	3.64E-05	3.64E-05	3.64E-05	-	-	1.46E-04	7.28E-05	0.00E+00
CAT 950G Wheel Loader 4CY	2	180	MARINE	-	-	-	-	-	6.98E-05	6.98E-05	6.98E-05	6.98E-05	6.98E-05	6.98E-05	1.75E-05	-	-	2.79E-04	8.73E-05	0.00E+00
CAT 966K Wheel Loader 5.5CY	2	267	MARINE	-	-	-	-	-	1.52E-04	1.52E-04	1.52E-04	1.52E-04	1.52E-04	7.59E-05	-	-	6.07E-04	2.28E-04	0.00E+00	
CAT 980K Wheel Loader 7 CY	2	367.44	MARINE	-	-	-	-	-	4.27E-04	4.27E-04	4.27E-04	4.27E-04	4.27E-04	1.07E-04	-	-	1.71E-03	5.34E-04	0.00E+00	
CAT D3K LGP Dozer	2	81	MARINE	-	-	-	-	-	2.26E-05	2.26E-05	2.26E-05	2.26E-05	2.26E-05	2.26E-05	-	-	9.05E-05	4.53E-05	0.00E+00	
Concrete Texture Machine	2	9	MARINE	-	-	-	-	-	2.90E-05	2.90E-05	2.90E-05	2.90E-05	2.90E-05	1.45E-05	-	-	1.16E-04	4.36E-05	0.00E+00	
Concrete Work Tools	2	0	MARINE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Delmag D80-23 212K FT-LB	2	55	MARINE																	

Generator 50 kW Enclosed	2	68	MARINE	-	2.03E-04	2.03E-04	2.03E-04	2.03E-04	2.03E-04	5.08E-05	-	-	-	-	-	8.12E-04	2.54E-04	0.00E+00
Genie GTH-842 TeleLift 8000#	2	99	MARINE	-	1.98E-05	1.98E-05	1.98E-05	1.98E-05	1.98E-05	4.94E-06	-	-	-	-	-	7.91E-05	2.47E-05	0.00E+00
GroveRT700B 36.3MT RT Crane	2	177.1	MARINE	-	6.35E-04	6.35E-04	6.35E-04	6.35E-04	6.35E-04	8.66E-05	-	-	-	-	-	2.54E-03	7.22E-04	0.00E+00
GroveRT750E 50MT RT Crane	2	200	MARINE	-	7.07E-04	7.07E-04	7.07E-04	7.07E-04	7.07E-04	9.78E-05	-	-	-	-	-	2.83E-03	8.04E-04	0.00E+00
Hilti Tools, Misc.	2	0	MARINE	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
I.C.E. 1412B Vibratory Hamme	2	550	MARINE	-	3.85E-03	3.85E-03	3.85E-03	3.85E-03	3.85E-03	6.80E-04	-	-	-	-	-	1.54E-02	4.53E-03	0.00E+00
JLG 400S MANLIFT	2	82	MARINE	-	1.56E-02	1.56E-02	1.56E-02	1.56E-02	1.56E-02	2.13E-03	-	-	-	-	-	6.25E-02	1.78E-02	0.00E+00
Manitowoc 555 136 MT	2	340	MARINE	-	7.23E-04	7.23E-04	7.23E-04	7.23E-04	7.23E-04	1.20E-04	-	-	-	-	-	2.89E-03	8.43E-04	0.00E+00
Manitowoc 777 181.4 MT	2	340	MARINE	-	1.45E-03	1.45E-03	1.45E-03	1.45E-03	1.45E-03	2.41E-04	-	-	-	-	-	5.78E-03	1.69E-03	0.00E+00
Manitowoc 999 250 MT	2	400	MARINE	-	5.10E-03	5.10E-03	5.10E-03	5.10E-03	5.10E-03	7.09E-04	-	-	-	-	-	2.04E-02	5.81E-03	0.00E+00
On-Hwy Dump - 18 CY Triax	2	310	MARINE	-	6.72E-04	6.72E-04	6.72E-04	6.72E-04	6.72E-04	9.60E-05	-	-	-	-	-	2.69E-03	7.68E-04	0.00E+00
Plate Compactor 25 in 11HP	2	4.8	MARINE	-	5.88E-06	5.88E-06	5.88E-06	5.88E-06	5.88E-06	5.88E-06	-	-	-	-	-	2.35E-05	1.18E-05	0.00E+00
Portable Mixer 11CF	2	0	MARINE	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Pressure Washer 3.000 psi	2	11	MARINE	-	2.28E-04	2.28E-04	2.28E-04	2.28E-04	2.28E-04	3.51E-05	-	-	-	-	-	9.12E-04	2.63E-04	0.00E+00
Pump 3 in Subm 6HP	2	6	MARINE	-	3.03E-05	3.03E-05	3.03E-05	3.03E-05	3.03E-05	7.58E-06	-	-	-	-	-	1.21E-04	3.79E-05	0.00E+00
PUSH BOAT 21-FT 435HP	2	150	MARINE	-	1.70E-03	1.70E-03	1.70E-03	1.70E-03	1.70E-03	2.27E-04	-	-	-	-	-	6.81E-03	1.93E-03	0.00E+00
Schwing2525 on Trk (181 y/hr	2	432	MARINE	-	1.62E-03	1.62E-03	1.62E-03	1.62E-03	1.62E-03	3.23E-04	-	-	-	-	-	6.46E-03	1.94E-03	0.00E+00
SCOW 8,000 CY	2	0	MARINE	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Suct & Disch 3" Hose 25 ft	2	0	MARINE	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Swing Lead-100'(11x33x36)	2	0	MARINE	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
VOLVO A25F 6x6 Articulated 15-19CY	2	315	MARINE	-	5.58E-05	5.58E-05	5.58E-05	5.58E-05	5.58E-05	1.39E-05	-	-	-	-	-	2.23E-04	6.97E-05	0.00E+00
WALK BEHIND BUGGY 12CF	2	0	MARINE	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
WALK-BEHIND FLOOR TROWEL36"	2	5.5	MARINE	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Welding Machine 400 Amp	2	0	MARINE	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Marine Improvements - Sub Phase 7A			MARINE	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Air Compressor 185 cfm	7A	49	MARINE	-	7.83E-06	7.83E-06	7.83E-06	-	-	-	-	-	-	-	-	2.35E-05	0.00E+00	0.00E+00
BOBCAT S130 Skid Steer	7A	49	MARINE	-	1.70E-04	2.26E-04	9.89E-05	-	-	-	-	-	-	-	-	4.95E-04	0.00E+00	0.00E+00
Burning Outfit	7A	0	MARINE	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CASAGRANDE B250 CRAWLER MP RIG	7A	451	MARINE	-	5.29E-03	7.37E-03	3.05E-03	-	-	-	-	-	-	-	-	1.57E-02	0.00E+00	0.00E+00
CAT 320 Crawler Medium Exc	7A	164	MARINE	-	3.57E-04	4.92E-04	2.09E-04	-	-	-	-	-	-	-	-	1.06E-03	0.00E+00	0.00E+00
CAT 330F Crawler Medium Exc	7A	239	MARINE	-	1.76E-04	2.34E-04	1.03E-04	-	-	-	-	-	-	-	-	5.13E-04	0.00E+00	0.00E+00
CAT 430E 4WD Backhoe	7A	111	MARINE	-	2.15E-03	3.02E-03	1.24E-03	-	-	-	-	-	-	-	-	6.41E-03	0.00E+00	0.00E+00
CAT 950G Wheel Loader 4CY	7A	180	MARINE	-	1.92E-04	2.62E-04	1.22E-04	-	-	-	-	-	-	-	-	5.76E-04	0.00E+00	0.00E+00
CAT 980K Wheel Loader 7 CY	7A	367.44	MARINE	-	3.20E-04	4.27E-04	2.14E-04	-	-	-	-	-	-	-	-	9.61E-04	0.00E+00	0.00E+00
CAT D3K LGP Dozer	7A	81	MARINE	-	2.72E-04	3.62E-04	1.58E-04	-	-	-	-	-	-	-	-	7.92E-04	0.00E+00	0.00E+00
CAT H120CS Hydr Impact 3000 FTLB	7A	0	MARINE	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Concrete Saw to 6"(wo Blade)	7A	11	MARINE	-	8.87E-05	1.06E-04	5.32E-05	-	-	-	-	-	-	-	-	2.48E-04	0.00E+00	0.00E+00
Concrete Work Tools	7A	0	MARINE	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Delmag D80-23 212K FT-LB	7A	55	MARINE	-	6.95E-04	9.88E-04	4.03E-04	-	-	-	-	-	-	-	-	2.09E-03	0.00E+00	0.00E+00
Flat Deck Barge - 1074 Ton	7A	0	MARINE	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Flatbed Truck - 15 Ton	7A	155	MARINE	-	4.53E-04	6.31E-04	2.61E-04	-	-	-	-	-	-	-	-	1.34E-03	0.00E+00	0.00E+00
FLEX SHAFT CONC VIBRHHP	7A	0	MARINE	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Flexifloat - 5' x 10' x 40'	7A	0	MARINE	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Generator 5000 w	7A	7.5	MARINE	-	2.99E-04	4.13E-04	1.76E-04	-	-	-	-	-	-	-	-	8.88E-04	0.00E+00	0.00E+00
Genie GTH-842 TeleLift 8000#	7A	99	MARINE	-	4.45E-05	5.93E-05	2.47E-05	-	-	-	-	-	-	-	-	1.28E-04	0.00E+00	0.00E+00
GroveRT700B 36.3MT RT Crane	7A	177.1	MARINE	-	3.95E-04	5.49E-04	2.21E-04	-	-	-	-	-	-	-	-	1.16E-03	0.00E+00	0.00E+00
GroveRT750E 50MT RT Crane	7A	200	MARINE	-	3.59E-04	5.00E-04	2.07E-04	-	-	-	-	-	-	-	-	1.07E-03	0.00E+00	0.00E+00
I.C.E. 1412B Vibratory Hamme	7A	550	MARINE	-	4.31E-03	6.12E-03	2.49E-03	-	-	-	-	-	-	-	-	1.29E-02	0.00E+00	0.00E+00
I.C.E. 44-30 Vibratory Hammer	7A	325	MARINE	-	1.22E-03	1.73E-03	7.08E-04	-	-	-	-	-	-	-	-	3.66E-03	0.00E+00	0.00E+00
JLG 400S MANLIFT	7A	82	MARINE	-	7.47E-04	1.03E-03	4.60E-04	-	-	-	-	-	-	-	-	2.24E-03	0.00E+00	0.00E+00
Manitowoc 999 250 MT	7A	400	MARINE	-	1.35E-03	1.91E-03	7.80E-04	-	-	-	-	-	-	-	-	4.04E-03	0.00E+00	0.00E+00
On-Hwy PU 4x4 - 1.25T Crew	7A	300	MARINE	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
OSR SLURRY MIXER 5CYD W/SILO	7A	27	MARINE	-	1.22E-03	1.70E-03	7.04E-04	-	-	-	-	-	-	-	-	3.62E-03	0.00E+00	0.00E+00
OSR SLURRY TANK (10MG-15MG)	7A	0	MARINE	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
OSR TECHNIWELL PUMP	7A	36	MARINE	-	8.60E-04	1.20E-03	4.97E-04	-	-	-	-	-	-	-	-	2.56E-03	0.00E+00	0.00E+00
Pump 3 in Centr 20k gph	7A	5	MARINE	-	3.54E-04	4.93E-04	2.02E-04	-	-	-	-	-	-	-	-	1.05E-03	0.00E+00	0.00E+00
Schwing2525 on Trk (181 y/hr	7A	432	MARINE	-	1.94E-03	2.75E-03	1.13E-03	-	-	-	-	-	-	-	-	5.82E-03	0.00E+00	0.00E+00
Suct & Disch 3" Hose 25 ft	7A	0	MARINE	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
SWEEPER ATTACH	7A	0	MARINE	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
TT 50K w/21CY Dump Trailer	7A	8	MARINE	-	4.44E-04	6.19E-04	2.57E-04	-	-	-	-	-	-	-	-	1.32E-03	0.00E+00	0.00E+00
WALK-BEHIND FLOOR TROWEL36"	7A	5.5	MARINE	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Welding Machine 400 Amp	7A	0	MARINE	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Marine Improvements - Sub Phase 0			MARINE	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Air Compressor 185 cfm	7B	49	MARINE	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
BOBCAT S130 Skid Steer	7B	49	MARINE	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Burning Outfit	7B	0	MARINE	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CASAGRANDE B250 CRAWLER MP RIG	7B	451	MARINE	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 320 Crawler Medium Exc	7B	164	MARINE	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 330F Crawler Medium Exc	7B	239	MARINE	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 430E 4WD Backhoe	7B	111	MARINE	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 950G Wheel Loader 4CY	7B	180	MARINE	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 980K Wheel Loader 7 CY	7B	367.44	MARINE	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT D3K LGP Dozer	7B	81	MARINE	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT H120CS Hydr Impact 3000 FTLB	7B	0	MARINE	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Concrete Saw to 6"(wo Blade)	7B	11	MARINE	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Concrete Work Tools	7B	0																

GroveRT700B 36.3MT RT Crane	7B	177.1	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
GroveRT750E 50MT RT Crane	7B	200	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Hydraulic Jack 50 Ton	7B	0	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
I.C.E. 1412B Vibratory Hamme	7B	550	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
JLG 400S MANLIFT	7B	82	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Manitowoc 555 136 MT	7B	340	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Manitowoc 999 250 MT	7B	400	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
On-Hwy PU 4x4 - 1.25T Crew	7B	300	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
OSR SLURRY MIXER 5CYD W/SILO	7B	27	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
OSR SLURRY TANK (10MG-15MG)	7B	0	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
OSR TECHNIWELL PUMP	7B	36	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Pump 3 in Centr 20k gph	7B	5	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Schwing2525 on Trk (181 y/hr	7B	432	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Suct & Disch 3" Hose 25 ft	7B	0	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
SWEEPER ATTACH	7B	0	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
TT 50K w/21CY Dump Trailer	7B	8	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
WALK-BEHIND FLOOR TROWEL36"	7B	5.5	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Welding Machine 400 Amp	7B	0	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Land Improvements - Sub Phase 1			LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Air Compressor 185 cfm	1	49	LAND1	-	-	-	2.27E-04	2.27E-04	2.27E-04	2.27E-04	6.26E-05	-	-	-	-	-	-	4.54E-04	5.17E-04	0.00E+00
Bomag 65S-2 WalkBhnd Roller 26	1	5.9	LAND1	-	-	-	1.23E-04	1.23E-04	1.23E-04	1.23E-04	3.79E-05	-	-	-	-	-	-	2.46E-04	2.84E-04	0.00E+00
Burning Outfit	1	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 320 Crawler Medium Exc	1	164	LAND1	-	-	-	3.69E-05	3.69E-05	3.69E-05	3.69E-05	1.23E-05	-	-	-	-	-	-	7.38E-05	8.61E-05	0.00E+00
CAT 330F Crawler Medium Exc	1	239	LAND1	-	-	-	3.66E-04	3.66E-04	3.66E-04	3.66E-04	1.03E-04	-	-	-	-	-	-	7.32E-04	8.35E-04	0.00E+00
CAT 345D Crawler Large Exca	1	380	LAND1	-	-	-	1.15E-03	1.15E-03	1.15E-03	1.15E-03	3.22E-04	-	-	-	-	-	-	2.30E-03	2.62E-03	0.00E+00
CAT 434D Tandem Roller 59"	1	83	LAND1	-	-	-	3.57E-04	3.57E-04	3.57E-04	3.57E-04	1.10E-04	-	-	-	-	-	-	7.15E-04	8.25E-04	0.00E+00
CAT 950G Wheel Loader 4CY	1	180	LAND1	-	-	-	6.28E-04	6.28E-04	6.28E-04	6.28E-04	1.75E-04	-	-	-	-	-	-	1.26E-03	1.43E-03	0.00E+00
CAT 963D LGP Track Loader	1	110	LAND1	-	-	-	9.02E-04	9.02E-04	9.02E-04	9.02E-04	2.53E-04	-	-	-	-	-	-	1.80E-03	2.06E-03	0.00E+00
CAT D3K LGP Dozer	1	81	LAND1	-	-	-	4.75E-04	4.75E-04	4.75E-04	4.75E-04	1.36E-04	-	-	-	-	-	-	9.50E-04	1.09E-03	0.00E+00
CAT D4G XL Dozer	1	87	LAND1	-	-	-	1.46E-04	1.46E-04	1.46E-04	1.46E-04	4.86E-05	-	-	-	-	-	-	2.92E-04	3.40E-04	0.00E+00
Concrete Saw to 11" (wo Blade)	1	11	LAND1	-	-	-	1.79E-03	1.79E-03	1.79E-03	1.79E-03	5.15E-04	-	-	-	-	-	-	3.59E-03	4.10E-03	0.00E+00
Concrete Work Tools	1	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Delmag D100-13 265K FT-LB	1	55	LAND1	-	-	-	4.76E-03	4.76E-03	4.76E-03	4.76E-03	1.35E-03	-	-	-	-	-	-	9.52E-03	1.09E-02	0.00E+00
Delmag D80-23 212K FT-LB	1	55	LAND1	-	-	-	7.65E-03	7.65E-03	7.65E-03	7.65E-03	2.12E-03	-	-	-	-	-	-	1.53E-02	1.74E-02	0.00E+00
Flat Deck Barge - 1074 Ton	1	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Flexifloat - 5' x 10' x 40'	1	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Genie GTH-842 TeleLift 8000#	1	99	LAND1	-	-	-	-	-	-	1.98E-04	1.98E-04	-	-	-	-	-	-	0.00E+00	3.95E-04	0.00E+00
GroveRT700B 36.3MT RT Crane	1	177.1	LAND1	-	-	-	6.45E-04	6.45E-04	6.45E-04	6.45E-04	1.83E-04	-	-	-	-	-	-	1.29E-03	1.47E-03	0.00E+00
GroveRT750E 50MT RT Crane	1	200	LAND1	-	-	-	8.70E-04	8.70E-04	8.70E-04	8.70E-04	2.50E-04	-	-	-	-	-	-	1.74E-03	1.99E-03	0.00E+00
Hilti Tools, Misc.	1	0	LAND1	-	-	-	-	-	-	0.00E+00	0.00E+00	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Hydraulic Jack 50 Ton	1	0	LAND1	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
I.C.E. 1412B Vibratory Hamme	1	550	LAND1	-	-	-	-	-	-	7.77E-03	7.77E-03	-	-	-	-	-	-	0.00E+00	1.55E-02	0.00E+00
JLG 400S MANLIFT	1	82	LAND1	-	-	-	3.33E-03	3.33E-03	3.33E-03	3.33E-03	9.19E-04	-	-	-	-	-	-	6.67E-03	7.58E-03	0.00E+00
Manitowoc 777 181.4 MT	1	340	LAND1	-	-	-	1.67E-02	1.67E-02	1.67E-02	1.67E-02	4.64E-03	-	-	-	-	-	-	3.35E-02	3.81E-02	0.00E+00
Plate Compactor 25 in 11HP	1	4.8	LAND1	-	-	-	4.11E-05	4.11E-05	4.11E-05	4.11E-05	1.18E-05	-	-	-	-	-	-	8.23E-05	9.40E-05	0.00E+00
Schwing2525 on Trk (181 y/hr	1	432	LAND1	-	-	-	7.27E-03	7.27E-03	7.27E-03	7.27E-03	2.10E-03	-	-	-	-	-	-	1.45E-02	1.66E-02	0.00E+00
WALK-BEHIND FLOOR TROWEL36"	1	5.5	LAND1	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Welding Machine 400 Amp	1	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Land Improvements - Sub Phase 3			LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Air Compressor 185 cfm	3	49	LAND1	-	-	-	7.83E-05	2.27E-04	2.27E-04	2.27E-04	1.57E-04	-	-	-	-	-	-	3.05E-04	6.11E-04	0.00E+00
Bomag 65S-2 WalkBhnd Roller 26	3	5.9	LAND1	-	-	-	4.74E-05	1.23E-04	1.23E-04	1.23E-04	8.53E-05	-	-	-	-	-	-	1.71E-04	3.32E-04	0.00E+00
Burning Outfit	3	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 320 Crawler Medium Exc	3	164	LAND1	-	-	-	1.23E-05	3.69E-05	3.69E-05	3.69E-05	2.46E-05	-	-	-	-	-	-	4.92E-05	9.84E-05	0.00E+00
CAT 330F Crawler Medium Exc	3	239	LAND1	-	-	-	1.32E-04	3.66E-04	3.66E-04	3.66E-04	2.49E-04	-	-	-	-	-	-	4.98E-04	9.81E-04	0.00E+00
CAT 345D Crawler Large Exca	3	380	LAND1	-	-	-	4.14E-04	1.15E-03	1.15E-03	1.15E-03	7.82E-04	-	-	-	-	-	-	1.56E-03	3.08E-03	0.00E+00
CAT 434D Tandem Roller 59"	3	83	LAND1	-	-	-	1.37E-04	3.57E-04	3.57E-04	3.57E-04	2.47E-04	-	-	-	-	-	-	4.95E-04	9.62E-04	0.00E+00
CAT 950G Wheel Loader 4CY	3	180	LAND1	-	-	-	2.09E-04	6.28E-04	6.28E-04	6.28E-04	4.19E-04	-	-	-	-	-	-	8.38E-04	1.68E-03	0.00E+00
CAT 963D LGP Track Loader	3	110	LAND1	-	-	-	3.25E-04	9.02E-04	9.02E-04	9.02E-04	6.14E-04	-	-	-	-	-	-	1.23E-03	2.42E-03	0.00E+00
CAT D3K LGP Dozer	3	81	LAND1	-	-	-	1.58E-04	4.75E-04	4.75E-04	4.75E-04	3.17E-04	-	-	-	-	-	-	6.34E-04	1.27E-03	0.00E+00
CAT D4G XL Dozer	3	87	LAND1	-	-	-	4.86E-05	1.46E-04	1.46E-04	1.46E-04	9.72E-05	-	-	-	-	-	-	1.94E-04	3.89E-04	0.00E+00
Concrete Saw to 11" (wo Blade)	3	11	LAND1	-	-	-	6.03E-04	1.79E-03	1.79E-03	1.79E-03	1.21E-03	-	-	-	-	-	-	2.40E-03	4.79E-03	0.00E+00
Concrete Work Tools	3	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Delmag D100-13 265K FT-LB	3	55	LAND1	-	-	-	1.61E-03	4.76E-03	4.76E-03	4.76E-03	3.18E-03	-	-	-	-	-	-	6.37E-03	1.27E-02	0.00E+00
Delmag D80-23 212K FT-LB	3	55	LAND1	-	-	-	1.83E-03	5.42E-03	5.42E-03	5.42E-03	3.62E-03	-	-	-	-	-	-	7.25E-03	1.45E-02	0.00E+00
Flat Deck Barge - 1074 Ton	3	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Flexifloat - 5' x 10' x 40'	3	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
GroveRT700B 36.3MT RT Crane	3	177.1	LAND1	-	-	-	1.93E-04	5.58E-04	5.58E-04	5.58E-04	3.75E-04	-	-	-	-	-	-	7.51E-04	1.49E-03	0.00E+00
GroveRT750E 50MT RT Crane	3	200	LAND1	-	-	-	2.93E-04	8.70E-04	8.70E-04	8.70E-04	5.87E-04	-	-	-	-	-	-	1.16E-03	2.33E-03	0.00E+00
Hilti Tools, Misc.	3	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
JLG 400S MANLIFT	3	82	LAND1	-	-	-	1.15													

CAT 980K Wheel Loader 7 CY	13	367.44	LAND1	-	-	-	-	-	-	4.48E-03	-	-	-	-	-	-	-	-	0.00E+00	4.48E-03	0.00E+00
CAT H120CS Hydr Impact 3000 FTLB	13	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Concrete Saw to 6"(wo Blade)	13	11	LAND1	-	-	-	-	-	-	1.16E-02	-	-	-	-	-	-	-	-	0.00E+00	1.16E-02	0.00E+00
Concrete Work Tools	13	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Daily Opertd Rent-Grove130MT	13	300	LAND1	-	-	-	-	-	-	8.48E-04	-	-	-	-	-	-	-	-	0.00E+00	8.48E-04	0.00E+00
Flatbed Tractor/Trailer-38T	13	300	LAND1	-	-	-	-	-	-	1.09E-03	-	-	-	-	-	-	-	-	0.00E+00	1.09E-03	0.00E+00
Flatbed Truck - 15 Ton	13	155	LAND1	-	-	-	-	-	-	3.31E-04	-	-	-	-	-	-	-	-	0.00E+00	3.31E-04	0.00E+00
Flatbed Truck - 23 Ton	13	170	LAND1	-	-	-	-	-	-	2.10E-04	-	-	-	-	-	-	-	-	0.00E+00	2.10E-04	0.00E+00
Generator 5000 w	13	7.5	LAND1	-	-	-	-	-	-	7.85E-03	-	-	-	-	-	-	-	-	0.00E+00	7.85E-03	0.00E+00
GroveRT750E 50MT RT Crane	13	200	LAND1	-	-	-	-	-	-	1.84E-03	-	-	-	-	-	-	-	-	0.00E+00	1.84E-03	0.00E+00
JLG 600A MANLIFT	13	82	LAND1	-	-	-	-	-	-	8.96E-03	-	-	-	-	-	-	-	-	0.00E+00	8.96E-03	0.00E+00
Mobe Crane for Daily Rental	13	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
OSR SLURRY MIXER 5CYD W/SILO	13	27	LAND1	-	-	-	-	-	-	2.70E-03	-	-	-	-	-	-	-	-	0.00E+00	2.70E-03	0.00E+00
Plate Compactor 25 in 11HP	13	4.8	LAND1	-	-	-	-	-	-	6.53E-03	-	-	-	-	-	-	-	-	0.00E+00	6.53E-03	0.00E+00
Putzmeister TK30 (31cy/hr) T	13	40	LAND1	-	-	-	-	-	-	3.33E-03	-	-	-	-	-	-	-	-	0.00E+00	3.33E-03	0.00E+00
ROD BENDER TO #10	13	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Suct & Disch 3" Hose 25 ft	13	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Welding Machine 400 Amp	13	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Land Improvements - Sub Phase 14			LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
16T Runabout Service Boat	14	100	LAND1	-	-	-	-	-	4.69E-03	5.22E-03	5.22E-03	5.22E-03	5.22E-03	-	-	-	-	-	4.69E-03	1.57E-02	0.00E+00
Air Compressor 185 cfm	14	49	LAND1	-	-	-	-	-	8.61E-05	1.02E-04	1.02E-04	1.02E-04	1.02E-04	-	-	-	-	-	8.61E-05	3.05E-04	0.00E+00
Bomag 213D Earth Roller 84"	14	128	LAND1	-	-	-	-	-	2.34E-03	2.64E-03	2.64E-03	2.64E-03	2.64E-03	-	-	-	-	-	2.34E-03	7.91E-03	0.00E+00
Bomag 65S-2 WalkBhnd Roller 26	14	5.9	LAND1	-	-	-	-	-	1.49E-03	1.68E-03	1.68E-03	1.68E-03	1.68E-03	-	-	-	-	-	1.49E-03	5.03E-03	0.00E+00
Burning Outfit	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 320 Crawler Medium Exc	14	164	LAND1	-	-	-	-	-	2.09E-03	2.36E-03	2.36E-03	2.36E-03	2.36E-03	-	-	-	-	-	2.09E-03	7.09E-03	0.00E+00
CAT 430E 4WD Backhoe	14	111	LAND1	-	-	-	-	-	4.77E-03	5.39E-03	5.39E-03	5.39E-03	5.39E-03	-	-	-	-	-	4.77E-03	1.62E-02	0.00E+00
CAT 950G Wheel Loader 4CY	14	180	LAND1	-	-	-	-	-	3.95E-03	4.43E-03	4.43E-03	4.43E-03	4.43E-03	-	-	-	-	-	3.95E-03	1.33E-02	0.00E+00
CAT 953C LGP Track loader	14	110	LAND1	-	-	-	-	-	4.76E-03	5.38E-03	5.38E-03	5.38E-03	5.38E-03	-	-	-	-	-	4.76E-03	1.61E-02	0.00E+00
CAT CR50 CRUSHER	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT D4G XL Dozer	14	87	LAND1	-	-	-	-	-	3.21E-03	3.62E-03	3.62E-03	3.62E-03	3.62E-03	-	-	-	-	-	3.21E-03	1.09E-02	0.00E+00
CAT D6M XL Dozer	14	153	LAND1	-	-	-	-	-	2.36E-03	2.67E-03	2.67E-03	2.67E-03	2.67E-03	-	-	-	-	-	2.36E-03	8.00E-03	0.00E+00
CAT H90CS Hydr Impact 1000FTLB	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT M318F WHEEL MTD EXCAV	14	171	LAND1	-	-	-	-	-	3.98E-04	4.36E-04	4.36E-04	4.36E-04	4.36E-04	-	-	-	-	-	3.98E-04	1.31E-03	0.00E+00
Concrete Saw to 6"(wo Blade)	14	11	LAND1	-	-	-	-	-	1.42E-04	1.60E-04	1.60E-04	1.60E-04	1.60E-04	-	-	-	-	-	1.42E-04	4.79E-04	0.00E+00
Concrete Work Tools	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Daily Opertd Rent-Grove130MT	14	300	LAND1	-	-	-	-	-	1.96E-04	2.28E-04	2.28E-04	2.28E-04	2.28E-04	-	-	-	-	-	1.96E-04	6.85E-04	0.00E+00
Flat Deck Barge - 1074 Ton	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Flatbed Tractor/Trailer-38T	14	300	LAND1	-	-	-	-	-	1.08E-05	1.08E-05	1.08E-05	1.08E-05	1.08E-05	-	-	-	-	-	1.08E-05	3.23E-05	0.00E+00
Generator 100 kW Enclosed	14	169	LAND1	-	-	-	-	-	1.13E-02	1.27E-02	1.27E-02	1.27E-02	1.27E-02	-	-	-	-	-	1.13E-02	3.81E-02	0.00E+00
Generator 5000 w	14	7.5	LAND1	-	-	-	-	-	5.99E-04	6.71E-04	6.71E-04	6.71E-04	6.71E-04	-	-	-	-	-	5.99E-04	2.01E-03	0.00E+00
Genie GTH-842 TeleLift 8000#	14	99	LAND1	-	-	-	-	-	2.47E-05	2.47E-05	2.47E-05	2.47E-05	2.47E-05	-	-	-	-	-	2.47E-05	7.41E-05	0.00E+00
GroveRT700B 36.3MT RT Crane	14	177.1	LAND1	-	-	-	-	-	1.93E-05	1.93E-05	1.93E-05	1.93E-05	1.93E-05	-	-	-	-	-	1.93E-05	5.78E-05	0.00E+00
GroveRT890E 81.6MT RT Crane	14	275	LAND1	-	-	-	-	-	6.58E-04	7.32E-04	7.32E-04	7.32E-04	7.32E-04	-	-	-	-	-	6.58E-04	2.20E-03	0.00E+00
Hilti Tools, Misc.	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
I.C.E. 44-30 Vibratory Hammer	14	325	LAND1	-	-	-	-	-	1.73E-03	1.93E-03	1.93E-03	1.93E-03	1.93E-03	-	-	-	-	-	1.73E-03	5.79E-03	0.00E+00
JD 710L 4WD (2011) Backhoe	14	148	LAND1	-	-	-	-	-	1.75E-03	1.94E-03	1.94E-03	1.94E-03	1.94E-03	-	-	-	-	-	1.75E-03	5.83E-03	0.00E+00
Light Plant 30' 4 Lts	14	11.7	LAND1	-	-	-	-	-	3.09E-05	4.12E-05	4.12E-05	4.12E-05	4.12E-05	-	-	-	-	-	3.09E-05	1.24E-04	0.00E+00
LITE SHORING BOX	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Manitowoc 555 136 MT	14	340	LAND1	-	-	-	-	-	3.86E-03	4.34E-03	4.34E-03	4.34E-03	4.34E-03	-	-	-	-	-	3.86E-03	1.30E-02	0.00E+00
MED SHORING BOX	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Mobe Crane for Daily Rental	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
On-Hwy Dump - 16 CY dbl ax	14	300	LAND1	-	-	-	-	-	2.42E-04	2.69E-04	2.69E-04	2.69E-04	2.69E-04	-	-	-	-	-	2.42E-04	8.07E-04	0.00E+00
Plate Compactor 25 in 11HP	14	4.8	LAND1	-	-	-	-	-	2.20E-03	2.48E-03	2.48E-03	2.48E-03	2.48E-03	-	-	-	-	-	2.20E-03	7.44E-03	0.00E+00
Portable Mixer 11CF	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Pump 4 in Centr 40k gph	14	10	LAND1	-	-	-	-	-	2.53E-05	2.53E-05	2.53E-05	2.53E-05	2.53E-05	-	-	-	-	-	2.53E-05	7.58E-05	0.00E+00
PUSH BOAT 21-FT 435HP	14	150	LAND1	-	-	-	-	-	7.26E-03	8.17E-03	8.17E-03	8.17E-03	8.17E-03	-	-	-	-	-	7.26E-03	2.45E-02	0.00E+00
Putzmeister TK30 (31cy/hr) T	14	40	LAND1	-	-	-	-	-	4.07E-04	4.58E-04	4.58E-04	4.58E-04	4.58E-04	-	-	-	-	-	4.07E-04	1.37E-03	0.00E+00
Pvmt Breaker 35-45 lbs	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Pvmt Breaker 60-65 lbs	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Suct & Disch 3" Hose 25 ft	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Welding Machine 400 Amp	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Land Improvements - Sub Phase 15			LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Bomag 65S-2 WalkBhnd Roller 26	15	5.9	LAND1	-	-	-	-	-	1.33E-04	3.79E-04	3.79E-04	3.79E-04	3.79E-04	-	-	-	-	-	1.33E-04	7.58E-04	0.00E+00
Burning Outfit	15	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 320 Crawler Medium Exc	15	164	LAND1	-	-	-	-	-	3.69E-05	9.84E-05	9.84E-05	9.84E-05	9.84E-05	-	-	-	-	-	3.69E-05	1.97E-04	0.00E+00
CAT 330F Crawler Medium Exc	15	239	LAND1	-	-	-	-	-	3.08E-04	8.93E-04	8.93E-04	8.93E-04	8.93E-04	-	-	-	-	-	3.08E-04	1.79E-03	0.00E+00
CAT 345D Crawler Large Exca	15	380	LAND1	-	-	-	-	-	9.66E-04	2.81E-03	2.81E-03	2.81E-03	2.81E-03	-	-	-	-	-	9.66E-04	5.61E-03	0.00E+00
CAT 434D Tandem Roller 59"	15	83	LAND1	-	-	-	-	-	3.85E-04	1.10E-03	1.10E-03	1.10E-03	1.10E-03	-	-	-	-	-	3.85E-04	2.20E-03	0.00E+00
CAT 950G Wheel Loader 4CY	15	180	LAND1	-	-	-	-	-	7.33E-04	2.20E-03	2.20E-03	2.20E-03	2.20E-03	-	-	-	-	-	7.33E-04	4.40E-03	0.00E+00
CAT 963D LGP Track Loader	15	110	LAND1	-	-	-	-	-	7.58E-04	2.20E-03	2.20E-03	2.20E-03	2.20E-03	-	-	-	-	-	7.58E-04	4.40E-03	0.00E+

Welding Machine 400 Amp	15	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
O&M Facility Construction			OMF	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Bomag 65S-2 WalkBhdn Roller 26	OMF	5.9	OMF	-	-	8.53E-05	8.53E-05	8.53E-05	8.53E-05	8.53E-05	8.53E-05	8.53E-05	8.53E-05	8.53E-05	8.53E-05	-	2.56E-04	3.41E-04	1.71E-04
Burning Outfit	OMF	0	OMF	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 320 Crawler Medium Exc	OMF	164	OMF	-	-	1.85E-05	1.85E-05	1.85E-05	1.85E-05	1.85E-05	1.85E-05	1.85E-05	1.85E-05	1.85E-05	1.85E-05	-	5.54E-05	7.38E-05	3.69E-05
CAT 330F Crawler Medium Exc	OMF	239	OMF	-	-	1.98E-04	1.98E-04	1.98E-04	1.98E-04	1.98E-04	1.98E-04	1.98E-04	1.98E-04	1.98E-04	1.98E-04	-	5.93E-04	7.91E-04	3.95E-04
CAT 345D Crawler Large Exca	OMF	380	OMF	-	-	6.21E-04	6.21E-04	6.21E-04	6.21E-04	6.21E-04	6.21E-04	6.21E-04	6.21E-04	6.21E-04	6.21E-04	-	1.86E-03	2.48E-03	1.24E-03
CAT 434D Tandem Roller 59"	OMF	83	OMF	-	-	2.47E-04	2.47E-04	2.47E-04	2.47E-04	2.47E-04	2.47E-04	2.47E-04	2.47E-04	2.47E-04	2.47E-04	-	7.42E-04	9.90E-04	4.95E-04
CAT 950G Wheel Loader 4CY	OMF	180	OMF	-	-	3.93E-04	3.93E-04	3.93E-04	3.93E-04	3.93E-04	3.93E-04	3.93E-04	3.93E-04	3.93E-04	3.93E-04	-	1.18E-03	1.57E-03	7.86E-04
CAT 963D LGP Track Loader	OMF	110	OMF	-	-	4.87E-04	4.87E-04	4.87E-04	4.87E-04	4.87E-04	4.87E-04	4.87E-04	4.87E-04	4.87E-04	4.87E-04	-	1.46E-03	1.95E-03	9.74E-04
CAT D3K LGP Dozer	OMF	81	OMF	-	-	3.39E-04	3.39E-04	3.39E-04	3.39E-04	3.39E-04	3.39E-04	3.39E-04	3.39E-04	3.39E-04	3.39E-04	-	1.02E-03	1.36E-03	6.79E-04
CAT D4G XL Dozer	OMF	87	OMF	-	-	1.09E-04	1.09E-04	1.09E-04	1.09E-04	1.09E-04	1.09E-04	1.09E-04	1.09E-04	1.09E-04	1.09E-04	-	3.28E-04	4.37E-04	2.19E-04
Concrete Saw to 11"(wo Blade)	OMF	11	OMF	-	-	1.09E-03	1.09E-03	1.09E-03	1.09E-03	1.09E-03	1.09E-03	1.09E-03	1.09E-03	1.09E-03	1.09E-03	-	3.27E-03	4.37E-03	2.18E-03
Concrete Work Tools	OMF	0	OMF	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Delmag D100-13 265K FT-LB	OMF	55	OMF	-	-	1.26E-03	1.26E-03	1.26E-03	1.26E-03	1.26E-03	1.26E-03	1.26E-03	1.26E-03	1.26E-03	1.26E-03	-	3.79E-03	5.05E-03	2.53E-03
Delmag D80-23 212K FT-LB	OMF	55	OMF	-	-	1.43E-03	1.43E-03	1.43E-03	1.43E-03	1.43E-03	1.43E-03	1.43E-03	1.43E-03	1.43E-03	1.43E-03	-	4.28E-03	5.71E-03	2.85E-03
Flat Deck Barge - 1074 Ton	OMF	0	OMF	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
GroveRT700B 36.3MT RT Crane	OMF	177.1	OMF	-	-	1.01E-04	1.01E-04	1.01E-04	1.01E-04	1.01E-04	1.01E-04	1.01E-04	1.01E-04	1.01E-04	1.01E-04	-	3.03E-04	4.04E-04	2.02E-04
GroveRT750E 50MT RT Crane	OMF	200	OMF	-	-	5.38E-04	5.38E-04	5.38E-04	5.38E-04	5.38E-04	5.38E-04	5.38E-04	5.38E-04	5.38E-04	5.38E-04	-	1.61E-03	2.15E-03	1.08E-03
Manitowoc 777 181.4 MT	OMF	340	OMF	-	-	4.34E-03	4.34E-03	4.34E-03	4.34E-03	4.34E-03	4.34E-03	4.34E-03	4.34E-03	4.34E-03	4.34E-03	-	1.30E-02	1.74E-02	8.68E-03
Plate Compactor 25 in 11HP	OMF	4.8	OMF	-	-	2.64E-05	2.64E-05	2.64E-05	2.64E-05	2.64E-05	2.64E-05	2.64E-05	2.64E-05	2.64E-05	2.64E-05	-	7.93E-05	1.06E-04	5.29E-05
Schwing2525 on Trk (181 y/hr	OMF	432	OMF	-	-	4.60E-03	4.60E-03	4.60E-03	4.60E-03	4.60E-03	4.60E-03	4.60E-03	4.60E-03	4.60E-03	4.60E-03	-	1.38E-02	1.84E-02	9.21E-03
WALK-BEHIND FLOOR TROWEL36"	OMF	5.5	OMF	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-	0.00E+00	0.00E+00	0.00E+00
Welding Machine 400 Amp	OMF	0	OMF	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00

	2024	2025	2026
DEMO	0.11	0.00	0.00
PAVE	0.28	0.00	0.00
BULK	0.47	0.39	0.00
DREDGE	1.09	0.64	0.00
MARINE	0.22	0.04	0.00
LAND1	0.25	0.72	0.00
OMF	0.05	0.06	0.03

Delmag D80-23 212K FT-LB	4	55	BULK	-	2.52E-02	2.52E-02	2.52E-02	2.52E-02	2.52E-02	2.52E-02	2.52E-02	2.52E-02	8.39E-03	-	-	-	1.01E-01	8.39E-02	0.00E+00
Flat Deck Barge - 1074 Ton	4	0	BULK	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
FLEX SHAFT CONC VIBRRHP	4	0	BULK	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Flexifloat - 5' x 10' x 20'	4	0	BULK	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Flexifloat - 5' x 10' x 40'	4	0	BULK	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Genie GTH-842 TeLeLift 8000#	4	99	BULK	-	4.23E-03	4.23E-03	4.23E-03	4.23E-03	4.23E-03	4.23E-03	4.23E-03	4.23E-03	1.41E-03	-	-	-	1.69E-02	1.41E-02	0.00E+00
GroveRT700B 36.3MT RT Crane	4	177.1	BULK	-	2.66E-03	2.66E-03	2.66E-03	2.66E-03	2.66E-03	2.66E-03	2.66E-03	2.66E-03	9.10E-04	-	-	-	1.06E-02	8.88E-03	0.00E+00
GroveRT750E 50MT RT Crane	4	200	BULK	-	6.25E-03	6.25E-03	6.25E-03	6.25E-03	6.25E-03	6.25E-03	6.25E-03	6.25E-03	2.10E-03	-	-	-	2.50E-02	2.09E-02	0.00E+00
Hilti Tools, Misc.	4	0	BULK	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Hydraulic Jack 50 Ton	4	0	BULK	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
I.C.E. 1412B Vibratory Hamme	4	550	BULK	-	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01	5.44E-02	-	-	-	6.52E-01	5.44E-01	0.00E+00
JLG 400S MANLIFT	4	82	BULK	-	1.85E-02	1.85E-02	1.85E-02	1.85E-02	1.85E-02	1.85E-02	1.85E-02	1.85E-02	6.18E-03	-	-	-	7.40E-02	6.17E-02	0.00E+00
Manitowoc 999 250 MT	4	400	BULK	-	5.74E-02	5.74E-02	5.74E-02	5.74E-02	5.74E-02	5.74E-02	5.74E-02	5.74E-02	1.91E-02	-	-	-	2.30E-01	1.91E-01	0.00E+00
Schwing2525 on Trk (181 y/hr	4	432	BULK	-	2.45E-02	2.45E-02	2.45E-02	2.45E-02	2.45E-02	2.45E-02	2.45E-02	2.45E-02	8.17E-03	-	-	-	9.81E-02	8.17E-02	0.00E+00
SWEEPER ATTACH	4	0	BULK	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
TT 50K w/21CY Dump Trailer	4	8	BULK	-	2.18E-03	2.18E-03	2.18E-03	2.18E-03	2.18E-03	2.18E-03	2.18E-03	2.18E-03	7.28E-04	-	-	-	8.74E-03	7.28E-03	0.00E+00
Welding Machine 400 Amp	4	0	BULK	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Dredging- Sub Phase 8			DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Clamshell 10CY Rehandling	8	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 330F Crawler Medium Exc	8	239	DREDGE	-	-	-	2.07E-02	-	-	-	-	-	-	-	-	-	2.07E-02	0.00E+00	0.00E+00
CAT 385C Crawler Large Exca	8	530	DREDGE	-	-	-	6.19E-02	-	-	-	-	-	-	-	-	-	6.19E-02	0.00E+00	0.00E+00
Generator 50 kW Enclosed	8	68	DREDGE	-	-	-	6.06E-02	-	-	-	-	-	-	-	-	-	6.06E-02	0.00E+00	0.00E+00
Flat Deck Barge - 3102 Ton	8	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
SCOW 8,000 CY	8	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
PUSH BOAT 21-FT 435HP	8	150	DREDGE	-	-	-	5.55E-01	-	-	-	-	-	-	-	-	-	5.55E-01	0.00E+00	0.00E+00
BAKER TANK 21K GAL	8	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Suct & Disch 3" Hose 25 ft	8	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Pump 3 in Subm 6HP	8	6	DREDGE	-	-	-	5.75E-03	-	-	-	-	-	-	-	-	-	5.75E-03	0.00E+00	0.00E+00
Burning Outfit	8	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Elec Chain Hoist 10T 2Spd	8	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Pressure Washer 3,000 psi	8	11	DREDGE	-	-	-	1.07E-02	-	-	-	-	-	-	-	-	-	1.07E-02	0.00E+00	0.00E+00
Welding Machine 400 Amp	8	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
VOLVO A25F 6x6 Articulated 15-19CY	8	315	DREDGE	-	-	-	2.11E-02	-	-	-	-	-	-	-	-	-	2.11E-02	0.00E+00	0.00E+00
On-Hwy Dump - 18 CY Triax	8	310	DREDGE	-	-	-	2.91E-01	-	-	-	-	-	-	-	-	-	2.91E-01	0.00E+00	0.00E+00
Air Compressor 375 cfm	8	117	DREDGE	-	-	-	6.62E-02	-	-	-	-	-	-	-	-	-	6.62E-02	0.00E+00	0.00E+00
CAT D6M XL Dozer	8	153	DREDGE	-	-	-	6.25E-02	-	-	-	-	-	-	-	-	-	6.25E-02	0.00E+00	0.00E+00
CAT 950G Wheel Loader 4CY	8	180	DREDGE	-	-	-	5.67E-02	-	-	-	-	-	-	-	-	-	5.67E-02	0.00E+00	0.00E+00
CAT 980K Wheel Loader 7 CY	8	367.44	DREDGE	-	-	-	1.15E-01	-	-	-	-	-	-	-	-	-	1.15E-01	0.00E+00	0.00E+00
Dredging- Sub Phase 9			DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Air Compressor 375 cfm	9	117	DREDGE	-	-	-	7.82E-02	-	-	-	-	-	-	-	-	-	7.82E-02	0.00E+00	0.00E+00
BAKER TANK 21K GAL	9	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Burning Outfit	9	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 330F Crawler Medium Exc	9	239	DREDGE	-	-	-	2.45E-02	-	-	-	-	-	-	-	-	-	2.45E-02	0.00E+00	0.00E+00
CAT 385C Crawler Large Exca	9	530	DREDGE	-	-	-	7.30E-02	-	-	-	-	-	-	-	-	-	7.30E-02	0.00E+00	0.00E+00
CAT 950G Wheel Loader 4CY	9	180	DREDGE	-	-	-	6.71E-02	-	-	-	-	-	-	-	-	-	6.71E-02	0.00E+00	0.00E+00
CAT 980K Wheel Loader 7 CY	9	367.44	DREDGE	-	-	-	1.36E-01	-	-	-	-	-	-	-	-	-	1.36E-01	0.00E+00	0.00E+00
CAT D6M XL Dozer	9	153	DREDGE	-	-	-	7.40E-02	-	-	-	-	-	-	-	-	-	7.40E-02	0.00E+00	0.00E+00
Clamshell 10CY Rehandling	9	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Elec Chain Hoist 10T 2Spd	9	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Flat Deck Barge - 3102 Ton	9	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Generator 50 kW Enclosed	9	68	DREDGE	-	-	-	7.17E-02	-	-	-	-	-	-	-	-	-	7.17E-02	0.00E+00	0.00E+00
On-Hwy Dump - 18 CY Triax	9	310	DREDGE	-	-	-	3.44E-01	-	-	-	-	-	-	-	-	-	3.44E-01	0.00E+00	0.00E+00
Pressure Washer 3,000 psi	9	11	DREDGE	-	-	-	1.26E-02	-	-	-	-	-	-	-	-	-	1.26E-02	0.00E+00	0.00E+00
Pump 3 in Subm 6HP	9	6	DREDGE	-	-	-	6.80E-03	-	-	-	-	-	-	-	-	-	6.80E-03	0.00E+00	0.00E+00
PUSH BOAT 21-FT 435HP	9	150	DREDGE	-	-	-	6.54E-01	-	-	-	-	-	-	-	-	-	6.54E-01	0.00E+00	0.00E+00
SCOW 8,000 CY	9	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Suct & Disch 3" Hose 25 ft	9	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
VOLVO A25F 6x6 Articulated 15-19CY	9	315	DREDGE	-	-	-	2.50E-02	-	-	-	-	-	-	-	-	-	2.50E-02	0.00E+00	0.00E+00
Welding Machine 400 Amp	9	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Dredging- Sub Phase 10			DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Air Compressor 375 cfm	10	117	DREDGE	-	-	-	2.08E-02	-	-	-	-	-	-	-	-	-	2.08E-02	0.00E+00	0.00E+00
BAKER TANK 21K GAL	10	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Burning Outfit	10	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 330F Crawler Medium Exc	10	239	DREDGE	-	-	-	6.15E-03	-	-	-	-	-	-	-	-	-	6.15E-03	0.00E+00	0.00E+00
CAT 385C Crawler Large Exca	10	530	DREDGE	-	-	-	2.14E-02	-	-	-	-	-	-	-	-	-	2.14E-02	0.00E+00	0.00E+00
CAT 950G Wheel Loader 4CY	10	180	DREDGE	-	-	-	1.68E-02	-	-	-	-	-	-	-	-	-	1.68E-02	0.00E+00	0.00E+00
CAT 980K Wheel Loader 7 CY	10	367.44	DREDGE	-	-	-	3.40E-02	-	-	-	-	-	-	-	-	-	3.40E-02	0.00E+00	0.00E+00
CAT D6M XL Dozer	10	153	DREDGE	-	-	-	1.85E-02	-	-	-	-	-	-	-	-	-	1.85E-02	0.00E+00	0.00E+00
Clamshell 10CY Rehandling	10	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Elec Chain Hoist 10T 2Spd	10	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Flat Deck Barge - 3102 Ton	10	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Generator 50 kW Enclosed	10	68	DREDGE	-	-	-	1.80E-02	-	-	-	-	-	-	-	-	-	1.80E-02	0.00E+00	0.00E+00
On-Hwy Dump - 18 CY Triax	10	310	DREDGE	-	-	-	8.61E-02	-	-	-	-	-	-	-	-	-	8.61E-02	0.00E+00	0.00E+00
Pressure Washer 3,000 psi	10	11	DREDGE	-	-	-	3.68E-03	-	-	-	-	-	-	-	-	-	3.68E-03	0.00E+00	0.00E+00
Pump 3 in Subm 6HP	10	6	DREDGE	-	-	-	1.71E-03	-	-	-	-	-	-	-	-	-	1.71E-03	0.00E+00	0.00E+00
PUSH BOAT 21-FT 435HP	10	150	DREDGE	-	-	-	1.92E-01	-	-	-	-	-	-	-	-	-	1.92E-01	0.00E+00	0.00E+00
SCOW 8,000 CY	10	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Suct & Disch 3" Hose 25 ft	10	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
VOLVO A25F 6x6 Articulated 15-19CY	10	315	DREDGE	-	-	-	6.27E-03	-	-	-	-	-	-	-	-	-	6.27E-03	0.00E+00	0.00E+00
Welding Machine																			

CAT 385C Crawler Large Exca	11	530	DREDGE	-	-	-	-	-	3.63E-02	-	-	-	-	-	-	-	-	3.63E-02	0.00E+00	0.00E+00
Generator 50 kW Enclosed	11	68	DREDGE	-	-	-	-	-	2.59E-02	-	-	-	-	-	-	-	-	2.59E-02	0.00E+00	0.00E+00
Flat Deck Barge - 3102 Ton	11	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
SCOW 8,000 CY	11	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
PUSH BOAT 21-FT 435HP	11	150	DREDGE	-	-	-	-	-	3.25E-01	-	-	-	-	-	-	-	-	3.25E-01	0.00E+00	0.00E+00
BAKER TANK 21K GAL	11	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Suct & Disch 3" Hose 25 ft	11	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Pump 3 in Subm 6HP	11	6	DREDGE	-	-	-	-	-	2.46E-03	-	-	-	-	-	-	-	-	2.46E-03	0.00E+00	0.00E+00
Burning Outfit	11	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Elec Chain Hoist 10T 2Spd	11	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Pressure Washer 3.000 psi	11	11	DREDGE	-	-	-	-	-	6.25E-03	-	-	-	-	-	-	-	-	6.25E-03	0.00E+00	0.00E+00
Welding Machine 400 Amp	11	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
VOLVO A25F 6x6 Articulated 15-19CY	11	315	DREDGE	-	-	-	-	-	9.02E-03	-	-	-	-	-	-	-	-	9.02E-03	0.00E+00	0.00E+00
On-Hwy Dump - 18 CY Triax	11	310	DREDGE	-	-	-	-	-	1.24E-01	-	-	-	-	-	-	-	-	1.24E-01	0.00E+00	0.00E+00
Air Compressor 375 cfm	11	117	DREDGE	-	-	-	-	-	3.21E-02	-	-	-	-	-	-	-	-	3.21E-02	0.00E+00	0.00E+00
CAT D6M XL Dozer	11	153	DREDGE	-	-	-	-	-	2.67E-02	-	-	-	-	-	-	-	-	2.67E-02	0.00E+00	0.00E+00
CAT 950G Wheel Loader 4CY	11	180	DREDGE	-	-	-	-	-	2.42E-02	-	-	-	-	-	-	-	-	2.42E-02	0.00E+00	0.00E+00
CAT 980K Wheel Loader 7 CY	11	367.44	DREDGE	-	-	-	-	-	4.90E-02	-	-	-	-	-	-	-	-	4.90E-02	0.00E+00	0.00E+00
Dredging - Sub Phase 12			DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Air Compressor 375 cfm	12	117	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	4.10E-02	0.00E+00
BAKER TANK 21K GAL	12	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Burning Outfit	12	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 330F Crawler Medium Exc	12	239	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	9.65E-03	0.00E+00
CAT 385C Crawler Large Exca	12	530	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	5.52E-02	0.00E+00
CAT 950G Wheel Loader 4CY	12	180	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	2.64E-02	0.00E+00
CAT 980K Wheel Loader 7 CY	12	367.44	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	5.34E-02	0.00E+00
CAT D6M XL Dozer	12	153	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	2.90E-02	0.00E+00
Clamshell 10CY Rehandling	12	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Elec Chain Hoist 10T 2Spd	12	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Flat Deck Barge - 3102 Ton	12	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Generator 50 kW Enclosed	12	68	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	2.82E-02	0.00E+00
On-Hwy Dump - 18 CY Triax	12	310	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	1.35E-01	0.00E+00
Pressure Washer 3.000 psi	12	11	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	9.51E-03	0.00E+00
Pump 3 in Subm 6HP	12	6	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	2.68E-03	0.00E+00
PUSH BOAT 21-FT 435HP	12	150	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	4.94E-01	0.00E+00
SCOW 8,000 CY	12	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Suct & Disch 3" Hose 25 ft	12	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
VOLVO A25F 6x6 Articulated 15-19CY	12	315	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	9.84E-03	0.00E+00
Welding Machine 400 Amp	12	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Pier 35 Dredging - Sub Phase 12A			DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Air Compressor 375 cfm	12A	117	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	7.49E-02	0.00E+00
BAKER TANK 21K GAL	12A	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Burning Outfit	12A	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 330F Crawler Medium Exc	12A	239	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	1.76E-02	0.00E+00
CAT 385C Crawler Large Exca	12A	530	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	1.01E-01	0.00E+00
CAT 950G Wheel Loader 4CY	12A	180	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	4.82E-02	0.00E+00
CAT 980K Wheel Loader 7 CY	12A	367.44	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	9.75E-02	0.00E+00
CAT D6M XL Dozer	12A	153	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	5.31E-02	0.00E+00
Clamshell 10CY Rehandling	12A	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Elec Chain Hoist 10T 2Spd	12A	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Flat Deck Barge - 3102 Ton	12A	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Generator 50 kW Enclosed	12A	68	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	5.15E-02	0.00E+00
On-Hwy Dump - 18 CY Triax	12A	310	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	2.47E-01	0.00E+00
Pressure Washer 3.000 psi	12A	11	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	1.74E-02	0.00E+00
Pump 3 in Subm 6HP	12A	6	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	4.89E-03	0.00E+00
PUSH BOAT 21-FT 435HP	12A	150	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	9.05E-01	0.00E+00
SCOW 8,000 CY	12A	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Suct & Disch 3" Hose 25 ft	12A	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
VOLVO A25F 6x6 Articulated 15-19CY	12A	315	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	1.80E-02	0.00E+00
Welding Machine 400 Amp	12A	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Marine Improvements - Sub Phase 2			MARINE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Air Compressor 185 cfm	2	49	MARINE	-	-	-	-	-	8.48E-04	8.48E-04	8.48E-04	8.48E-04	8.48E-04	8.48E-04	1.21E-04	-	-	3.39E-03	9.70E-04	0.00E+00
BAKER TANK 21K GAL	2	0	MARINE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Bomag 65S-2 WalkBhdn Roller 26	2	5.9	MARINE	-	-	-	-	-	1.61E-05	1.61E-05	1.61E-05	1.61E-05	1.61E-05	1.61E-05	1.61E-05	-	-	6.42E-05	3.21E-05	0.00E+00
Burning Outfit	2	0	MARINE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 320 Crawler Medium Exc	2	164	MARINE	-	-	-	-	-	3.61E-05	3.61E-05	3.61E-05	3.61E-05	3.61E-05	3.61E-05	3.61E-05	-	-	1.45E-04	7.23E-05	0.00E+00
CAT 330F Crawler Medium Exc	2	239	MARINE	-	-	-	-	-	1.77E-04	1.77E-04	1.77E-04	1.77E-04	1.77E-04	1.77E-04	4.43E-05	-	-	7.08E-04	2.21E-04	0.00E+00
CAT 345D Crawler Large Exca	2	380	MARINE	-	-	-	-	-	7.78E-04	7.78E-04	7.78E-04	7.78E-04	7.78E-04	7.78E-04	1.11E-04	-	-	3.11E-03	8.89E-04	0.00E+00
CAT 385C Crawler Large Exca	2	530	MARINE	-	-	-	-	-	2.33E-03	2.33E-03	2.33E-03	2.33E-03	2.33E-03	2.33E-03	3.10E-04	-	-	9.30E-03	2.64E-03	0.00E+00
CAT 430E 4WD Backhoe	2	111	MARINE	-	-	-	-	-	5.81E-05	5.81E-05	5.81E-05	5.81E-05	5.81E-05	5.81E-05	5.81E-05	-	-	2.32E-04	1.16E-04	0.00E+00
CAT 950G Wheel Loader 4CY	2	180	MARINE	-	-	-	-	-	1.94E-04	1.94E-04	1.94E-04	1.94E-04	1.94E-04	1.94E-04	4.85E-05	-	-	7.75E-04	2.42E-04	0.00E+00
CAT 966K Wheel Loader 5.5CY	2	267	MARINE	-	-	-	-	-	2.50E-04	2.50E-04	2.50E-04	2.50E-04	2.50E-04	2.50E-04	1.25E-04	-	-	1.00E-03	3.75E-04	0.00E+00
CAT 980K Wheel Loader 7 CY	2	367.44	MARINE	-	-	-	-	-	9.80E-04	9.80E-04	9.80E-04	9.80E-04	9.80E-04	9.80E-04	2.45E-04	-	-	3.92E-03	1.22E-03	0.00E+00
CAT D3K LGP Dozer	2	81	MARINE	-	-	-	-	-	5.99E-05	5.99E-05	5.99E-05	5.99E-05	5.99E-05	5.99E-05	5.99E-05	-	-	2.40E-04	1.20E-04	0.00E+00
Concrete Texture Machine	2	9	MARINE	-	-	-	-	-	4.90E-05	4.90E-05	4.90E-05	4.90E-05	4.90E-05	4.90E-05	2.45E-05	-	-	1.96E-04	7.35E-05	0.00E+00
Concrete Work Tools	2	0	MARINE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Delmag D80-23 212K FT-LB	2	55	MARINE	-	-	-	-	-	7.37E-03	7.37E-03	7.37E-03	7.37E-03	7.37E-03	7.37E-03	1.02E-03	-	-	2.95E-02		

Generator 50 kW Enclosed	2	68	MARINE	-	5.18E-04	5.18E-04	5.18E-04	5.18E-04	5.18E-04	1.30E-04	-	-	-	-	-	2.07E-03	6.48E-04	0.00E+00
Genie GTH-842 TeleLift 8000#	2	99	MARINE	-	2.25E-04	2.25E-04	2.25E-04	2.25E-04	2.25E-04	5.63E-05	-	-	-	-	-	9.02E-04	2.82E-04	0.00E+00
GroveRT700B 36.3MT RT Crane	2	177.1	MARINE	-	2.50E-03	2.50E-03	2.50E-03	2.50E-03	2.50E-03	3.41E-04	-	-	-	-	-	1.00E-02	2.85E-03	0.00E+00
GroveRT750E 50MT RT Crane	2	200	MARINE	-	2.78E-03	2.78E-03	2.78E-03	2.78E-03	2.78E-03	3.86E-04	-	-	-	-	-	1.11E-02	3.17E-03	0.00E+00
Hilti Tools, Misc.	2	0	MARINE	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
I.C.E. 1412B Vibratory Hamme	2	550	MARINE	-	1.13E-02	1.13E-02	1.13E-02	1.13E-02	1.13E-02	1.99E-03	-	-	-	-	-	4.51E-02	1.33E-02	0.00E+00
JLG 400S MANLIFT	2	82	MARINE	-	1.57E-02	1.57E-02	1.57E-02	1.57E-02	1.57E-02	2.14E-03	-	-	-	-	-	6.29E-02	1.79E-02	0.00E+00
Manitowoc 555 136 MT	2	340	MARINE	-	2.38E-03	2.38E-03	2.38E-03	2.38E-03	2.38E-03	3.97E-04	-	-	-	-	-	9.52E-03	2.78E-03	0.00E+00
Manitowoc 777 181.4 MT	2	340	MARINE	-	4.76E-03	4.76E-03	4.76E-03	4.76E-03	4.76E-03	7.93E-04	-	-	-	-	-	1.90E-02	5.55E-03	0.00E+00
Manitowoc 999 250 MT	2	400	MARINE	-	1.68E-02	1.68E-02	1.68E-02	1.68E-02	1.68E-02	2.33E-03	-	-	-	-	-	6.72E-02	1.91E-02	0.00E+00
On-Hwy Dump - 18 CY Triax	2	310	MARINE	-	2.18E-03	2.18E-03	2.18E-03	2.18E-03	2.18E-03	3.11E-04	-	-	-	-	-	8.70E-03	2.49E-03	0.00E+00
Plate Compactor 25 in 11HP	2	4.8	MARINE	-	9.59E-06	9.59E-06	9.59E-06	9.59E-06	9.59E-06	9.59E-06	-	-	-	-	-	3.84E-05	1.92E-05	0.00E+00
Portable Mixer 11CF	2	0	MARINE	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Pressure Washer 3.000 psi	2	11	MARINE	-	3.47E-04	3.47E-04	3.47E-04	3.47E-04	3.47E-04	5.34E-05	-	-	-	-	-	1.39E-03	4.01E-04	0.00E+00
Pump 3 in Subm 6HP	2	6	MARINE	-	4.91E-05	4.91E-05	4.91E-05	4.91E-05	4.91E-05	1.23E-05	-	-	-	-	-	1.96E-04	6.14E-05	0.00E+00
PUSH BOAT 21-FT 435HP	2	150	MARINE	-	1.04E-02	1.04E-02	1.04E-02	1.04E-02	1.04E-02	1.39E-03	-	-	-	-	-	4.17E-02	1.18E-02	0.00E+00
Schwing2525 on Trk (181 y/hr	2	432	MARINE	-	5.11E-03	5.11E-03	5.11E-03	5.11E-03	5.11E-03	1.02E-03	-	-	-	-	-	2.04E-02	6.13E-03	0.00E+00
SCOW 8,000 CY	2	0	MARINE	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Suct & Disch 3" Hose 25 ft	2	0	MARINE	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Swing Lead-100'(11x33x36)	2	0	MARINE	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
VOLVO A25F 6x6 Articulated 15-19CY	2	315	MARINE	-	1.80E-04	1.80E-04	1.80E-04	1.80E-04	1.80E-04	4.51E-05	-	-	-	-	-	7.22E-04	2.26E-04	0.00E+00
WALK BEHIND BUGGY 12CF	2	0	MARINE	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
WALK-BEHIND FLOOR TROWEL36"	2	5.5	MARINE	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Welding Machine 400 Amp	2	0	MARINE	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Marine Improvements - Sub Phase 7A			MARINE	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Air Compressor 185 cfm	7A	49	MARINE	-	6.06E-05	6.06E-05	6.06E-05	6.06E-05	6.06E-05	6.06E-05	-	-	-	-	-	1.82E-04	0.00E+00	0.00E+00
BOBCAT S130 Skid Steer	7A	49	MARINE	-	4.30E-04	5.73E-04	2.51E-04	2.51E-04	2.51E-04	2.51E-04	-	-	-	-	-	1.25E-03	0.00E+00	0.00E+00
Burning Outfit	7A	0	MARINE	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CASAGRANDE B250 CRAWLER MP RIG	7A	451	MARINE	-	1.32E-02	1.84E-02	7.63E-03	7.63E-03	7.63E-03	7.63E-03	-	-	-	-	-	3.93E-02	0.00E+00	0.00E+00
CAT 320 Crawler Medium Exc	7A	164	MARINE	-	1.05E-03	1.45E-03	6.14E-04	6.14E-04	6.14E-04	6.14E-04	-	-	-	-	-	3.11E-03	0.00E+00	0.00E+00
CAT 330F Crawler Medium Exc	7A	239	MARINE	-	5.31E-04	7.08E-04	3.10E-04	3.10E-04	3.10E-04	3.10E-04	-	-	-	-	-	1.55E-03	0.00E+00	0.00E+00
CAT 430E 4WD Backhoe	7A	111	MARINE	-	3.43E-03	4.82E-03	1.97E-03	1.97E-03	1.97E-03	1.97E-03	-	-	-	-	-	1.02E-02	0.00E+00	0.00E+00
CAT 950G Wheel Loader 4CY	7A	180	MARINE	-	5.33E-04	7.27E-04	3.39E-04	3.39E-04	3.39E-04	3.39E-04	-	-	-	-	-	1.60E-03	0.00E+00	0.00E+00
CAT 980K Wheel Loader 7 CY	7A	367.44	MARINE	-	7.35E-04	9.80E-04	4.90E-04	4.90E-04	4.90E-04	4.90E-04	-	-	-	-	-	2.20E-03	0.00E+00	0.00E+00
CAT D3K LGP Dozer	7A	81	MARINE	-	7.19E-04	9.59E-04	4.20E-04	4.20E-04	4.20E-04	4.20E-04	-	-	-	-	-	2.10E-03	0.00E+00	0.00E+00
CAT H120CS Hydr Impact 3000 FTLB	7A	0	MARINE	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Concrete Saw to 6"(wo Blade)	7A	11	MARINE	-	1.50E-04	1.80E-04	8.98E-05	8.98E-05	8.98E-05	8.98E-05	-	-	-	-	-	4.19E-04	0.00E+00	0.00E+00
Concrete Work Tools	7A	0	MARINE	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Delmag D80-23 212K FT-LB	7A	55	MARINE	-	1.94E-03	2.76E-03	1.13E-03	1.13E-03	1.13E-03	1.13E-03	-	-	-	-	-	5.83E-03	0.00E+00	0.00E+00
Flat Deck Barge - 1074 Ton	7A	0	MARINE	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Flatbed Truck - 15 Ton	7A	155	MARINE	-	1.38E-03	1.93E-03	7.99E-04	7.99E-04	7.99E-04	7.99E-04	-	-	-	-	-	4.11E-03	0.00E+00	0.00E+00
FLEX SHAFT CONC VIBRHHP	7A	0	MARINE	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Flexifloat - 5' x 10' x 40'	7A	0	MARINE	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Generator 5000 w	7A	7.5	MARINE	-	4.62E-04	6.37E-04	2.71E-04	2.71E-04	2.71E-04	2.71E-04	-	-	-	-	-	1.37E-03	0.00E+00	0.00E+00
Genie GTH-842 TeleLift 8000#	7A	99	MARINE	-	5.07E-04	6.76E-04	2.82E-04	2.82E-04	2.82E-04	2.82E-04	-	-	-	-	-	1.47E-03	0.00E+00	0.00E+00
GroveRT700B 36.3MT RT Crane	7A	177.1	MARINE	-	1.56E-03	2.16E-03	8.73E-04	8.73E-04	8.73E-04	8.73E-04	-	-	-	-	-	4.59E-03	0.00E+00	0.00E+00
GroveRT750E 50MT RT Crane	7A	200	MARINE	-	1.41E-03	1.97E-03	8.14E-04	8.14E-04	8.14E-04	8.14E-04	-	-	-	-	-	4.20E-03	0.00E+00	0.00E+00
I.C.E. 1412B Vibratory Hamme	7A	550	MARINE	-	1.26E-02	1.79E-02	7.29E-03	7.29E-03	7.29E-03	7.29E-03	-	-	-	-	-	3.78E-02	0.00E+00	0.00E+00
I.C.E. 44-30 Vibratory Hammer	7A	325	MARINE	-	2.95E-03	4.18E-03	1.71E-03	1.71E-03	1.71E-03	1.71E-03	-	-	-	-	-	8.84E-03	0.00E+00	0.00E+00
JLG 400S MANLIFT	7A	82	MARINE	-	7.51E-04	1.04E-03	4.62E-04	4.62E-04	4.62E-04	4.62E-04	-	-	-	-	-	2.25E-03	0.00E+00	0.00E+00
Manitowoc 999 250 MT	7A	400	MARINE	-	4.43E-03	6.30E-03	2.57E-03	2.57E-03	2.57E-03	2.57E-03	-	-	-	-	-	1.33E-02	0.00E+00	0.00E+00
On-Hwy PU 4x4 - 1.25T Crew	7A	300	MARINE	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
OSR SLURRY MIXER 5CYD W/SILO	7A	27	MARINE	-	3.37E-03	4.70E-03	1.94E-03	1.94E-03	1.94E-03	1.94E-03	-	-	-	-	-	1.00E-02	0.00E+00	0.00E+00
OSR SLURRY TANK (10MG-15MG)	7A	0	MARINE	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
OSR TECHNIWELL PUMP	7A	36	MARINE	-	3.75E-03	5.23E-03	2.17E-03	2.17E-03	2.17E-03	2.17E-03	-	-	-	-	-	1.11E-02	0.00E+00	0.00E+00
Pump 3 in Centr 20k gph	7A	5	MARINE	-	5.73E-04	7.98E-04	3.27E-04	3.27E-04	3.27E-04	3.27E-04	-	-	-	-	-	1.70E-03	0.00E+00	0.00E+00
Schwing2525 on Trk (181 y/hr	7A	432	MARINE	-	6.13E-03	8.68E-03	3.58E-03	3.58E-03	3.58E-03	3.58E-03	-	-	-	-	-	1.84E-02	0.00E+00	0.00E+00
Suct & Disch 3" Hose 25 ft	7A	0	MARINE	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
SWEEPER ATTACH	7A	0	MARINE	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
TT 50K w/21CY Dump Trailer	7A	8	MARINE	-	3.69E-04	5.15E-04	2.14E-04	2.14E-04	2.14E-04	2.14E-04	-	-	-	-	-	1.10E-03	0.00E+00	0.00E+00
WALK-BEHIND FLOOR TROWEL36"	7A	5.5	MARINE	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Welding Machine 400 Amp	7A	0	MARINE	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Marine Improvements - Sub Phase 0			MARINE	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Air Compressor 185 cfm	7B	49	MARINE	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
BOBCAT S130 Skid Steer	7B	49	MARINE	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Burning Outfit	7B	0	MARINE	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CASAGRANDE B250 CRAWLER MP RIG	7B	451	MARINE	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 320 Crawler Medium Exc	7B	164	MARINE	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 330F Crawler Medium Exc	7B	239	MARINE	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 430E 4WD Backhoe	7B	111	MARINE	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 950G Wheel Loader 4CY	7B	180	MAR															

GroveRT700B 36.3MT RT Crane	7B	177.1	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
GroveRT750E 50MT RT Crane	7B	200	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Hydraulic Jack 50 Ton	7B	0	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
I.C.E. 1412B Vibratory Hamme	7B	550	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
JLG 400S MANLIFT	7B	82	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Manitowoc 555 136 MT	7B	340	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Manitowoc 999 250 MT	7B	400	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
On-Hwy PU 4x4 - 1.25T Crew	7B	300	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
OSR SLURRY MIXER 5CYD W/SILO	7B	27	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
OSR SLURRY TANK (10MG-15MG)	7B	0	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
OSR TECHNIWELL PUMP	7B	36	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Pump 3 in Centr 20k gph	7B	5	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Schwing2525 on Trk (181 y/hr	7B	432	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Suct & Disch 3" Hose 25 ft	7B	0	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
SWEEPER ATTACH	7B	0	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
TT 50K w/21CY Dump Trailer	7B	8	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
WALK-BEHIND FLOOR TROWEL36"	7B	5.5	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Welding Machine 400 Amp	7B	0	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Land Improvements - Sub Phase 1			LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Air Compressor 185 cfm	1	49	LAND1	-	-	-	1.76E-03	1.76E-03	1.76E-03	1.76E-03	1.76E-03	4.85E-04	-	-	-	-	-	3.51E-03	4.00E-03	0.00E+00
Bomag 65S-2 WalkBhnd Roller 26	1	5.9	LAND1	-	-	-	2.09E-04	2.09E-04	2.09E-04	2.09E-04	6.42E-05	-	-	-	-	-	-	4.17E-04	4.82E-04	0.00E+00
Burning Outfit	1	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 320 Crawler Medium Exc	1	164	LAND1	-	-	-	1.08E-04	1.08E-04	1.08E-04	1.08E-04	3.61E-05	-	-	-	-	-	-	2.17E-04	2.53E-04	0.00E+00
CAT 330F Crawler Medium Exc	1	239	LAND1	-	-	-	1.11E-03	1.11E-03	1.11E-03	1.11E-03	3.10E-04	-	-	-	-	-	-	2.21E-03	2.52E-03	0.00E+00
CAT 345D Crawler Large Exca	1	380	LAND1	-	-	-	2.78E-03	2.78E-03	2.78E-03	2.78E-03	7.78E-04	-	-	-	-	-	-	5.56E-03	6.34E-03	0.00E+00
CAT 434D Tandem Roller 59"	1	83	LAND1	-	-	-	8.76E-04	8.76E-04	8.76E-04	8.76E-04	2.69E-04	-	-	-	-	-	-	1.75E-03	2.02E-03	0.00E+00
CAT 950G Wheel Loader 4CY	1	180	LAND1	-	-	-	1.74E-03	1.74E-03	1.74E-03	1.74E-03	4.85E-04	-	-	-	-	-	-	3.49E-03	3.97E-03	0.00E+00
CAT 963D LGP Track Loader	1	110	LAND1	-	-	-	1.44E-03	1.44E-03	1.44E-03	1.44E-03	4.03E-04	-	-	-	-	-	-	2.88E-03	3.28E-03	0.00E+00
CAT D3K LGP Dozer	1	81	LAND1	-	-	-	1.26E-03	1.26E-03	1.26E-03	1.26E-03	3.60E-04	-	-	-	-	-	-	2.52E-03	2.88E-03	0.00E+00
CAT D4G XL Dozer	1	87	LAND1	-	-	-	3.86E-04	3.86E-04	3.86E-04	3.86E-04	1.29E-04	-	-	-	-	-	-	7.72E-04	9.01E-04	0.00E+00
Concrete Saw to 11"(wo Blade)	1	11	LAND1	-	-	-	3.02E-03	3.02E-03	3.02E-03	3.02E-03	8.68E-04	-	-	-	-	-	-	6.05E-03	6.91E-03	0.00E+00
Concrete Work Tools	1	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Delmag D100-13 265K FT-LB	1	55	LAND1	-	-	-	1.33E-02	1.33E-02	1.33E-02	1.33E-02	3.79E-03	-	-	-	-	-	-	2.66E-02	3.04E-02	0.00E+00
Delmag D80-23 212K FT-LB	1	55	LAND1	-	-	-	2.14E-02	2.14E-02	2.14E-02	2.14E-02	5.94E-03	-	-	-	-	-	-	4.28E-02	4.87E-02	0.00E+00
Flat Deck Barge - 1074 Ton	1	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Flexifloat - 5' x 10' x 40'	1	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Genie GTH-842 TeleLift 8000#	1	99	LAND1	-	-	-	-	-	-	2.25E-03	2.25E-03	-	-	-	-	-	-	0.00E+00	4.51E-03	0.00E+00
GroveRT700B 36.3MT RT Crane	1	177.1	LAND1	-	-	-	2.54E-03	2.54E-03	2.54E-03	2.54E-03	7.21E-04	-	-	-	-	-	-	5.08E-03	5.80E-03	0.00E+00
GroveRT750E 50MT RT Crane	1	200	LAND1	-	-	-	3.43E-03	3.43E-03	3.43E-03	3.43E-03	9.85E-04	-	-	-	-	-	-	6.85E-03	7.84E-03	0.00E+00
Hilti Tools, Misc.	1	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Hydraulic Jack 50 Ton	1	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
I.C.E. 1412B Vibratory Hamme	1	550	LAND1	-	-	-	-	-	-	8.55E-02	8.55E-02	-	-	-	-	-	-	0.00E+00	1.71E-01	0.00E+00
JLG 400S MANLIFT	1	82	LAND1	-	-	-	3.35E-03	3.35E-03	3.35E-03	3.35E-03	9.25E-04	-	-	-	-	-	-	6.70E-03	7.63E-03	0.00E+00
Manitowoc 777 181.4 MT	1	340	LAND1	-	-	-	5.51E-02	5.51E-02	5.51E-02	5.51E-02	1.53E-02	-	-	-	-	-	-	1.10E-01	1.26E-01	0.00E+00
Plate Compactor 25 in 11HP	1	4.8	LAND1	-	-	-	6.72E-05	6.72E-05	6.72E-05	6.72E-05	1.92E-05	-	-	-	-	-	-	1.34E-04	1.54E-04	0.00E+00
Schwing2525 on Trk (181 y/hr	1	432	LAND1	-	-	-	2.30E-02	2.30E-02	2.30E-02	2.30E-02	6.64E-03	-	-	-	-	-	-	4.60E-02	5.26E-02	0.00E+00
WALK-BEHIND FLOOR TROWEL36"	1	5.5	LAND1	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Welding Machine 400 Amp	1	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Land Improvements - Sub Phase 3			LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Air Compressor 185 cfm	3	49	LAND1	-	-	-	6.06E-04	1.76E-03	1.76E-03	1.76E-03	1.21E-03	-	-	-	-	-	-	2.36E-03	4.73E-03	0.00E+00
Bomag 65S-2 WalkBhnd Roller 26	3	5.9	LAND1	-	-	-	8.03E-05	2.09E-04	2.09E-04	2.09E-04	1.44E-04	-	-	-	-	-	-	2.89E-04	5.62E-04	0.00E+00
Burning Outfit	3	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 320 Crawler Medium Exc	3	164	LAND1	-	-	-	3.61E-05	1.08E-04	1.08E-04	1.08E-04	7.23E-05	-	-	-	-	-	-	1.45E-04	2.89E-04	0.00E+00
CAT 330F Crawler Medium Exc	3	239	LAND1	-	-	-	3.98E-04	1.11E-03	1.11E-03	1.11E-03	7.53E-04	-	-	-	-	-	-	1.51E-03	2.97E-03	0.00E+00
CAT 345D Crawler Large Exca	3	380	LAND1	-	-	-	1.00E-03	2.78E-03	2.78E-03	2.78E-03	1.89E-03	-	-	-	-	-	-	3.78E-03	7.45E-03	0.00E+00
CAT 434D Tandem Roller 59"	3	83	LAND1	-	-	-	3.37E-04	8.76E-04	8.76E-04	8.76E-04	6.06E-04	-	-	-	-	-	-	1.21E-03	2.36E-03	0.00E+00
CAT 950G Wheel Loader 4CY	3	180	LAND1	-	-	-	5.82E-04	1.74E-03	1.74E-03	1.74E-03	1.16E-03	-	-	-	-	-	-	2.33E-03	4.65E-03	0.00E+00
CAT 963D LGP Track Loader	3	110	LAND1	-	-	-	5.18E-04	1.44E-03	1.44E-03	1.44E-03	9.78E-04	-	-	-	-	-	-	1.96E-03	3.86E-03	0.00E+00
CAT D3K LGP Dozer	3	81	LAND1	-	-	-	4.20E-04	1.26E-03	1.26E-03	1.26E-03	8.39E-04	-	-	-	-	-	-	1.68E-03	3.36E-03	0.00E+00
CAT D4G XL Dozer	3	87	LAND1	-	-	-	1.29E-04	3.86E-04	3.86E-04	3.86E-04	2.57E-04	-	-	-	-	-	-	5.15E-04	1.03E-03	0.00E+00
Concrete Saw to 11"(wo Blade)	3	11	LAND1	-	-	-	1.02E-03	3.02E-03	3.02E-03	3.02E-03	2.04E-03	-	-	-	-	-	-	4.04E-03	8.08E-03	0.00E+00
Concrete Work Tools	3	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Delmag D100-13 265K FT-LB	3	55	LAND1	-	-	-	4.50E-03	1.33E-02	1.33E-02	1.33E-02	8.90E-03	-	-	-	-	-	-	1.78E-02	3.55E-02	0.00E+00
Delmag D80-23 212K FT-LB	3	55	LAND1	-	-	-	5.12E-03	1.51E-02	1.51E-02	1.51E-02	1.01E-02	-	-	-	-	-	-	2.03E-02	4.04E-02	0.00E+00
Flat Deck Barge - 1074 Ton	3	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Flexifloat - 5' x 10' x 40'	3	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
GroveRT700B 36.3MT RT Crane	3	177.1	LAND1	-	-	-	7.59E-04	2.20E-03	2.20E-03	2.20E-03	1.48E-03	-	-	-	-	-	-	2.96E-03	5.88E-03	0.00E+00
GroveRT750E 50MT RT Crane	3	200	LAND1	-	-	-	1.16E-03	3.43E-03	3.43E-03	3.43E-03	2.31E-03	-	-	-	-	-	-	4.58E-03	9.17E-03	0.00E+00
Hilti Tools, Misc.	3	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
JLG 400S MANLIFT	3	82	LAND1	-	-	-	1.16E-03	3.35E-03	3.35E-03	3.35E-03	2.									

CAT 980K Wheel Loader 7 CY	13	367.44	LAND1	-	-	-	-	-	-	1.03E-02	-	-	-	-	-	-	-	0.00E+00	1.03E-02	0.00E+00
CAT H120CS Hydr Impact 3000 FTLB	13	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Concrete Saw to 6"(wo Blade)	13	11	LAND1	-	-	-	-	-	-	1.96E-02	-	-	-	-	-	-	-	0.00E+00	1.96E-02	0.00E+00
Concrete Work Tools	13	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Daily Opertd Rent-Grove130MT	13	300	LAND1	-	-	-	-	-	-	3.34E-03	-	-	-	-	-	-	-	0.00E+00	3.34E-03	0.00E+00
Flatbed Tractor/Trailer-38T	13	300	LAND1	-	-	-	-	-	-	5.08E-03	-	-	-	-	-	-	-	0.00E+00	5.08E-03	0.00E+00
Flatbed Truck - 15 Ton	13	155	LAND1	-	-	-	-	-	-	1.01E-03	-	-	-	-	-	-	-	0.00E+00	1.01E-03	0.00E+00
Flatbed Truck - 23 Ton	13	170	LAND1	-	-	-	-	-	-	6.41E-04	-	-	-	-	-	-	-	0.00E+00	6.41E-04	0.00E+00
Generator 5000 w	13	7.5	LAND1	-	-	-	-	-	-	1.21E-02	-	-	-	-	-	-	-	0.00E+00	1.21E-02	0.00E+00
GroveRT750E 50MT RT Crane	13	200	LAND1	-	-	-	-	-	-	7.24E-03	-	-	-	-	-	-	-	0.00E+00	7.24E-03	0.00E+00
JLG 600A MANLIFT	13	82	LAND1	-	-	-	-	-	-	9.01E-03	-	-	-	-	-	-	-	0.00E+00	9.01E-03	0.00E+00
Mobe Crane for Daily Rental	13	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
OSR SLURRY MIXER 5CYD W/SILO	13	27	LAND1	-	-	-	-	-	-	7.45E-03	-	-	-	-	-	-	-	0.00E+00	7.45E-03	0.00E+00
Plate Compactor 25 in 11HP	13	4.8	LAND1	-	-	-	-	-	-	1.07E-02	-	-	-	-	-	-	-	0.00E+00	1.07E-02	0.00E+00
Putzmeister TK30 (31cy/hr) T	13	40	LAND1	-	-	-	-	-	-	9.21E-03	-	-	-	-	-	-	-	0.00E+00	9.21E-03	0.00E+00
ROD BENDER TO #10	13	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Suct & Disch 3" Hose 25 ft	13	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Welding Machine 400 Amp	13	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Land Improvements - Sub Phase 14			LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
16Tt Runabout Service Boat	14	100	LAND1	-	-	-	-	-	2.87E-02	3.20E-02	3.20E-02	3.20E-02	-	-	-	-	-	2.87E-02	9.60E-02	0.00E+00
Air Compressor 185 cfm	14	49	LAND1	-	-	-	-	-	6.67E-04	7.88E-04	7.88E-04	7.88E-04	-	-	-	-	-	6.67E-04	2.36E-03	0.00E+00
Bomag 213D Earth Roller 84"	14	128	LAND1	-	-	-	-	-	5.77E-03	6.51E-03	6.51E-03	6.51E-03	-	-	-	-	-	5.77E-03	1.95E-02	0.00E+00
Bomag 65S-2 WalkBhnd Roller 26	14	5.9	LAND1	-	-	-	-	-	2.52E-03	2.84E-03	2.84E-03	2.84E-03	-	-	-	-	-	2.52E-03	8.52E-03	0.00E+00
Burning Outfit	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 320 Crawler Medium Exc	14	164	LAND1	-	-	-	-	-	6.14E-03	6.94E-03	6.94E-03	6.94E-03	-	-	-	-	-	6.14E-03	2.08E-02	0.00E+00
CAT 430E 4WD Backhoe	14	111	LAND1	-	-	-	-	-	7.61E-03	8.60E-03	8.60E-03	8.60E-03	-	-	-	-	-	7.61E-03	2.58E-02	0.00E+00
CAT 950G Wheel Loader 4CY	14	180	LAND1	-	-	-	-	-	1.10E-02	1.23E-02	1.23E-02	1.23E-02	-	-	-	-	-	1.10E-02	3.69E-02	0.00E+00
CAT 953C LGP Track loader	14	110	LAND1	-	-	-	-	-	7.60E-03	8.58E-03	8.58E-03	8.58E-03	-	-	-	-	-	7.60E-03	2.57E-02	0.00E+00
CAT CR50 CRUSHER	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT D4G XL Dozer	14	87	LAND1	-	-	-	-	-	8.50E-03	9.59E-03	9.59E-03	9.59E-03	-	-	-	-	-	8.50E-03	2.88E-02	0.00E+00
CAT D6M XL Dozer	14	153	LAND1	-	-	-	-	-	5.88E-03	6.63E-03	6.63E-03	6.63E-03	-	-	-	-	-	5.88E-03	1.99E-02	0.00E+00
CAT H90CS Hydr Impact 1000FTLB	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT M318F WHEEL MTD EXCAV	14	171	LAND1	-	-	-	-	-	1.17E-03	1.28E-03	1.28E-03	1.28E-03	-	-	-	-	-	1.17E-03	3.84E-03	0.00E+00
Concrete Saw to 6"(wo Blade)	14	11	LAND1	-	-	-	-	-	2.39E-04	2.69E-04	2.69E-04	2.69E-04	-	-	-	-	-	2.39E-04	8.08E-04	0.00E+00
Concrete Work Tools	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Daily Opertd Rent-Grove130MT	14	300	LAND1	-	-	-	-	-	7.71E-04	9.00E-04	9.00E-04	9.00E-04	-	-	-	-	-	7.71E-04	2.70E-03	0.00E+00
Flat Deck Barge - 1074 Ton	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Flatbed Tractor/Trailer-38T	14	300	LAND1	-	-	-	-	-	5.00E-05	5.00E-05	5.00E-05	5.00E-05	-	-	-	-	-	5.00E-05	1.50E-04	0.00E+00
Generator 100 kW Enclosed	14	169	LAND1	-	-	-	-	-	3.89E-02	4.39E-02	4.39E-02	4.39E-02	-	-	-	-	-	3.89E-02	1.32E-01	0.00E+00
Generator 5000 w	14	7.5	LAND1	-	-	-	-	-	9.24E-04	1.03E-03	1.03E-03	1.03E-03	-	-	-	-	-	9.24E-04	3.10E-03	0.00E+00
Genie GTH-842 TeleLift 8000#	14	99	LAND1	-	-	-	-	-	2.82E-04	2.82E-04	2.82E-04	2.82E-04	-	-	-	-	-	2.82E-04	8.45E-04	0.00E+00
GroveRT700B 36.3MT RT Crane	14	177.1	LAND1	-	-	-	-	-	7.59E-05	7.59E-05	7.59E-05	7.59E-05	-	-	-	-	-	7.59E-05	2.28E-04	0.00E+00
GroveRT890E 81.6MT RT Crane	14	275	LAND1	-	-	-	-	-	2.59E-03	2.89E-03	2.89E-03	2.89E-03	-	-	-	-	-	2.59E-03	8.66E-03	0.00E+00
Hilti Tools, Misc.	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
I.C.E. 44-30 Vibratory Hammer	14	325	LAND1	-	-	-	-	-	4.18E-03	4.66E-03	4.66E-03	4.66E-03	-	-	-	-	-	4.18E-03	1.40E-02	0.00E+00
JD 710L 4WD (2011) Backhoe	14	148	LAND1	-	-	-	-	-	2.79E-03	3.10E-03	3.10E-03	3.10E-03	-	-	-	-	-	2.79E-03	9.29E-03	0.00E+00
Light Plant 30' 4 Lts	14	11.7	LAND1	-	-	-	-	-	6.83E-05	9.11E-05	9.11E-05	9.11E-05	-	-	-	-	-	6.83E-05	2.73E-04	0.00E+00
LITE SHORING BOX	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Manitowoc 555 136 MT	14	340	LAND1	-	-	-	-	-	1.27E-02	1.43E-02	1.43E-02	1.43E-02	-	-	-	-	-	1.27E-02	4.28E-02	0.00E+00
MED SHORING BOX	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Mobe Crane for Daily Rental	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
On-Hwy Dump - 16 CY dbl ax	14	300	LAND1	-	-	-	-	-	1.13E-03	1.25E-03	1.25E-03	1.25E-03	-	-	-	-	-	1.13E-03	3.75E-03	0.00E+00
Plate Compactor 25 in 11HP	14	4.8	LAND1	-	-	-	-	-	3.60E-03	4.05E-03	4.05E-03	4.05E-03	-	-	-	-	-	3.60E-03	1.21E-02	0.00E+00
Portable Mixer 11CF	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Pump 4 in Centr 40k gph	14	10	LAND1	-	-	-	-	-	4.09E-05	4.09E-05	4.09E-05	4.09E-05	-	-	-	-	-	4.09E-05	1.23E-04	0.00E+00
PUSH BOAT 21-FT 435HP	14	150	LAND1	-	-	-	-	-	4.45E-02	5.01E-02	5.01E-02	5.01E-02	-	-	-	-	-	4.45E-02	1.50E-01	0.00E+00
Putzmeister TK30 (31cy/hr) T	14	40	LAND1	-	-	-	-	-	1.12E-03	1.26E-03	1.26E-03	1.26E-03	-	-	-	-	-	1.12E-03	3.79E-03	0.00E+00
Pvmt Breaker 35-45 lbs	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Pvmt Breaker 60-65 lbs	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Suct & Disch 3" Hose 25 ft	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Welding Machine 400 Amp	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Land Improvements - Sub Phase 15			LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Bomag 65S-2 WalkBhnd Roller 26	15	5.9	LAND1	-	-	-	-	-	2.25E-04	6.42E-04	6.42E-04	-	-	-	-	-	-	2.25E-04	1.28E-03	0.00E+00
Burning Outfit	15	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 320 Crawler Medium Exc	15	164	LAND1	-	-	-	-	-	1.08E-04	2.89E-04	2.89E-04	-	-	-	-	-	-	1.08E-04	5.78E-04	0.00E+00
CAT 330F Crawler Medium Exc	15	239	LAND1	-	-	-	-	-	9.30E-04	2.70E-03	2.70E-03	-	-	-	-	-	-	9.30E-04	5.40E-03	0.00E+00
CAT 345D Crawler Large Exca	15	380	LAND1	-	-	-	-	-	2.33E-03	6.78E-03	6.78E-03	-	-	-	-	-	-	2.33E-03	1.36E-02	0.00E+00
CAT 434D Tandem Roller 59"	15	83	LAND1	-	-	-	-	-	9.43E-04	2.69E-03	2.69E-03	-	-	-	-	-	-	9.43E-04	5.39E-03	0.00E+00
CAT 950G Wheel Loader 4CY	15	180	LAND1	-	-	-	-	-	2.04E-03	6.11E-03	6.11E-03	-	-	-	-	-	-	2.04E-03	1.22E-02	0.00E+00
CAT 963D LGP Track Loader	15	110	LAND1	-	-	-	-	-	1.21E-03	3.51E-03	3.51E-03	-	-	-	-	-	-	1.21E-03	7.02E-03	0.00E+00
CAT D3K LGP Dozer	15	81	LAND1	-	-	-	-	-	1.26E-03	3.78E-03	3.78E-03	-	-	-	-	-	-	1.26E-03	7.55E-03	0.00E+00
CAT D4G XL Dozer	15	87	LAND1	-	-	-	-	-	3.86E-04	1.03E-03	1.03E-03	-	-	-	-	-	-	3.86E-04	2.06E-03	0.00E+00
Concrete Saw to 11"(wo Blade)	15	11	LAND1	-	-	-	-	-	2.90E-03	8.65E-03	8.65E-03	-	-	-	-	-	-	2.90E-03	1.73E-02	0.00E+00
Concrete Work Tools	15	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Delmag D100-13 265K FT																				

Welding Machine 400 Amp	15	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
O&M Facility Construction			OMF	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Bomag 65S-2 WalkBhdn Roller 26	OMF	5.9	OMF	-	-	1.44E-04	1.44E-04	1.44E-04	1.44E-04	1.44E-04	1.44E-04	1.44E-04	1.44E-04	1.44E-04	1.44E-04	1.44E-04	4.33E-04	5.78E-04	2.89E-04
Burning Outfit	OMF	0	OMF	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 320 Crawler Medium Exc	OMF	164	OMF	-	-	5.42E-05	5.42E-05	5.42E-05	5.42E-05	5.42E-05	5.42E-05	5.42E-05	5.42E-05	5.42E-05	5.42E-05	5.42E-05	1.63E-04	2.17E-04	1.08E-04
CAT 330F Crawler Medium Exc	OMF	239	OMF	-	-	5.98E-04	5.98E-04	5.98E-04	5.98E-04	5.98E-04	5.98E-04	5.98E-04	5.98E-04	5.98E-04	5.98E-04	5.98E-04	1.79E-03	2.39E-03	1.20E-03
CAT 345D Crawler Large Exca	OMF	380	OMF	-	-	1.50E-03	1.50E-03	1.50E-03	1.50E-03	1.50E-03	1.50E-03	1.50E-03	1.50E-03	1.50E-03	1.50E-03	1.50E-03	4.50E-03	6.00E-03	3.00E-03
CAT 434D Tandem Roller 59"	OMF	83	OMF	-	-	6.06E-04	6.06E-04	6.06E-04	6.06E-04	6.06E-04	6.06E-04	6.06E-04	6.06E-04	6.06E-04	6.06E-04	6.06E-04	1.82E-03	2.43E-03	1.21E-03
CAT 950G Wheel Loader 4CY	OMF	180	OMF	-	-	1.09E-03	1.09E-03	1.09E-03	1.09E-03	1.09E-03	1.09E-03	1.09E-03	1.09E-03	1.09E-03	1.09E-03	1.09E-03	3.27E-03	4.36E-03	2.18E-03
CAT 963D LGP Track Loader	OMF	110	OMF	-	-	7.77E-04	7.77E-04	7.77E-04	7.77E-04	7.77E-04	7.77E-04	7.77E-04	7.77E-04	7.77E-04	7.77E-04	7.77E-04	2.33E-03	3.11E-03	1.55E-03
CAT D3K LGP Dozer	OMF	81	OMF	-	-	8.99E-04	8.99E-04	8.99E-04	8.99E-04	8.99E-04	8.99E-04	8.99E-04	8.99E-04	8.99E-04	8.99E-04	8.99E-04	2.70E-03	3.60E-03	1.80E-03
CAT D4G XL Dozer	OMF	87	OMF	-	-	2.90E-04	2.90E-04	2.90E-04	2.90E-04	2.90E-04	2.90E-04	2.90E-04	2.90E-04	2.90E-04	2.90E-04	2.90E-04	8.69E-04	1.16E-03	5.79E-04
Concrete Saw to 11"(wo Blade)	OMF	11	OMF	-	-	1.84E-03	1.84E-03	1.84E-03	1.84E-03	1.84E-03	1.84E-03	1.84E-03	1.84E-03	1.84E-03	1.84E-03	1.84E-03	5.52E-03	7.36E-03	3.68E-03
Concrete Work Tools	OMF	0	OMF	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Delmag D100-13 265K FT-LB	OMF	55	OMF	-	-	3.53E-03	3.53E-03	3.53E-03	3.53E-03	3.53E-03	3.53E-03	3.53E-03	3.53E-03	3.53E-03	3.53E-03	3.53E-03	1.06E-02	1.41E-02	7.06E-03
Delmag D80-23 212K FT-LB	OMF	55	OMF	-	-	3.99E-03	3.99E-03	3.99E-03	3.99E-03	3.99E-03	3.99E-03	3.99E-03	3.99E-03	3.99E-03	3.99E-03	3.99E-03	1.20E-02	1.60E-02	7.98E-03
Flat Deck Barge - 1074 Ton	OMF	0	OMF	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
GroveRT700B 36.3MT RT Crane	OMF	177.1	OMF	-	-	3.98E-04	3.98E-04	3.98E-04	3.98E-04	3.98E-04	3.98E-04	3.98E-04	3.98E-04	3.98E-04	3.98E-04	3.98E-04	1.19E-03	1.59E-03	7.97E-04
GroveRT750E 50MT RT Crane	OMF	200	OMF	-	-	2.12E-03	2.12E-03	2.12E-03	2.12E-03	2.12E-03	2.12E-03	2.12E-03	2.12E-03	2.12E-03	2.12E-03	2.12E-03	6.36E-03	8.48E-03	4.24E-03
Manitowoc 777 181.4 MT	OMF	340	OMF	-	-	1.43E-02	1.43E-02	1.43E-02	1.43E-02	1.43E-02	1.43E-02	1.43E-02	1.43E-02	1.43E-02	1.43E-02	1.43E-02	4.28E-02	5.71E-02	2.86E-02
Plate Compactor 25 in 11HP	OMF	4.8	OMF	-	-	4.32E-05	4.32E-05	4.32E-05	4.32E-05	4.32E-05	4.32E-05	4.32E-05	4.32E-05	4.32E-05	4.32E-05	4.32E-05	1.30E-04	1.73E-04	8.63E-05
Schwing2525 on Trk (181 y/hr	OMF	432	OMF	-	-	1.46E-02	1.46E-02	1.46E-02	1.46E-02	1.46E-02	1.46E-02	1.46E-02	1.46E-02	1.46E-02	1.46E-02	1.46E-02	4.37E-02	5.82E-02	2.91E-02
WALK-BEHIND FLOOR TROWEL36"	OMF	5.5	OMF	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Welding Machine 400 Amp	OMF	0	OMF	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00

	2024	2025	2026
DEMO	0.25	0.00	0.00
PAVE	0.65	0.00	0.00
BULK	1.25	1.05	0.00
DREDGE	3.99	2.53	0.00
MARINE	0.54	0.10	0.00
LAND1	0.74	2.24	0.00
OMF	0.14	0.19	0.09

Delmag D80-23 212K FT-LB	4	55	BULK	-	1.54E-03	1.54E-03	1.54E-03	1.54E-03	1.54E-03	1.54E-03	1.54E-03	1.54E-03	5.14E-04	-	-	-	6.17E-03	5.14E-03	0.00E+00
Flat Deck Barge - 1074 Ton	4	0	BULK	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
FLEX SHAFT CONC VIBRRHP	4	0	BULK	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Flexifloat - 5' x 10' x 20'	4	0	BULK	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Flexifloat - 5' x 10' x 40'	4	0	BULK	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Genie GTH-842 TeleLift 8000#	4	99	BULK	-	7.88E-05	7.88E-05	7.88E-05	7.88E-05	7.88E-05	7.88E-05	7.88E-05	7.88E-05	2.63E-05	-	-	-	3.15E-04	2.63E-04	0.00E+00
GroveRT700B 36.3MT RT Crane	4	177.1	BULK	-	1.45E-04	1.45E-04	1.45E-04	1.45E-04	1.45E-04	1.45E-04	1.45E-04	1.45E-04	4.97E-05	-	-	-	5.80E-04	4.85E-04	0.00E+00
GroveRT750E 50MT RT Crane	4	200	BULK	-	3.42E-04	3.42E-04	3.42E-04	3.42E-04	3.42E-04	3.42E-04	3.42E-04	3.42E-04	1.15E-04	-	-	-	1.37E-03	1.14E-03	0.00E+00
Hilti Tools, Misc.	4	0	BULK	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Hydraulic Jack 50 Ton	4	0	BULK	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
I.C.E. 1412B Vibratory Hamme	4	550	BULK	-	9.40E-03	9.40E-03	9.40E-03	9.40E-03	9.40E-03	9.40E-03	9.40E-03	9.40E-03	3.13E-03	-	-	-	3.76E-02	3.13E-02	0.00E+00
JLG 400S MANLIFT	4	82	BULK	-	2.50E-03	2.50E-03	2.50E-03	2.50E-03	2.50E-03	2.50E-03	2.50E-03	2.50E-03	8.35E-04	-	-	-	9.99E-03	8.33E-03	0.00E+00
Manitowoc 999 250 MT	4	400	BULK	-	2.89E-03	2.89E-03	2.89E-03	2.89E-03	2.89E-03	2.89E-03	2.89E-03	2.89E-03	9.64E-04	-	-	-	1.16E-02	9.64E-03	0.00E+00
Schwing2525 on Trk (181 y/hr	4	432	BULK	-	1.25E-03	1.25E-03	1.25E-03	1.25E-03	1.25E-03	1.25E-03	1.25E-03	1.25E-03	4.16E-04	-	-	-	4.99E-03	4.16E-03	0.00E+00
SWEEPER ATTACH	4	0	BULK	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
TT 50K w/21CY Dump Trailer	4	8	BULK	-	3.43E-04	3.43E-04	3.43E-04	3.43E-04	3.43E-04	3.43E-04	3.43E-04	3.43E-04	1.14E-04	-	-	-	1.37E-03	1.14E-03	0.00E+00
Welding Machine 400 Amp	4	0	BULK	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Dredging- Sub Phase 8			DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Clamshell 10CY Rehandling	8	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 330F Crawler Medium Exc	8	239	DREDGE	-	-	-	1.55E-03	-	-	-	-	-	-	-	-	-	1.55E-03	0.00E+00	0.00E+00
CAT 385C Crawler Large Exca	8	530	DREDGE	-	-	-	4.68E-03	-	-	-	-	-	-	-	-	-	4.68E-03	0.00E+00	0.00E+00
Generator 50 kW Enclosed	8	68	DREDGE	-	-	-	3.89E-03	-	-	-	-	-	-	-	-	-	3.89E-03	0.00E+00	0.00E+00
Flat Deck Barge - 3102 Ton	8	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
SCOW 8,000 CY	8	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
PUSH BOAT 21-FT 435HP	8	150	DREDGE	-	-	-	1.46E-02	-	-	-	-	-	-	-	-	-	1.46E-02	0.00E+00	0.00E+00
BAKER TANK 21K GAL	8	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Suct & Disch 3" Hose 25 ft	8	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Pump 3 in Subm 6HP	8	6	DREDGE	-	-	-	3.83E-04	-	-	-	-	-	-	-	-	-	3.83E-04	0.00E+00	0.00E+00
Burning Outfit	8	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Elec Chain Hoist 10T 2Spd	8	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Pressure Washer 3,000 psi	8	11	DREDGE	-	-	-	9.04E-04	-	-	-	-	-	-	-	-	-	9.04E-04	0.00E+00	0.00E+00
Welding Machine 400 Amp	8	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
VOLVO A25F 6x6 Articulated 15-19CY	8	315	DREDGE	-	-	-	1.42E-03	-	-	-	-	-	-	-	-	-	1.42E-03	0.00E+00	0.00E+00
On-Hwy Dump - 18 CY Triax	8	310	DREDGE	-	-	-	1.96E-02	-	-	-	-	-	-	-	-	-	1.96E-02	0.00E+00	0.00E+00
Air Compressor 375 cfm	8	117	DREDGE	-	-	-	4.12E-03	-	-	-	-	-	-	-	-	-	4.12E-03	0.00E+00	0.00E+00
CAT D6M XL Dozer	8	153	DREDGE	-	-	-	6.55E-03	-	-	-	-	-	-	-	-	-	6.55E-03	0.00E+00	0.00E+00
CAT 950G Wheel Loader 4CY	8	180	DREDGE	-	-	-	4.39E-03	-	-	-	-	-	-	-	-	-	4.39E-03	0.00E+00	0.00E+00
CAT 980K Wheel Loader 7 CY	8	367.44	DREDGE	-	-	-	8.13E-03	-	-	-	-	-	-	-	-	-	8.13E-03	0.00E+00	0.00E+00
Dredging- Sub Phase 9			DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Air Compressor 375 cfm	9	117	DREDGE	-	-	-	4.87E-03	-	-	-	-	-	-	-	-	-	4.87E-03	0.00E+00	0.00E+00
BAKER TANK 21K GAL	9	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Burning Outfit	9	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 330F Crawler Medium Exc	9	239	DREDGE	-	-	-	1.84E-03	-	-	-	-	-	-	-	-	-	1.84E-03	0.00E+00	0.00E+00
CAT 385C Crawler Large Exca	9	530	DREDGE	-	-	-	5.52E-03	-	-	-	-	-	-	-	-	-	5.52E-03	0.00E+00	0.00E+00
CAT 950G Wheel Loader 4CY	9	180	DREDGE	-	-	-	5.19E-03	-	-	-	-	-	-	-	-	-	5.19E-03	0.00E+00	0.00E+00
CAT 980K Wheel Loader 7 CY	9	367.44	DREDGE	-	-	-	9.62E-03	-	-	-	-	-	-	-	-	-	9.62E-03	0.00E+00	0.00E+00
CAT D6M XL Dozer	9	153	DREDGE	-	-	-	7.76E-03	-	-	-	-	-	-	-	-	-	7.76E-03	0.00E+00	0.00E+00
Clamshell 10CY Rehandling	9	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Elec Chain Hoist 10T 2Spd	9	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Flat Deck Barge - 3102 Ton	9	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Generator 50 kW Enclosed	9	68	DREDGE	-	-	-	4.60E-03	-	-	-	-	-	-	-	-	-	4.60E-03	0.00E+00	0.00E+00
On-Hwy Dump - 18 CY Triax	9	310	DREDGE	-	-	-	2.32E-02	-	-	-	-	-	-	-	-	-	2.32E-02	0.00E+00	0.00E+00
Pressure Washer 3,000 psi	9	11	DREDGE	-	-	-	1.07E-03	-	-	-	-	-	-	-	-	-	1.07E-03	0.00E+00	0.00E+00
Pump 3 in Subm 6HP	9	6	DREDGE	-	-	-	4.53E-04	-	-	-	-	-	-	-	-	-	4.53E-04	0.00E+00	0.00E+00
PUSH BOAT 21-FT 435HP	9	150	DREDGE	-	-	-	1.72E-02	-	-	-	-	-	-	-	-	-	1.72E-02	0.00E+00	0.00E+00
SCOW 8,000 CY	9	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Suct & Disch 3" Hose 25 ft	9	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
VOLVO A25F 6x6 Articulated 15-19CY	9	315	DREDGE	-	-	-	1.68E-03	-	-	-	-	-	-	-	-	-	1.68E-03	0.00E+00	0.00E+00
Welding Machine 400 Amp	9	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Dredging- Sub Phase 10			DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Air Compressor 375 cfm	10	117	DREDGE	-	-	-	1.30E-03	-	-	-	-	-	-	-	-	-	1.30E-03	0.00E+00	0.00E+00
BAKER TANK 21K GAL	10	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Burning Outfit	10	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 330F Crawler Medium Exc	10	239	DREDGE	-	-	-	4.61E-04	-	-	-	-	-	-	-	-	-	4.61E-04	0.00E+00	0.00E+00
CAT 385C Crawler Large Exca	10	530	DREDGE	-	-	-	1.62E-03	-	-	-	-	-	-	-	-	-	1.62E-03	0.00E+00	0.00E+00
CAT 950G Wheel Loader 4CY	10	180	DREDGE	-	-	-	1.30E-03	-	-	-	-	-	-	-	-	-	1.30E-03	0.00E+00	0.00E+00
CAT 980K Wheel Loader 7 CY	10	367.44	DREDGE	-	-	-	2.41E-03	-	-	-	-	-	-	-	-	-	2.41E-03	0.00E+00	0.00E+00
CAT D6M XL Dozer	10	153	DREDGE	-	-	-	1.94E-03	-	-	-	-	-	-	-	-	-	1.94E-03	0.00E+00	0.00E+00
Clamshell 10CY Rehandling	10	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Elec Chain Hoist 10T 2Spd	10	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Flat Deck Barge - 3102 Ton	10	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Generator 50 kW Enclosed	10	68	DREDGE	-	-	-	1.16E-03	-	-	-	-	-	-	-	-	-	1.16E-03	0.00E+00	0.00E+00
On-Hwy Dump - 18 CY Triax	10	310	DREDGE	-	-	-	5.80E-03	-	-	-	-	-	-	-	-	-	5.80E-03	0.00E+00	0.00E+00
Pressure Washer 3,000 psi	10	11	DREDGE	-	-	-	3.13E-04	-	-	-	-	-	-	-	-	-	3.13E-04	0.00E+00	0.00E+00
Pump 3 in Subm 6HP	10	6	DREDGE	-	-	-	1.14E-04	-	-	-	-	-	-	-	-	-	1.14E-04	0.00E+00	0.00E+00
PUSH BOAT 21-FT 435HP	10	150	DREDGE	-	-	-	5.04E-03	-	-	-	-	-	-	-	-	-	5.04E-03	0.00E+00	0.00E+00
SCOW 8,000 CY	10	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Suct & Disch 3" Hose 25 ft	10	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
VOLVO A25F 6x6 Articulated 15-19CY	10	315	DREDGE	-	-	-	4.23E-04	-	-	-	-	-	-	-	-	-	4.23E-04	0.00E+00	0.00E+00
Welding Machine																			

GroveRT700B 36.3MT RT Crane	7B	177.1	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
GroveRT750E 50MT RT Crane	7B	200	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Hydraulic Jack 50 Ton	7B	0	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
I.C.E. 1412B Vibratory Hamme	7B	550	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
JLG 400S MANLIFT	7B	82	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Manitowoc 555 136 MT	7B	340	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Manitowoc 999 250 MT	7B	400	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
On-Hwy PU 4x4 - 1.25T Crew	7B	300	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
OSR SLURRY MIXER 5CYD W/SILO	7B	27	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
OSR SLURRY TANK (10MG-15MG)	7B	0	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
OSR TECHNIWELL PUMP	7B	36	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Pump 3 in Centr 20k gph	7B	5	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Schwing2525 on Trk (181 y/hr	7B	432	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Suct & Disch 3" Hose 25 ft	7B	0	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
SWEEPER ATTACH	7B	0	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
TT 50K w/21CY Dump Trailer	7B	8	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
WALK-BEHIND FLOOR TROWEL36"	7B	5.5	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Welding Machine 400 Amp	7B	0	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Land Improvements - Sub Phase 1			LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Air Compressor 185 cfm	1	49	LAND1	-	-	-	2.34E-05	2.34E-05	2.34E-05	2.34E-05	6.47E-06	-	-	-	-	-	-	4.69E-05	5.34E-05	0.00E+00
Bomag 65S-2 WalkBhnd Roller 26	1	5.9	LAND1	-	-	-	1.20E-05	1.20E-05	1.20E-05	1.20E-05	3.69E-06	-	-	-	-	-	-	2.40E-05	2.77E-05	0.00E+00
Burning Outfit	1	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 320 Crawler Medium Exc	1	164	LAND1	-	-	-	9.36E-06	9.36E-06	9.36E-06	9.36E-06	3.12E-06	-	-	-	-	-	-	1.87E-05	2.18E-05	0.00E+00
CAT 330F Crawler Medium Exc	1	239	LAND1	-	-	-	8.30E-05	8.30E-05	8.30E-05	8.30E-05	2.32E-05	-	-	-	-	-	-	1.66E-04	1.89E-04	0.00E+00
CAT 345D Crawler Large Exca	1	380	LAND1	-	-	-	2.10E-04	2.10E-04	2.10E-04	2.10E-04	5.88E-05	-	-	-	-	-	-	4.20E-04	4.79E-04	0.00E+00
CAT 434D Tandem Roller 59"	1	83	LAND1	-	-	-	5.14E-05	5.14E-05	5.14E-05	5.14E-05	1.58E-05	-	-	-	-	-	-	1.03E-04	1.19E-04	0.00E+00
CAT 950G Wheel Loader 4CY	1	180	LAND1	-	-	-	1.35E-04	1.35E-04	1.35E-04	1.35E-04	3.75E-05	-	-	-	-	-	-	2.70E-04	3.07E-04	0.00E+00
CAT 963D LGP Track Loader	1	110	LAND1	-	-	-	1.81E-04	1.81E-04	1.81E-04	1.81E-04	5.08E-05	-	-	-	-	-	-	3.63E-04	4.14E-04	0.00E+00
CAT D3K LGP Dozer	1	81	LAND1	-	-	-	7.81E-05	7.81E-05	7.81E-05	7.81E-05	2.23E-05	-	-	-	-	-	-	1.56E-04	1.79E-04	0.00E+00
CAT D4G XL Dozer	1	87	LAND1	-	-	-	2.40E-05	2.40E-05	2.40E-05	2.40E-05	7.99E-06	-	-	-	-	-	-	4.80E-05	5.60E-05	0.00E+00
Concrete Saw to 11"(wo Blade)	1	11	LAND1	-	-	-	1.75E-04	1.75E-04	1.75E-04	1.75E-04	5.03E-05	-	-	-	-	-	-	3.50E-04	4.01E-04	0.00E+00
Concrete Work Tools	1	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Delmag D100-13 265K FT-LB	1	55	LAND1	-	-	-	8.15E-04	8.15E-04	8.15E-04	8.15E-04	2.32E-04	-	-	-	-	-	-	1.63E-03	1.86E-03	0.00E+00
Delmag D80-23 212K FT-LB	1	55	LAND1	-	-	-	1.31E-03	1.31E-03	1.31E-03	1.31E-03	3.64E-04	-	-	-	-	-	-	2.62E-03	2.99E-03	0.00E+00
Flat Deck Barge - 1074 Ton	1	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Flexifloat - 5' x 10' x 40'	1	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Genie GTH-842 TeleLift 8000#	1	99	LAND1	-	-	-	-	-	-	4.20E-05	4.20E-05	-	-	-	-	-	-	0.00E+00	8.40E-05	0.00E+00
GroveRT700B 36.3MT RT Crane	1	177.1	LAND1	-	-	-	1.39E-04	1.39E-04	1.39E-04	1.39E-04	3.94E-05	-	-	-	-	-	-	2.78E-04	3.17E-04	0.00E+00
GroveRT750E 50MT RT Crane	1	200	LAND1	-	-	-	1.87E-04	1.87E-04	1.87E-04	1.87E-04	5.38E-05	-	-	-	-	-	-	3.74E-04	4.28E-04	0.00E+00
Hilti Tools, Misc.	1	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Hydraulic Jack 50 Ton	1	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
I.C.E. 1412B Vibratory Hamme	1	550	LAND1	-	-	-	-	-	-	4.93E-03	4.93E-03	-	-	-	-	-	-	0.00E+00	9.85E-03	0.00E+00
JLG 400S MANLIFT	1	82	LAND1	-	-	-	4.53E-04	4.53E-04	4.53E-04	1.25E-04	-	-	-	-	-	-	-	9.05E-04	1.03E-03	0.00E+00
Manitowoc 777 181.4 MT	1	340	LAND1	-	-	-	2.78E-03	2.78E-03	2.78E-03	2.78E-03	7.69E-04	-	-	-	-	-	-	5.56E-03	6.32E-03	0.00E+00
Plate Compactor 25 in 11HP	1	4.8	LAND1	-	-	-	4.22E-06	4.22E-06	4.22E-06	4.22E-06	1.21E-06	-	-	-	-	-	-	8.44E-06	9.65E-06	0.00E+00
Schwing2525 on Trk (181 y/hr	1	432	LAND1	-	-	-	1.17E-03	1.17E-03	1.17E-03	1.17E-03	3.38E-04	-	-	-	-	-	-	2.34E-03	2.68E-03	0.00E+00
WALK-BEHIND FLOOR TROWEL36"	1	5.5	LAND1	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Welding Machine 400 Amp	1	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Land Improvements - Sub Phase 3			LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Air Compressor 185 cfm	3	49	LAND1	-	-	-	8.08E-06	2.34E-05	2.34E-05	2.34E-05	1.62E-05	-	-	-	-	-	-	3.15E-05	6.31E-05	0.00E+00
Bomag 65S-2 WalkBhnd Roller 26	3	5.9	LAND1	-	-	-	4.62E-06	1.20E-05	1.20E-05	1.20E-05	8.31E-06	-	-	-	-	-	-	1.66E-05	3.23E-05	0.00E+00
Burning Outfit	3	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 320 Crawler Medium Exc	3	164	LAND1	-	-	-	3.12E-06	9.36E-06	9.36E-06	9.36E-06	6.24E-06	-	-	-	-	-	-	1.25E-05	2.50E-05	0.00E+00
CAT 330F Crawler Medium Exc	3	239	LAND1	-	-	-	2.99E-05	8.30E-05	8.30E-05	8.30E-05	5.64E-05	-	-	-	-	-	-	1.13E-04	2.22E-04	0.00E+00
CAT 345D Crawler Large Exca	3	380	LAND1	-	-	-	7.57E-05	2.10E-04	2.10E-04	2.10E-04	1.43E-04	-	-	-	-	-	-	2.86E-04	5.63E-04	0.00E+00
CAT 434D Tandem Roller 59"	3	83	LAND1	-	-	-	1.98E-05	5.14E-05	5.14E-05	5.14E-05	3.56E-05	-	-	-	-	-	-	7.11E-05	1.38E-04	0.00E+00
CAT 950G Wheel Loader 4CY	3	180	LAND1	-	-	-	4.50E-05	1.35E-04	1.35E-04	1.35E-04	9.00E-05	-	-	-	-	-	-	1.80E-04	3.60E-04	0.00E+00
CAT 963D LGP Track Loader	3	110	LAND1	-	-	-	6.53E-05	1.81E-04	1.81E-04	1.81E-04	1.23E-04	-	-	-	-	-	-	2.47E-04	4.86E-04	0.00E+00
CAT D3K LGP Dozer	3	81	LAND1	-	-	-	2.60E-05	7.81E-05	7.81E-05	7.81E-05	5.21E-05	-	-	-	-	-	-	1.04E-04	2.08E-04	0.00E+00
CAT D4G XL Dozer	3	87	LAND1	-	-	-	7.99E-06	2.40E-05	2.40E-05	2.40E-05	1.60E-05	-	-	-	-	-	-	3.20E-05	6.40E-05	0.00E+00
Concrete Saw to 11"(wo Blade)	3	11	LAND1	-	-	-	5.90E-05	1.75E-04	1.75E-04	1.75E-04	1.18E-04	-	-	-	-	-	-	2.34E-04	4.68E-04	0.00E+00
Concrete Work Tools	3	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Delmag D100-13 265K FT-LB	3	55	LAND1	-	-	-	2.76E-04	8.15E-04	8.15E-04	8.15E-04	5.46E-04	-	-	-	-	-	-	1.09E-03	2.18E-03	0.00E+00
Delmag D80-23 212K FT-LB	3	55	LAND1	-	-	-	3.14E-04	9.28E-04	9.28E-04	9.28E-04	6.21E-04	-	-	-	-	-	-	1.24E-03	2.48E-03	0.00E+00
Flat Deck Barge - 1074 Ton	3	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Flexifloat - 5' x 10' x 40'	3	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
GroveRT700B 36.3MT RT Crane	3	177.1	LAND1	-	-	-	4.14E-05	1.20E-04	1.20E-04	1.20E-04	8.08E-05	-	-	-	-	-	-	1.62E-04	3.21E-04	0.00E+00
GroveRT750E 50MT RT Crane	3	200	LAND1	-	-	-	6.32E-05	1.87E-04	1.87E-04	1.87E-04	1.26E-04	-	-	-	-	-	-	2.50E-04	5.01E-04	0.00E+00
Hilti Tools, Misc.	3	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
JLG 400S MANLIFT	3	82	LAND1	-	-	-	1.56E-04	4.53E-04	4.53E-04	4.53E-04	3.04E-04	-	-							

CAT 980K Wheel Loader 7 CY	13	367.44	LAND1	-	-	-	-	-	-	7.30E-04	-	-	-	-	-	-	-	-	0.00E+00	7.30E-04	0.00E+00
CAT H120CS Hydr Impact 3000 FT/LB	13	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Concrete Saw to 6"(wo Blade)	13	11	LAND1	-	-	-	-	-	-	1.14E-03	-	-	-	-	-	-	-	-	0.00E+00	1.14E-03	0.00E+00
Concrete Work Tools	13	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Daily Opertd Rent-Grove130MT	13	300	LAND1	-	-	-	-	-	-	1.83E-04	-	-	-	-	-	-	-	-	0.00E+00	1.83E-04	0.00E+00
Flatbed Tractor/Trailer-38T	13	300	LAND1	-	-	-	-	-	-	3.32E-04	-	-	-	-	-	-	-	-	0.00E+00	3.32E-04	0.00E+00
Flatbed Truck - 15 Ton	13	155	LAND1	-	-	-	-	-	-	7.94E-05	-	-	-	-	-	-	-	-	0.00E+00	7.94E-05	0.00E+00
Flatbed Truck - 23 Ton	13	170	LAND1	-	-	-	-	-	-	5.03E-05	-	-	-	-	-	-	-	-	0.00E+00	5.03E-05	0.00E+00
Generator 5000 w	13	7.5	LAND1	-	-	-	-	-	-	9.31E-04	-	-	-	-	-	-	-	-	0.00E+00	9.31E-04	0.00E+00
GroveRT750E 50MT RT Crane	13	200	LAND1	-	-	-	-	-	-	3.95E-04	-	-	-	-	-	-	-	-	0.00E+00	3.95E-04	0.00E+00
JLG 600A MANLIFT	13	82	LAND1	-	-	-	-	-	-	1.22E-03	-	-	-	-	-	-	-	-	0.00E+00	1.22E-03	0.00E+00
Mobe Crane for Daily Rental	13	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
OSR SLURRY MIXER 5CYD W/SILO	13	27	LAND1	-	-	-	-	-	-	5.12E-04	-	-	-	-	-	-	-	-	0.00E+00	5.12E-04	0.00E+00
Plate Compactor 25 in 11HP	13	4.8	LAND1	-	-	-	-	-	-	6.71E-04	-	-	-	-	-	-	-	-	0.00E+00	6.71E-04	0.00E+00
Putzmeister TK30 (31cy/hr) T	13	40	LAND1	-	-	-	-	-	-	6.33E-04	-	-	-	-	-	-	-	-	0.00E+00	6.33E-04	0.00E+00
ROD BENDER TO #10	13	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Suct & Disch 3" Hose 25 ft	13	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Welding Machine 400 Amp	13	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Land Improvements - Sub Phase 14			LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
16T Runabout Service Boat	14	100	LAND1	-	-	-	-	-	7.54E-04	8.39E-04	8.39E-04	8.39E-04	-	-	-	-	-	-	7.54E-04	2.52E-03	0.00E+00
Air Compressor 185 cfm	14	49	LAND1	-	-	-	-	-	8.89E-06	1.05E-05	1.05E-05	1.05E-05	-	-	-	-	-	-	8.89E-06	3.15E-05	0.00E+00
Bomag 213D Earth Roller 84"	14	128	LAND1	-	-	-	-	-	5.70E-04	6.43E-04	6.43E-04	6.43E-04	-	-	-	-	-	-	5.70E-04	1.93E-03	0.00E+00
Bomag 65S-2 WalkBhnd Roller 26	14	5.9	LAND1	-	-	-	-	-	1.45E-04	1.63E-04	1.63E-04	1.63E-04	-	-	-	-	-	-	1.45E-04	4.90E-04	0.00E+00
Burning Outfit	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 320 Crawler Medium Exc	14	164	LAND1	-	-	-	-	-	5.30E-04	5.99E-04	5.99E-04	5.99E-04	-	-	-	-	-	-	5.30E-04	1.80E-03	0.00E+00
CAT 430E 4WD Backhoe	14	111	LAND1	-	-	-	-	-	9.59E-04	1.08E-03	1.08E-03	1.08E-03	-	-	-	-	-	-	9.59E-04	3.25E-03	0.00E+00
CAT 950G Wheel Loader 4CY	14	180	LAND1	-	-	-	-	-	8.47E-04	9.52E-04	9.52E-04	9.52E-04	-	-	-	-	-	-	8.47E-04	2.86E-03	0.00E+00
CAT 953C LGP Track loader	14	110	LAND1	-	-	-	-	-	9.58E-04	1.08E-03	1.08E-03	1.08E-03	-	-	-	-	-	-	9.58E-04	3.24E-03	0.00E+00
CAT CR50 CRUSHER	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT D4G XL Dozer	14	87	LAND1	-	-	-	-	-	5.28E-04	5.96E-04	5.96E-04	5.96E-04	-	-	-	-	-	-	5.28E-04	1.79E-03	0.00E+00
CAT D6M XL Dozer	14	153	LAND1	-	-	-	-	-	6.16E-04	6.95E-04	6.95E-04	6.95E-04	-	-	-	-	-	-	6.16E-04	2.09E-03	0.00E+00
CAT H90CS Hydr Impact 1000FT/LB	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT M318F WHEEL MTD EXCAV	14	171	LAND1	-	-	-	-	-	1.01E-04	1.11E-04	1.11E-04	1.11E-04	-	-	-	-	-	-	1.01E-04	3.32E-04	0.00E+00
Concrete Saw to 6"(wo Blade)	14	11	LAND1	-	-	-	-	-	1.39E-05	1.56E-05	1.56E-05	1.56E-05	-	-	-	-	-	-	1.39E-05	4.68E-05	0.00E+00
Concrete Work Tools	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Daily Opertd Rent-Grove130MT	14	300	LAND1	-	-	-	-	-	4.21E-05	4.91E-05	4.91E-05	4.91E-05	-	-	-	-	-	-	4.21E-05	1.47E-04	0.00E+00
Flat Deck Barge - 1074 Ton	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Flatbed Tractor/Trailer-38T	14	300	LAND1	-	-	-	-	-	3.27E-06	3.27E-06	3.27E-06	3.27E-06	-	-	-	-	-	-	3.27E-06	9.82E-06	0.00E+00
Generator 100 kW Enclosed	14	169	LAND1	-	-	-	-	-	2.48E-03	2.80E-03	2.80E-03	2.80E-03	-	-	-	-	-	-	2.48E-03	8.39E-03	0.00E+00
Generator 5000 w	14	7.5	LAND1	-	-	-	-	-	7.11E-05	7.96E-05	7.96E-05	7.96E-05	-	-	-	-	-	-	7.11E-05	2.39E-04	0.00E+00
Genie GTH-842 TeleLift 8000#	14	99	LAND1	-	-	-	-	-	5.25E-06	5.25E-06	5.25E-06	5.25E-06	-	-	-	-	-	-	5.25E-06	1.58E-05	0.00E+00
GroveRT700B 36.3MT RT Crane	14	177.1	LAND1	-	-	-	-	-	4.14E-06	4.14E-06	4.14E-06	4.14E-06	-	-	-	-	-	-	4.14E-06	1.24E-05	0.00E+00
GroveRT890E 81.6MT RT Crane	14	275	LAND1	-	-	-	-	-	1.42E-04	1.58E-04	1.58E-04	1.58E-04	-	-	-	-	-	-	1.42E-04	4.73E-04	0.00E+00
Hilti Tools, Misc.	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
I.C.E. 44-30 Vibratory Hammer	14	325	LAND1	-	-	-	-	-	3.16E-04	3.52E-04	3.52E-04	3.52E-04	-	-	-	-	-	-	3.16E-04	1.06E-03	0.00E+00
JD 710L 4WD (2011) Backhoe	14	148	LAND1	-	-	-	-	-	3.51E-04	3.91E-04	3.91E-04	3.91E-04	-	-	-	-	-	-	3.51E-04	1.17E-03	0.00E+00
Light Plant 30' 4 Lts	14	11.7	LAND1	-	-	-	-	-	3.95E-06	5.27E-06	5.27E-06	5.27E-06	-	-	-	-	-	-	3.95E-06	1.58E-05	0.00E+00
LITE SHORING BOX	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Manitowoc 555 136 MT	14	340	LAND1	-	-	-	-	-	6.39E-04	7.19E-04	7.19E-04	7.19E-04	-	-	-	-	-	-	6.39E-04	2.16E-03	0.00E+00
MED SHORING BOX	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Mobe Crane for Daily Rental	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
On-Hwy Dump - 16 CY dbl ax	14	300	LAND1	-	-	-	-	-	7.37E-05	8.19E-05	8.19E-05	8.19E-05	-	-	-	-	-	-	7.37E-05	2.46E-04	0.00E+00
Plate Compactor 25 in 11HP	14	4.8	LAND1	-	-	-	-	-	2.26E-04	2.54E-04	2.54E-04	2.54E-04	-	-	-	-	-	-	2.26E-04	7.63E-04	0.00E+00
Portable Mixer 11CF	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Pump 4 in Centr 40k gph	14	10	LAND1	-	-	-	-	-	2.73E-06	2.73E-06	2.73E-06	2.73E-06	-	-	-	-	-	-	2.73E-06	8.18E-06	0.00E+00
PUSH BOAT 21-FT 435HP	14	150	LAND1	-	-	-	-	-	1.17E-03	1.31E-03	1.31E-03	1.31E-03	-	-	-	-	-	-	1.17E-03	3.94E-03	0.00E+00
Putzmeister TK30 (31cy/hr) T	14	40	LAND1	-	-	-	-	-	7.73E-05	8.70E-05	8.70E-05	8.70E-05	-	-	-	-	-	-	7.73E-05	2.61E-04	0.00E+00
Pvmt Breaker 35-45 lbs	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Pvmt Breaker 60-65 lbs	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Suct & Disch 3" Hose 25 ft	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Welding Machine 400 Amp	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Land Improvements - Sub Phase 15			LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Bomag 65S-2 WalkBhnd Roller 26	15	5.9	LAND1	-	-	-	-	-	1.29E-05	3.69E-05	3.69E-05	-	-	-	-	-	-	-	1.29E-05	7.39E-05	0.00E+00
Burning Outfit	15	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 320 Crawler Medium Exc	15	164	LAND1	-	-	-	-	-	9.36E-06	2.50E-05	2.50E-05	-	-	-	-	-	-	-	9.36E-06	4.99E-05	0.00E+00
CAT 330F Crawler Medium Exc	15	239	LAND1	-	-	-	-	-	6.97E-05	2.03E-04	2.03E-04	-	-	-	-	-	-	-	6.97E-05	4.05E-04	0.00E+00
CAT 345D Crawler Large Exca	15	380	LAND1	-	-	-	-	-	1.77E-04	5.13E-04	5.13E-04	-	-	-	-	-	-	-	1.77E-04	1.03E-03	0.00E+00
CAT 434D Tandem Roller 59"	15	83	LAND1	-	-	-	-	-	5.53E-05	1.58E-04	1.58E-04	-	-	-	-	-	-	-	5.53E-05	3.16E-04	0.00E+00
CAT 950G Wheel Loader 4CY	15	180	LAND1	-	-	-	-	-	1.57E-04	4.72E-04	4.72E-04	4.72E-04	-	-	-	-	-	-	1.57E-04	9.45E-04	0.00E+00
CAT 963D LGP Track Loader	15	110	LAND1	-	-	-	-	-	1.52E-04	4.43E-04	4.43E-04	-	-	-	-	-	-	-	1.52E-04	8.85E-04	0.00E+00
CAT D3K LGP Dozer	15	81	LAND1	-	-	-	-	-	7.81E-05	2.34E-04	2.34E-04	-	-	-	-	-	-	-	7.81E-05	4.69E-04	0.00E+00
CAT D4G XL Dozer	15	87	LAND1	-	-	-	-	-	2.40E-05	6.40E-05	6.40E-05	-	-	-	-	-	-	-	2.40E-		

Welding Machine 400 Amp	15	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
O&M Facility Construction			OMF	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Bomag 65S-2 WalkBhdn Roller 26	OMF	5.9	OMF	-	-	8.31E-06	8.31E-06	8.31E-06	8.31E-06	8.31E-06	8.31E-06	8.31E-06	8.31E-06	8.31E-06	8.31E-06	-	2.49E-05	3.32E-05	1.66E-05
Burning Outfit	OMF	0	OMF	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 320 Crawler Medium Exc	OMF	164	OMF	-	-	4.68E-06	4.68E-06	4.68E-06	4.68E-06	4.68E-06	4.68E-06	4.68E-06	4.68E-06	4.68E-06	4.68E-06	-	1.40E-05	1.87E-05	9.36E-06
CAT 330F Crawler Medium Exc	OMF	239	OMF	-	-	4.48E-05	4.48E-05	4.48E-05	4.48E-05	4.48E-05	4.48E-05	4.48E-05	4.48E-05	4.48E-05	4.48E-05	-	1.34E-04	1.79E-04	8.96E-05
CAT 345D Crawler Large Exca	OMF	380	OMF	-	-	1.13E-04	1.13E-04	1.13E-04	1.13E-04	1.13E-04	1.13E-04	1.13E-04	1.13E-04	1.13E-04	1.13E-04	-	3.40E-04	4.54E-04	2.27E-04
CAT 434D Tandem Roller 59"	OMF	83	OMF	-	-	3.56E-05	3.56E-05	3.56E-05	3.56E-05	3.56E-05	3.56E-05	3.56E-05	3.56E-05	3.56E-05	3.56E-05	-	1.07E-04	1.42E-04	7.11E-05
CAT 950G Wheel Loader 4CY	OMF	180	OMF	-	-	8.44E-05	8.44E-05	8.44E-05	8.44E-05	8.44E-05	8.44E-05	8.44E-05	8.44E-05	8.44E-05	8.44E-05	-	2.53E-04	3.37E-04	1.69E-04
CAT 963D LGP Track Loader	OMF	110	OMF	-	-	9.80E-05	9.80E-05	9.80E-05	9.80E-05	9.80E-05	9.80E-05	9.80E-05	9.80E-05	9.80E-05	9.80E-05	-	2.94E-04	3.92E-04	1.96E-04
CAT D3K LGP Dozer	OMF	81	OMF	-	-	5.58E-05	5.58E-05	5.58E-05	5.58E-05	5.58E-05	5.58E-05	5.58E-05	5.58E-05	5.58E-05	5.58E-05	-	1.67E-04	2.23E-04	1.12E-04
CAT D4G XL Dozer	OMF	87	OMF	-	-	1.80E-05	1.80E-05	1.80E-05	1.80E-05	1.80E-05	1.80E-05	1.80E-05	1.80E-05	1.80E-05	1.80E-05	-	5.40E-05	7.19E-05	3.60E-05
Concrete Saw to 11"(wo Blade)	OMF	11	OMF	-	-	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04	-	3.20E-04	4.27E-04	2.13E-04
Concrete Work Tools	OMF	0	OMF	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Delmag D100-13 265K FT-LB	OMF	55	OMF	-	-	2.16E-04	2.16E-04	2.16E-04	2.16E-04	2.16E-04	2.16E-04	2.16E-04	2.16E-04	2.16E-04	2.16E-04	-	6.49E-04	8.66E-04	4.33E-04
Delmag D80-23 212K FT-LB	OMF	55	OMF	-	-	2.45E-04	2.45E-04	2.45E-04	2.45E-04	2.45E-04	2.45E-04	2.45E-04	2.45E-04	2.45E-04	2.45E-04	-	7.34E-04	9.79E-04	4.89E-04
Flat Deck Barge - 1074 Ton	OMF	0	OMF	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
GroveRT700B 36.3MT RT Crane	OMF	177.1	OMF	-	-	2.18E-05	2.18E-05	2.18E-05	2.18E-05	2.18E-05	2.18E-05	2.18E-05	2.18E-05	2.18E-05	2.18E-05	-	6.53E-05	8.70E-05	4.35E-05
GroveRT750E 50MT RT Crane	OMF	200	OMF	-	-	1.16E-04	1.16E-04	1.16E-04	1.16E-04	1.16E-04	1.16E-04	1.16E-04	1.16E-04	1.16E-04	1.16E-04	-	3.48E-04	4.63E-04	2.32E-04
Manitowoc 777 181.4 MT	OMF	340	OMF	-	-	7.19E-04	7.19E-04	7.19E-04	7.19E-04	7.19E-04	7.19E-04	7.19E-04	7.19E-04	7.19E-04	7.19E-04	-	2.16E-03	2.88E-03	1.44E-03
Plate Compactor 25 in 11HP	OMF	4.8	OMF	-	-	2.71E-06	2.71E-06	2.71E-06	2.71E-06	2.71E-06	2.71E-06	2.71E-06	2.71E-06	2.71E-06	2.71E-06	-	8.14E-06	1.09E-05	5.43E-06
Schwing2525 on Trk (181 y/hr	OMF	432	OMF	-	-	7.40E-04	7.40E-04	7.40E-04	7.40E-04	7.40E-04	7.40E-04	7.40E-04	7.40E-04	7.40E-04	7.40E-04	-	2.22E-03	2.96E-03	1.48E-03
WALK-BEHIND FLOOR TROWEL36"	OMF	5.5	OMF	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-	0.00E+00	0.00E+00	0.00E+00
Welding Machine 400 Amp	OMF	0	OMF	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00

	2024	2025	2026
DEMO	0.02	0.00	0.00
PAVE	0.05	0.00	0.00
BULK	0.08	0.06	0.00
DREDGE	0.21	0.12	0.00
MARINE	0.04	0.01	0.00
LAND1	0.04	0.13	0.00
OMF	0.01	0.01	0.01

Delmag D80-23 212K FT-LB	4	55	BULK	-	1.50E-03	1.50E-03	1.50E-03	1.50E-03	1.50E-03	1.50E-03	1.50E-03	1.50E-03	4.99E-04	-	-	-	5.99E-03	4.99E-03	0.00E+00
Flat Deck Barge - 1074 Ton	4	0	BULK	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
FLEX SHAFT CONC VIBRRHP	4	0	BULK	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Flexifloat - 5' x 10' x 20'	4	0	BULK	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Flexifloat - 5' x 10' x 40'	4	0	BULK	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Genie GTH-842 TeleLift 8000#	4	99	BULK	-	7.64E-05	7.64E-05	7.64E-05	7.64E-05	7.64E-05	7.64E-05	7.64E-05	7.64E-05	2.55E-05	-	-	-	3.06E-04	2.55E-04	0.00E+00
GroveRT700B 36.3MT RT Crane	4	177.1	BULK	-	1.41E-04	1.41E-04	1.41E-04	1.41E-04	1.41E-04	1.41E-04	1.41E-04	1.41E-04	4.82E-05	-	-	-	5.63E-04	4.70E-04	0.00E+00
GroveRT750E 50MT RT Crane	4	200	BULK	-	3.31E-04	3.31E-04	3.31E-04	3.31E-04	3.31E-04	3.31E-04	3.31E-04	3.31E-04	1.11E-04	-	-	-	1.33E-03	1.11E-03	0.00E+00
Hilti Tools, Misc.	4	0	BULK	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Hydraulic Jack 50 Ton	4	0	BULK	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
I.C.E. 1412B Vibratory Hamme	4	550	BULK	-	9.11E-03	9.11E-03	9.11E-03	9.11E-03	9.11E-03	9.11E-03	9.11E-03	9.11E-03	3.04E-03	-	-	-	3.65E-02	3.04E-02	0.00E+00
JLG 400S MANLIFT	4	82	BULK	-	2.42E-03	2.42E-03	2.42E-03	2.42E-03	2.42E-03	2.42E-03	2.42E-03	2.42E-03	8.10E-04	-	-	-	9.69E-03	8.08E-03	0.00E+00
Manitowoc 999 250 MT	4	400	BULK	-	2.81E-03	2.81E-03	2.81E-03	2.81E-03	2.81E-03	2.81E-03	2.81E-03	2.81E-03	9.35E-04	-	-	-	1.12E-02	9.35E-03	0.00E+00
Schwing2525 on Trk (181 y/hr	4	432	BULK	-	1.21E-03	1.21E-03	1.21E-03	1.21E-03	1.21E-03	1.21E-03	1.21E-03	1.21E-03	4.03E-04	-	-	-	4.84E-03	4.03E-03	0.00E+00
SWEEPER ATTACH	4	0	BULK	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
TT 50K w/21CY Dump Trailer	4	8	BULK	-	3.32E-04	3.32E-04	3.32E-04	3.32E-04	3.32E-04	3.32E-04	3.32E-04	3.32E-04	1.11E-04	-	-	-	1.33E-03	1.11E-03	0.00E+00
Welding Machine 400 Amp	4	0	BULK	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Dredging- Sub Phase 8			DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Clamshell 10CY Rehandling	8	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 330F Crawler Medium Exc	8	239	DREDGE	-	-	-	1.51E-03	-	-	-	-	-	-	-	-	-	1.51E-03	0.00E+00	0.00E+00
CAT 385C Crawler Large Exca	8	530	DREDGE	-	-	-	4.54E-03	-	-	-	-	-	-	-	-	-	4.54E-03	0.00E+00	0.00E+00
Generator 50 kW Enclosed	8	68	DREDGE	-	-	-	3.77E-03	-	-	-	-	-	-	-	-	-	3.77E-03	0.00E+00	0.00E+00
Flat Deck Barge - 3102 Ton	8	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
SCOW 8,000 CY	8	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
PUSH BOAT 21-FT 435HP	8	150	DREDGE	-	-	-	1.42E-02	-	-	-	-	-	-	-	-	-	1.42E-02	0.00E+00	0.00E+00
BAKER TANK 21K GAL	8	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Suct & Disch 3" Hose 25 ft	8	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Pump 3 in Subm 6HP	8	6	DREDGE	-	-	-	3.71E-04	-	-	-	-	-	-	-	-	-	3.71E-04	0.00E+00	0.00E+00
Burning Outfit	8	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Elec Chain Hoist 10T 2Spd	8	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Pressure Washer 3,000 psi	8	11	DREDGE	-	-	-	8.77E-04	-	-	-	-	-	-	-	-	-	8.77E-04	0.00E+00	0.00E+00
Welding Machine 400 Amp	8	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
VOLVO A25F 6x6 Articulated 15-19CY	8	315	DREDGE	-	-	-	1.38E-03	-	-	-	-	-	-	-	-	-	1.38E-03	0.00E+00	0.00E+00
On-Hwy Dump - 18 CY Triax	8	310	DREDGE	-	-	-	1.90E-02	-	-	-	-	-	-	-	-	-	1.90E-02	0.00E+00	0.00E+00
Air Compressor 375 cfm	8	117	DREDGE	-	-	-	4.00E-03	-	-	-	-	-	-	-	-	-	4.00E-03	0.00E+00	0.00E+00
CAT D6M XL Dozer	8	153	DREDGE	-	-	-	6.35E-03	-	-	-	-	-	-	-	-	-	6.35E-03	0.00E+00	0.00E+00
CAT 950G Wheel Loader 4CY	8	180	DREDGE	-	-	-	4.25E-03	-	-	-	-	-	-	-	-	-	4.25E-03	0.00E+00	0.00E+00
CAT 980K Wheel Loader 7 CY	8	367.44	DREDGE	-	-	-	7.89E-03	-	-	-	-	-	-	-	-	-	7.89E-03	0.00E+00	0.00E+00
Dredging- Sub Phase 9			DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Air Compressor 375 cfm	9	117	DREDGE	-	-	-	4.72E-03	-	-	-	-	-	-	-	-	-	4.72E-03	0.00E+00	0.00E+00
BAKER TANK 21K GAL	9	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Burning Outfit	9	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 330F Crawler Medium Exc	9	239	DREDGE	-	-	-	1.78E-03	-	-	-	-	-	-	-	-	-	1.78E-03	0.00E+00	0.00E+00
CAT 385C Crawler Large Exca	9	530	DREDGE	-	-	-	5.36E-03	-	-	-	-	-	-	-	-	-	5.36E-03	0.00E+00	0.00E+00
CAT 950G Wheel Loader 4CY	9	180	DREDGE	-	-	-	5.04E-03	-	-	-	-	-	-	-	-	-	5.04E-03	0.00E+00	0.00E+00
CAT 980K Wheel Loader 7 CY	9	367.44	DREDGE	-	-	-	9.34E-03	-	-	-	-	-	-	-	-	-	9.34E-03	0.00E+00	0.00E+00
CAT D6M XL Dozer	9	153	DREDGE	-	-	-	7.52E-03	-	-	-	-	-	-	-	-	-	7.52E-03	0.00E+00	0.00E+00
Clamshell 10CY Rehandling	9	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Elec Chain Hoist 10T 2Spd	9	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Flat Deck Barge - 3102 Ton	9	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Generator 50 kW Enclosed	9	68	DREDGE	-	-	-	4.47E-03	-	-	-	-	-	-	-	-	-	4.47E-03	0.00E+00	0.00E+00
On-Hwy Dump - 18 CY Triax	9	310	DREDGE	-	-	-	2.25E-02	-	-	-	-	-	-	-	-	-	2.25E-02	0.00E+00	0.00E+00
Pressure Washer 3,000 psi	9	11	DREDGE	-	-	-	1.03E-03	-	-	-	-	-	-	-	-	-	1.03E-03	0.00E+00	0.00E+00
Pump 3 in Subm 6HP	9	6	DREDGE	-	-	-	4.40E-04	-	-	-	-	-	-	-	-	-	4.40E-04	0.00E+00	0.00E+00
PUSH BOAT 21-FT 435HP	9	150	DREDGE	-	-	-	1.67E-02	-	-	-	-	-	-	-	-	-	1.67E-02	0.00E+00	0.00E+00
SCOW 8,000 CY	9	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Suct & Disch 3" Hose 25 ft	9	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
VOLVO A25F 6x6 Articulated 15-19CY	9	315	DREDGE	-	-	-	1.63E-03	-	-	-	-	-	-	-	-	-	1.63E-03	0.00E+00	0.00E+00
Welding Machine 400 Amp	9	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Dredging- Sub Phase 10			DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Air Compressor 375 cfm	10	117	DREDGE	-	-	-	1.26E-03	-	-	-	-	-	-	-	-	-	1.26E-03	0.00E+00	0.00E+00
BAKER TANK 21K GAL	10	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Burning Outfit	10	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 330F Crawler Medium Exc	10	239	DREDGE	-	-	-	4.48E-04	-	-	-	-	-	-	-	-	-	4.48E-04	0.00E+00	0.00E+00
CAT 385C Crawler Large Exca	10	530	DREDGE	-	-	-	1.57E-03	-	-	-	-	-	-	-	-	-	1.57E-03	0.00E+00	0.00E+00
CAT 950G Wheel Loader 4CY	10	180	DREDGE	-	-	-	1.26E-03	-	-	-	-	-	-	-	-	-	1.26E-03	0.00E+00	0.00E+00
CAT 980K Wheel Loader 7 CY	10	367.44	DREDGE	-	-	-	2.34E-03	-	-	-	-	-	-	-	-	-	2.34E-03	0.00E+00	0.00E+00
CAT D6M XL Dozer	10	153	DREDGE	-	-	-	1.88E-03	-	-	-	-	-	-	-	-	-	1.88E-03	0.00E+00	0.00E+00
Clamshell 10CY Rehandling	10	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Elec Chain Hoist 10T 2Spd	10	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Flat Deck Barge - 3102 Ton	10	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Generator 50 kW Enclosed	10	68	DREDGE	-	-	-	1.12E-03	-	-	-	-	-	-	-	-	-	1.12E-03	0.00E+00	0.00E+00
On-Hwy Dump - 18 CY Triax	10	310	DREDGE	-	-	-	5.63E-03	-	-	-	-	-	-	-	-	-	5.63E-03	0.00E+00	0.00E+00
Pressure Washer 3,000 psi	10	11	DREDGE	-	-	-	3.03E-04	-	-	-	-	-	-	-	-	-	3.03E-04	0.00E+00	0.00E+00
Pump 3 in Subm 6HP	10	6	DREDGE	-	-	-	1.10E-04	-	-	-	-	-	-	-	-	-	1.10E-04	0.00E+00	0.00E+00
PUSH BOAT 21-FT 435HP	10	150	DREDGE	-	-	-	4.90E-03	-	-	-	-	-	-	-	-	-	4.90E-03	0.00E+00	0.00E+00
SCOW 8,000 CY	10	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Suct & Disch 3" Hose 25 ft	10	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
VOLVO A25F 6x6 Articulated 15-19CY	10	315	DREDGE	-	-	-	4.10E-04	-	-	-	-	-	-	-	-	-	4.10E-04	0.00E+00	0.00E+00
Welding Machine																			

GroveRT700B 36.3MT RT Crane	7B	177.1	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
GroveRT750E 50MT RT Crane	7B	200	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Hydraulic Jack 50 Ton	7B	0	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
I.C.E. 1412B Vibratory Hamme	7B	550	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
JLG 400S MANLIFT	7B	82	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Manitowoc 555 136 MT	7B	340	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Manitowoc 999 250 MT	7B	400	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
On-Hwy PU 4x4 - 1.25T Crew	7B	300	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
OSR SLURRY MIXER 5CYD W/SILO	7B	27	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
OSR SLURRY TANK (10MG-15MG)	7B	0	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
OSR TECHNIWELL PUMP	7B	36	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Pump 3 in Centr 20k gph	7B	5	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Schwing2525 on Trk (181 y/hr	7B	432	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Suct & Disch 3" Hose 25 ft	7B	0	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
SWEEPER ATTACH	7B	0	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
TT 50K w/21CY Dump Trailer	7B	8	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
WALK-BEHIND FLOOR TROWEL36"	7B	5.5	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Welding Machine 400 Amp	7B	0	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Land Improvements - Sub Phase 1			LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Air Compressor 185 cfm	1	49	LAND1	-	-	-	2.27E-05	2.27E-05	2.27E-05	2.27E-05	2.27E-05	6.27E-06	-	-	-	-	-	4.55E-05	5.18E-05	0.00E+00
Bomag 65S-2 WalkBhnd Roller 26	1	5.9	LAND1	-	-	-	1.16E-05	1.16E-05	1.16E-05	1.16E-05	1.16E-05	3.58E-06	-	-	-	-	-	2.33E-05	2.69E-05	0.00E+00
Burning Outfit	1	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 320 Crawler Medium Exc	1	164	LAND1	-	-	-	9.08E-06	9.08E-06	9.08E-06	9.08E-06	9.08E-06	3.03E-06	-	-	-	-	-	1.82E-05	2.12E-05	0.00E+00
CAT 330F Crawler Medium Exc	1	239	LAND1	-	-	-	8.05E-05	8.05E-05	8.05E-05	8.05E-05	8.05E-05	2.25E-05	-	-	-	-	-	1.61E-04	1.84E-04	0.00E+00
CAT 345D Crawler Large Exca	1	380	LAND1	-	-	-	2.04E-04	2.04E-04	2.04E-04	2.04E-04	2.04E-04	5.71E-05	-	-	-	-	-	4.08E-04	4.65E-04	0.00E+00
CAT 434D Tandem Roller 59"	1	83	LAND1	-	-	-	4.98E-05	4.98E-05	4.98E-05	4.98E-05	4.98E-05	1.53E-05	-	-	-	-	-	9.97E-05	1.15E-04	0.00E+00
CAT 950G Wheel Loader 4CY	1	180	LAND1	-	-	-	1.31E-04	1.31E-04	1.31E-04	1.31E-04	1.31E-04	3.64E-05	-	-	-	-	-	2.62E-04	2.98E-04	0.00E+00
CAT 963D LGP Track Loader	1	110	LAND1	-	-	-	1.76E-04	1.76E-04	1.76E-04	1.76E-04	1.76E-04	4.93E-05	-	-	-	-	-	3.52E-04	4.01E-04	0.00E+00
CAT D3K LGP Dozer	1	81	LAND1	-	-	-	7.58E-05	7.58E-05	7.58E-05	7.58E-05	7.58E-05	2.17E-05	-	-	-	-	-	1.52E-04	1.73E-04	0.00E+00
CAT D4G XL Dozer	1	87	LAND1	-	-	-	2.33E-05	2.33E-05	2.33E-05	2.33E-05	2.33E-05	7.75E-06	-	-	-	-	-	4.65E-05	5.43E-05	0.00E+00
Concrete Saw to 11"(wo Blade)	1	11	LAND1	-	-	-	1.70E-04	1.70E-04	1.70E-04	1.70E-04	1.70E-04	4.88E-05	-	-	-	-	-	3.40E-04	3.89E-04	0.00E+00
Concrete Work Tools	1	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Delmag D100-13 265K FT-LB	1	55	LAND1	-	-	-	7.91E-04	7.91E-04	7.91E-04	7.91E-04	7.91E-04	2.25E-04	-	-	-	-	-	1.58E-03	1.81E-03	0.00E+00
Delmag D80-23 212K FT-LB	1	55	LAND1	-	-	-	1.27E-03	1.27E-03	1.27E-03	1.27E-03	1.27E-03	3.53E-04	-	-	-	-	-	2.54E-03	2.90E-03	0.00E+00
Flat Deck Barge - 1074 Ton	1	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Flexifloat - 5' x 10' x 40'	1	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Genie GTH-842 TeleLift 8000#	1	99	LAND1	-	-	-	-	-	-	-	4.08E-05	4.08E-05	-	-	-	-	-	0.00E+00	8.15E-05	0.00E+00
GroveRT700B 36.3MT RT Crane	1	177.1	LAND1	-	-	-	1.35E-04	1.35E-04	1.35E-04	1.35E-04	1.35E-04	3.82E-05	-	-	-	-	-	2.69E-04	3.08E-04	0.00E+00
GroveRT750E 50MT RT Crane	1	200	LAND1	-	-	-	1.82E-04	1.82E-04	1.82E-04	1.82E-04	1.82E-04	5.22E-05	-	-	-	-	-	3.63E-04	4.15E-04	0.00E+00
Hilti Tools, Misc.	1	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Hydraulic Jack 50 Ton	1	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
I.C.E. 1412B Vibratory Hamme	1	550	LAND1	-	-	-	-	-	-	-	4.78E-03	4.78E-03	-	-	-	-	-	0.00E+00	9.56E-03	0.00E+00
JLG 400S MANLIFT	1	82	LAND1	-	-	-	4.39E-04	4.39E-04	4.39E-04	4.39E-04	1.21E-04	-	-	-	-	-	-	8.78E-04	9.99E-04	0.00E+00
Manitowoc 777 181.4 MT	1	340	LAND1	-	-	-	2.69E-03	2.69E-03	2.69E-03	2.69E-03	2.69E-03	7.46E-04	-	-	-	-	-	5.39E-03	6.14E-03	0.00E+00
Plate Compactor 25 in 11HP	1	4.8	LAND1	-	-	-	4.09E-06	4.09E-06	4.09E-06	4.09E-06	4.09E-06	1.17E-06	-	-	-	-	-	8.19E-06	9.36E-06	0.00E+00
Schwing2525 on Trk (181 y/hr	1	432	LAND1	-	-	-	1.13E-03	1.13E-03	1.13E-03	1.13E-03	1.13E-03	3.28E-04	-	-	-	-	-	2.27E-03	2.60E-03	0.00E+00
WALK-BEHIND FLOOR TROWEL36"	1	5.5	LAND1	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Welding Machine 400 Amp	1	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Land Improvements - Sub Phase 3			LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Air Compressor 185 cfm	3	49	LAND1	-	-	-	7.84E-06	2.27E-05	2.27E-05	2.27E-05	2.27E-05	1.57E-05	-	-	-	-	-	3.06E-05	6.12E-05	0.00E+00
Bomag 65S-2 WalkBhnd Roller 26	3	5.9	LAND1	-	-	-	4.48E-06	1.16E-05	1.16E-05	1.16E-05	1.16E-05	8.06E-06	-	-	-	-	-	1.61E-05	3.14E-05	0.00E+00
Burning Outfit	3	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 320 Crawler Medium Exc	3	164	LAND1	-	-	-	3.03E-06	9.08E-06	9.08E-06	9.08E-06	9.08E-06	6.05E-06	-	-	-	-	-	1.21E-05	2.42E-05	0.00E+00
CAT 330F Crawler Medium Exc	3	239	LAND1	-	-	-	2.90E-05	8.05E-05	8.05E-05	8.05E-05	8.05E-05	5.47E-05	-	-	-	-	-	1.09E-04	2.16E-04	0.00E+00
CAT 345D Crawler Large Exca	3	380	LAND1	-	-	-	7.34E-05	2.04E-04	2.04E-04	2.04E-04	2.04E-04	1.39E-04	-	-	-	-	-	2.77E-04	5.46E-04	0.00E+00
CAT 434D Tandem Roller 59"	3	83	LAND1	-	-	-	1.92E-05	4.98E-05	4.98E-05	4.98E-05	4.98E-05	3.45E-05	-	-	-	-	-	6.90E-05	1.34E-04	0.00E+00
CAT 950G Wheel Loader 4CY	3	180	LAND1	-	-	-	4.36E-05	1.31E-04	1.31E-04	1.31E-04	1.31E-04	8.73E-05	-	-	-	-	-	1.75E-04	3.49E-04	0.00E+00
CAT 963D LGP Track Loader	3	110	LAND1	-	-	-	6.33E-05	1.76E-04	1.76E-04	1.76E-04	1.76E-04	1.20E-04	-	-	-	-	-	2.39E-04	4.72E-04	0.00E+00
CAT D3K LGP Dozer	3	81	LAND1	-	-	-	2.53E-05	7.58E-05	7.58E-05	7.58E-05	7.58E-05	5.05E-05	-	-	-	-	-	1.01E-04	2.02E-04	0.00E+00
CAT D4G XL Dozer	3	87	LAND1	-	-	-	7.75E-06	2.33E-05	2.33E-05	2.33E-05	2.33E-05	1.55E-05	-	-	-	-	-	3.10E-05	6.20E-05	0.00E+00
Concrete Saw to 11"(wo Blade)	3	11	LAND1	-	-	-	5.72E-05	1.70E-04	1.70E-04	1.70E-04	1.70E-04	1.14E-04	-	-	-	-	-	2.27E-04	4.54E-04	0.00E+00
Concrete Work Tools	3	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Delmag D100-13 265K FT-LB	3	55	LAND1	-	-	-	2.68E-04	7.91E-04	7.91E-04	7.91E-04	7.91E-04	5.29E-04	-	-	-	-	-	1.06E-03	2.11E-03	0.00E+00
Delmag D80-23 212K FT-LB	3	55	LAND1	-	-	-	3.04E-04	9.01E-04	9.01E-04	9.01E-04	9.01E-04	6.02E-04	-	-	-	-	-	1.20E-03	2.40E-03	0.00E+00
Flat Deck Barge - 1074 Ton	3	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Flexifloat - 5' x 10' x 40'	3	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
GroveRT700B 36.3MT RT Crane	3	177.1	LAND1	-	-	-	4.02E-05	1.17E-04	1.17E-04	1.17E-04	1.17E-04	7.84E-05	-	-	-	-	-	1.57E-04	3.12E-04	0.00E+00
GroveRT750E 50MT RT Crane	3	200	LAND1	-	-	-	6.13E-05	1.82E-04	1.82E-04	1.82E-04	1.82E-04	1.23E-04	-	-	-	-	-	2.43E-04	4.86E-04	

CAT 980K Wheel Loader 7 CY	13	367.44	LAND1	-	-	-	-	-	-	7.08E-04	-	-	-	-	-	-	-	0.00E+00	7.08E-04	0.00E+00
CAT H120CS Hydr Impact 3000 FT/LB	13	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Concrete Saw to 6"(wo Blade)	13	11	LAND1	-	-	-	-	-	-	1.10E-03	-	-	-	-	-	-	-	0.00E+00	1.10E-03	0.00E+00
Concrete Work Tools	13	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Daily Opertd Rent-Grove130MT	13	300	LAND1	-	-	-	-	-	-	1.77E-04	-	-	-	-	-	-	-	0.00E+00	1.77E-04	0.00E+00
Flatbed Tractor/Trailer-38T	13	300	LAND1	-	-	-	-	-	-	3.22E-04	-	-	-	-	-	-	-	0.00E+00	3.22E-04	0.00E+00
Flatbed Truck - 15 Ton	13	155	LAND1	-	-	-	-	-	-	7.71E-05	-	-	-	-	-	-	-	0.00E+00	7.71E-05	0.00E+00
Flatbed Truck - 23 Ton	13	170	LAND1	-	-	-	-	-	-	4.88E-05	-	-	-	-	-	-	-	0.00E+00	4.88E-05	0.00E+00
Generator 5000 w	13	7.5	LAND1	-	-	-	-	-	-	9.03E-04	-	-	-	-	-	-	-	0.00E+00	9.03E-04	0.00E+00
GroveRT750E 50MT RT Crane	13	200	LAND1	-	-	-	-	-	-	3.84E-04	-	-	-	-	-	-	-	0.00E+00	3.84E-04	0.00E+00
JLG 600A MANLIFT	13	82	LAND1	-	-	-	-	-	-	1.18E-03	-	-	-	-	-	-	-	0.00E+00	1.18E-03	0.00E+00
Mobe Crane for Daily Rental	13	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
OSR SLURRY MIXER 5CYD W/SILO	13	27	LAND1	-	-	-	-	-	-	4.97E-04	-	-	-	-	-	-	-	0.00E+00	4.97E-04	0.00E+00
Plate Compactor 25 in 11HP	13	4.8	LAND1	-	-	-	-	-	-	6.50E-04	-	-	-	-	-	-	-	0.00E+00	6.50E-04	0.00E+00
Putzmeister TK30 (31cy/hr) T	13	40	LAND1	-	-	-	-	-	-	6.14E-04	-	-	-	-	-	-	-	0.00E+00	6.14E-04	0.00E+00
ROD BENDER TO #10	13	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Suct & Disch 3" Hose 25 ft	13	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Welding Machine 400 Amp	13	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Land Improvements - Sub Phase 14			LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
16T Runabout Service Boat	14	100	LAND1	-	-	-	-	-	7.34E-04	8.17E-04	8.17E-04	8.17E-04	-	-	-	-	-	7.34E-04	2.45E-03	0.00E+00
Air Compressor 185 cfm	14	49	LAND1	-	-	-	-	-	8.63E-06	1.02E-05	1.02E-05	1.02E-05	-	-	-	-	-	8.63E-06	3.06E-05	0.00E+00
Bomag 213D Earth Roller 84"	14	128	LAND1	-	-	-	-	-	5.53E-04	6.24E-04	6.24E-04	6.24E-04	-	-	-	-	-	5.53E-04	1.87E-03	0.00E+00
Bomag 65S-2 WalkBhnd Roller 26	14	5.9	LAND1	-	-	-	-	-	1.41E-04	1.59E-04	1.59E-04	1.59E-04	-	-	-	-	-	1.41E-04	4.76E-04	0.00E+00
Burning Outfit	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 320 Crawler Medium Exc	14	164	LAND1	-	-	-	-	-	5.14E-04	5.81E-04	5.81E-04	5.81E-04	-	-	-	-	-	5.14E-04	1.74E-03	0.00E+00
CAT 430E 4WD Backhoe	14	111	LAND1	-	-	-	-	-	9.30E-04	1.05E-03	1.05E-03	1.05E-03	-	-	-	-	-	9.30E-04	3.15E-03	0.00E+00
CAT 950G Wheel Loader 4CY	14	180	LAND1	-	-	-	-	-	8.22E-04	9.24E-04	9.24E-04	9.24E-04	-	-	-	-	-	8.22E-04	2.77E-03	0.00E+00
CAT 953C LGP Track loader	14	110	LAND1	-	-	-	-	-	9.29E-04	1.05E-03	1.05E-03	1.05E-03	-	-	-	-	-	9.29E-04	3.15E-03	0.00E+00
CAT CR50 CRUSHER	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT D4G XL Dozer	14	87	LAND1	-	-	-	-	-	5.12E-04	5.78E-04	5.78E-04	5.78E-04	-	-	-	-	-	5.12E-04	1.73E-03	0.00E+00
CAT D6M XL Dozer	14	153	LAND1	-	-	-	-	-	5.97E-04	6.74E-04	6.74E-04	6.74E-04	-	-	-	-	-	5.97E-04	2.02E-03	0.00E+00
CAT H90CS Hydr Impact 1000FT/LB	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT M318F WHEEL MTD EXCAV	14	171	LAND1	-	-	-	-	-	9.78E-05	1.07E-04	1.07E-04	1.07E-04	-	-	-	-	-	9.78E-05	3.22E-04	0.00E+00
Concrete Saw to 6"(wo Blade)	14	11	LAND1	-	-	-	-	-	1.35E-05	1.51E-05	1.51E-05	1.51E-05	-	-	-	-	-	1.35E-05	4.54E-05	0.00E+00
Concrete Work Tools	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Daily Opertd Rent-Grove130MT	14	300	LAND1	-	-	-	-	-	4.09E-05	4.77E-05	4.77E-05	4.77E-05	-	-	-	-	-	4.09E-05	1.43E-04	0.00E+00
Flat Deck Barge - 1074 Ton	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Flatbed Tractor/Trailer-38T	14	300	LAND1	-	-	-	-	-	3.18E-06	3.18E-06	3.18E-06	3.18E-06	-	-	-	-	-	3.18E-06	9.53E-06	0.00E+00
Generator 100 kW Enclosed	14	169	LAND1	-	-	-	-	-	2.41E-03	2.71E-03	2.71E-03	2.71E-03	-	-	-	-	-	2.41E-03	8.13E-03	0.00E+00
Generator 5000 w	14	7.5	LAND1	-	-	-	-	-	6.89E-05	7.72E-05	7.72E-05	7.72E-05	-	-	-	-	-	6.89E-05	2.32E-04	0.00E+00
Genie GTH-842 TeleLift 8000#	14	99	LAND1	-	-	-	-	-	5.09E-06	5.09E-06	5.09E-06	5.09E-06	-	-	-	-	-	5.09E-06	1.53E-05	0.00E+00
GroveRT700B 36.3MT RT Crane	14	177.1	LAND1	-	-	-	-	-	4.02E-06	4.02E-06	4.02E-06	4.02E-06	-	-	-	-	-	4.02E-06	1.21E-05	0.00E+00
GroveRT890E 81.6MT RT Crane	14	275	LAND1	-	-	-	-	-	1.37E-04	1.53E-04	1.53E-04	1.53E-04	-	-	-	-	-	1.37E-04	4.59E-04	0.00E+00
Hilti Tools, Misc.	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
I.C.E. 44-30 Vibratory Hammer	14	325	LAND1	-	-	-	-	-	3.07E-04	3.42E-04	3.42E-04	3.42E-04	-	-	-	-	-	3.07E-04	1.03E-03	0.00E+00
JD 710L 4WD (2011) Backhoe	14	148	LAND1	-	-	-	-	-	3.41E-04	3.79E-04	3.79E-04	3.79E-04	-	-	-	-	-	3.41E-04	1.14E-03	0.00E+00
Light Plant 30' 4 Lts	14	11.7	LAND1	-	-	-	-	-	3.83E-06	5.11E-06	5.11E-06	5.11E-06	-	-	-	-	-	3.83E-06	1.53E-05	0.00E+00
LITE SHORING BOX	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Manitowoc 555 136 MT	14	340	LAND1	-	-	-	-	-	6.20E-04	6.98E-04	6.98E-04	6.98E-04	-	-	-	-	-	6.20E-04	2.09E-03	0.00E+00
MED SHORING BOX	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Mobe Crane for Daily Rental	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
On-Hwy Dump - 16 CY dbl ax	14	300	LAND1	-	-	-	-	-	7.15E-05	7.94E-05	7.94E-05	7.94E-05	-	-	-	-	-	7.15E-05	2.38E-04	0.00E+00
Plate Compactor 25 in 11HP	14	4.8	LAND1	-	-	-	-	-	2.19E-04	2.47E-04	2.47E-04	2.47E-04	-	-	-	-	-	2.19E-04	7.40E-04	0.00E+00
Portable Mixer 11CF	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Pump 4 in Centr 40k gph	14	10	LAND1	-	-	-	-	-	2.65E-06	2.65E-06	2.65E-06	2.65E-06	-	-	-	-	-	2.65E-06	7.94E-06	0.00E+00
PUSH BOAT 21-FT 435HP	14	150	LAND1	-	-	-	-	-	1.14E-03	1.28E-03	1.28E-03	1.28E-03	-	-	-	-	-	1.14E-03	3.84E-03	0.00E+00
Putzmeister TK30 (31cy/hr) T	14	40	LAND1	-	-	-	-	-	7.50E-05	8.44E-05	8.44E-05	8.44E-05	-	-	-	-	-	7.50E-05	2.53E-04	0.00E+00
Pvmt Breaker 35-45 lbs	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Pvmt Breaker 60-65 lbs	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Suct & Disch 3" Hose 25 ft	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Welding Machine 400 Amp	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Land Improvements - Sub Phase 15			LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Bomag 65S-2 WalkBhnd Roller 26	15	5.9	LAND1	-	-	-	-	-	1.25E-05	3.58E-05	3.58E-05	-	-	-	-	-	-	1.25E-05	7.17E-05	0.00E+00
Burning Outfit	15	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 320 Crawler Medium Exc	15	164	LAND1	-	-	-	-	-	9.08E-06	2.42E-05	2.42E-05	-	-	-	-	-	-	9.08E-06	4.84E-05	0.00E+00
CAT 330F Crawler Medium Exc	15	239	LAND1	-	-	-	-	-	6.76E-05	1.96E-04	1.96E-04	-	-	-	-	-	-	6.76E-05	3.93E-04	0.00E+00
CAT 345D Crawler Large Exca	15	380	LAND1	-	-	-	-	-	1.71E-04	4.97E-04	4.97E-04	-	-	-	-	-	-	1.71E-04	9.95E-04	0.00E+00
CAT 434D Tandem Roller 59"	15	83	LAND1	-	-	-	-	-	5.37E-05	1.53E-04	1.53E-04	-	-	-	-	-	-	5.37E-05	3.07E-04	0.00E+00
CAT 950G Wheel Loader 4CY	15	180	LAND1	-	-	-	-	-	1.53E-04	4.58E-04	4.58E-04	-	-	-	-	-	-	1.53E-04	9.16E-04	0.00E+00
CAT 963D LGP Track Loader	15	110	LAND1	-	-	-	-	-	1.48E-04	4.29E-04	4.29E-04	-	-	-	-	-	-	1.48E-04	8.59E-04	0.00E+00
CAT D3K LGP Dozer	15	81	LAND1	-	-	-	-	-	7.58E-05	2.27E-04	2.27E-04	-	-	-	-	-	-	7.58E-05	4.55E-04	0.00E+00
CAT D4G XL Dozer	15	87	LAND1	-	-	-	-	-	2.33E-05	6.20E-05	6.20E-05	-	-	-	-	-	-	2.33E-05	1.24E-04	0.00E+00
Concrete Saw to 11"(wo Blade)	15	11	LAND1	-	-	-	-	-	1.63E-04	4.86E-04	4.86E-04	-	-	-	-	-	-	1.63E-04	9.72E-04	0.00E+00
Concrete Work Tools	15	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Delmag D100-13 265K FT																				

Welding Machine 400 Amp	15	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
O&M Facility Construction			OMF	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Bomag 65S-2 WalkBhdn Roller 26	OMF	5.9	OMF	-	-	8.06E-06	8.06E-06	8.06E-06	8.06E-06	8.06E-06	8.06E-06	8.06E-06	8.06E-06	8.06E-06	8.06E-06	-	2.42E-05	3.22E-05	1.61E-05
Burning Outfit	OMF	0	OMF	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 320 Crawler Medium Exc	OMF	164	OMF	-	-	4.54E-06	4.54E-06	4.54E-06	4.54E-06	4.54E-06	4.54E-06	4.54E-06	4.54E-06	4.54E-06	4.54E-06	-	1.36E-05	1.82E-05	9.08E-06
CAT 330F Crawler Medium Exc	OMF	239	OMF	-	-	4.35E-05	4.35E-05	4.35E-05	4.35E-05	4.35E-05	4.35E-05	4.35E-05	4.35E-05	4.35E-05	4.35E-05	-	1.30E-04	1.74E-04	8.69E-05
CAT 345D Crawler Large Exca	OMF	380	OMF	-	-	1.10E-04	1.10E-04	1.10E-04	1.10E-04	1.10E-04	1.10E-04	1.10E-04	1.10E-04	1.10E-04	1.10E-04	-	3.30E-04	4.40E-04	2.20E-04
CAT 434D Tandem Roller 59"	OMF	83	OMF	-	-	3.45E-05	3.45E-05	3.45E-05	3.45E-05	3.45E-05	3.45E-05	3.45E-05	3.45E-05	3.45E-05	3.45E-05	-	1.03E-04	1.38E-04	6.90E-05
CAT 950G Wheel Loader 4CY	OMF	180	OMF	-	-	8.18E-05	8.18E-05	8.18E-05	8.18E-05	8.18E-05	8.18E-05	8.18E-05	8.18E-05	8.18E-05	8.18E-05	-	2.45E-04	3.27E-04	1.64E-04
CAT 963D LGP Track Loader	OMF	110	OMF	-	-	9.50E-05	9.50E-05	9.50E-05	9.50E-05	9.50E-05	9.50E-05	9.50E-05	9.50E-05	9.50E-05	9.50E-05	-	2.85E-04	3.80E-04	1.90E-04
CAT D3K LGP Dozer	OMF	81	OMF	-	-	5.41E-05	5.41E-05	5.41E-05	5.41E-05	5.41E-05	5.41E-05	5.41E-05	5.41E-05	5.41E-05	5.41E-05	-	1.62E-04	2.17E-04	1.08E-04
CAT D4G XL Dozer	OMF	87	OMF	-	-	1.74E-05	1.74E-05	1.74E-05	1.74E-05	1.74E-05	1.74E-05	1.74E-05	1.74E-05	1.74E-05	1.74E-05	-	5.23E-05	6.98E-05	3.49E-05
Concrete Saw to 11"(wo Blade)	OMF	11	OMF	-	-	1.03E-04	1.03E-04	1.03E-04	1.03E-04	1.03E-04	1.03E-04	1.03E-04	1.03E-04	1.03E-04	1.03E-04	-	3.10E-04	4.14E-04	2.07E-04
Concrete Work Tools	OMF	0	OMF	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Delmag D100-13 265K FT-LB	OMF	55	OMF	-	-	2.10E-04	2.10E-04	2.10E-04	2.10E-04	2.10E-04	2.10E-04	2.10E-04	2.10E-04	2.10E-04	2.10E-04	-	6.30E-04	8.40E-04	4.20E-04
Delmag D80-23 212K FT-LB	OMF	55	OMF	-	-	2.37E-04	2.37E-04	2.37E-04	2.37E-04	2.37E-04	2.37E-04	2.37E-04	2.37E-04	2.37E-04	2.37E-04	-	7.12E-04	9.49E-04	4.75E-04
Flat Deck Barge - 1074 Ton	OMF	0	OMF	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
GroveRT700B 36.3MT RT Crane	OMF	177.1	OMF	-	-	2.11E-05	2.11E-05	2.11E-05	2.11E-05	2.11E-05	2.11E-05	2.11E-05	2.11E-05	2.11E-05	2.11E-05	-	6.33E-05	8.44E-05	4.22E-05
GroveRT750E 50MT RT Crane	OMF	200	OMF	-	-	1.12E-04	1.12E-04	1.12E-04	1.12E-04	1.12E-04	1.12E-04	1.12E-04	1.12E-04	1.12E-04	1.12E-04	-	3.37E-04	4.49E-04	2.25E-04
Manitowoc 777 181.4 MT	OMF	340	OMF	-	-	6.98E-04	6.98E-04	6.98E-04	6.98E-04	6.98E-04	6.98E-04	6.98E-04	6.98E-04	6.98E-04	6.98E-04	-	2.09E-03	2.79E-03	1.40E-03
Plate Compactor 25 in 11HP	OMF	4.8	OMF	-	-	2.63E-06	2.63E-06	2.63E-06	2.63E-06	2.63E-06	2.63E-06	2.63E-06	2.63E-06	2.63E-06	2.63E-06	-	7.90E-06	1.05E-05	5.26E-06
Schwing2525 on Trk (181 y/hr	OMF	432	OMF	-	-	7.18E-04	7.18E-04	7.18E-04	7.18E-04	7.18E-04	7.18E-04	7.18E-04	7.18E-04	7.18E-04	7.18E-04	-	2.15E-03	2.87E-03	1.44E-03
WALK-BEHIND FLOOR TROWEL36"	OMF	5.5	OMF	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-	0.00E+00	0.00E+00	0.00E+00
Welding Machine 400 Amp	OMF	0	OMF	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00

	2024	2025	2026
DEMO	0.02	0.00	0.00
PAVE	0.05	0.00	0.00
BULK	0.07	0.06	0.00
DREDGE	0.20	0.11	0.00
MARINE	0.03	0.01	0.00
LAND1	0.04	0.13	0.00
OMF	0.01	0.01	0.01

VOC

Resource	Sub Phase	Estimated Horsepower	Model Location	Emission Rate (tons/year)												Annual Total (tons/year)			
				Q4 2023	Q1 2024	Q2 2024	Q3 2024	Q4 2024	Q1 2025	Q2 2025	Q3 2025	Q4 2025	Q1 2026	Q2 2026	Q3 2026	2024	2025	2026	
Demo - Sub Phase 16			DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Burning Outfit	16	0	DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CAT 320 Crawler Medium Exc	16	164	DEMO	-	1.95E-04	-	-	-	-	-	-	-	-	-	-	-	1.95E-04	0.00E+00	0.00E+00
CAT 345D Crawler Large Exca	16	380	DEMO	-	7.94E-04	-	-	-	-	-	-	-	-	-	-	-	7.94E-04	0.00E+00	0.00E+00
CAT 385C Crawler Large Exca	16	530	DEMO	-	3.32E-03	-	-	-	-	-	-	-	-	-	-	-	3.32E-03	0.00E+00	0.00E+00
CAT 980K Wheel Loader 7 CY	16	367.44	DEMO	-	3.16E-03	-	-	-	-	-	-	-	-	-	-	-	3.16E-03	0.00E+00	0.00E+00
CAT CR50 CRUSHER	16	0	DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT P60 PULVERIZER	16	0	DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT S365 Hyd Shear	16	0	DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
ELECTR SELF-PROR SCIS LIFT 32"	16	0	DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Genie GTH-842 TeleLift 8000#	16	99	DEMO	-	3.50E-05	-	-	-	-	-	-	-	-	-	-	-	3.50E-05	0.00E+00	0.00E+00
JD 710L 4WD (2011) Backhoe	16	148	DEMO	-	4.13E-04	-	-	-	-	-	-	-	-	-	-	-	4.13E-04	0.00E+00	0.00E+00
JLG 400S MANLIFT	16	82	DEMO	-	3.87E-04	-	-	-	-	-	-	-	-	-	-	-	3.87E-04	0.00E+00	0.00E+00
Welding Machine 400 Amp	16	0	DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Demo - Sub Phase 17			DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Burning Outfit	17	0	DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 320 Crawler Medium Exc	17	164	DEMO	-	4.13E-05	3.57E-05	-	-	-	-	-	-	-	-	-	-	7.70E-05	0.00E+00	0.00E+00
CAT 345D Crawler Large Exca	17	380	DEMO	-	1.68E-04	1.45E-04	-	-	-	-	-	-	-	-	-	-	3.13E-04	0.00E+00	0.00E+00
CAT 385C Crawler Large Exca	17	530	DEMO	-	6.81E-04	5.96E-04	-	-	-	-	-	-	-	-	-	-	1.28E-03	0.00E+00	0.00E+00
CAT 980K Wheel Loader 7 CY	17	367.44	DEMO	-	6.53E-04	5.77E-04	-	-	-	-	-	-	-	-	-	-	1.23E-03	0.00E+00	0.00E+00
CAT CR50 CRUSHER	17	0	DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT P60 PULVERIZER	17	0	DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT S365 Hyd Shear	17	0	DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
ELECTR SELF-PROR SCIS LIFT 32"	17	0	DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Genie GTH-842 TeleLift 8000#	17	99	DEMO	-	5.16E-06	4.59E-06	-	-	-	-	-	-	-	-	-	-	9.75E-06	0.00E+00	0.00E+00
JD 710L 4WD (2011) Backhoe	17	148	DEMO	-	1.16E-04	1.03E-04	-	-	-	-	-	-	-	-	-	-	2.19E-04	0.00E+00	0.00E+00
JLG 400S MANLIFT	17	82	DEMO	-	7.74E-05	6.88E-05	-	-	-	-	-	-	-	-	-	-	1.46E-04	0.00E+00	0.00E+00
Welding Machine 400 Amp	17	0	DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Demo - Sub Phase 18			DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Burning Outfit	18	0	DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 320 Crawler Medium Exc	18	164	DEMO	-	-	1.20E-04	-	-	-	-	-	-	-	-	-	-	1.20E-04	0.00E+00	0.00E+00
CAT 345D Crawler Large Exca	18	380	DEMO	-	-	4.88E-04	-	-	-	-	-	-	-	-	-	-	4.88E-04	0.00E+00	0.00E+00
CAT 385C Crawler Large Exca	18	530	DEMO	-	-	2.04E-03	-	-	-	-	-	-	-	-	-	-	2.04E-03	0.00E+00	0.00E+00
CAT 980K Wheel Loader 7 CY	18	367.44	DEMO	-	-	1.94E-03	-	-	-	-	-	-	-	-	-	-	1.94E-03	0.00E+00	0.00E+00
CAT CR50 CRUSHER	18	0	DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT P60 PULVERIZER	18	0	DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT S365 Hyd Shear	18	0	DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
ELECTR SELF-PROR SCIS LIFT 32"	18	0	DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Genie GTH-842 TeleLift 8000#	18	99	DEMO	-	-	1.38E-05	-	-	-	-	-	-	-	-	-	-	1.38E-05	0.00E+00	0.00E+00
JD 710L 4WD (2011) Backhoe	18	148	DEMO	-	-	2.06E-04	-	-	-	-	-	-	-	-	-	-	2.06E-04	0.00E+00	0.00E+00
JLG 400S MANLIFT	18	82	DEMO	-	-	2.06E-04	-	-	-	-	-	-	-	-	-	-	2.06E-04	0.00E+00	0.00E+00
Welding Machine 400 Amp	18	0	DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Demo - Pavement Sub Phase 314112-314			PAVE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Bomag 655-2 WalkBhdn Roller 26	4112 - 31413	5.9	PAVE	-	3.54E-05	1.03E-04	-	-	-	-	-	-	-	-	-	-	1.38E-04	0.00E+00	0.00E+00
Burning Outfit	4112 - 31413	0	PAVE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 320 Crawler Medium Exc	4112 - 31413	164	PAVE	-	1.57E-03	4.71E-03	-	-	-	-	-	-	-	-	-	-	6.28E-03	0.00E+00	0.00E+00
CAT 345D Crawler Large Exca	4112 - 31413	380	PAVE	-	3.05E-04	9.16E-04	-	-	-	-	-	-	-	-	-	-	1.22E-03	0.00E+00	0.00E+00
CAT 385C Crawler Large Exca	4112 - 31413	530	PAVE	-	9.90E-04	2.96E-03	-	-	-	-	-	-	-	-	-	-	3.95E-03	0.00E+00	0.00E+00
CAT 430E 4WD Backhoe	4112 - 31413	111	PAVE	-	9.68E-06	1.94E-05	-	-	-	-	-	-	-	-	-	-	2.90E-05	0.00E+00	0.00E+00
CAT 434D Tandem Roller 59"	4112 - 31413	83	PAVE	-	1.47E-05	3.93E-05	-	-	-	-	-	-	-	-	-	-	5.40E-05	0.00E+00	0.00E+00
CAT 950G Wheel Loader 4CY	4112 - 31413	180	PAVE	-	3.54E-05	9.83E-05	-	-	-	-	-	-	-	-	-	-	1.34E-04	0.00E+00	0.00E+00
CAT 980K Wheel Loader 7 CY	4112 - 31413	367.44	PAVE	-	6.91E-03	2.07E-02	-	-	-	-	-	-	-	-	-	-	2.76E-02	0.00E+00	0.00E+00
CAT CR50 CRUSHER	4112 - 31413	0	PAVE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT H120CS Hydr Impact 3000 FTLB	4112 - 31413	0	PAVE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT H160DS Hydr Impact 7500 FTLB	4112 - 31413	0	PAVE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT H90CS Hydr Impact 1000FTLB	4112 - 31413	0	PAVE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT P60 PULVERIZER	4112 - 31413	0	PAVE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT S365 Hyd Shear	4112 - 31413	0	PAVE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Chain Saw 43"	4112 - 31413	2.9	PAVE	-	4.19E-04	1.26E-03	-	-	-	-	-	-	-	-	-	-	1.68E-03	0.00E+00	0.00E+00
Daily Opertd Rent-Grove130MT	4112 - 31413	300	PAVE	-	2.56E-05	7.67E-05	-	-	-	-	-	-	-	-	-	-	1.02E-04	0.00E+00	0.00E+00
ELECTR SELF-PROR SCIS LIFT 32"	4112 - 31413	0	PAVE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Flatbed Tractor/Trailer-38T	4112 - 31413	300	PAVE	-	6.35E-06	1.91E-05	-	-	-	-	-	-	-	-	-	-	2.54E-05	0.00E+00	0.00E+00
Genie GTH-842 TeleLift 8000#	4112 - 31413	99	PAVE	-	2.29E-06	6.88E-06	-	-	-	-	-	-	-	-	-	-	9.17E-06	0.00E+00	0.00E+00
GroveRT750E 50MT RT Crane	4112 - 31413	200	PAVE	-	1.36E-05	4.09E-05	-	-	-	-	-	-	-	-	-	-	5.46E-05	0.00E+00	0.00E+00
Hilti Tools, Misc.	4112 - 31413	0	PAVE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
JD 410G 4WD Backhoe	4112 - 31413	65	PAVE	-	3.32E-05	9.13E-05	-	-	-	-	-	-	-	-	-	-	1.24E-04	0.00E+00	0.00E+00
JD 710L 4WD (2011) Backhoe	4112 - 31413	148	PAVE	-	1.16E-04	3.35E-04	-	-	-	-	-	-	-	-	-	-	4.52E-04	0.00E+00	0.00E+00
JLG 400S MANLIFT	4112 - 31413	82	PAVE	-	5.16E-05	1.38E-04	-	-	-	-	-	-	-	-	-	-	1.89E-04	0.00E+00	0.00E+00
Plate Compactor 25 in 11HP	4112 - 31413	4.8	PAVE	-	2.05E-05	5.95E-05	-	-	-	-	-	-	-	-	-	-	8.00E-05	0.00E+00	0.00E+00
Welding Machine 400 Amp	4112 - 31413	0	PAVE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Bulkhead Improvement - Sub Phase 4			BULK	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Air Compressor 185 cfm	4	49	BULK	-	6.13E-05	6.13E-05	6.13E-05	6.13E-05	6.13E-05	6.13E-05	6.13E-05	6.13E-05	2.21E-05	-	-	-	2.45E-04	2.06E-04	0.00E+00
BOBCAT S130 Skid Steer	4	49	BULK	-	6.49E-05	6.49E-05	6.49E-05	6.49E-05	6.49E-05	6.49E-05	6.49E-05	6.49E-05	2.39E-05	-	-	-	2.60E-04	2.19E-04	0.00E+00
Burning Outfit	4	0	BULK	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 320 Crawler Medium Exc	4	164	BULK	-	9.39E-06	9.39E-06	9.39E-06	9.39E-06	9.39E-06	9.39E-06	9.39E-06	9.39E-06	3.76E-06	-	-	-	3.76E-05	3.19E-05	0.00E+00
CAT 330F Crawler Medium Exc	4	239	BULK	-	1.36E-04	1.36E-04	1.36E-04	1.36E-04	1.36E-04	1.36E-04	1.36E-04	1.36E-04	4.63E-05	-	-	-	5.42E-04	4.53E-04	0.00E+00
CAT 430																			

Delmag D80-23 212K FT-LB	4	55	BULK	-	1.98E-03	1.98E-03	1.98E-03	1.98E-03	1.98E-03	1.98E-03	1.98E-03	1.98E-03	6.61E-04	-	-	-	7.94E-03	6.61E-03	0.00E+00
Flat Deck Barge - 1074 Ton	4	0	BULK	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
FLEX SHAFT CONC VIBRRHP	4	0	BULK	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Flexifloat - 5' x 10' x 20'	4	0	BULK	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Flexifloat - 5' x 10' x 40'	4	0	BULK	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Genie GTH-842 TeLeLift 8000#	4	99	BULK	-	4.30E-05	4.30E-05	4.30E-05	4.30E-05	4.30E-05	4.30E-05	4.30E-05	4.30E-05	1.43E-05	-	-	-	1.72E-04	1.43E-04	0.00E+00
GroveRT700B 36.3MT RT Crane	4	177.1	BULK	-	2.11E-04	2.11E-04	2.11E-04	2.11E-04	2.11E-04	2.11E-04	2.11E-04	2.11E-04	7.25E-05	-	-	-	8.45E-04	7.07E-04	0.00E+00
GroveRT750E 50MT RT Crane	4	200	BULK	-	4.98E-04	4.98E-04	4.98E-04	4.98E-04	4.98E-04	4.98E-04	4.98E-04	4.98E-04	1.67E-04	-	-	-	1.99E-03	1.66E-03	0.00E+00
Hilti Tools, Misc.	4	0	BULK	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Hydraulic Jack 50 Ton	4	0	BULK	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
I.C.E. 1412B Vibratory Hamme	4	550	BULK	-	1.20E-02	1.20E-02	1.20E-02	1.20E-02	1.20E-02	1.20E-02	1.20E-02	1.20E-02	4.00E-03	-	-	-	4.80E-02	4.00E-02	0.00E+00
JLG 400S MANLIFT	4	82	BULK	-	2.75E-03	2.75E-03	2.75E-03	2.75E-03	2.75E-03	2.75E-03	2.75E-03	2.75E-03	9.20E-04	-	-	-	1.10E-02	9.17E-03	0.00E+00
Manitowoc 999 250 MT	4	400	BULK	-	3.66E-03	3.66E-03	3.66E-03	3.66E-03	3.66E-03	3.66E-03	3.66E-03	3.66E-03	1.22E-03	-	-	-	1.46E-02	1.22E-02	0.00E+00
Schwing2525 on Trk (181 y/hr	4	432	BULK	-	1.71E-03	1.71E-03	1.71E-03	1.71E-03	1.71E-03	1.71E-03	1.71E-03	1.71E-03	5.70E-04	-	-	-	6.84E-03	5.70E-03	0.00E+00
SWEEPER ATTACH	4	0	BULK	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
TT 50K w/21CY Dump Trailer	4	8	BULK	-	5.75E-04	5.75E-04	5.75E-04	5.75E-04	5.75E-04	5.75E-04	5.75E-04	5.75E-04	1.92E-04	-	-	-	2.30E-03	1.92E-03	0.00E+00
Welding Machine 400 Amp	4	0	BULK	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Dredging- Sub Phase 8			DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Clamshell 10CY Rehandling	8	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 330F Crawler Medium Exc	8	239	DREDGE	-	-	-	1.55E-03	-	-	-	-	-	-	-	-	-	1.55E-03	0.00E+00	0.00E+00
CAT 385C Crawler Large Exca	8	530	DREDGE	-	-	-	4.25E-03	-	-	-	-	-	-	-	-	-	4.25E-03	0.00E+00	0.00E+00
Generator 50 kW Enclosed	8	68	DREDGE	-	-	-	5.08E-03	-	-	-	-	-	-	-	-	-	5.08E-03	0.00E+00	0.00E+00
Flat Deck Barge - 3102 Ton	8	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
SCOW 8,000 CY	8	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
PUSH BOAT 21-FT 435HP	8	150	DREDGE	-	-	-	2.95E-02	-	-	-	-	-	-	-	-	-	2.95E-02	0.00E+00	0.00E+00
BAKER TANK 21K GAL	8	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Suct & Disch 3" Hose 25 ft	8	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Pump 3 in Subm 6HP	8	6	DREDGE	-	-	-	1.09E-03	-	-	-	-	-	-	-	-	-	1.09E-03	0.00E+00	0.00E+00
Burning Outfit	8	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Elec Chain Hoist 10T 2Spd	8	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Pressure Washer 3,000 psi	8	11	DREDGE	-	-	-	1.86E-03	-	-	-	-	-	-	-	-	-	1.86E-03	0.00E+00	0.00E+00
Welding Machine 400 Amp	8	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
VOLVO A25F 6x6 Articulated 15-19CY	8	315	DREDGE	-	-	-	1.46E-03	-	-	-	-	-	-	-	-	-	1.46E-03	0.00E+00	0.00E+00
On-Hwy Dump - 18 CY Triax	8	310	DREDGE	-	-	-	2.01E-02	-	-	-	-	-	-	-	-	-	2.01E-02	0.00E+00	0.00E+00
Air Compressor 375 cfm	8	117	DREDGE	-	-	-	4.14E-03	-	-	-	-	-	-	-	-	-	4.14E-03	0.00E+00	0.00E+00
CAT D6M XL Dozer	8	153	DREDGE	-	-	-	3.79E-03	-	-	-	-	-	-	-	-	-	3.79E-03	0.00E+00	0.00E+00
CAT 950G Wheel Loader 4CY	8	180	DREDGE	-	-	-	4.60E-03	-	-	-	-	-	-	-	-	-	4.60E-03	0.00E+00	0.00E+00
CAT 980K Wheel Loader 7 CY	8	367.44	DREDGE	-	-	-	7.10E-03	-	-	-	-	-	-	-	-	-	7.10E-03	0.00E+00	0.00E+00
Dredging- Sub Phase 9			DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Air Compressor 375 cfm	9	117	DREDGE	-	-	-	4.90E-03	-	-	-	-	-	-	-	-	-	4.90E-03	0.00E+00	0.00E+00
BAKER TANK 21K GAL	9	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Burning Outfit	9	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 330F Crawler Medium Exc	9	239	DREDGE	-	-	-	1.83E-03	-	-	-	-	-	-	-	-	-	1.83E-03	0.00E+00	0.00E+00
CAT 385C Crawler Large Exca	9	530	DREDGE	-	-	-	5.01E-03	-	-	-	-	-	-	-	-	-	5.01E-03	0.00E+00	0.00E+00
CAT 950G Wheel Loader 4CY	9	180	DREDGE	-	-	-	5.44E-03	-	-	-	-	-	-	-	-	-	5.44E-03	0.00E+00	0.00E+00
CAT 980K Wheel Loader 7 CY	9	367.44	DREDGE	-	-	-	8.41E-03	-	-	-	-	-	-	-	-	-	8.41E-03	0.00E+00	0.00E+00
CAT D6M XL Dozer	9	153	DREDGE	-	-	-	4.48E-03	-	-	-	-	-	-	-	-	-	4.48E-03	0.00E+00	0.00E+00
Clamshell 10CY Rehandling	9	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Elec Chain Hoist 10T 2Spd	9	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Flat Deck Barge - 3102 Ton	9	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Generator 50 kW Enclosed	9	68	DREDGE	-	-	-	6.02E-03	-	-	-	-	-	-	-	-	-	6.02E-03	0.00E+00	0.00E+00
On-Hwy Dump - 18 CY Triax	9	310	DREDGE	-	-	-	2.38E-02	-	-	-	-	-	-	-	-	-	2.38E-02	0.00E+00	0.00E+00
Pressure Washer 3,000 psi	9	11	DREDGE	-	-	-	2.19E-03	-	-	-	-	-	-	-	-	-	2.19E-03	0.00E+00	0.00E+00
Pump 3 in Subm 6HP	9	6	DREDGE	-	-	-	1.29E-03	-	-	-	-	-	-	-	-	-	1.29E-03	0.00E+00	0.00E+00
PUSH BOAT 21-FT 435HP	9	150	DREDGE	-	-	-	3.48E-02	-	-	-	-	-	-	-	-	-	3.48E-02	0.00E+00	0.00E+00
SCOW 8,000 CY	9	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Suct & Disch 3" Hose 25 ft	9	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
VOLVO A25F 6x6 Articulated 15-19CY	9	315	DREDGE	-	-	-	1.73E-03	-	-	-	-	-	-	-	-	-	1.73E-03	0.00E+00	0.00E+00
Welding Machine 400 Amp	9	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Dredging- Sub Phase 10			DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Air Compressor 375 cfm	10	117	DREDGE	-	-	-	1.30E-03	-	-	-	-	-	-	-	-	-	1.30E-03	0.00E+00	0.00E+00
BAKER TANK 21K GAL	10	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Burning Outfit	10	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 330F Crawler Medium Exc	10	239	DREDGE	-	-	-	4.59E-04	-	-	-	-	-	-	-	-	-	4.59E-04	0.00E+00	0.00E+00
CAT 385C Crawler Large Exca	10	530	DREDGE	-	-	-	1.47E-03	-	-	-	-	-	-	-	-	-	1.47E-03	0.00E+00	0.00E+00
CAT 950G Wheel Loader 4CY	10	180	DREDGE	-	-	-	1.36E-03	-	-	-	-	-	-	-	-	-	1.36E-03	0.00E+00	0.00E+00
CAT 980K Wheel Loader 7 CY	10	367.44	DREDGE	-	-	-	2.11E-03	-	-	-	-	-	-	-	-	-	2.11E-03	0.00E+00	0.00E+00
CAT D6M XL Dozer	10	153	DREDGE	-	-	-	1.12E-03	-	-	-	-	-	-	-	-	-	1.12E-03	0.00E+00	0.00E+00
Clamshell 10CY Rehandling	10	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Elec Chain Hoist 10T 2Spd	10	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Flat Deck Barge - 3102 Ton	10	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Generator 50 kW Enclosed	10	68	DREDGE	-	-	-	1.51E-03	-	-	-	-	-	-	-	-	-	1.51E-03	0.00E+00	0.00E+00
On-Hwy Dump - 18 CY Triax	10	310	DREDGE	-	-	-	5.96E-03	-	-	-	-	-	-	-	-	-	5.96E-03	0.00E+00	0.00E+00
Pressure Washer 3,000 psi	10	11	DREDGE	-	-	-	6.42E-04	-	-	-	-	-	-	-	-	-	6.42E-04	0.00E+00	0.00E+00
Pump 3 in Subm 6HP	10	6	DREDGE	-	-	-	3.23E-04	-	-	-	-	-	-	-	-	-	3.23E-04	0.00E+00	0.00E+00
PUSH BOAT 21-FT 435HP	10	150	DREDGE	-	-	-	1.02E-02	-	-	-	-	-	-	-	-	-	1.02E-02	0.00E+00	0.00E+00
SCOW 8,000 CY	10	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Suct & Disch 3" Hose 25 ft	10	0	DREDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
VOLVO A25F 6x6 Articulated 15-19CY	10	315	DREDGE	-	-	-	4.34E-04	-	-	-	-	-	-	-	-	-	4.34E-04	0.00E+00	0.00E+00
Welding Machine																			

GroveRT700B 36.3MT RT Crane	7B	177.1	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
GroveRT750E 50MT RT Crane	7B	200	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Hydraulic Jack 50 Ton	7B	0	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
I.C.E. 1412B Vibratory Hamme	7B	550	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
JLG 400S MANLIFT	7B	82	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Manitowoc 555 136 MT	7B	340	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Manitowoc 999 250 MT	7B	400	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
On-Hwy PU 4x4 - 1.25T Crew	7B	300	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
OSR SLURRY MIXER 5CYD W/SILO	7B	27	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
OSR SLURRY TANK (10MG-15MG)	7B	0	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
OSR TECHNIWELL PUMP	7B	36	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Pump 3 in Centr 20k gph	7B	5	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Schwing2525 on Trk (181 y/hr	7B	432	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Suct & Disch 3" Hose 25 ft	7B	0	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
SWEeper ATTACH	7B	0	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
TT 50K w/21CY Dump Trailer	7B	8	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
WALK-BEHIND FLOOR TROWEL36"	7B	5.5	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Welding Machine 400 Amp	7B	0	MARINE	-	-	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Land Improvements - Sub Phase 1			LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Air Compressor 185 cfm	1	49	LAND1	-	-	-	7.12E-05	7.12E-05	7.12E-05	7.12E-05	1.96E-05	-	-	-	-	-	-	1.42E-04	1.62E-04	0.00E+00
Bomag 65S-2 WalkBhnd Roller 26	1	5.9	LAND1	-	-	-	4.18E-05	4.18E-05	4.18E-05	4.18E-05	1.29E-05	-	-	-	-	-	-	8.36E-05	9.65E-05	0.00E+00
Burning Outfit	1	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 320 Crawler Medium Exc	1	164	LAND1	-	-	-	5.63E-06	5.63E-06	5.63E-06	5.63E-06	1.88E-06	-	-	-	-	-	-	1.13E-05	1.31E-05	0.00E+00
CAT 330F Crawler Medium Exc	1	239	LAND1	-	-	-	8.26E-05	8.26E-05	8.26E-05	8.26E-05	2.31E-05	-	-	-	-	-	-	1.65E-04	1.88E-04	0.00E+00
CAT 345D Crawler Large Exca	1	380	LAND1	-	-	-	1.91E-04	1.91E-04	1.91E-04	1.91E-04	5.34E-05	-	-	-	-	-	-	3.82E-04	4.35E-04	0.00E+00
CAT 434D Tandem Roller 59"	1	83	LAND1	-	-	-	3.19E-05	3.19E-05	3.19E-05	3.19E-05	9.82E-06	-	-	-	-	-	-	6.38E-05	7.36E-05	0.00E+00
CAT 950G Wheel Loader 4CY	1	180	LAND1	-	-	-	1.42E-04	1.42E-04	1.42E-04	1.42E-04	3.93E-05	-	-	-	-	-	-	2.83E-04	3.22E-04	0.00E+00
CAT 963D LGP Track Loader	1	110	LAND1	-	-	-	2.40E-04	2.40E-04	2.40E-04	2.40E-04	6.71E-05	-	-	-	-	-	-	4.79E-04	5.47E-04	0.00E+00
CAT D3K LGP Dozer	1	81	LAND1	-	-	-	3.30E-05	3.30E-05	3.30E-05	3.30E-05	9.42E-06	-	-	-	-	-	-	6.59E-05	7.53E-05	0.00E+00
CAT D4G XL Dozer	1	87	LAND1	-	-	-	1.01E-05	1.01E-05	1.01E-05	1.01E-05	3.37E-06	-	-	-	-	-	-	2.02E-05	2.36E-05	0.00E+00
Concrete Saw to 11"(wo Blade)	1	11	LAND1	-	-	-	6.05E-04	6.05E-04	6.05E-04	6.05E-04	1.74E-04	-	-	-	-	-	-	1.21E-03	1.38E-03	0.00E+00
Concrete Work Tools	1	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Delmag D100-13 265K FT-LB	1	55	LAND1	-	-	-	1.05E-03	1.05E-03	1.05E-03	1.05E-03	2.98E-04	-	-	-	-	-	-	2.10E-03	2.40E-03	0.00E+00
Delmag D80-23 212K FT-LB	1	55	LAND1	-	-	-	1.69E-03	1.69E-03	1.69E-03	1.69E-03	4.68E-04	-	-	-	-	-	-	3.37E-03	3.84E-03	0.00E+00
Flat Deck Barge - 1074 Ton	1	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Flexifloat - 5' x 10' x 40'	1	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Genie GTH-842 TeleLift 8000#	1	99	LAND1	-	-	-	-	-	-	-	2.29E-05	2.29E-05	-	-	-	-	-	0.00E+00	4.59E-05	0.00E+00
GroveRT700B 36.3MT RT Crane	1	177.1	LAND1	-	-	-	2.02E-04	2.02E-04	2.02E-04	2.02E-04	5.74E-05	-	-	-	-	-	-	4.05E-04	4.62E-04	0.00E+00
GroveRT750E 50MT RT Crane	1	200	LAND1	-	-	-	2.73E-04	2.73E-04	2.73E-04	2.73E-04	7.84E-05	-	-	-	-	-	-	5.46E-04	6.24E-04	0.00E+00
Hilti Tools, Misc.	1	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Hydraulic Jack 50 Ton	1	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
I.C.E. 1412B Vibratory Hamme	1	550	LAND1	-	-	-	-	-	-	-	6.29E-03	6.29E-03	-	-	-	-	-	0.00E+00	1.26E-02	0.00E+00
JLG 400S MANLIFT	1	82	LAND1	-	-	-	4.99E-04	4.99E-04	4.99E-04	4.99E-04	1.38E-04	-	-	-	-	-	-	9.97E-04	1.13E-03	0.00E+00
Manitowoc 777 181.4 MT	1	340	LAND1	-	-	-	3.52E-03	3.52E-03	3.52E-03	3.52E-03	9.74E-04	-	-	-	-	-	-	7.03E-03	8.01E-03	0.00E+00
Plate Compactor 25 in 11HP	1	4.8	LAND1	-	-	-	1.30E-05	1.30E-05	1.30E-05	1.30E-05	3.72E-06	-	-	-	-	-	-	2.60E-05	2.98E-05	0.00E+00
Schwing2525 on Trk (181 y/hr	1	432	LAND1	-	-	-	1.60E-03	1.60E-03	1.60E-03	1.60E-03	4.63E-04	-	-	-	-	-	-	3.20E-03	3.67E-03	0.00E+00
WALK-BEHIND FLOOR TROWEL36"	1	5.5	LAND1	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Welding Machine 400 Amp	1	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Land Improvements - Sub Phase 3			LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Air Compressor 185 cfm	3	49	LAND1	-	-	-	2.45E-05	7.12E-05	7.12E-05	7.12E-05	4.91E-05	-	-	-	-	-	-	9.57E-05	1.91E-04	0.00E+00
Bomag 65S-2 WalkBhnd Roller 26	3	5.9	LAND1	-	-	-	1.61E-05	4.18E-05	4.18E-05	4.18E-05	2.89E-05	-	-	-	-	-	-	5.79E-05	1.13E-04	0.00E+00
Burning Outfit	3	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 320 Crawler Medium Exc	3	164	LAND1	-	-	-	1.88E-06	5.63E-06	5.63E-06	5.63E-06	3.76E-06	-	-	-	-	-	-	7.51E-06	1.50E-05	0.00E+00
CAT 330F Crawler Medium Exc	3	239	LAND1	-	-	-	2.97E-05	8.26E-05	8.26E-05	8.26E-05	5.62E-05	-	-	-	-	-	-	1.12E-04	2.21E-04	0.00E+00
CAT 345D Crawler Large Exca	3	380	LAND1	-	-	-	6.87E-05	1.91E-04	1.91E-04	1.91E-04	1.30E-04	-	-	-	-	-	-	2.59E-04	5.11E-04	0.00E+00
CAT 434D Tandem Roller 59"	3	83	LAND1	-	-	-	1.23E-05	3.19E-05	3.19E-05	3.19E-05	2.21E-05	-	-	-	-	-	-	4.42E-05	8.59E-05	0.00E+00
CAT 950G Wheel Loader 4CY	3	180	LAND1	-	-	-	4.72E-05	1.42E-04	1.42E-04	1.42E-04	9.43E-05	-	-	-	-	-	-	1.89E-04	3.77E-04	0.00E+00
CAT 963D LGP Track Loader	3	110	LAND1	-	-	-	8.63E-05	2.40E-04	2.40E-04	2.40E-04	1.63E-04	-	-	-	-	-	-	3.26E-04	6.42E-04	0.00E+00
CAT D3K LGP Dozer	3	81	LAND1	-	-	-	1.10E-05	3.30E-05	3.30E-05	3.30E-05	2.20E-05	-	-	-	-	-	-	4.39E-05	8.79E-05	0.00E+00
CAT D4G XL Dozer	3	87	LAND1	-	-	-	3.37E-06	1.01E-05	1.01E-05	1.01E-05	6.74E-06	-	-	-	-	-	-	1.35E-05	2.70E-05	0.00E+00
Concrete Saw to 11"(wo Blade)	3	11	LAND1	-	-	-	2.04E-04	6.05E-04	6.05E-04	6.05E-04	4.07E-04	-	-	-	-	-	-	8.08E-04	1.62E-03	0.00E+00
Concrete Work Tools	3	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Delmag D100-13 265K FT-LB	3	55	LAND1	-	-	-	3.55E-04	1.05E-03	1.05E-03	1.05E-03	7.02E-04	-	-	-	-	-	-	1.40E-03	2.80E-03	0.00E+00
Delmag D80-23 212K FT-LB	3	55	LAND1	-	-	-	4.03E-04	1.19E-03	1.19E-03	1.19E-03	7.98E-04	-	-	-	-	-	-	1.60E-03	3.19E-03	0.00E+00
Flat Deck Barge - 1074 Ton	3	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Flexifloat - 5' x 10' x 40'	3	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
GroveRT700B 36.3MT RT Crane	3	177.1	LAND1	-	-	-	6.04E-05	1.75E-04	1.75E-04	1.75E-04	1.18E-04	-	-	-	-	-	-	2.36E-04	4.68E-04	0.00E+00
GroveRT750E 50MT RT Crane	3	200	LAND1	-	-	-	9.21E-05	2.73E-04	2.73E-04	2.73E-04	1.84E-04	-	-	-	-	-	-	3.65E-04	7.30E-04	0.00E+00
Hilti Tools, Misc.	3	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
JLG 400S MANLIFT	3	82	LAND1	-	-	-	1.72E-04	4.99E-04	4.99E-04	4.99E-04	3.35E-04	-	-	-	-	-	-	6.71E-04	1.3	

CAT 980K Wheel Loader 7 CY	13	367.44	LAND1	-	-	-	-	-	-	6.37E-04	-	-	-	-	-	-	-	0.00E+00	6.37E-04	0.00E+00
CAT H120CS Hydr Impact 3000 FTLB	13	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Concrete Saw to 6"(wo Blade)	13	11	LAND1	-	-	-	-	-	-	3.93E-03	-	-	-	-	-	-	-	0.00E+00	3.93E-03	0.00E+00
Concrete Work Tools	13	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Daily Opertd Rent-Grove130MT	13	300	LAND1	-	-	-	-	-	-	2.66E-04	-	-	-	-	-	-	-	0.00E+00	2.66E-04	0.00E+00
Flatbed Tractor/Trailer-38T	13	300	LAND1	-	-	-	-	-	-	4.30E-04	-	-	-	-	-	-	-	0.00E+00	4.30E-04	0.00E+00
Flatbed Truck - 15 Ton	13	155	LAND1	-	-	-	-	-	-	5.35E-05	-	-	-	-	-	-	-	0.00E+00	5.35E-05	0.00E+00
Flatbed Truck - 23 Ton	13	170	LAND1	-	-	-	-	-	-	3.39E-05	-	-	-	-	-	-	-	0.00E+00	3.39E-05	0.00E+00
Generator 5000 w	13	7.5	LAND1	-	-	-	-	-	-	2.22E-03	-	-	-	-	-	-	-	0.00E+00	2.22E-03	0.00E+00
GroveRT750E 50MT RT Crane	13	200	LAND1	-	-	-	-	-	-	5.76E-04	-	-	-	-	-	-	-	0.00E+00	5.76E-04	0.00E+00
JLG 600A MANLIFT	13	82	LAND1	-	-	-	-	-	-	1.34E-03	-	-	-	-	-	-	-	0.00E+00	1.34E-03	0.00E+00
Mobe Crane for Daily Rental	13	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
OSR SLURRY MIXER 5CYD W/SILO	13	27	LAND1	-	-	-	-	-	-	7.90E-04	-	-	-	-	-	-	-	0.00E+00	7.90E-04	0.00E+00
Plate Compactor 25 in 11HP	13	4.8	LAND1	-	-	-	-	-	-	2.07E-03	-	-	-	-	-	-	-	0.00E+00	2.07E-03	0.00E+00
Putzmeister TK30 (31cy/hr) T	13	40	LAND1	-	-	-	-	-	-	9.76E-04	-	-	-	-	-	-	-	0.00E+00	9.76E-04	0.00E+00
ROD BENDER TO #10	13	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Suct & Disch 3" Hose 25 ft	13	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Welding Machine 400 Amp	13	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Land Improvements - Sub Phase 14			LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
16FT Runabout Service Boat	14	100	LAND1	-	-	-	-	-	1.53E-03	1.70E-03	1.70E-03	1.70E-03	-	-	-	-	-	1.53E-03	5.10E-03	0.00E+00
Air Compressor 185 cfm	14	49	LAND1	-	-	-	-	-	2.70E-05	3.19E-05	3.19E-05	3.19E-05	-	-	-	-	-	2.70E-05	9.57E-05	0.00E+00
Bomag 213D Earth Roller 84"	14	128	LAND1	-	-	-	-	-	4.19E-04	4.73E-04	4.73E-04	4.73E-04	-	-	-	-	-	4.19E-04	1.42E-03	0.00E+00
Bomag 65S-2 WalkBhnd Roller 26	14	5.9	LAND1	-	-	-	-	-	5.05E-04	5.69E-04	5.69E-04	5.69E-04	-	-	-	-	-	5.05E-04	1.71E-03	0.00E+00
Burning Outfit	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 320 Crawler Medium Exc	14	164	LAND1	-	-	-	-	-	3.19E-04	3.61E-04	3.61E-04	3.61E-04	-	-	-	-	-	3.19E-04	1.08E-03	0.00E+00
CAT 430E 4WD Backhoe	14	111	LAND1	-	-	-	-	-	1.27E-03	1.43E-03	1.43E-03	1.43E-03	-	-	-	-	-	1.27E-03	4.30E-03	0.00E+00
CAT 950G Wheel Loader 4CY	14	180	LAND1	-	-	-	-	-	8.88E-04	9.99E-04	9.99E-04	9.99E-04	-	-	-	-	-	8.88E-04	3.00E-03	0.00E+00
CAT 953C LGP Track loader	14	110	LAND1	-	-	-	-	-	1.27E-03	1.43E-03	1.43E-03	1.43E-03	-	-	-	-	-	1.27E-03	4.29E-03	0.00E+00
CAT CR50 CRUSHER	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT D4G XL Dozer	14	87	LAND1	-	-	-	-	-	2.23E-04	2.51E-04	2.51E-04	2.51E-04	-	-	-	-	-	2.23E-04	7.53E-04	0.00E+00
CAT D6M XL Dozer	14	153	LAND1	-	-	-	-	-	3.56E-04	4.02E-04	4.02E-04	4.02E-04	-	-	-	-	-	3.56E-04	1.21E-03	0.00E+00
CAT H90CS Hydr Impact 1000FTLB	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT M318F WHEEL MTD EXCAV	14	171	LAND1	-	-	-	-	-	6.07E-05	6.66E-05	6.66E-05	6.66E-05	-	-	-	-	-	6.07E-05	2.00E-04	0.00E+00
Concrete Saw to 6"(wo Blade)	14	11	LAND1	-	-	-	-	-	4.79E-05	5.39E-05	5.39E-05	5.39E-05	-	-	-	-	-	4.79E-05	1.62E-04	0.00E+00
Concrete Work Tools	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Daily Opertd Rent-Grove130MT	14	300	LAND1	-	-	-	-	-	6.14E-05	7.16E-05	7.16E-05	7.16E-05	-	-	-	-	-	6.14E-05	2.15E-04	0.00E+00
Flat Deck Barge - 1074 Ton	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Flatbed Tractor/Trailer-38T	14	300	LAND1	-	-	-	-	-	4.23E-06	4.23E-06	4.23E-06	4.23E-06	-	-	-	-	-	4.23E-06	1.27E-05	0.00E+00
Generator 100 kW Enclosed	14	169	LAND1	-	-	-	-	-	3.37E-03	3.79E-03	3.79E-03	3.79E-03	-	-	-	-	-	3.37E-03	1.14E-02	0.00E+00
Generator 5000 w	14	7.5	LAND1	-	-	-	-	-	1.69E-04	1.90E-04	1.90E-04	1.90E-04	-	-	-	-	-	1.69E-04	5.70E-04	0.00E+00
Genie GTH-842 TeleLift 8000#	14	99	LAND1	-	-	-	-	-	2.87E-06	2.87E-06	2.87E-06	2.87E-06	-	-	-	-	-	2.87E-06	8.60E-06	0.00E+00
GroveRT700B 36.3MT RT Crane	14	177.1	LAND1	-	-	-	-	-	6.04E-06	6.04E-06	6.04E-06	6.04E-06	-	-	-	-	-	6.04E-06	1.81E-05	0.00E+00
GroveRT890E 81.6MT RT Crane	14	275	LAND1	-	-	-	-	-	2.06E-04	2.30E-04	2.30E-04	2.30E-04	-	-	-	-	-	2.06E-04	6.89E-04	0.00E+00
Hilti Tools, Misc.	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
I.C.E. 44-30 Vibratory Hammer	14	325	LAND1	-	-	-	-	-	2.87E-04	3.20E-04	3.20E-04	3.20E-04	-	-	-	-	-	2.87E-04	9.59E-04	0.00E+00
JD 710L 4WD (2011) Backhoe	14	148	LAND1	-	-	-	-	-	4.64E-04	5.16E-04	5.16E-04	5.16E-04	-	-	-	-	-	4.64E-04	1.55E-03	0.00E+00
Light Plant 30' 4 Lts	14	11.7	LAND1	-	-	-	-	-	7.69E-06	1.03E-05	1.03E-05	1.03E-05	-	-	-	-	-	7.69E-06	3.08E-05	0.00E+00
LITE SHORING BOX	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Manitowoc 555 136 MT	14	340	LAND1	-	-	-	-	-	8.09E-04	9.11E-04	9.11E-04	9.11E-04	-	-	-	-	-	8.09E-04	2.73E-03	0.00E+00
MED SHORING BOX	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Mobe Crane for Daily Rental	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
On-Hwy Dump - 16 CY dbl ax	14	300	LAND1	-	-	-	-	-	9.53E-05	1.06E-04	1.06E-04	1.06E-04	-	-	-	-	-	9.53E-05	3.18E-04	0.00E+00
Plate Compactor 25 in 11HP	14	4.8	LAND1	-	-	-	-	-	6.98E-04	7.85E-04	7.85E-04	7.85E-04	-	-	-	-	-	6.98E-04	2.36E-03	0.00E+00
Portable Mixer 11CF	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Pump 4 in Centr 40k gph	14	10	LAND1	-	-	-	-	-	7.75E-06	7.75E-06	7.75E-06	7.75E-06	-	-	-	-	-	7.75E-06	2.32E-05	0.00E+00
PUSH BOAT 21-FT 435HP	14	150	LAND1	-	-	-	-	-	2.37E-03	2.66E-03	2.66E-03	2.66E-03	-	-	-	-	-	2.37E-03	7.99E-03	0.00E+00
Putzmeister TK30 (31cy/hr) T	14	40	LAND1	-	-	-	-	-	1.19E-04	1.34E-04	1.34E-04	1.34E-04	-	-	-	-	-	1.19E-04	4.02E-04	0.00E+00
Pvmt Breaker 35-45 lbs	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Pvmt Breaker 60-65 lbs	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Suct & Disch 3" Hose 25 ft	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Welding Machine 400 Amp	14	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Land Improvements - Sub Phase 15			LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Bomag 65S-2 WalkBhnd Roller 26	15	5.9	LAND1	-	-	-	-	-	4.50E-05	1.29E-04	1.29E-04	-	-	-	-	-	-	4.50E-05	2.57E-04	0.00E+00
Burning Outfit	15	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 320 Crawler Medium Exc	15	164	LAND1	-	-	-	-	-	5.63E-06	1.50E-05	1.50E-05	-	-	-	-	-	-	5.63E-06	3.00E-05	0.00E+00
CAT 330F Crawler Medium Exc	15	239	LAND1	-	-	-	-	-	6.94E-05	2.02E-04	2.02E-04	-	-	-	-	-	-	6.94E-05	4.03E-04	0.00E+00
CAT 345D Crawler Large Exca	15	380	LAND1	-	-	-	-	-	1.60E-04	4.65E-04	4.65E-04	-	-	-	-	-	-	1.60E-04	9.31E-04	0.00E+00
CAT 434D Tandem Roller 59"	15	83	LAND1	-	-	-	-	-	3.44E-05	9.82E-05	9.82E-05	-	-	-	-	-	-	3.44E-05	1.96E-04	0.00E+00
CAT 950G Wheel Loader 4CY	15	180	LAND1	-	-	-	-	-	1.65E-04	4.95E-04	4.95E-04	-	-	-	-	-	-	1.65E-04	9.91E-04	0.00E+00
CAT 963D LGP Track Loader	15	110	LAND1	-	-	-	-	-	2.01E-04	5.85E-04	5.85E-04	-	-	-	-	-	-	2.01E-04	1.17E-03	0.00E+00
CAT D3K LGP Dozer	15	81	LAND1	-	-	-	-	-	3.30E-05	9.89E-05	9.89E-05	-	-	-	-	-	-	3.30E-05	1.98E-04	0.00E+00
CAT D4G XL Dozer	15	87	LAND1	-	-	-	-	-	1.01E-05	2.70E-05	2.70E-05	-	-	-	-	-	-	1.01E-05	5.39E-05	0.00E+00
Concrete Saw to 11"(wo Blade)	15	11	LAND1	-	-	-	-	-	5.81E-04	1.73E-03	1.73E-03	-	-	-	-	-	-	5.81E-04	3.46E-03	0.00E+00
Concrete Work Tools	15	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Delmag D100-13 265K FT-L																				

Welding Machine 400 Amp	15	0	LAND1	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
O&M Facility Construction			OMF	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Bomag 65S-2 WalkBhdn Roller 26	OMF	5.9	OMF	-	-	2.89E-05	2.89E-05	2.89E-05	2.89E-05	2.89E-05	2.89E-05	2.89E-05	2.89E-05	2.89E-05	2.89E-05	2.89E-05	8.68E-05	1.16E-04	5.79E-05
Burning Outfit	OMF	0	OMF	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
CAT 320 Crawler Medium Exc	OMF	164	OMF	-	-	2.82E-06	2.82E-06	2.82E-06	2.82E-06	2.82E-06	2.82E-06	2.82E-06	2.82E-06	2.82E-06	2.82E-06	2.82E-06	8.45E-06	1.13E-05	5.63E-06
CAT 330F Crawler Medium Exc	OMF	239	OMF	-	-	4.46E-05	4.46E-05	4.46E-05	4.46E-05	4.46E-05	4.46E-05	4.46E-05	4.46E-05	4.46E-05	4.46E-05	4.46E-05	1.34E-04	1.78E-04	8.92E-05
CAT 345D Crawler Large Exca	OMF	380	OMF	-	-	1.03E-04	1.03E-04	1.03E-04	1.03E-04	1.03E-04	1.03E-04	1.03E-04	1.03E-04	1.03E-04	1.03E-04	1.03E-04	3.09E-04	4.12E-04	2.06E-04
CAT 434D Tandem Roller 59"	OMF	83	OMF	-	-	2.21E-05	2.21E-05	2.21E-05	2.21E-05	2.21E-05	2.21E-05	2.21E-05	2.21E-05	2.21E-05	2.21E-05	2.21E-05	6.63E-05	8.84E-05	4.42E-05
CAT 950G Wheel Loader 4CY	OMF	180	OMF	-	-	8.85E-05	8.85E-05	8.85E-05	8.85E-05	8.85E-05	8.85E-05	8.85E-05	8.85E-05	8.85E-05	8.85E-05	8.85E-05	2.65E-04	3.54E-04	1.77E-04
CAT 963D LGP Track Loader	OMF	110	OMF	-	-	1.29E-04	1.29E-04	1.29E-04	1.29E-04	1.29E-04	1.29E-04	1.29E-04	1.29E-04	1.29E-04	1.29E-04	1.29E-04	3.88E-04	5.18E-04	2.59E-04
CAT D3K LGP Dozer	OMF	81	OMF	-	-	2.35E-05	2.35E-05	2.35E-05	2.35E-05	2.35E-05	2.35E-05	2.35E-05	2.35E-05	2.35E-05	2.35E-05	2.35E-05	7.06E-05	9.42E-05	4.71E-05
CAT D4G XL Dozer	OMF	87	OMF	-	-	7.59E-06	7.59E-06	7.59E-06	7.59E-06	7.59E-06	7.59E-06	7.59E-06	7.59E-06	7.59E-06	7.59E-06	7.59E-06	2.28E-05	3.03E-05	1.52E-05
Concrete Saw to 11"(wo Blade)	OMF	11	OMF	-	-	3.68E-04	3.68E-04	3.68E-04	3.68E-04	3.68E-04	3.68E-04	3.68E-04	3.68E-04	3.68E-04	3.68E-04	3.68E-04	1.10E-03	1.47E-03	7.37E-04
Concrete Work Tools	OMF	0	OMF	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
Delmag D100-13 265K FT-LB	OMF	55	OMF	-	-	2.78E-04	2.78E-04	2.78E-04	2.78E-04	2.78E-04	2.78E-04	2.78E-04	2.78E-04	2.78E-04	2.78E-04	2.78E-04	8.35E-04	1.11E-03	5.57E-04
Delmag D80-23 212K FT-LB	OMF	55	OMF	-	-	3.15E-04	3.15E-04	3.15E-04	3.15E-04	3.15E-04	3.15E-04	3.15E-04	3.15E-04	3.15E-04	3.15E-04	3.15E-04	9.44E-04	1.26E-03	6.29E-04
Flat Deck Barge - 1074 Ton	OMF	0	OMF	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00
GroveRT700B 36.3MT RT Crane	OMF	177.1	OMF	-	-	3.17E-05	3.17E-05	3.17E-05	3.17E-05	3.17E-05	3.17E-05	3.17E-05	3.17E-05	3.17E-05	3.17E-05	3.17E-05	9.51E-05	1.27E-04	6.34E-05
GroveRT750E 50MT RT Crane	OMF	200	OMF	-	-	1.69E-04	1.69E-04	1.69E-04	1.69E-04	1.69E-04	1.69E-04	1.69E-04	1.69E-04	1.69E-04	1.69E-04	1.69E-04	5.06E-04	6.75E-04	3.38E-04
Manitowoc 777 181.4 MT	OMF	340	OMF	-	-	9.11E-04	9.11E-04	9.11E-04	9.11E-04	9.11E-04	9.11E-04	9.11E-04	9.11E-04	9.11E-04	9.11E-04	9.11E-04	2.73E-03	3.64E-03	1.82E-03
Plate Compactor 25 in 11HP	OMF	4.8	OMF	-	-	8.37E-06	8.37E-06	8.37E-06	8.37E-06	8.37E-06	8.37E-06	8.37E-06	8.37E-06	8.37E-06	8.37E-06	8.37E-06	2.51E-05	3.35E-05	1.67E-05
Schwing2525 on Trk (181 y/hr	OMF	432	OMF	-	-	1.01E-03	1.01E-03	1.01E-03	1.01E-03	1.01E-03	1.01E-03	1.01E-03	1.01E-03	1.01E-03	1.01E-03	1.01E-03	3.04E-03	4.06E-03	2.03E-03
WALK-BEHIND FLOOR TROWEL36"	OMF	5.5	OMF	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Welding Machine 400 Amp	OMF	0	OMF	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00

	2024	2025	2026
DEMO	0.02	0.00	0.00
PAVE	0.04	0.00	0.00
BULK	0.10	0.08	0.00
DREDGE	0.25	0.16	0.00
MARINE	0.04	0.01	0.00
LAND1	0.06	0.18	0.00
OMF	0.01	0.01	0.01

Appendix N Responses to NYSDEC Technical Comments

**July 7, 2022 Letter with Responses to NYSDEC Technical
Comments dated March 4, 2022**

July 7, 2022

New York State Department of
Environmental Conservation
Division of Environmental Permits
625 Broadway, 4th Floor
Albany, NY 12233

**Response to Comments Letter Dated: March 4, 2022 Technical Comment Letter
South Brooklyn Marine Terminal – Port Infrastructure Improvements
Project DEC ID: 2-6102-00120**

Dear Karen Gaidasz,

Thank you for providing technical comments on the December 23, 2021 South Brooklyn Marine Terminal Infrastructure Improvement Project Joint Permit Application in your March 4, 2022 Technical Comment Letter. Below are the Applicant's responses to your comments.

Comment 1: Sediment

Comment 1a: *The proposed dredging will expose deep sediments that contain higher levels of contaminants (i.e., mercury, dioxins, and other analytes) than what is currently present at the existing mud surface. The Applicant has presented material to NYSDEC showing an anticipated post-dredging sedimentation rate of 0.5 feet to 1.0 feet per year. This sedimentation rate was cited as evidence that a cap is not needed to cover the post-dredge sediments. NYSDEC staff have determined that a cap will not be required for the initial dredge activity based on the reported sedimentation rate. However, NYSDEC is requesting that the Applicant verify the sedimentation rate by providing a post-dredge bathymetric survey, followed by surveys taken annually for three (3) years. If the sedimentation rate in any of the three years is less than that cited by the Applicant, (i.e., 0.5 feet to 1.0 feet), the Applicant will be required to cap the post-dredge sediments. As such, please submit a post-dredging cap plan as contingency for lower-than-expected post-dredging sedimentation rates. Alternatively, the Applicant could consider the use of the cleaner class B dredge sediments to cap some of the class C sediments that will be exposed by this dredge project (see comments 1c and 1d below).*

Response 1a: During a January 26, 2022 meeting, the Applicant explained why capping of the post-dredging surface should not be required, including the limited and degraded habitat, high sedimentation rate, lack of precedent, and site suitability concerns. As shown above, the March 4, 2022 Technical Comment letter required capping in the first three years if the sedimentation rate was not observed in any year. However, stopping wind farm construction-related transport activities to cap in the first three years would be detrimental to meeting common project, State, and City goals. At the May 23, 2022 meeting with NYSDEC when this timing concern was discussed, NYSDEC stated that capping therefore would be required before operations. In response to NYSDEC's comments, the Applicant presented a targeted capping option that consists of placing a clean sand cap in contiguous areas where 2,3,7,8-TCDD TEQ concentrations in the post-dredging surface significantly exceed their TOGS 5.1.9 Class C threshold. The area identified for capping represents a large percentage (approximately 40%) of the proposed dredging area. Based on analysis of the Fall 2021 sediment data, placement of a 1-foot sand cap on the post-dredging surface in Areas 2.1A and 2.3 (**Figure 1**, attached) will achieve sediment quality across the Project Area that is similar to or better than current conditions when considered on an average, Project-wide basis. To ensure the necessary project depths (including 2 feet of overdredge) are achieved following capping, an additional 1 foot of dredging would need to be incorporated into the design in these areas. Consistent with responding to NYSDEC's requirement, the Applicant would place the clean sand cap as described above during SBMT Project construction to avoid interference with cargo carrying

vessel operations. During the May 23 meeting, NYSDEC requested that an analysis of existing vs. post-cap conditions be conducted for all constituents to inform their evaluation of the targeted cap.

Therefore, AECOM performed the same analysis as presented during the May 23 meeting on all constituents that were above Class A thresholds. **Tables 1 through 9** (attached) present area-wide average concentrations of 2,3,7,8-TCDD-TEQ, total PCBs, total PAHs, DDx (sum of DDD, DDE, and DDT) and five metals (arsenic, cadmium, copper, lead, and mercury) in the targeted dredge material and the post-dredging surface (with and without a cap in Areas 2.1A and 2.3). Benzene, total BTEX, chlordane, dieldrin, and mirex are all Class A or were not detected in the targeted dredge material and post-dredging surface and were therefore not included in this analysis.

As shown in **Tables 1 through 9**, following capping of Areas 2.1A and 2.3 (approximately 6.1 acres), the average concentrations of TCDD-TEQ, total PCBs, total PAHs, DDx and metals in the post-dredging surface are similar to or better than pre-dredge conditions on a project-wide basis.¹ In the areas not targeted for capping (Areas 1, 2.1B, and 2.2), average concentrations of all analytes except mercury (discussed below) are below Class C or marginally above (TCDD-TEQ in Area 1) in the post-dredging surface. The in-water portion of the Project Area, comprising the dredging basin footprint, is a total of 13.1 acres, but the total dredging surface area footprint, including side slopes, is 14.7 acres. By capping Areas 2.1A and 2.3, the surface weighted average concentration (SWAC) across the dredging surface area footprint (total of 14.7 acres) would be below the Class C threshold for all of the above analytes except mercury. A SWAC is a widely used metric in sediment remediation and risk assessment for evaluating exposure to contaminants in the bioactive zone by aquatic organisms.² Most forage fish and higher trophic level receptors that may occur in the Project Area have home ranges that are much greater than the size of the Project Area; therefore, the use of a Project-wide SWAC is appropriate and conservative. For TCDD-TEQ (**Table 1**), capping of Areas 2.1A and 2.3 significantly reduces the estimated post-dredging SWAC across the Project Area from 72 ng/kg (above the Class C threshold of 50 ng/kg) to 41.5 ng/kg (or lower in the event that there is less than 6 inches of mixing) which is below the Class C threshold and similar to the average in the targeted dredge material (41.6 ng/kg). Post-cap SWACs for total PCBs, total PAHs, DDx, arsenic, cadmium, copper, and lead (**Tables 2 through 8**) are all well below their respective Class C thresholds. For mercury (**Table 9**), the post-cap SWAC across the Project Area of 2 mg/kg is essentially the same as the average in the targeted dredge material (1.9 mg/kg), and both exceed the Class C threshold of 1 mg/kg. The levels of mercury observed in SBMT sediments are consistent with levels observed in the greater Gowanus Bay.³

In summary, as required by NYSDEC, placement of a clean sand cap in Areas 2.1A and 2.3 (6.1 acres of the 14.7 acre dredging footprint including side slopes; 41%) immediately following dredging would achieve sediment quality across the Project Area that is similar to or better than current conditions. Continued deposition will bring surface concentrations to ambient levels in Upper New York Harbor. This capping concept does not include future cap monitoring or cap maintenance, monitoring of sedimentation rates, or future dredging and capping of other areas so as not to disrupt future cargo carrying vessel operations.

Comment 1b: *In Section 5.2.4 Sediment Characteristics and Analysis, please estimate how many cubic yards of sandy material is represented by the cores where sand was overlain by the black silty material.*

Response 1b: There is an estimated volume of 2,900 cubic yards (CY) of sandy material within the targeted dredge volume, comprising less than 2 percent of the overall dredge volume of 148,500 CY. For the purpose of this estimate, targeted dredge material with a minimum composition of 50% sand based on the grain size

¹ Surface concentrations of analytes in Areas 2.1A and 2.3 were estimated after consolidation of cap material into underlying sediment by assuming approximately 6-inches of sediment mixing with the 1 ft of placed clean cap material. Concentrations in the cap material were assumed to be less than the Class A thresholds for metals and representative of the detection limits for organics (1 ng/kg for TCDD TEQ [estimated total TEQ detection limit which is less than the Class A threshold of 4.5 ng/kg], 100 ug/kg for total PCBs which is the same as the Class A threshold, 1000 ug/kg for total PAHs, which is less than the Class A threshold of 4,000 ug/kg, and 10 ug/kg for DDx [sum of DDD, DDE, and DDT], which is slightly above the Class A threshold but generally consistent with the detection limits for the individual isomers).

² See for example: Magar, V. et al. (2009), Monitored Natural Recovery at Contaminated Sediment Sites, Technical Guide prepared under grant from U.S. Department of Defense, Environmental Security Technology Certification Program, ESTCP Project ER-0622.

³ See for example: CH2MHill and HDR (2011), Gowanus Canal Remedial Investigation Report, Prepared for EPA Region 2; and NYSDEC (2003), Contaminant Assessment and Reduction Project: NY/NJ Harbor Sediment Report 1998-2001, Division of Water.

analyses performed on samples collected during the sediment sampling program is considered “sandy material.” Sandy material was identified in three distinct areas:

- Approximately 1,100 CY in Area 2.1, in the vicinity of cores A2.1-8 and A2.1-9;
- Approximately 500 CY in Area 2.1, in the vicinity of core A2.1-20; and
- Approximately 1,300 CY in Area 2.2, in the vicinity of cores A2.2-14, A2.2-18 and A2.2-19.

Please note that these are in-place volume estimates and are also based on interpolation between core locations to establish areal extents. The sandy material, where present, is in all cases overlain by silty material; the depth to the top of the sandy material varies from 5.8 to 10.3 feet below the existing sediment surface. The actual volume of sandy material that would be recoverable by segregated dredging in the field would be impacted by sloping or benching to provide stability for the surrounding black silty material, and by likely sloughing of the surrounding silty material into the sandy material as the work progresses. These conditions pose significant technical challenges to recovery of the limited sandy material within the targeted dredge volume.

Comment 1c: *Section 7.1.1 Direct Impact to Marine Habitat, indicates that the existing benthic surface does support a benthic community, but Area 2.3 has existing low invertebrate numbers. The Sediment Data Usability Summary Report indicates that some of the dredged material could potentially be used beneficially. Please explain if any of the dredged material could be used to create a more hospitable benthic environment than exists there currently.*

Response 1c: The physical characteristics of the dredged material (soft, unconsolidated sediments) would not be expected to provide a more hospitable benthic environment than already currently exists based on the sediment characterization data collected. Beneficial re-use of sediments in the benthic environment would be limited and would not be expected to produce a significant beneficial effect, as any improvements from lower contaminant levels would be nominal and temporary due to covering by continued sedimentation. Further, as discussed above and below (Responses 1b and 1d), the areas of nominally cleaner or sandier sediments within the targeted dredge material are limited and interspersed across the dredging footprint, such that removal and separation of these sediments would be extremely difficult and not be productive or cost-effective. As indicated in the JPA, dredged sediments will be beneficially used upland, if appropriate.

Comment 1d: *The conclusion section of the Sediment Data Usability Summary Report contains the statement: “Limited areas meet the Class B threshold and may be candidates for separate dredging and handling operation to optimize disposal and/or reuse options.” With an additional one foot of dredging in area 2.3, would there be enough Class B material (especially the sandy fractions of the dredge areas contained in 2.1 and 2.2) to cover the exposed sediment in area 2.3 with one foot of Class B material? If not one foot, how many inches of cover could this material provide?*

Response 1d: The estimated in place volume of sediment meeting Class B thresholds in a contiguous area spanning the northern edge of Area 2.1, the southern portion of Area 2.2 adjacent to the north side of the 39th Street wharf and a portion of Area 2.2 southwest of the 35th Street wharf (shown in yellow in Figure 2A of the *Sediment Data Usability Summary Report*) is estimated at 15,400 CY. However, the actual recoverable volume of sediment meeting Class B thresholds will be less – possibly by a substantial amount due to benching and sloping necessary to maintain stability, and from sloughing of material from adjacent Class C sediments into the target area that will occur during dredging. Because of the sloughing considerations, it is not possible to develop a reliable estimate of the quantity of Class B sediment that could be segregated from the overall dredge volume. The potential suitability of this material for reuse is also limited or precluded by the following considerations:

- The silty nature of the dredged material poses challenges to handling and placement, especially in light of the high-energy marine nature of the site. Further, none of the sandy material described above in Response 1b is coincident with the contiguous area of material meeting Class B thresholds. These factors pose significant challenges to effective placement of dredged material and control of water quality during placement.

- This material has poor geotechnical properties based on data gathered during engineering design investigations, which is consistent with typical experience working with silty New York Harbor sediments. This material would need to be dewatered and stabilized before any potential reuse and, therefore, is more likely to be beneficially reused at another site after stabilization (either upland, or riparian placement at another site if found to be suitable from a sediment chemistry and water quality perspective).

There are other areas of targeted dredge material meeting Class B thresholds; however, these areas are discontinuous, and the comparatively small sizes of these areas preclude an effective approach to selectively dredging these areas.

Comment 2: *Protected Species Time of Year Restrictions (TOYRs)* -The narrative recognizes the need for compliance with the TOYRs, however TOYR dates are not specified. TOYRs also will apply for in-water work associated with bulkhead/wharf improvements (such any in-water vibratory pile driving). To avoid impacts to federal- and state-protected species, including migrating Atlantic sturgeon and spawning winter flounder, no in-water activity shall occur between:

- a. December 15 and March 1 in waters less than 20 feet; and
- b. March 1 and June 30 and between October 1 and November 30, in waters of any depth.

Response 2: Thank you for providing the TOYRs. The project will comply with these restrictions.

Comment 3: *Protected Species Protection Measures* - Please indicate the size of the buffer zone that would trigger a shut down if a protected species is observed (as discussed in Section 8.1 of the Permit Information Packet). Additionally, please also include the Protected Species Shut Down buffer zone as a Best Management Practice to be implemented.

Response 3: As described in the JPA, the likelihood that protected species would be present in the Project Area during in-water construction activities is extremely low. Based upon review of the NOAA Fisheries *Final Biological Opinion for the New Jersey Wind Port* dated February 25, 2022, which required no buffer zone for similar in-water work, and implementation of other conflict-minimizing Best Management Practices pile installation, (e.g., operator will begin pile driving with soft start 'warning taps,' piles will be vibrated in for the majority of the installation, and then driven the remainder of the way), the Applicant believes that a shutdown buffer zone is not necessary. Based on prior experience with pile driving operations, these BMPs would cause any protected species present to leave the action area prior to the production of maximum noise levels, reducing the risk of injury. Pile driving at the start of each day would commence with an initial set of three strikes with the hammer operating at 40% power. After a one-minute pause, two more sets of three strikes separated by a one-minute pause would be performed with the hammer operating at 40% power. After a third and final one-minute pause, normal hammer operations would commence. Further, pile installation will be limited to dates outside of sturgeon TOYR, lessening the likelihood of potential impacts to sturgeon species.

Comment 4: *Mitigation Plan* - According to the table on page 18 in the Summary of In-Water Work, titled, *Components Installed In Marine and Tidal Habitats and Approximate Measurements of Area and Volume*, the Project will add 3,863 cubic yards of fill and 3,328 cubic yards of new structures in the marine habitat below mean high water (MHW). Additionally, the table indicates that there will be 0.37 acre of shading impacts from the proposed platforms and wharves. Mitigation is required for the proposed fill and shading impacts. Please provide a mitigation plan for NYSDEC review and approval.

Response 4: The Applicant has minimized fill and shading to the extent possible in the presented design. Based on guidance provided by NYSDEC to NYCEDC on Monday, June 13, impacts requiring mitigation have been clarified, and the fill and shading impacts will be recalculated. NYSDEC's guidance was as follows:

- Bulkheads
 - o New Fill Volume should be calculated from MHW to the existing mudline.
 - o If new fill volume is represented in cubic yards, it does not need to be represented in acres as well.
 - o For the 32-33 bulkhead, there is no need to mitigate for fill or shading.
- Wharves

- There is no need to mitigate for pile fill when mitigating for square footage of pile supporting heavy lift platform.
- Fenders
 - The Applicant should document what fenders were previously permitted/allowed and the existing fenders. Mitigation is required for the incremental additional shading.

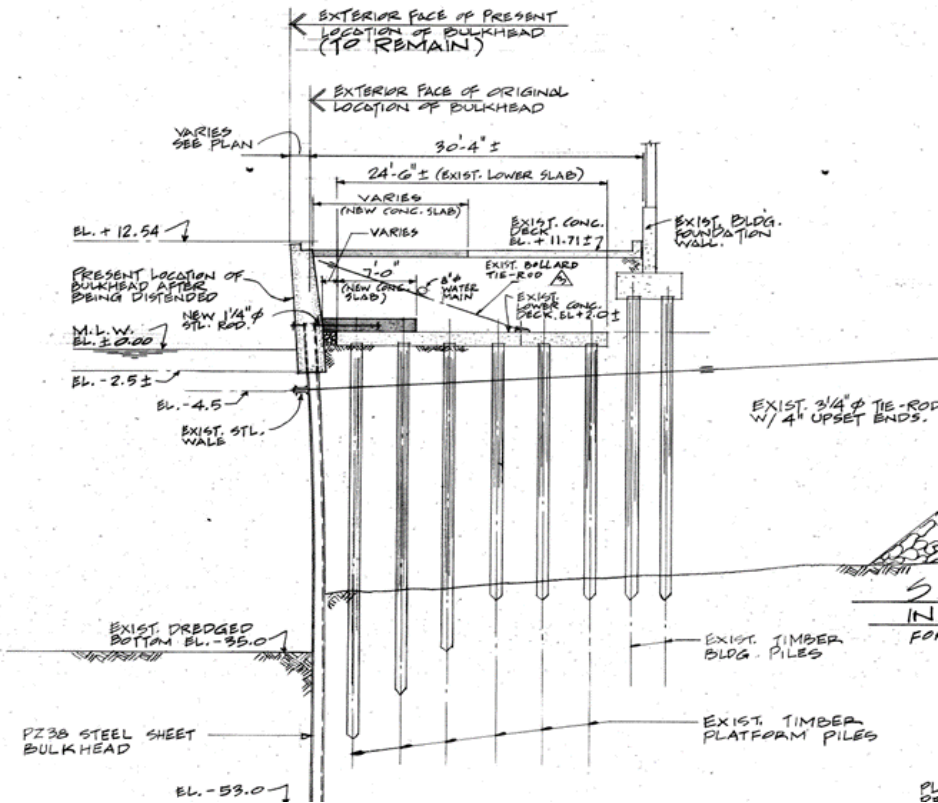
The Applicant is investigating mitigation options for the remaining fill and shading and will submit a separate mitigation plan for NYSDEC approval.

Comment 5: *Bulkhead - The JPA proposes a new bulkhead along approximately 600 feet of bulkhead on the southern side of the 39th St Pier. Plans call for the bulkhead to be placed 35 inches in front of the existing bulkhead surface. While the JPA provides justification for not meeting the NYSDEC's standard to re-build in-kind/in-place, justification must be provided for the relocation of the bulkhead 35 inches seaward. As such:*

Comment 5a: *The Applicant should attempt to reduce the distance of the new bulkhead in front of the existing bulkhead to 18 inches or less.*

Response 5a: The JPA was based on preliminary engineering performed in 2021 and represents a fair assumption around new construction dimensions and existing structural capacities. Given the constraints associated with known and assumed existing conditions at the time of preliminary design and required live load capacities, the preliminary design presented in the JPA drawings represents the alternative with the smallest offset from the existing bulkhead that can be safely installed. This alternative was chosen over other designs, including a pipe and sheet pile combination wall, because of its relatively tight fit to the existing bulkhead. Further detailing will be performed in upcoming design phases, following further underwater inspection to assess the condition and dry inspection of tie rods through test pits.

A robust new steel sheeted bulkhead is needed as there is historical evidence that the existing bulkhead has experienced partial collapses. These local failures were accompanied by lateral displacement of the bulkhead. The amount of displacement varies along the bulkhead plan length (see figure below for additional details). Given the state of disrepair, the live load capacity of the bulkhead is compromised. Dredging the 39th Pier South side back to its original depth of minus 35 feet could initiate failures of the structural system.



Comment 5b: *If the Applicant cannot meet the above reduction in fill, additional justification must be provided for why this fill is reasonable and necessary.*

Response 5b: The distance between the existing and new steel sheet bulkhead is dictated by the extension of the existing concrete cap to the bulkhead face. The cast extends approximately 9 inches seaward of the sheet-piling. New piles need to be set with a clearance to avoid construction conflict with the existing concrete cap and the bowed area from the previous bulkhead failures. To drive new piles closer, the concrete cap would need to be reduced in width. That reduction and associated loss of section capacity would risk bulkhead destabilization. These factors, and the assumed deteriorated conditions of the wall, are to be confirmed by ongoing inspections.

Comment 5c: *If the Applicant can reduce the fill from the current design, the table will need to be recalculated with the new fill numbers.*

Response 5c: The fill numbers will be recalculated if the extension of bulkhead can be reduced. This will be investigated as the design advances.

Comment 6: *Provide Additional Plans - Please create separate overall site plans for each of the following proposed aspects of the Project.*

- a. Bulkhead Repair Plan
- b. New Fenders Plan
- c. New Wharf Plan

Response 6: These plans have been provided and are attached. Refer to Sheet numbers 3, 4 and 5 of 33.

Comment 7: *Drawings – Please address the following comments on the drawings:*

Response 7: The sheet numbers have been revised and are attached as noted in the specific responses.

Comment 7a: *Sheet 7: Pier 39W Heavy lift platform section shows an existing mudline. NYSDEC believes this to be a solid fill pier. Explain and revise as necessary.*

Response 7a: Sheet 7: due to the request for added plans, this comment now pertains to Sheet 10 of 33. The existing mudline and dike lines within Pier 39W were from the historic 'as-built' drawing. Both lines have been removed to represent existing conditions.

Comment 7b: *Sheet 13: Add a labeled cutline from Sheet 13 where this section is taken on the appropriate plan view drawing.*

Response 7b: Sheet 13: due to the request for added plans, this comment now pertains to Sheet 16 of 33. Section line added to Sheet 16 of 33 for reference to Sheet 18 of 33, Section A.

Comment 7c: *Sheet 18: Add cut lines for all dredging sections on the proposed dredging summary.*

Response 7c: Sheet 18: due to the request for added sheets, dredge plans and sections are provided on Sheets 26 – 33. See Sheets 28, 29 and 30 for location of dredge sections, which are provided on Sheets 31, 32 and 33.

Comment 7d: *Sheet 22: Sections 1.1 and 1.2 show a raised mudline area between the proposed dredge prisms north of the 35th Street pier that will remain following construction. Explain this feature or correct the section.*

Response 7d: Sheet 22: due to the request for added sheets, this comment now pertains to Sheet 31 of 33. This feature corresponds to a dredge area that is part of Empire Wind 1 USACE permit and Article VII applications; therefore the corresponding work is not shown in Section 1.1 (outboard) and 1.2 (inboard) for Area 1. Dredge plans including Sheet 26, 27, 29 and 30 provide additional detail.

Comment 7e: *For each of the sheets and/or sections listed below, create separate existing and proposed plans and label accordingly:*

- i. Plan 5, Pier 39 S Heavy Lift Platform section.*
- ii. Plan 9, Pier 35 Heavy Lift Platform enlarged plan.*
- iii. Plan 10, Pier 35W Heavy Lift Platform section.*
- iv. Plan 12, Pier 35 N SOV wharf plan.*
- v. Plan 13, Pier 35N SOV wharf section.*
- vi. Plan 14, Bulkhead 32 to 33.*
- vii. Plan 15, Bulkhead 32 to 33.*

Response 7e: Separate existing and proposed plans have been provided for each of the following areas:

- i. See Plan 8 for Pier 39S – Existing Low Level Platform Section*
- ii. See Plan 12 and 14 for Pier 35W – Existing Cofferdam Plan and Section Note, the face of the platform has been moved west due to structural concerns. The additional fill from the structural piles and shading from the high-level deck has been accounted for.*
- iii. See Plan 16 and 17 for Pier 35N – Existing Revetment Plan and Section*
- iv. See Plan 20 and 22 for Bulkhead 32-33 – Existing Condition Plan and Section*

Comment 7f: *JPA 6a response includes a sketch that shows areas where a new bulkhead is proposed, including in front of the CTV platform. However, Sheet 16, which shows the CTV platform, does not show this bulkhead. Please submit existing and proposed sections of the bulkhead or correct the sketch submitted in response to JPA 6a.*

Response 7f: Plan 16 CTV Platform: due to the request for added sheets, this comment now pertains to Plans 24 and 25 of 33. The CTV Floating Platform Plan (Plan 24) was revised and the corresponding Sections (Plan 25) have also been corrected to display the gangway landing on the gravity wall / top of bulkhead, which incorporates a new concrete deck at El. +7.5'.

Comment 8: *Dewatering Plan - Section 6.e of the Joint Permit Application Form Addendum includes a reference to dewatering scows after 24 hours of settling. Due to the Class C contamination in the dredge material, monitoring of the overlying water column will be required prior to decanting the overlying water. Please provide a detailed dewatering plan for NYSDEC staff review and approval.*

Response 8: Consistent with established dredging practices, a detailed compliance monitoring plan for discharge of decant water will be provided by the contractor for approval by NYSDEC prior to the commencement of dredging related work. The specific equipment and processes (i.e. means and methods) will be selected by the Dredge and Dredge Material Management Contractor, which will be selected prior to construction that is targeted for dredge windows in Summer 2024 and/or 2025. Refer to Sheet 27, which includes the dewatering plan submission requirement prior to commencement of dredging.

Comment 9: *Closed Environmental Bucket - Section 6.g of the Joint Permit Application Form Addendum specifies the use of a closed environmental bucket. Due to the extent of contamination in some of the material to be removed, the following are the specifications for the environmental bucket which need to be incorporated into the dredge plan:*

Comment 9a: *A closed (i.e., sealed) environmental (clamshell) bucket with sealing gaskets or an overlapping sealed design at the jaws and seals or flaps positioned at locations of vent openings shall be used to minimize sediment re-suspension at the dredging site.*

Response 9a: Noted. The environmental bucket will meet these requirements.

Comment 9b: *Seals or flaps designed or installed at the jaws and locations of vent openings must tightly cover these openings while the bucket is lifted through the water column and into the barge.*

Response 9b: Noted. The environmental bucket will meet these requirements.

Comment 9c: *The closed environmental (clamshell) bucket dredge shall be equipped with sensors to ensure complete closure of the bucket before lifting through the water.*

Response 9c: Noted. The environmental bucket will meet these requirements.

Requirement for inclusion of environmental bucket criteria a, b, and c within the dredge plan have been included. Refer to Plan 27.

Comment 10: *Turbidity Curtains - In Section 2.1.1 of the Permit Information Packet it says that turbidity curtains are proposed to be installed in those areas where it is feasible. Water quality monitoring for contaminants of concern will be required outside the confines of the silt curtain and, in areas where silt curtains are not feasible, at the edge of a 500-foot mixing zone downcurrent of the dredging operations. The concentration of contaminants shall not exceed the applicable water quality standards at either the edge of the mixing zone or outside the silt curtain containment. Please update the Dredging Plan to include the following language:*

- a. *Turbidity curtains will be positioned to enclose the dredge work area prior to the commencement of dredging activities.*
- b. *The turbidity curtains will remain in place and functional during all phases of the dredging operation and will remain in place for at least two hours after dredging is completed.*
- c. *All dredging and barge decanting will take place within the confines of the turbidity curtain enclosure.*
- d. *The turbidity curtain enclosure must be regularly inspected and maintained to ensure continuous proper operation.*
- e. *Upon observation of a plume outside the confines of the turbidity curtain, the turbidity curtain containment area shall be examined for breaches. Any identified breaches in the curtain shall be immediately repaired.*

Response 10: Use of turbidity curtains, which is only feasible across the inter-pier basins, will meet the above requirements, including items a, b, c, d, and e and will be included in the dredge plan. Use of turbidity curtains in open water areas along the outer piers (39W and 35W) is not feasible due to strong tidal currents and the presence of the navigation channel. Refer to Sheet 27.

Visual monitoring will be performed during dredging to monitor impacts on water quality. If a substantial visible contrast to natural conditions (as defined at 6 NYCRR Part 703.2) is observed beyond the mixing zone, dredging activities will be reduced to minimize sediment release to the water column until there is no visible contrast. Other means of monitoring at this site are not practicable or feasible for technological or navigation safety reasons.

Currently, no technology is available to directly monitor concentrations of the contaminants identified in the targeted dredge material (primarily, several metals plus dioxin) in surface water in real time. Direct monitoring of suspended solids is likewise not possible in real time. Suspended solids concentrations may have a correlation to turbidity, which can be monitored in real time. However, particularly in high-energy marine environments with intense vessel traffic, there will be several other contributors to turbidity that can confound measurements for purposes of evaluating contribution from a specific source (including background concentrations of suspended solids, prop wash from unrelated vessel traffic, and colloids [e.g., from algal or other biological activity]). In addition, and notably, the navigation channel is immediately adjacent to the work area and the entirety of the mixing zone outboard of the work zone (1,500 feet as per TOGS 5.1.9 for open water areas) falls within the federal navigation channel. Placement of turbidity monitoring buoys within the channel is not permissible or feasible due to safety and navigation concerns.

Comment 11: *Other Best Management Practices – Please update the Dredging Plan to include other BMPs for reducing resuspension that will be required during the dredging, such as no barge overflow, no draining of the bucket over the water column and careful placement of the dredge material onto the scows. For any locations where concrete will be cast in place, there should be BMPs to keep wet concrete or concrete leachate from entering the water column. Also, please change remove references to the use of haybales and replace them with straw bales.*

Response 11: These BMPs will be included in the forthcoming JPA.

Comment 12: *Dredge Material Disposal - The dredge material disposal location will need to be approved by NYSDEC prior to the start of dredging. Please provide information on where the dredge material will be disposed/managed.*

Response 12: Refer to Plan 28, Note 2, which has included the requirement that the dredge material disposal location be approved in advance by NYSDEC. The selection of the dredge material disposal site will ultimately be determined by the Dredge and Dredge Material Management Contractor as part of their means and methods. The Contractor will be selected prior to construction.

If you have any questions, please reach out to me at 212-377-8737.

Yours sincerely,

andrea rosenthal

Andrea Rosenthal
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Supplemental Information for Response 1a

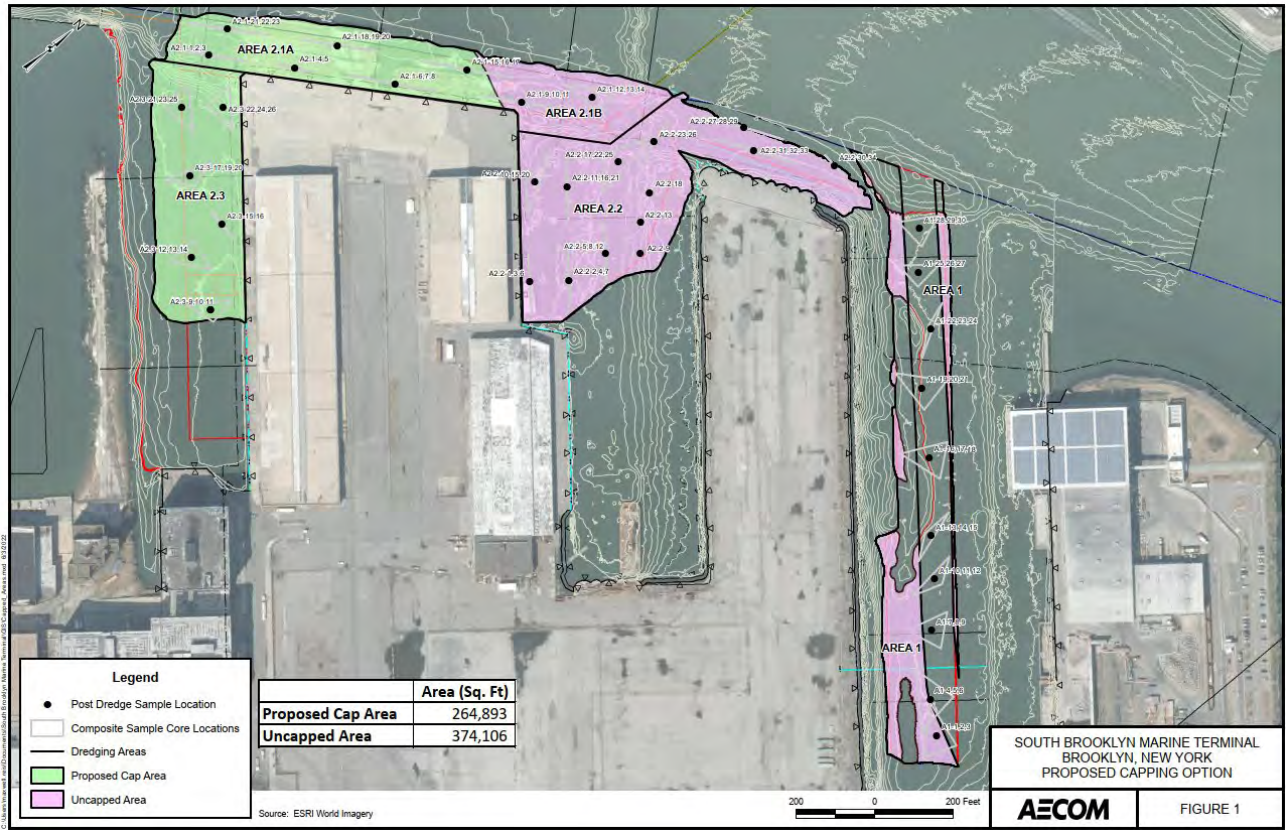


Table 1. Targeted Dredge Material and Post-Dredging Conservative* Average Concentrations 2,3,7,8-TCDD-TEQ

Area	Targeted Dredge Material (ng/kg)	Post-Dredging Surface (ng/kg)	
		w/ No Cap	w/ Limited Cap
Area 1	33.4	51.4	51.4
Area 2.1A	36.4	89.8	30.6*
Area 2.1B	82.9	35.1	35.1
Area 2.2	34.9	43.9	43.9
Area 2.3	43.9	127.7	43.2*
Project-wide SWAC	41.6	72.0	41.5
* Estimated surface concentration after consolidation of cap material into underlying sediment by assuming approximately 6-inches of sediment mixing with the 1 ft of cap material. SWAC = surface weighted average concentration			

TOGS Class C Threshold for TCDD-TEQ = 50 ng/kg

Table 2. Targeted Dredge Material and Post-Dredging Conservative* Average Concentrations Total PCBs

Area	Targeted Dredge Material (ug/kg)	Post-Dredging Surface (ug/kg)	
		w/ No Cap	w/ Limited Cap
Area 1	119.1	114	114
Area 2.1A	156.0	302.5	167.5*
Area 2.1B	384.2	155.0	155.0
Area 2.2	82.8	87.7	87.7
Area 2.3	199.5	416.3	205.4*
Project-wide SWAC	156.7	213.4	139.6
* Estimated surface concentration after consolidation of cap material into underlying sediment by assuming approximately 6-inches of sediment mixing with the 1 ft of cap material. SWAC = surface weighted average concentration			

TOGS Class C Threshold for Total PCBs = 1000 ug/kg

**Table 3. Targeted Dredge Material and Post-Dredging
Conservative* Average Concentrations
Total PAHs**

Area	Targeted Dredge Material (ug/kg)	Post-Dredging Surface (ug/kg)	
		w/ No Cap	w/ Limited Cap
Area 1	842.5	1699.0	1699.0
Area 2.1A	2479.5	2250.0	1416.7*
Area 2.1B	3216.3	4800.0	4800.0
Area 2.2	10,574.6	12,023.1	12,023.1
Area 2.3	1698.6	3500.0	1833.3*
Project-wide SWAC	5015.1	6169.1	5628.9
* Estimated surface concentration after consolidation of cap material into underlying sediment by assuming approximately 6-inches of sediment mixing with the 1 ft of cap material. SWAC = surface weighted average concentration			

TOGS Class C Threshold for Total PAHs = 45,000 ug/kg

**Table 4. Targeted Dredge Material and Post-Dredging
Conservative* Average Concentrations
DDx**

Area	Targeted Dredge Material (ug/kg)	Post-Dredging Surface (ug/kg)	
		w/ No Cap	w/ Limited Cap
Area 1	8.7	10.1	10.1
Area 2.1A	7.5	8.1	9.4*
Area 2.1B	8.0	7.9	7.9
Area 2.2	8.3	7.9	7.9
Area 2.3	9.0	16.3	12.1*
Project-wide SWAC	8.3	10.2	9.4
* Estimated surface concentration after consolidation of cap material into underlying sediment by assuming approximately 6-inches of sediment mixing with the 1 ft of cap material. SWAC = surface weighted average concentration			

TOGS Class C Threshold for DDx (sum of DDD, DDE, & DDT) = 30 ug/kg

**Table 5. Targeted Dredge Material and Post-Dredging Conservative* Average Concentrations
ARSENIC**

Area	Targeted Dredge Material (mg/kg)	Post-Dredging Surface (mg/kg)	
		w/ No Cap	w/ Limited Cap
Area 1	13.4	15.2	15.2
Area 2.1A	16.9	21.2	12.5*
Area 2.1B	17.1	14.9	14.9
Area 2.2	20.5	24.8	24.8
Area 2.3	19.3	27.1	14.5*
Project-wide SWAC	18.3	22.4	17.9
* Estimated surface concentration after consolidation of cap material into underlying sediment by assuming approximately 6-inches of sediment mixing with the 1 ft of cap material. SWAC = surface weighted average concentration			

TOGS Class C Threshold for Arsenic = 53 mg/kg

**Table 6. Targeted Dredge Material and Post-Dredging Conservative* Average Concentrations
CADMIUM**

Area	Targeted Dredge Material (mg/kg)	Post-Dredging Surface (mg/kg)	
		w/ No Cap	w/ Limited Cap
Area 1	1.5	3.0	3.0
Area 2.1A	2.5	4.8	2.4*
Area 2.1B	2.0	1.7	1.7
Area 2.2	1.2	1.6	1.6
Area 2.3	3.3	7.8	3.4*
Project-wide SWAC	2.0	3.8	2.4
* Estimated surface concentration after consolidation of cap material into underlying sediment by assuming approximately 6-inches of sediment mixing with the 1 ft of cap material. SWAC = surface weighted average concentration			

TOGS Class C Threshold for Cadmium = 9.5 mg/kg

**Table 7. Targeted Dredge Material and Post-Dredging
Conservative* Average Concentrations
COPPER**

Area	Targeted Dredge Material (mg/kg)	Post-Dredging Surface (mg/kg)	
		w/ No Cap	w/ Limited Cap
Area 1	112.2	161.8	161.8
Area 2.1A	130.5	196.6	87.5*
Area 2.1B	128.0	115.9	115.9
Area 2.2	127.5	148.7	148.7
Area 2.3	176.9	344.3	136.8*
Project-wide SWAC	137.5	201.6	133.3
* Estimated surface concentration after consolidation of cap material into underlying sediment by assuming approximately 6-inches of sediment mixing with the 1 ft of cap material. SWAC = surface weighted average concentration			

TOGS Class C Threshold for Copper = 270 mg/kg

**Table 8. Targeted Dredge Material and Post-Dredging
Conservative* Average Concentrations
LEAD**

Area	Targeted Dredge Material (mg/kg)	Post-Dredging Surface (mg/kg)	
		w/ No Cap	w/ Limited Cap
Area 1	134.4	177.1	177.1
Area 2.1A	139.4	180.1	91.4*
Area 2.1B	141.3	122.9	122.9
Area 2.2	158.8	191.2	191.2
Area 2.3	186.2	320.5	138.2*
Project-wide SWAC	156.6	210.8	152.2
* Estimated surface concentration after consolidation of cap material into underlying sediment by assuming approximately 6-inches of sediment mixing with the 1 ft of cap material. SWAC = surface weighted average concentration			

TOGS Class C Threshold for Lead = 218 mg/kg

**Table 9. Targeted Dredge Material and Post-Dredging Conservative* Average Concentrations
MERCURY**

Area	Targeted Dredge Material (mg/kg)	Post-Dredging Surface (mg/kg)	
		w/ No Cap	w/ Limited Cap
Area 1	1.5	2.3	2.3
Area 2.1A	1.2	2.0	0.8*
Area 2.1B	1.6	1.1	1.1
Area 2.2	2.4	3.1	3.1
Area 2.3	1.9	4.5	1.6*
Project-wide SWAC	1.9	2.9	2.0
* Estimated surface concentration after consolidation of cap material into underlying sediment by assuming approximately 6-inches of sediment mixing with the 1 ft of cap material. SWAC = surface weighted average concentration			

TOGS Class C Threshold for Mercury = 1 mg/kg

**May 25, 2023 Letter with Responses to NYSDEC Technical
Comments dated April 27, 2023**

Q.6.21 Connected Action

Table Q.6.21-1 Responses to Comments on the Connected Action

Note: Bolded sections are NYSDEC Agency Response (dated 27-Apr-2023), and Applicant Response.

Comment No.	Comment	Response
Cooperating Agency Comments		
BOEM-2022-0053-0120-0001	<p>This letter focuses on comments associated with the SBMT facility connected action and the associated State Environmental Quality Review Act (SEQR) documents in DEIS Appendix P. Appendix P – Environmental Analysis of the South Brooklyn Marine Terminal Port Infrastructure Improvement Project General 1. SEQR regulations [Footnote 2: 6 NYCRR 617.9(b)(5)(iii)(d)] require that an Environmental Impact Statement (EIS) address “any growth-inducing aspects of the proposed action.” Growth-inducing aspects should be discussed anywhere there is discussion of indirect impacts.</p> <p>The NYS Agencies would like to review the revised sections. Additional comments may be provided upon review of those sections.</p>	<p>Discussions of growth-inducing effects will be added to sections 3.1 Introduction, 3.2 Land Use, Zoning and Public Policy, 3.3 Socioeconomics, and 3.4 Community Facilities and Services and any other sections where it is appropriate in the Final EA.</p> <p>Acknowledged</p>
BOEM-2022-0053-0120-0002	<p>Section 2.1 Reasonable Alternatives to the Proposed Project 2. SEQR regulations [Footnote 3: 6 NYCRR 617.9(b)(5)(v)] require that an EIS include “a description and evaluation of the range of reasonable alternatives to the action that are feasible considering the objectives and capabilities of the project sponsor. The description and evaluation of each alternative should be at a level of detail sufficient to permit a comparative assessment of the alternatives discussed. The range of alternatives must include the no action alternative. The no action alternative discussion should evaluate the adverse or beneficial site changes that are likely to occur in the reasonably foreseeable future in the absence of the proposed action. The range of alternatives may also include as appropriate alternative: (a) sites; (b) technology; (c) scale or magnitude; (d) design; (e) timing; (f) use; and (g) types of action.” The Environmental Assessment (EA) does not provide a sufficient detailed alternative site analysis for sites considered by Equinor for staging and the Operations and Maintenance (O&M) facility beyond SBMT. The EA should include an alternative site analysis “at a level of detail sufficient to permit a comparative assessment of the alternatives discussed.”</p> <p>The EA should reference and discuss/consider the findings in NYSDERDA’s Ports Cumulative Impact Study: https://www.nysderda.ny.gov/-/media/Project/Nysderda/Files/Programs/Offshore-Wind/22-10-Ports-Cumulative-Impact-Study.pdf</p>	<p>Section 2.1.2.1 of the EA discusses the site alternatives that were evaluated. The site alternatives evaluated in addition to SBMT included Howland Hook, Port Ivory (Parcel C) and Red Hook Container Terminal. As described in Section 2.1.2.1, none of these site alternatives would meet the project’s purpose and need, so they are not practicable. As a result, a further detailed evaluation of these alternatives was not undertaken. Moreover, two of the three site alternatives would cause greater environmental impacts.</p> <p>The EA will reference and consider the information contained in NYSDERDA’s Ports Cumulative Impact Study.</p>
BOEM-2022-0053-0120-0003	<p>Section 3.3 Socioeconomic Conditions 3. Section 7(3) of the Climate Leadership and Community Protection Act (Climate Act) provides that all New York State agencies shall ensure that their decisions “not disproportionately burden disadvantaged communities” and affirmatively “prioritize reductions of greenhouse gas emissions and co-pollutants.” The New York State Climate Justice Working Group identified Disadvantaged Communities as required by the Climate Act. Please see https://gisservices.dec.ny.gov/gis/dil/ for an interactive map of communities</p>	<p>EA Section 3.3.5 Environmental Justice will be revised to reflect the SBMT Project’s location in a Disadvantaged Community. As established in section 3.3.5.5, the SBMT Project would not result in any significant adverse impacts, and therefore would not result in any disproportionately high and adverse effects on EJ or disadvantaged communities. The further reduction of GHG emissions including the co-pollutant emissions from each GHG source via alternatives or mitigation measures will be discussed and/or quantified if it can be reasonably estimated (e.g., the leakage of HFCs from the HVAC system cannot be reasonably estimated) with a summary to be included in Section 3.3.5. These alternatives and mitigation measures during construction and operation would include 1) potential use of electric cranes during permanent operations, 2) no use of natural gas service for</p>

Comment No.	Comment	Response
	<p>that meet the Disadvantaged Communities criteria. A review of the referenced interactive map by NYSDEC staff determined that the SBMT facility has the potential to impact a Disadvantaged Community. As such additional information pursuant to Climate Act Section 7(3) should be included in Section 3.3.5 Environmental Justice including the calculation of the co-pollutant emissions from each GHG source at the facility and the discussion of any alternatives or mitigation measures that will be used to reduce the impact of those emissions on the facility's neighbors.</p> <p>Since providing our previous comments, the disadvantaged communities criteria has been finalized. A final map may be accessed here: Disadvantaged Communities Criteria - New York's Climate Leadership & Community Protection Act (ny.gov) . Please update the narrative, as needed.</p> <p>The NYS Agencies would like to review the revised section. Additional comments may be provided upon review of the section.</p>	<p>heating and other uses, 3) incorporating solar panels, 4) use of hybrid SOVs in lieu of fossil fuel vessels, 5) potential provision of electrical works to support vessel hoteling while at berth, in lieu of running vessel diesel engines, and 6) shore power will be used for construction (instead of diesel generators) and other best management practices will be implemented. In addition, the primary crew transfer vessels that will be needed during both construction and O&M will use the engine models per the highest EPA Tier marine engine standards in 40 CFR Part 1042 (which is Tier 4 for engines rated at 600 kW or greater, and Tier 3 for engines rated at less than 600 kW).</p> <p>The narrative will reflect the final Disadvantaged Communities map.</p>
BOEM-2022-0053-0120-0004	<p>4. As the DEIS acknowledges minority and low-income populations meeting New York State's definition of environmental justice populations are present in the vicinity of SBMT and the onshore substation for Empire Wind 1. [Footnote 4: See DEIS at 3.12.1.1] This community has historically endured exposure to adverse air quality and related health impacts in part due to exposure to emissions from fossil fuel based peak power plants and other sources of pollution like the Brooklyn Queens Expressway. [Footnote 5: See DEIS at 3.12.3.1 p. 3.12-13] The Empire Wind Project is expected to have long term beneficial impacts on air quality throughout the New York City region due to anticipated retirement of fossil fuel powered generation facilities. [Footnote 6: See DEIS at 3.12-21] However as the DEIS acknowledges environmental justice communities near onshore construction and ports "could experience adverse impacts from air emissions." [Footnote 7: See DEIS at p 3.12-19] While the DEIS further states that it expects these impacts to be "minor temporary and variable" an aggregate assessment of these localized impacts for the SBMT community should be prepared and included in the EA to reconfirm that impacts will be minor.</p> <p>The Response states that an analysis that, "estimates the contributions of the project to ambient pollutant concentrations in the neighborhood" was conducted, but it does not cross reference the data. The data should be cross-referenced. Table 3.20-6?</p> <p>Plases clarify that the statement, "there's no violation of the NAAQS" relates to both the analysis of ambient concentrations, "at the closest monitoring station" and the neighborhood level analysis.</p>	<p>The air quality impact analysis was conducted for the SBMT upgrade-related construction activities during which the most intensive air emissions from all sources would occur on site. The analysis, conducted via dispersion modeling, not only estimates the contributions of the project to ambient pollutant concentrations in the neighborhood, but it also includes the monitored ambient concentrations recorded at the closest monitoring station; these monitored ambient conditions reflect background stationary and mobile sources such as off-site traffic along local roadways and highways. Therefore, the contributions from off-site sources were accounted for in the modeling in an aggregated way. The results from the analysis of the most intensive use of emission sources during the SBMT Project construction plus the ambient monitoring results from other sources show no violation of the NAAQS. It can be anticipated that during other SBMT operational periods when emissions are lower, there would be fewer impacts as compared to the phases modeled (which showed no violation of the NAAQS). Therefore, potential air quality impacts during the SBMT Project's construction and operational conditions would be minor. No further aggregated analysis is warranted. Please also see the response to Comment 9.</p> <p>The worst-case condition during construction phases with the most equipment and shortest distance between the source and receptors was described in Chapter 20. The modeling results are summarized in Table 3.20-6. These results will be cross-referenced. These results will be cross-referenced.</p> <p>The total concentrations summarized in Table 3.20-6 consist of 1) the worst-case neighborhood levels that would occur from Project construction activities and 2) the levels collected from the closest monitoring stations to reflect the ambient background concentration levels contributed from the existing sources around the closest stations. These monitoring stations with continuous monitoring results were selected by EPA/DEC to establish city-wide representative ambient air quality conditions with contributions from all existing sources. By combining both elements, the predicted total concentrations within the neighborhood would consist of both Project-induced and existing source contributions. As shown in Table 3.20-6, these combined contributions would not cause an exceedance of the NAAQS or City de minimis thresholds.</p> <p>EPA research indicates that pollutant concentrations from ground level mobile sources such as those considered in this modeling (e.g. trucks, equipment), generally decrease to background levels within 500-600 feet. https://www.epa.gov/sites/default/files/2015-11/documents/420f14044_0.pdf Therefore, for receptors located beyond a certain distance from these sources, the potential air quality impacts would be negligible. This research is consistent with the screening distances established in the <i>CEQR Technical Manual</i> and used in the analysis.</p>
BOEM-2022-0053-0120-0005	<p>Section 3.11 Water and Sewer: 5. The following general comments apply to Section 3.1.1:</p> <p>a. A water quality monitoring plan should be implemented during dredging and in-</p>	<p>5a - A water quality monitoring plan will be implemented, following permit requirements, and developed in coordination with NYSDEC.</p> <p>5b - Turbidity curtains will be used to the extent possible during in-water work, and as reflected in permit requirements.</p>

Comment No.	Comment	Response
	<p>water construction b. Turbidity curtains should be installed used and maintained. c. Where contamination of aquatic sediments are summarized sediment contamination should be provided in the context of NYSDEC’s Division of Water Technical & Operational Guidance Series 5.1.9 (TOGS 5.1.9) (e.g. individual contaminants present and classification based on TOGS 5.1.9 criteria). d. Where there is discussion of the removal of existing cofferdams more information should be provided including: the area and volume of material to be removed; type of habitat that will be created and whether this habitat will be shaded by the proposed platform; what type of sediments are in the cofferdam; if there are any contaminants that would be exposed to the waterway; and what BMPs will be used during the removal to protect the surrounding waters.</p> <p>No further comment at this time.</p>	<p>5c - EA Sections 1.2, 1.3.2.2, 3.10.3.1, and 3.20.2.1.4, discuss sediment contamination in the context of TOGS 5.1.9. In addition, a copy of the Data Usability Summary Report was submitted as Appendix H to the Permit Information Packet submitted with the JPA.</p> <p>5d – Initial information regarding the 35W cofferdam removal is given in JPA Section 2.1.3.5. A revised summary of in-water work table is attached; this table more accurately reflects the following information: Removal of the cofferdam will remove a total of 16,259 CY of fill and structure over an area of 0.4581 acres (19,953 sq ft). The area will receive 4,101 CY of stone fill, for a net removal of 12,158 CY of fill. The exposed new habitat will extend from the existing “pier” surface to the mudline.</p> <p>The newly created habitat will be of four types: upland slope, covered with layers of bedding and riprap stone (identical to adjacent riprap slopes) [0.0645 ac; 0.0475 ac of which will be shaded], tidal wetland slopes covered with stone [0.2082 ac; 0.1534 ac of which will be shaded], marine habitats covered with stone [0.0416 ac; 0.0307 ac of which will be shaded], and marine habitats of open fill exposed through removal of the cofferdam [0.1437 ac, 0.1058 ac of which will be shaded]</p> <p>Acknowledged.</p>
BOEM-2022-0053-0120-0006	<p>6. 3.11.3.2 Future with Project – please address the following comments on this section: a. This section does not specify the discharge point for Drainage Area B. This should be described in more detail. b. Drainage Area D is described as both a direct discharge and reusing an existing connection to city sewer. This requires clarification. c. Drainage Areas D and H are proposed to reuse existing city sewer connections. Please mark out proposed connection location to existing sewer on Figure 3.11-2 (if different from the mark out for Drainage Area E) and revise the narrative as necessary.</p> <p>Please explain if the proposed discharges to the bay will require that a new outfall be constructed. Will the outfall require an excavation or fill within navigable waters? Also, has the applicant determined if a SPDES permit will be required for the new outfalls?</p> <p>The NYS Agencies would like to review the revised narrative. Additional comments may be provided upon review of the narrative.</p>	<p>6a -Upon NYCDEP review and approval, Drainage Area B will be connected via the existing 18-inch diameter stormwater sewer to the existing NYCDEP 48-inch stormwater sewer in 39th Street. 6b- Upon developing the design, it has been determined that Drainage Area D will not be connected to city sewer, it will only discharge directly to the bay. All proposed discharges to the bay will have new Hydraulic Separators installed and will be approved by the NYCDEP. 6c - As mentioned above, Drainage Area D will not be connected to city sewer. Drainage Area H will connect to an existing 24-inch storm sewer in 29th Street. As noted, all proposed discharges to the bay will have new Hydraulic Separators installed and will be approved by the NYCDEP. The narrative will be updated accordingly in the Final EA.</p> <p>The majority of the outfalls were deemed inadequate structurally, and/or did not have the hydraulic capacity to meet design and regulatory requirements. All but one existing outfall, will be upgraded which will involve upgrading the pipe and structure at existing outfall locations. No expected excavation or fill within navigable waters is expected. No new outfalls are proposed.</p>
BOEM-2022-0053-0120-0008	<p>7. Figure 3.11-2 does not include the 35th street "pier" in a drainage area but pavement removal is planned for this section.</p> <p>Please see response to BOEM-2022-0053-0120-0006.</p>	<p>The final pavement and grading of 35th Street is currently being designed; that design will determine the appropriate drainage area. All drainage will pass through a new hydraulic separator before discharge to the bay.</p> <p>Please see response to BOEM-2022-0053-0120-0006.</p>
BOEM-2022-0053-0120-0009	<p>Section 3.13 Energy 8. In accordance with 6 NYCRR 617.9(b)(5)(iii)(e) this section should include the following narrative: “impacts of the proposed action on the use and conservation of energy (for an electric generating facility the statement must include a demonstration that the facility will satisfy electric generating capacity needs or other electric systems needs in a manner reasonably consistent with the most recent state energy plan).”</p> <p>This requirement does apply to SBMT. The only part that does not apply is the parenthetical which only applies to electric generating facilities. All SEQRA-compliant EISs must include a discussion on the use and conservation of energy. This needs to be addressed for SEQRA compliance as originally noted. See q.,44,</p>	<p>The SBMT Port is not an electric generating facility and this requirement does not apply. The relevant impacts on use and conservation of energy are minimal since the current design of the Operations & Maintenance (O&M) building includes LEED certification. In addition, the building will be fully electric with high efficiency HVAC equipment meeting or exceeding requirements.</p> <p>A discussion on the use and conservation of energy will be added to the EA.</p>

Comment No.	Comment	Response
	<p>page 123 for more detail and guidance. https://www.dec.ny.gov/docs/permits_ej_operations_pdf/seqrhandbook.pdf</p>	
BOEM-2022-0053-0120-0010	<p>Section 3.15 Air Quality 9. Amendments to the SBMT EA are recommended. Specifically the discussion in Section 3.15 focuses solely on regional level impacts and compliance with National Ambient Air Quality Standards (NAAQS) without discussion of potential local impacts even though data on the latter is available. The EA also screens out specific impact components individually without considering whether more detailed analysis would or would not be warranted if considered in aggregate (e.g. combined emissions from off-site on-road vehicle trips and HVAC emissions).</p> <p>The Response states that detailed localized analysis was conducted per CEQR but does not cross reference the data. Suggest cross-reference to Table 3.20-6. Recommend clarifying whether the reference to vehicle trip screening under the CEQR Technical Manual accounted for vessel trips and if so, stating that (to show that it screened out not only accounting for cars and trucks, but also vessel engines).</p>	<p>Pursuant to the CEQR Technical Manual, a detailed analysis is not warranted for the localized impacts anticipated during the SBMT operational phase.</p> <p>It should be noted that a detailed localized analysis was conducted for the SBMT construction period solely per the city-specific guidance; it is not required under the federal guidance for either the 2-year (2024 and 2025) SBMT site upgrade or the 2-year SBMT staging phase (EW1 and EW2 construction phases, 2026 and 2027), or for both periods, if conservatively considered as a four-year period of construction. . According to 40 CFR 93.123(c)(5), “CO, PM10, and PM2.5 hot spot analyses are not required to consider construction-related activities which cause temporary increases in emissions. Each site which is affected by construction-related activities shall be considered separately, using established ‘Guideline’ methods. Temporary increases are defined as those which occur only during the construction phase and last five years or less at any individual site.” Therefore, any aggregated assessment via dispersion modeling with comparisons of NAAQS (i.e., hot spot analysis) is not warranted under NEPA. The operational condition from 2028 and beyond (after EW1 and EW2 become operational) is purely speculative and cannot be reasonably defined at this time. The estimate of potential annual emissions during SBMT operations beyond 2028 conservatively assumed that activities would be comparable to the SBMT staging phase (EW1 and EW2 construction phases) for a disclosure purpose and making a comparison primarily as part of general conformity rule applicability analysis. Offsite vehicle trips during operation are negligible since vehicle trips do not even exceed the traffic screening threshold per CEQR. In addition, HVAC will be powered by the grid, resulting in no criteria pollutant emissions. Therefore, a detailed aggregated analysis is not warranted.</p> <p>Although this comment references operational impacts, given the greater amount of equipment and closer distances to sensitive receptors during the construction phase as compared to the operational phase, the cross-reference to Table 3.20-6 showing construction-related impacts will be made.</p> <p>Traffic screening is relevant to specific intersections where pedestrians (receptors) are immediately adjacent to the sources and have the potential to be affected by traffic congestion. The same adjacency does not exist for vessels, which are typically far from the sensitive receptors; therefore, no similar screening procedures/thresholds have been established in the CEQR Technical Manual, nor is it necessary to consider these sources for the SBMT Project (also see explanation provided in response to Comment #4). In this case, the vessel traffic would occur 1,000 feet or more from the closest sensitive receptors. As a result, a localized impact analysis is not warranted per the CEQR Technical Manual distance screening threshold.</p>
BOEM-2022-0053-0120-0011	<p>10. 3.15.1 Affected Environment – In the first paragraph and Table 3.15.2 consider that while the closest monitoring stations show just under the NAAQS New York State shares a nonattainment area with Connecticut and those monitors show design values above the NAAQS.</p> <p>No further comment at this time.</p>	<p>The document will add a brief discussion of nonattainment status of the region within which Kings County is located. Table 3.15-2 reflects the air quality conditions at a local level where the project is located.</p> <p>Acknowledged.</p>
BOEM-2022-0053-0120-0012	<p>11. Section 3.15.2.2 Future with Project – A new subsection should be added to report on the results of the supplemental analysis provided in the Supplemental Air Quality and Climate Change Analysis. This new subsection should make it clear that the analysis considered quantitative emissions from all land-based sources including the emissions from off-site on-road vehicles discussed in Section 3.15.2.2.1; from on-site emissions discussed in Section 3.15.2.2.2 including HVAC equipment cranes and other on-site vehicles and equipment; and from Berthed Vessels. This new subsection should address not only regional level NAAQS screening criteria but localized screening criteria consistent with City Environmental</p>	<p>This section was prepared by following the CEQR analysis guidance (2021 CEQR Technical Manual) as the quantification of these operational emissions is not warranted. However, the direct and indirect emissions presented in the Supplemental Air Quality and Climate Change Analysis, included as EA Appendix P, will be incorporated into this section in the final EA.</p> <p>The CEQR Technical Manual establishes various source- (stationary or mobile source) specific screening thresholds in terms of source-receptor distances within which an impact analysis via a quantitative analysis is warranted. Since the proposed on-site operation of these sources such as cranes, vessels, trucks, etc. would not operate within the applicable distance between the stationary/mobile sources and sensitive receptors, “quantification of these operational emissions is not warranted.” Even though Section 3.20 pertains to construction activities, we will add a statement cross-referencing Table 3.20-6. Also see</p>

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	<p>Quality Review (CEQR) microscale analysis.</p> <p>Consider expanding the statement, “quantification of these operational emissions is not warranted” to explain why it’s not warranted. For example, add, “because dispersion modeling projected no significant localized elevated concentrations of criteria pollutants, see Table 3.20-6.”</p>	<p>response to Comment #9.</p>
BOEM-2022-0053-0120-0013	<p>12. 3.15.2.2.2 On-site Sources – in the third paragraph the statement that mobile equipment operation would not result in “significant adverse air quality impacts” because they will operate 600 feet away does not address the NAAQS requirements.</p> <p>No further comment at this time.</p>	<p>The 2021 CEQR Technical Manual establishes a screening radius of 400 feet beyond which non-major stationary sources are unlikely to result in significant air quality impacts in terms of NAAQS. The sentence will be revised to reflect the 400 feet screening criteria and its connection to the NAAQS requirements.</p> <p>Acknowledged.</p>
BOEM-2022-0053-0120-0014	<p>13. Section 3.15.2.3 Indirect Effects and Cumulative Impacts - Expand or supplement the cumulative impacts discussion to account for cumulative emissions of the SBMT Project with Empire Wind Project emissions allocated to Kings County in the COP Appendix K viewing on both a regional and local level.</p> <p>The NYS Agencies would like to review the Final EA and may have additional comments upon review.</p>	<p>Both operational and construction emissions for SBMT Project will be combined with the emissions presented in the COP for other projects within Kings County to provide cumulative emissions on a regional level in the Final EA.</p> <p>Acknowledged.</p>
BOEM-2022-0053-0120-0015	<p>14. 3.20.4.2.2.4 Fugitive Dust - Clarify if the statement “measures would be implemented as practicable to reduce pollutant emissions in accordance with applicable regulation” means that there will be compliance with regulations or if there are any planned efforts to go above and beyond.</p> <p>No further comment at this time.</p>	<p>The statement means that the project will comply with regulations, which are designed to minimize potential emissions.</p> <p>Acknowledged.</p>
BOEM-2022-0053-0120-0016	<p>15. 3.20.4.2.2.5 Analysis Periods – The first sentence states “[t]he resulting emission factors were used....” Explain what the emission factors resulted from. If it’s from a MOVES run please explain methodology. Alternatively if it is referring to Table 3.20.4.2.3 a reference to that table should be included in the text.</p> <p>The NYS Agencies would like to review the Final EA and may have additional comments upon review.</p>	<p>The methodology will be explained and further information provided. The phrase “resulting emission factors” refers to the emissions factors described in the preceding two sections: the engine emission factors estimated from MOVES and the fugitive dust emissions from AP-42. These emission factors from equipment engines were then used in association with other factors, such as engine operating hours, size, and load factors, to calculate short- and long-term emission rates as depicted in the profile figures (Figures 3.20-3 through 3.20-5) for further dispersion modeling.</p> <p>Acknowledged.</p>
BOEM-2022-0053-0120-0017	<p>16. Figure 3.20.6 NOx Annual Emission Rate Profile: Consider highlighting that this is less than the conformity de minimis threshold.</p> <p>No further comment at this time.</p>	<p>Change will be made.</p> <p>Acknowledged.</p>
BOEM-2022-0053-0120-0018	<p>17. 3.20.4.2.2.8 Impact Determination – In the third paragraph it states that because the proposed construction duration is less than 3 years the NAAQS with a 3-year average do not apply. It should be noted that the length of a project does not change its impact on the NAAQS. This comment also applies to Table 3.20-5.</p> <p>This Response does not address General Conformity and includes odd and non-</p>	<p>Potential impacts from temporary construction activities are not treated in the same way as continuing operational activities for which the NAAQS were established. Those NAAQS that require three years of data to determine compliance do not apply to temporary activities of shorter duration. Per New Source Review (NSR) Workshop Manual (NSR Workshop Manual (DRAFT October 1990) (epa.gov)), “the EPA allows for the exclusion of temporary emissions (e.g., emissions occurring during the construction phase of a project) when establishing the impact area and conducting the subsequent air quality analysis.” Therefore, such temporary/shorter duration emissions do not require air quality analysis which is relevant to the comparison</p>

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	<p>related citations to justify not providing this information. However, the calculations show that the project will not exceed the General Conformity threshold and this should be stated. For reference, here is webpage which provides clarifications on General Conformity: https://www.epa.gov/general-conformity/frequent-questions-about-general-conformity#0</p> <p>While EPA guidance may allow exclusion of certain construction related air quality impacts from NAAQS analysis, the statement at the end of 3.20.4.2.2.8 seems a bit out of place given that the EA then goes on to (appropriately) analyze all criteria pollutants against the NAAQS in Table 3.20-6. Consider a response that notes the EPA guidance, indicates all pollutants were nevertheless analyzed since 3.20-6 serves as the worst case scenario for air analysis for both construction and non-construction project phases, and indicates that the text will be clarified</p>	<p>with the NAAQS.</p> <p>This section addresses potential on-site localized emissions impacts to the neighborhood in terms of concentration levels for localized pollutants with respect to NAAQS. The GCR covers both direct and indirect off-site emissions that can be reasonably estimated including those regional pollutants such as NOx or VOCs that are not addressed in this section. Therefore, there is a separate section (3.20.4.2.4) that addresses meeting the GCR requirement for all relevant pollutants (see Table 3.20-7).</p> <p>As previously explained, the NAAQS comparison analysis for short-term construction activities is not warranted per common impact modeling practice. Moreover, the General Conformity Rule states “CO, PM10, and PM2.5 hot spot analyses are not required to consider construction-related activities which cause temporary increases in emissions. Each site which is affected by construction-related activities shall be considered separately, using established ‘Guideline’ methods. Temporary increases are defined as those which occur only during the construction phase and last five years or less at any individual site.” 40 CFR 93.123(c)(5).</p> <p>Therefore, the analysis performed and discussed in Section 3.20 is not required under NEPA or SEQRA. However, given more stringent requirements established in the CEQR Technical Manual, this analysis including demonstrating compliance with City de minimis thresholds was conducted.</p>
BOEM-2022-0053-0120-0019	<p>18. Table 3.20.7 General Conformity Annual Emissions (in tons) - The NOx number for dredging does not appear to be accurate and is important for this determination. It appears that a column adjustment may be needed.</p> <p>No further comment at this time.</p>	<p>The printout error of NOx in the table will be fixed.</p> <p>Acknowledged.</p>
BOEM-2022-0053-0120-0020	<p>Appendix P Supplemental Air Quality and Climate Change Analysis General 19. Regarding SF6 this GHG is specifically mentioned in Section 3 of the Supplemental Air and Climate Change Analysis (the “Supplemental Analysis”) but is not mentioned in Section 4 of the Supplemental Analysis. In a few places in Sections 3.15 and 3.16 of the EA this sentence is added “[t]herefore air quality conditions within the Study Area as compared to the existing baseline condition would be impacted by the operation of an emergency generator at the onshore substation and from GHG emission leakages of sulfur hexafluoride from gas-insulated switchgear installed at the onshore substation.” While it is likely that the overall CO2e emission reductions that could be achieved through this Project that is not sufficient justification to ignore these emissions in Section 4 of the Supplemental Analysis entirely and to introduce new SF6 equipment if alternatives are available. The CLCPA Draft Scoping Plan discusses why New York State needs to phaseout SF6 equipment (Strategy E7 page 167). This Project should seek to avoid the SF6 emissions noted in Sections 3.15 and 3.16 of the EA. Section 4 of the Supplemental Analysis should describe these emissions; include why SF6 emissions are a particular environmental concern (e.g. the Draft Scoping Plan discusses their high GWP and atmospheric lifetime of >3000 years); provide a rationale for why non-SF6 equipment was not considered for this Project; and indicate how SF6 emission leakage will be controlled.</p> <p>The NYS Agencies would like to review the revised Supplemental Analysis and may have additional comments upon review.</p>	<p>Switch gear related SF6 will be added to the Supplemental Air and Climate Change Analysis.</p> <p>Acknowledged.</p>
BOEM-2022-0053-	Section 2 Air Pollutant Emissions Estimate20. Section 2.13 Greenhouse Gas	The switchgear-related GHGs will be included in Section 4. However, the leakage of HFCs from the HVAC system cannot be

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0120-0021	<p>Emissions – This section lists the GHGs subject to the CLCPA and Part 496. However Section 4 Greenhouse Gas Emissions and CLCPA Consistency reports only some GHG emissions associated with energy (i.e. fuel combustion and electricity. There are also emissions from the fluorinated GHGs SF6 and HFCs. This includes from the use of gas insulated switchgear and HVAC equipment (electric heating and cooling). Section 4 should be updated to include all the GHGs subject to the CLCPA and Part 496.</p> <p>The NYS Agencies would like to review the revised section. Additional comments may be provided upon review of the section.</p>	<p>reasonably estimated. A HFCs leak control discussion (as summarized in Response to Comment #23) will be added to Section 4.</p> <p>Acknowledged.</p>
BOEM-2022-0053-0120-0022	<p>21. 2.3.1.2 Fugitive Dust - Clarify if the statement “measures would be implemented as practicable to reduce pollutant emissions in accordance with applicable regulation” means that there will be compliance with regulations or if there are any planned efforts to go above and beyond.</p> <p>No further comment at this time.</p>	<p>Fugitive dust measures will be in compliance with the regulations, which are designed to minimize potential emissions. In addition, a Community Air Monitoring Plan (CAMP) will be implemented during subsurface work as part of the NYSDEC Brownfield Cleanup Program (BCP).</p> <p>Acknowledged.</p>
BOEM-2022-0053-0120-0023	<p>Section 4 Greenhouse Gas Emissions and CLCPA Consistency22. NYSDEC recently updated the fossil fuel emission factors to be used in Climate Act analyses based on updated information. The revised factors can be found here https://www.dec.ny.gov/energy/99223.html. The calculations should be revised using these factors.</p> <p>No further comment at this time.</p>	<p>Update will be made.</p> <p>Acknowledged.</p>
BOEM-2022-0053-0120-0024	<p>23. Regarding HFCs and HVAC there is not sufficient information as to the HFCs that will be associated with the electric “heating and cooling” equipment referred to in Section 4.2 and 4.3 of the Supplemental Analysis. In Section 4.3 the use of electric heating is cited as a lower GHG option compared to gas but there is no explanation as to whether the equipment in question contains HFCs (i.e. if it is a heat pump). However HFCs used in HVAC equipment are also subject to the Climate Act and were the subject of the Draft Scoping Plan strategies B11 and W5. It would be appropriate for Section 4 to indicate which HFCs may be emitted (i.e. refrigerant blend) an estimate of HFC leakage and an indication how operational and end-of-life emissions would be controlled. If the Project seeks to install HVAC equipment with high-GWP refrigerants (i.e. those with a 20-year GWP above 750) for which lower-GWP alternatives are available then this should be reconsidered or justified. The adoption of high-GWP HFC refrigerant is not consistent with the Climate Act. Given the federal phasedown under the AIM Act these refrigerants are expected to also be associated with higher maintenance costs as soon as 2024.</p> <p>No further comment at this time.</p>	<p>The current design of the Operations & Maintenance (O&M) building includes LEED certification with minimal impacts to energy conservation. In addition, the building will be fully electric with high efficiency HVAC equipment. Rooftop Air Source Heat Pumps (RTUs) will be used to provide Heating and cooling for the O&M Base. During the winter, additional heating will be provided with VAV duct-mounted electric heating coils. The RTUs will include HFC refrigerants (R410A), which have a high GWP of over 2,000. While there is the potential for leakage, periodic maintenance will be performed to inspect and test the refrigerants to minimize the likelihood of leakage. When the refrigerant is removed in the future, it will be removed and stored in accordance with EPA regulations. Moreover, some manufacturers indicate that newer refrigerants (R-454B with low GWP of 466) will be available in 2025 to replace the R410A; if that occurs, such refrigerants will replace R410A when appropriate and when such replacement can be accomplished without reducing the RTUs’ cooling and heating capacities.</p> <p>Acknowledged.</p>
BOEM-2022-0053-0120-0025	<p>24. Section 4.3 Consistency with Climate Leadership and Community Protection Act – This section states that the project is consistent with the achievement of the Statewide Emission Limits of the Climate Act because any volume of GHG emissions will be overshadowed by the reductions in electricity emissions offered by OSW. All</p>	<p>The CLCPA requires reaching net zero, which refers to a state in which the greenhouse gases going into the atmosphere are balanced by removal out of the atmosphere. For example, the new GHG emissions sources (e.g., equipment) required to run EW1 and EW2 would be substantially lower than those produced by fossil fuel power plants (i.e., a GHG removal that is greater than those generated from the new GHG sources resulting in net zero target being achieved).The CLCPA does not require the</p>

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	<p>GHG emissions sources must be all but eliminated by 2050 under the law regardless of the type of project being proposed. Additionally a correction should be made to reflect that the Climate Act targets are mandates not goals.</p> <p>This comment is not addressed adequately. The importance of project-level emissions should not be minimized since the State is legally required to “all but eliminate” all GHG emissions. A similar argument has been made in the past, that project-level emissions such as from ongoing fossil fuel combustion, are not important because of the potential benefits of OSW. However, such statements ignore that climate change is driven by the accumulation of GHGs from all sources. Future reductions in electricity sector emission will not “overshadow”, offset, or otherwise negate the impacts of project-level emissions in the interim. The CEQ guidance for NEPA reviews makes the same point and recommends federal agencies quantify and address all cumulative emissions and both short and long-term emission impacts. CEQ specifically cite wind energy projects as an example in their recently proposed update (88 FR 1196).</p> <p>Additionally, the Response states, “the CLCPA requires net zero”, but this is not the case. Net zero emissions is an aspirational goal of the CLCPA. The statewide GHG emission limits are a legal requirement per ECL 75-0107. NYSDEC’s comment that emissions must be all but eliminated refers to the 85x50 emission limit.</p> <p>Finally, the Response cited the Scoping Plan, but did not acknowledge sections of that Plan that point out the importance of annual emissions reductions in every year, not just in 2050, as being critical to achieving the requirements of the CLCPA.</p>	<p>elimination of all GHG emissions sources by 2050, although the SBMT project does minimize GHGs to the extent possible. The final Scoping Plan issued pursuant to the CLCPA (https://www.nysed.gov/About/Newsroom/2022-Announcements/2022-12-19-NYS-Climate-Action-Council-Finalizes-Scoping-Plan-to-Advance-Nation-Leading-Climate-Law)</p> <p>“outlines actions needed for New York to achieve 70 percent renewable energy by 2030; 100 percent zero-emission electricity by 2040; a 40-percent reduction in statewide greenhouse gas emissions from 1990 levels by 2030, an 85-percent reduction from 1990 levels by 2050; and net-zero emissions statewide by 2050.” The targeted reduction from 1990 level further indicates that not all GHG emissions sources will be eliminated by 2050.</p> <p>The Applicant acknowledges the importance of reducing GHG emissions, and GHG emissions have been minimized to the maximum extent practicable for the SBMT Project. The SBMT Project is critical in supporting the development of offshore wind and helping New York State achieve the CLCPA's mandates. As stated in the NYSERDA Port study, "the short-term emissions of the OSW ports that would occur regionally during construction would be greatly offset by the regional net air pollution reduction (CO2, methane, PM 2.5 and other GHG) that would occur once the 9,000 megawatts (MW) of the OSW farms are operational." (S-15). Moreover, according to that study, in the "Planned Alternative" scenario, which includes SBMT, "New York state would avoid more than 8.7 million tons of GHG emissions, 1,800 tons of NOx, 780 tons of SO2, and 180 tons of PM 2.5 compared to a business-as-usual scenario without OSW energy." (S-16)</p> <p>A similar discussion will be added to the EA.</p>
BOEM-2022-0053-0120-0026	<p>25. Table 4-3 Upstream Indirect GHG Emissions Associated with Operation of the Proposed Project - There appear to be issues with some of the numbers in Table 4-3 as follows: a. The two rows for on-site equipment diesel fuel use do not appear to have used the 20-year GWP for at least methane and potentially nitrous oxide when the CO2e column was calculated. b. The two rows for electric power use have methane and nitrous oxide values ten times higher than what NYSDEC calculates based on usage and emission factors given.</p> <p>No further comment at this time.</p>	<p>The calculation will be corrected, and the table will be updated.</p> <p>Acknowledged.</p>
BOEM-2022-0053-0120-0027	<p>Section 5 Climate Change26. Section 5.1 Community Risk and Resiliency Act (CRRRA) - CRRRA requires applicants for major permits in New York State to demonstrate consideration of future physical climate risk. Climate hazards most relevant to offshore wind projects are effects of sea level rise and more frequent extreme precipitation on related onshore development. Section 5.1 should incorporate projected sea level rise; change in extreme precipitation parameters; and a resilience assessment of the onshore facility and of its effects on natural and cultural resources under projected conditions of extreme precipitation. The projected frequency and magnitude of extreme precipitation events as provided by the Northeast Regional Climate Center should be incorporated into siting and design of onshore projects.</p>	<p>The following statement will be added to Section 5.1 - "The upgraded stormwater management system for SBMT is being designed for extreme storm events with rainfall intensity duration curves obtained from the Extreme Precipitation in New York and New England data, available at: https://precip.eas.cornell.edu/#/data_and_products"</p> <p>Acknowledged.</p>

Comment No.	Comment	Response
	<p>No further comment at this time.</p>	
BOEM-2022-0053-0120-0028	<p>27. Section 5.2.4 Sea Level Rise - This section misstates projected sea level rise for New York City as 12 to 48 inches by 2100. However both the reference provided (Horton et al. 2014 and 6 NYCRR Part 490) provide a range of 15 to 75 inches of sea level rise in New York City by 2100. The other reference provided (Frankson et al 2022) provides a projection of 12 to 48 inches of global sea level rise by 2100 but as described in the first paragraph of this section the rate of sea level rise at New York City exceeds the rate of global sea level rise. This portion of the section should be corrected. An expected end of project date of 2050 appears to be implicit but should be stated more explicitly to clarify the selection of sea level rise projections. The projections cited for 2050 (8 to 30 inches) are correct and the risk assessment (Section 5.3.2.3) indicates the potential for some ponding to occur at between two and three feet of sea level rise.</p> <p>No further comment at this time.</p>	<p>The following discussion will be added to Section 5.2.4 - "The Operations and Maintenance Base buildings are being designed for sea level rise projections per the NYC Mayor's Office of Resiliency, Climate Resiliency Design Guidelines - Version 4.0. The value used for SLR is 16 inches considering a 2050s End of Useful Life Horizon. This value is consistent with the DEC regulation's Medium Projection for the New York City/Lower Hudson Region. "</p> <p>Acknowledged.</p>
BOEM-2022-0053-0120-0029	<p>28. Section 5.2.4 Sea Level Rise - Siting and design decisions should incorporate the projections provided by 6 NYCRR Part 490 including application of the medium projection (16 inches by 2050s) for non-critical facilities and equipment and the high projection (30 inches by 2050s) for critical facilities and equipment for the expected life of the Project. NYSDEC is available for consultation to determine what elements of the Project may be considered critical facilities and equipment.</p> <p>Please explain a 16 inch SLR was assumed for critical facilities despite 6 NYCRR Part 490.</p> <p>The Response refers to the freeboard requirements specified by the NYC Climate Resiliency Design Guidelines, (i.e., 12 inches above base flood elevation plus projected sea level rise for non-critical facilities, 24 inches for critical facilities). However, the NY State Flood Risk Management Guidance, which would be most directly applicable for NYSDEC's permitting purposes, recommends 24 inches of freeboard above projected BFE (i.e., current BFE plus the medium sea level rise projection, for non-critical facilities, and 36 inches plus the high sea level rise projection for critical facilities). Further, these elevations should be extended landward to their intersection with the ground to determine the extent of area at risk where these recommendations for additional freeboard would apply. After Superstorm Sandy, the NYC building code was updated to require 24 inches of freeboard for single- and two-family buildings, although the NYC building code still allows 12 inches of freeboard for commercial buildings.</p> <p>Given the conflict between the NYC and NYS guidelines, an additional assessment of the different cost and risk-reduction benefits between applying 12/24 inches of freeboard vs. 24/36 inches should be conducted and discussed in the Final EA.</p>	<p>The following discussion will be added to Section 5.2.4 - "An SLR value of 16 inches has been adopted for the design of both critical and noncritical facilities within the SBMT in accordance with NYC Mayor's Office of Resiliency, Climate Resiliency Design Guidelines. A distinction in design is made between critical and noncritical facilities and equipment in the required freeboard level. Per the NYC Climate Resiliency Design Guidelines, the freeboard considered for noncritical facilities and equipment is 12 inches, while the freeboard for critical facilities and equipment is 24 inches. For the SBMT O&M Base, the office building is being designed as a critical facility and the warehouse as noncritical."</p> <p>The assumed sea level rise for critical facilities was not 16". The minimum first floor elevation for critical features (buildings, above ground electrical utilities) in the proposed design is 21.83' NAVD88. The 1% flood elevation at the site is 13.0' NAVD88. The 0.2% flood elevation is 14.33'. SLR (High projection) for the 2050s is 2.5'. NYSDEC's freeboard requirement for critical structures is 3.0' (36").</p> <p>The required design elevations are as follows:</p> <p>1% storm = 13.00' + 2.5' + 3.0' = 18.5'</p> <p>0.2% storm = 14.33' + 2.5' + 3.0' = 20.33'.</p> <p>Therefore, all critical structures are designed to be 3.33' and 1.5' above the requirements for the 1% and 0.2% events respectively.</p> <p>The other features included in the discussion and analysis are the non-critical structures, which include bulkheads, wharf decks, and roadways. These will all remain above the MHHW + SLR (High projection) for the 2050s as designed. They would however be submerged during flood events but designed to do so with no damage. Additional information and details can be found in the attached revised SBMT Policy 6.2 document and NYCDP flood evaluation worksheet.</p>
BOEM-2022-0053-0120-0030	<p>29. Section 5.2.5.2 – Correct spelling of “coastal” in last sentence of the first paragraph. NYSDEC appreciates the opportunity to provide comments on the Empire Wind DEIS for the SBMT connected action. Please feel free to contact me at</p>	<p>Correction will be made.</p> <p>Acknowledged.</p>

Comment No.	Comment	Response
	karen.gaidasz@dec.ny.gov for further detail on the above comments. No further comment at this time.	

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**Appendix O New York State Environmental Quality
Review Act Full Environmental Assessment Form Part 1,
Part 2, and Addendum**

**Environmental Analysis of the
South Brooklyn Marine Terminal
Port Infrastructure Improvement Project
Brooklyn, NY**

**New York State Environmental Quality Review Act (SEQR)
Full Environmental Assessment Form
Part 1 & Part 2**

May 2023

Submitted to: New York State Department of Environmental Conservation (NYSDEC)

**Submitted by: New York City Economic Development Committee (NYCEDC), on
behalf of the City of New York**

Prepared by: AECOM Technical Services

Full Environmental Assessment Form
Part 1 - Project and Setting

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either “Yes” or “No”. If the answer to the initial question is “Yes”, complete the sub-questions that follow. If the answer to the initial question is “No”, proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the applicant or project sponsor to verify that the information contained in Part 1 is accurate and complete.

A. Project and Applicant/Sponsor Information.

Name of Action or Project: South Brooklyn Marine Terminal Port Infrastructure Improvement Project		
Project Location (describe, and attach a general location map): South Brooklyn Marine Terminal, 29th St to 39th St, between waterfront and 2nd Ave, Brooklyn, NY 11232 Block 662/Lots 1 (part), 130, 136, 137, 155		
Brief Description of Proposed Action (include purpose or need): The purpose of the SBMT Port Infrastructure Improvement Project is to upgrade SBMT to enable it to serve as a staging facility and operations and maintenance base for the offshore wind (OSW) industry. The Proposed Project is needed to support the development of OSW power generation capacity to fulfill New York State's mandate of 9,000 megawatts (MW) of OSW energy capacity by 2035, the United States' goal of 30 gigawatts (GW) of OSW ca-pacity by 2030, and New York City's Offshore Wind Vision plan. The proposed facility improvements will allow the staging, pre-assembly and transfer of materials used in offshore wind projects; and will provide access to marine vessels and ground transport. Proposed elements include bulkhead improvements to the existing landfill "piers" and "interpier" areas, new pile supported and floating platforms, new fenders for vessel mooring, upgrades to landfill "pier" infrastructure, including a regraded riprap slope at 35N, ad-ministration facility and warehouse, operations and maintenance buildings, and site utilities. The Proposed Project also requires dredging of approxi-mately 189,000 cubic yards (CY) of sediments to enable safe vessel access to berthing areas.		
Name of Applicant/Sponsor: NYC Economic Development Corporation (c/o Rebecca Gafvert, Senior Vice President)	Telephone: 212.618.5763	
	E-Mail: rgafvert@edc.nyc	
Address: 1 Liberty Plaza, 14th Floor		
City/PO: New York	State: New York	Zip Code: 10006
Project Contact (if not same as sponsor; give name and title/role):	Telephone:	
	E-Mail:	
Address:		
City/PO:	State:	Zip Code:
Property Owner (if not same as sponsor): NYC Department of Small Business Services (c/o Anthony Dell'Olio)	Telephone: 212.513.6428	
	E-Mail: ADelloio@sbs.nyc.gov	
Address: 1 Liberty Plaza, 11th Floor		
City/PO: New York	State: New York	Zip Code: 10006

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. (“Funding” includes grants, loans, tax relief, and any other forms of financial assistance.)

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Council, Town Board, or Village Board of Trustees <input type="checkbox"/> Yes <input type="checkbox"/> No		
b. City, Town or Village Planning Board or Commission <input type="checkbox"/> Yes <input type="checkbox"/> No		
c. City, Town or Village Zoning Board of Appeals <input type="checkbox"/> Yes <input type="checkbox"/> No		
d. Other local agencies <input type="checkbox"/> Yes <input type="checkbox"/> No		
e. County agencies <input type="checkbox"/> Yes <input type="checkbox"/> No		
f. Regional agencies <input type="checkbox"/> Yes <input type="checkbox"/> No		
g. State agencies <input type="checkbox"/> Yes <input type="checkbox"/> No		
h. Federal agencies <input type="checkbox"/> Yes <input type="checkbox"/> No		
<p>i. Coastal Resources.</p> <p><i>i.</i> Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><i>ii.</i> Is the project site located in a community with an approved Local Waterfront Revitalization Program? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><i>iii.</i> Is the project site within a Coastal Erosion Hazard Area? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>		

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? Yes No

- **If Yes**, complete sections C, F and G.
- **If No**, proceed to question C.2 and complete all remaining sections and questions in Part 1

C.2. Adopted land use plans.

a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? Yes No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? Yes No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway; Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) Yes No

If Yes, identify the plan(s):

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? Yes No

If Yes, identify the plan(s):

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. Yes No
 If Yes, what is the zoning classification(s) including any applicable overlay district?
M3-1 - Manufacturing District; Southwest Brooklyn Industrial Business Zone

b. Is the use permitted or allowed by a special or conditional use permit? Yes No

c. Is a zoning change requested as part of the proposed action? Yes No
 If Yes,
 i. What is the proposed new zoning for the site? _____

C.4. Existing community services.

a. In what school district is the project site located? Brooklyn NY School District 15

b. What police or other public protection forces serve the project site?
New York Police Department

c. Which fire protection and emergency medical services serve the project site?
Fire Department of New York

d. What parks serve the project site?
NYC Parks: D'Emic Playground approximately 1,100 ft east of Project Area, Gonzalo Plasencia Playground approximately 1,200 ft southeast of Project Area, and Bush Terminal Piers Park approximately 2,000 ft south of Project Area

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)? Industrial. Port infrastructure improvements to enable staging, construction, and operations and maintenance of offshore wind energy generation and transmission facilities.

b. a. Total acreage of the site of the proposed action? _____ 80.30 acres
 b. Total acreage to be physically disturbed? _____ 40.30 acres
 c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? _____ 101.52 acres

c. Is the proposed action an expansion of an existing project or use? Yes No
 i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % _____ Units: _____

d. Is the proposed action a subdivision, or does it include a subdivision? Yes No
 If Yes,
 i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types) _____
 ii. Is a cluster/conservation layout proposed? Yes No
 iii. Number of lots proposed? _____
 iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will the proposed action be constructed in multiple phases? Yes No
 i. If No, anticipated period of construction: _____ 32 months
 ii. If Yes:
 • Total number of phases anticipated _____ 1
 • Anticipated commencement date of phase 1 (including demolition) _____ Nov month 2023 year
 • Anticipated completion date of final phase _____ Jun month 2026 year
 • Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases: _____
Project will start with above-water demolition and removal of pavement. Bulkhead replacement and reinforcement scheduled for January 2024, dredging scheduled for Summer and Fall 2024 and Fall 2025. Above-ground work to progress throughout the schedule.

f. Does the project include new residential uses? Yes No

If Yes, show numbers of units proposed.

	<u>One Family</u>	<u>Two Family</u>	<u>Three Family</u>	<u>Multiple Family (four or more)</u>
Initial Phase	_____	_____	_____	_____
At completion	_____	_____	_____	_____
of all phases	_____	_____	_____	_____

g. Does the proposed action include new non-residential construction (including expansions)? Yes No

If Yes, (6 in-water structures, 3 ground structures, 2 above-ground buildings, temporary facilities on a rental basis)

i. Total number of structures 11

ii. Dimensions (in feet) of largest proposed structure: 32.8 ft height; 210 ft width; and 390 ft length

iii. Approximate extent of building space to be heated or cooled: 60,000 sf (O&M base) square feet (and max 16,000 sf for temp facilities)

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? Yes No

If Yes,

i. Purpose of the impoundment: _____

ii. If a water impoundment, the principal source of the water: Ground water Surface water streams Other specify: _____

iii. If other than water, identify the type of impounded/contained liquids and their source. _____

iv. Approximate size of the proposed impoundment. Volume: _____ million gallons; surface area: _____ acres

v. Dimensions of the proposed dam or impounding structure: _____ height; _____ length

vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete): _____

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? Yes No

(Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite) (see attached sheets for further information on this section)

If Yes:

i. What is the purpose of the excavation or dredging? deepening of water column to allow vessel access, installation of piles and structures

ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?

- Volume (specify tons or cubic yards): 1,327,836 tons (see EAF Addendum [page 4])
- Over what duration of time? 32 months

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them. Marine sediments and upland fill. Material will be disposed of at appropriately permitted upland disposal facility. (see EAF Addendum [page 4])

iv. Will there be onsite dewatering or processing of excavated materials? Yes No

If yes, describe. Dewatering of sediments to occur on barges, following regulations. (see EAF Addendum [page 4])

v. What is the total area to be dredged or excavated? 14.20 marine dredging and 26.10 upland acres

vi. What is the maximum area to be worked at any one time? 40.30 acres

vii. What would be the maximum depth of excavation or dredging? -43 ft MHW (-38.1 ft MLLW) feet

viii. Will the excavation require blasting? Yes No

ix. Summarize site reclamation goals and plan: _____

Site will be partially reclaimed by new bulkhead and pile-supported structures. Remainder will be left as dredged open bay habitat. Habitats will largely be similar unconsolidated silt sediment habitat. (see EAF Addendum [page 4])

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? Yes No

If Yes:

i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): Upper New York Bay. Index #(MW1.3) UB. Intrusion of 0.03 acres and shading of 0.64 acres of marine habitat. Tidal wetland impacts of 0.16 acres of lost habitat but removal of cofferdam and associated fill at 35W would reduce volume of existing fill occupying the water column and the area of mudline disturbance by approximately 0.18 acres resulting in a new gain of 0.02 acres of unvegetated tidal wetland habitat. See JPA's PIP for details. A 14.2-acre area dredged to remove approximately 189,000 CY of sediments. Sand capping of 9,033 CY to be placed on post-dredging surface in Areas 2.1A and 2.3 (see EAF Addendum [pages 4-7]).

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:
 See EAF Addendum (page 5) for detailed information.

iii. Will the proposed action cause or result in disturbance to bottom sediments? Yes No
 If Yes, describe: See EAF Addendum (page 5)

iv. Will the proposed action cause or result in the destruction or removal of aquatic vegetation? Yes No
 If Yes:

- acres of aquatic vegetation proposed to be removed: _____
- expected acreage of aquatic vegetation remaining after project completion: _____
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access): _____
- proposed method of plant removal: _____
- if chemical/herbicide treatment will be used, specify product(s): _____

v. Describe any proposed reclamation/mitigation following disturbance: _____

Sand capping of 9,033 CY of clean sand in Areas 2.1A and 2.3 after the areas are dredged.

c. Will the proposed action use, or create a new demand for water? Yes No
 If Yes:

i. Total anticipated water usage/demand per day: _____ gallons/day

ii. Will the proposed action obtain water from an existing public water supply? Yes No
 If Yes:

- Name of district or service area: _____
- Does the existing public water supply have capacity to serve the proposal? Yes No
- Is the project site in the existing district? Yes No
- Is expansion of the district needed? Yes No
- Do existing lines serve the project site? Yes No

iii. Will line extension within an existing district be necessary to supply the project? Yes No
 If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____
- Source(s) of supply for the district: _____

iv. Is a new water supply district or service area proposed to be formed to serve the project site? Yes No
 If Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- Proposed source(s) of supply for new district: _____

v. If a public water supply will not be used, describe plans to provide water supply for the project: _____

vi. If water supply will be from wells (public or private), what is the maximum pumping capacity: _____ gallons/minute.

d. Will the proposed action generate liquid wastes? Yes No
 If Yes:

i. Total anticipated liquid waste generation per day: _____ 5,700 gallons/day

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each): _____

Sanitary wastewater associated with the proposed O&M base on the Project Site. 5,700 gallons/day rate estimated using the commercial/office sewage generation rate in the 2021 CEQR Technical Manual (Chapter 13 Water and Sewer Infrastructure, page 13-12).

iii. Will the proposed action use any existing public wastewater treatment facilities? Yes No
 If Yes:

- Name of wastewater treatment plant to be used: Owls Head Wastewater Treatment Plant
- Name of district: Owls Head Wastewater Resource and Recovery Facility (NYCDEP)
- Does the existing wastewater treatment plant have capacity to serve the project? Yes No
- Is the project site in the existing district? Yes No
- Is expansion of the district needed? Yes No

- Do existing sewer lines serve the project site? Yes No
- Will a line extension within an existing district be necessary to serve the project? Yes No

 If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? Yes No
 If Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge or describe subsurface disposal plans):

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____
 No plans to capture, recycle, or reuse liquid waste. _____

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? Yes No
 If Yes:

- i. How much impervious surface will the project create in relation to total size of project parcel?
 4,970 Square feet or 0.11 acres (impervious surface)
 3.5 M Square feet or 80.30 acres (parcel size)
- ii. Describe types of new point sources. No new outfalls will be constructed. All but one existing outfall will be upgraded. All outfalls will have new hydraulic separators installed to treat stormwater runoff.
- iii. Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?
Stormwater runoff onsite will be directed into and treated by an updated stormwater management system. During construction, a SWPPP (in conformance with SPDES GP-0-20-001) will be implemented, and NYSDEC stormwater guidance will be followed, as applicable. (see EAF Addendum [page 5])
 - If to surface waters, identify receiving water bodies or wetlands: _____
A portion of stormwater will be directed to Upper New York Bay. (see EAF Addendum [page 5])
 - Will stormwater runoff flow to adjacent properties? Yes No

iv. Does the proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? Yes No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? Yes No
 If Yes, identify:

- i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)
 see EAF Addendum (page 5)
- ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)
 see EAF Addendum (page 5)
- iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)
 see EAF Addendum (page 5)

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? Yes No
 If Yes:

- i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) Yes No
- ii. In addition to emissions as calculated in the application, the project will generate:
 - _____ Tons/year (short tons) of Carbon Dioxide (CO₂)
 - _____ Tons/year (short tons) of Nitrous Oxide (N₂O)
 - _____ Tons/year (short tons) of Perfluorocarbons (PFCs)
 - _____ Tons/year (short tons) of Sulfur Hexafluoride (SF₆)
 - _____ Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflouorocarbons (HFCs)
 - _____ Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? Yes No

If Yes:

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? Yes No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust): _____

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? Yes No

If Yes:

i. When is the peak traffic expected (Check all that apply): Morning Evening Weekend
 Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of truck trips/day and type (e.g., semi trailers and dump trucks): _____

iii. Parking spaces: Existing _____ Proposed _____ Net increase/decrease _____

iv. Does the proposed action include any shared use parking? Yes No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe: _____

vi. Are public/private transportation service(s) or facilities available within 1/2 mile of the proposed site? Yes No

vii. Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? Yes No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? Yes No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? Yes No

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: _____

Energy demands (for new lighting and operations) will not be significant on the existing power grid.

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other): _____

Supplied by existing local utility companies _____

iii. Will the proposed action require a new, or an upgrade, to an existing substation? Yes No

l. Hours of operation. Answer all items which apply.

<p>i. During Construction:</p> <ul style="list-style-type: none"> • Monday - Friday: <u>7a-6p and 24 hr for dredging</u> • Saturday: <u>8a-4p as necessary</u> • Sunday: <u>8a-4p as necessary</u> • Holidays: _____ 	<p>ii. During Operations:</p> <ul style="list-style-type: none"> • Monday - Friday: <u>24 hours/day</u> • Saturday: <u>24 hours/day</u> • Sunday: <u>24 hours/day</u> • Holidays: <u>24 hours/day</u>
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m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? Yes No
 If yes:
 i. Provide details including sources, time of day and duration:
 During construction only - see EAF Addendum (pages 5-6) for details _____

ii. Will the proposed action remove existing natural barriers that could act as a noise barrier or screen? Yes No
 Describe: _____

n. Will the proposed action have outdoor lighting? Yes No
 If yes:
 i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:
 The location of high mast lighting (120 ft high) will be kept at a minimum and coordinated with location of cranes, pads, and buildings _____

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? Yes No
 Describe: _____

o. Does the proposed action have the potential to produce odors for more than one hour per day? Yes No
 If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures: _____

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? Yes No
 If Yes:
 i. Product(s) to be stored _____
 ii. Volume(s) _____ per unit time _____ (e.g., month, year)
 iii. Generally, describe the proposed storage facilities: _____

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? Yes No
 If Yes:
 i. Describe proposed treatment(s):

ii. Will the proposed action use Integrated Pest Management Practices? Yes No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? Yes No
 If Yes:
 i. Describe any solid waste(s) to be generated during construction or operation of the facility:
 • Construction: see EAF Addendum (p. 6) tons per _____ (unit of time)
 • Operation : See EAF Addendum (p. 6) tons per _____ (unit of time)
 ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:
 • Construction: Reuse onsite will be done when possible. Beneficial reuse of all solid wastes will be implemented if the material is determined to be a candidate.

 • Operation: Solid waste will be negligible and incidental to operations (e.g., packing materials, office waste).

 iii. Proposed disposal methods/facilities for solid waste generated on-site:
 • Construction: Material not re-used will be disposed of in an appropriate facility, in a manner that conforms to all regulations and permit conditions.

 • Operation: _____

s. Does the proposed action include construction or modification of a solid waste management facility? Yes No
 If Yes:
 i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____
 ii. Anticipated rate of disposal/processing:
 • _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
 • _____ Tons/hour, if combustion or thermal treatment
 iii. If landfill, anticipated site life: _____ years

t. Will the proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? Yes No
 If Yes:
 i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

 ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

 iii. Specify amount to be handled or generated _____ tons/month
 iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

 v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? Yes No
 If Yes: provide name and location of facility: _____

 If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility:

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.
 i. Check all uses that occur on, adjoining and near the project site.
 Urban Industrial Commercial Residential (suburban) Rural (non-farm)
 Forest Agriculture Aquatic Other (specify): _____
 ii. If mix of uses, generally describe:
 Site is an active terminal. Bush Terminal lands (to south and west) are a mix of unused and commercial land use. Bush Terminal includes Industry City to the east. Sims Facility is adjacent to the north.

b. Land uses and coverytypes on the project site.

Land use or Coverytype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	66.10	66.21	+0.11
• Forested	--	--	--
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	--	--	--
• Agricultural (includes active orchards, field, greenhouse etc.)	--	--	--
• Surface water features (lakes, ponds, streams, rivers, etc.)	33.51	33.48	-0.03
• Wetlands (freshwater or tidal)	0.99	1.01	+0.02
• Non-vegetated (bare rock, earth or fill)	0.10	0.10	0
• Other Describe: _____	--	--	--

c. Is the project site presently used by members of the community for public recreation? Yes No
i. If Yes: explain: _____

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? Yes No
If Yes,
i. Identify Facilities:
Intermediate School 136 Charles O. Dewey is approximately 1,500 ft southeast of Project Area (separated from Project Area by 2nd Ave and 3rd Ave).

e. Does the project site contain an existing dam? Yes No
If Yes:
i. Dimensions of the dam and impoundment:
• Dam height: _____ feet
• Dam length: _____ feet
• Surface area: _____ acres
• Volume impounded: _____ gallons OR acre-feet
ii. Dam's existing hazard classification: _____
iii. Provide date and summarize results of last inspection:

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? Yes No
If Yes:
i. Has the facility been formally closed? Yes No
• If yes, cite sources/documentation: _____
ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:

iii. Describe any development constraints due to the prior solid waste activities: _____

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? Yes No
If Yes:
i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:
PCB-containing transformers were observed during site investigations in 2018 & 2022. The following sites may have been located on the property but location info. is not exact: Intl Term Opt Co (ignitable and corrosive wastes); NYNEX (lead waste, 1995); Dept Ports Intl Trade & Comm (PCBs in 1994).

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? Yes No
If Yes:
i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: Yes No
 Yes – Spills Incidents database Provide DEC ID number(s): 2204215, 8801529, 9714187, 9714188, 9714189, 9714190
 Yes – Environmental Site Remediation database Provide DEC ID number(s): C224360
 Neither database
ii. If site has been subject of RCRA corrective activities, describe control measures:
The terminal was identified on the RCRA NonGen/NLR and CORRACTS databases in association with the former generation of hazardous waste. The facility received notices of violation in 1985, resolved by 1987 & PBC recordkeeping violations w/ resolution 1994. 5 spill nos. were listed as closed.
iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? Yes No
If yes, provide DEC ID number(s): 224011, B00031, C224148, 224133, C224043, C224360, 2204215
iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):
NYSDEC Spill Nos 9714187, 9714188, 9714189, 9714190 closed in 2005. Spill No 8801529 closed in 1988. Spill No 2204216 closed in 2022. RCRA violations from 1985 corrected in 1987 & from 1994 were corrected in 1994. According to the Env. Site Remediation Database, 224011 (Rear of Bush Terminal Building) is a dump, a remedial alternatives report has been prepared; B00031 (Bush Terminal Landfill Piers 1-4) has been remediated and residuals are managed.

v. Is the project site subject to an institutional control limiting property uses? Yes No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? Yes No
- Explain: _____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? _____ 15-125 feet

b. Are there bedrock outcroppings on the project site? Yes No
 If Yes, what proportion of the site is comprised of bedrock outcroppings? _____ %

c. Predominant soil type(s) present on project site:

Urban land-Laguardia complex	_____	100 %
(ULA), 0-3 percent slopes	_____	_____ %
_____	_____	_____ %

d. What is the average depth to the water table on the project site? Average: _____ 3-6 feet

e. Drainage status of project site soils: Well Drained: _____ % of site
 Moderately Well Drained: _____ 50 % of site
 Poorly Drained _____ 50 % of site

f. Approximate proportion of proposed action site with slopes: 0-10%: _____ 100 % of site
 10-15%: _____ % of site
 15% or greater: _____ % of site

g. Are there any unique geologic features on the project site? Yes No
 If Yes, describe: _____

h. Surface water features.

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? Yes No

ii. Do any wetlands or other waterbodies adjoin the project site? Yes No
 If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? Yes No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information:

- Streams: Name _____ Classification _____
- Lakes or Ponds: Name 890-6 _____ Classification ! _____
- Wetlands: Name riprap slopes bordering Upper New York Bay _____ Approximate Size 0.99 acres
- Wetland No. (if regulated by DEC) N/A _____

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? Yes No
 If yes, name of impaired water body/bodies and basis for listing as impaired: _____
 Name-Pollutants-Uses: Upper New York Bay-Priority Organics; Metals-Fish Consumption. See JPA's DUSR for further information.

i. Is the project site in a designated Floodway? Yes No

j. Is the project site in the 100-year Floodplain? Yes No

k. Is the project site in the 500-year Floodplain? Yes No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? Yes No
 If Yes:
 i. Name of aquifer: Sole Source Aquifer Names: Kings/Queens Counties (Brooklyn-Queens) Sole Source Aquifer _____

m. Identify the predominant wildlife species that occupy or use the project site: Ring-billed gull _____ European starling _____ Norway rat _____ Canada goose _____ _____ _____	
n. Does the project site contain a designated significant natural community? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes: i. Describe the habitat/community (composition, function, and basis for designation): _____ _____ ii. Source(s) of description or evaluation: _____ iii. Extent of community/habitat: <ul style="list-style-type: none"> • Currently: _____ acres • Following completion of project as proposed: _____ acres • Gain or loss (indicate + or -): _____ acres 	
o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes: i. Species and listing (endangered or threatened): _____ _____ Piping Plover, Red Knot, Roseate Tern, Seabeach Amaranth, Atlantic Sturgeon, Shortnose Sturgeon, Loggerhead Turtle, Leatherback Turtle, Green Turtle, and Kemp's Ridley Turtle are mapped as occurring in the Project Area. See PIP Appendix E-Biological Assessment for detailed information.	
p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes: i. Species and listing: _____ _____ Atlantic Sturgeon, Shortnose Sturgeon, Loggerhead Turtle, Leatherback Turtle, Green Turtle, Kemp's Ridley Turtle, Roseate Tern, Red Knot, and Piping Plover are species of special concern listed by NYSDEC. See PIP Appendix E-Biological Assessment for detailed information.	
q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, give a brief description of how the proposed action may affect that use: _____ _____	
E.3. Designated Public Resources On or Near Project Site	
a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, provide county plus district name/number: _____	
b. Are agricultural lands consisting of highly productive soils present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No i. If Yes: acreage(s) on project site? _____ ii. Source(s) of soil rating(s): _____	
c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes: i. Nature of the natural landmark: <input type="checkbox"/> Biological Community <input type="checkbox"/> Geological Feature ii. Provide brief description of landmark, including values behind designation and approximate size/extent: _____ _____ _____	
d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes: i. CEA name: _____ ii. Basis for designation: _____ iii. Designating agency and date: _____	

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places? Yes No

If Yes:

i. Nature of historic/archaeological resource: Archaeological Site Historic Building or District

ii. Name: Adjacent to National Register-eligible Bush Terminal Historic District, and National Register-listed Navy Storehouse #2

iii. Brief description of attributes on which listing is based:

New York State Historic Preservation Office (SHPO) Cultural Resource Information System (CRIS) USN #s 04701.019392 and 12NR06399.

f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory? Yes No

g. Have additional archaeological or historic site(s) or resources been identified on the project site? Yes No

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

h. Is the project site within five miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? Yes No

If Yes:

i. Identify resource: _____

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): _____

iii. Distance between project and resource: _____ miles.

i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? Yes No

If Yes:

i. Identify the name of the river and its designation: _____

ii. Is the activity consistent with development restrictions contained in 6NYCRR Part 666? Yes No

F. Additional Information

Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

Applicant/Sponsor Name Robert Holbrook Date 5/31/23

Signature  Title Senior Vice President, Land Use Planning

Full Environmental Assessment Form
Part 2 - Identification of Potential Project Impacts

Agency Use Only [If applicable]

Project :
 Date :

Part 2 is to be completed by the lead agency. Part 2 is designed to help the lead agency inventory all potential resources that could be affected by a proposed project or action. We recognize that the lead agency's reviewer(s) will not necessarily be environmental professionals. So, the questions are designed to walk a reviewer through the assessment process by providing a series of questions that can be answered using the information found in Part 1. To further assist the lead agency in completing Part 2, the form identifies the most relevant questions in Part 1 that will provide the information needed to answer the Part 2 question. When Part 2 is completed, the lead agency will have identified the relevant environmental areas that may be impacted by the proposed activity.

If the lead agency is a state agency **and** the action is in any Coastal Area, complete the Coastal Assessment Form before proceeding with this assessment.

Tips for completing Part 2:

- Review all of the information provided in Part 1.
- Review any application, maps, supporting materials and the Full EAF Workbook.
- Answer each of the 18 questions in Part 2.
- If you answer “**Yes**” to a numbered question, please complete all the questions that follow in that section.
- If you answer “**No**” to a numbered question, move on to the next numbered question.
- Check appropriate column to indicate the anticipated size of the impact.
- Proposed projects that would exceed a numeric threshold contained in a question should result in the reviewing agency checking the box “Moderate to large impact may occur.”
- The reviewer is not expected to be an expert in environmental analysis.
- If you are not sure or undecided about the size of an impact, it may help to review the sub-questions for the general question and consult the workbook.
- When answering a question consider all components of the proposed activity, that is, the “whole action”.
- Consider the possibility for long-term and cumulative impacts as well as direct impacts.
- Answer the question in a reasonable manner considering the scale and context of the project.

1. Impact on Land Proposed action may involve construction on, or physical alteration of, <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES the land surface of the proposed site. (See Part 1. D.1) <i>If “Yes”, answer questions a - j. If “No”, move on to Section 2.</i>			
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may involve construction on land where depth to water table is less than 3 feet.	E2d	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may involve construction on slopes of 15% or greater.	E2f	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may involve construction on land where bedrock is exposed, or generally within 5 feet of existing ground surface.	E2a	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may involve the excavation and removal of more than 1,000 tons of natural material.	D2a	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may involve construction that continues for more than one year or in multiple phases.	D1e	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. The proposed action may result in increased erosion, whether from physical disturbance or vegetation removal (including from treatment by herbicides).	D2e, D2q	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. The proposed action is, or may be, located within a Coastal Erosion hazard area.	B1i	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h. Other impacts: <u>Proposed Action is located in the State's Coastal Zone Boundary as well as the New York City Waterfront Revitalization Program (WRP).</u>		<input checked="" type="checkbox"/>	<input type="checkbox"/>

2. Impact on Geological Features

The proposed action may result in the modification or destruction of, or inhibit access to, any unique or unusual land forms on the site (e.g., cliffs, dunes, minerals, fossils, caves). (See Part 1. E.2.g)

NO

YES

If "Yes", answer questions a - c. If "No", move on to Section 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Identify the specific land form(s) attached: _____ _____	E2g	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may affect or is adjacent to a geological feature listed as a registered National Natural Landmark. Specific feature: _____	E3c	<input type="checkbox"/>	<input type="checkbox"/>
c. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

3. Impacts on Surface Water

The proposed action may affect one or more wetlands or other surface water bodies (e.g., streams, rivers, ponds or lakes). (See Part 1. D.2, E.2.h)

NO

YES

If "Yes", answer questions a - l. If "No", move on to Section 4.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may create a new water body.	D2b, D1h	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in an increase or decrease of over 10% or more than a 10 acre increase or decrease in the surface area of any body of water.	D2b	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may involve dredging more than 100 cubic yards of material from a wetland or water body.	D2a	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. The proposed action may involve construction within or adjoining a freshwater or tidal wetland, or in the bed or banks of any other water body.	E2h	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may create turbidity in a waterbody, either from upland erosion, runoff or by disturbing bottom sediments.	D2a, D2h	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. The proposed action may include construction of one or more intake(s) for withdrawal of water from surface water.	D2c	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. The proposed action may include construction of one or more outfall(s) for discharge of wastewater to surface water(s).	D2d	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h. The proposed action may cause soil erosion, or otherwise create a source of stormwater discharge that may lead to siltation or other degradation of receiving water bodies.	D2e	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i. The proposed action may affect the water quality of any water bodies within or downstream of the site of the proposed action.	E2h	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j. The proposed action may involve the application of pesticides or herbicides in or around any water body.	D2q, E2h	<input checked="" type="checkbox"/>	<input type="checkbox"/>
k. The proposed action may require the construction of new, or expansion of existing, wastewater treatment facilities.	D1a, D2d	<input checked="" type="checkbox"/>	<input type="checkbox"/>

I. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>
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4. Impact on groundwater
 The proposed action may result in new or additional use of ground water, or may have the potential to introduce contaminants to ground water or an aquifer. NO YES
 (See Part 1. D.2.a, D.2.c, D.2.d, D.2.p, D.2.q, D.2.t)
If "Yes", answer questions a - h. If "No", move on to Section 5.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may require new water supply wells, or create additional demand on supplies from existing water supply wells.	D2c	<input type="checkbox"/>	<input type="checkbox"/>
b. Water supply demand from the proposed action may exceed safe and sustainable withdrawal capacity rate of the local supply or aquifer. Cite Source: _____	D2c	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may allow or result in residential uses in areas without water and sewer services.	D1a, D2c	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may include or require wastewater discharged to groundwater.	D2d, E2l	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may result in the construction of water supply wells in locations where groundwater is, or is suspected to be, contaminated.	D2c, E1f, E1g, E1h	<input type="checkbox"/>	<input type="checkbox"/>
f. The proposed action may require the bulk storage of petroleum or chemical products over ground water or an aquifer.	D2p, E2l	<input type="checkbox"/>	<input type="checkbox"/>
g. The proposed action may involve the commercial application of pesticides within 100 feet of potable drinking water or irrigation sources.	E2h, D2q, E2l, D2c	<input type="checkbox"/>	<input type="checkbox"/>
h. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

5. Impact on Flooding
 The proposed action may result in development on lands subject to flooding. NO YES
 (See Part 1. E.2)
If "Yes", answer questions a - g. If "No", move on to Section 6.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in development in a designated floodway.	E2i	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in development within a 100 year floodplain.	E2j	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may result in development within a 500 year floodplain.	E2k	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may result in, or require, modification of existing drainage patterns.	D2b, D2e	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may change flood water flows that contribute to flooding.	D2b, E2i, E2j, E2k	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. If there is a dam located on the site of the proposed action, is the dam in need of repair, or upgrade?	E1e	<input checked="" type="checkbox"/>	<input type="checkbox"/>

g. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>
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6. Impacts on Air			
The proposed action may include a state regulated air emission source. (See Part 1. D.2.f., D.2.h, D.2.g) <i>If "Yes", answer questions a - f. If "No", move on to Section 7.</i>		<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. If the proposed action requires federal or state air emission permits, the action may also emit one or more greenhouse gases at or above the following levels:			
i. More than 1000 tons/year of carbon dioxide (CO ₂)	D2g	<input type="checkbox"/>	<input type="checkbox"/>
ii. More than 3.5 tons/year of nitrous oxide (N ₂ O)	D2g	<input type="checkbox"/>	<input type="checkbox"/>
iii. More than 1000 tons/year of carbon equivalent of perfluorocarbons (PFCs)	D2g	<input type="checkbox"/>	<input type="checkbox"/>
iv. More than .045 tons/year of sulfur hexafluoride (SF ₆)	D2g	<input type="checkbox"/>	<input type="checkbox"/>
v. More than 1000 tons/year of carbon dioxide equivalent of hydrochloroflourocarbons (HFCs) emissions	D2g	<input type="checkbox"/>	<input type="checkbox"/>
vi. 43 tons/year or more of methane	D2h	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may generate 10 tons/year or more of any one designated hazardous air pollutant, or 25 tons/year or more of any combination of such hazardous air pollutants.	D2g	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may require a state air registration, or may produce an emissions rate of total contaminants that may exceed 5 lbs. per hour, or may include a heat source capable of producing more than 10 million BTU's per hour.	D2f, D2g	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may reach 50% of any of the thresholds in "a" through "c", above.	D2g	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may result in the combustion or thermal treatment of more than 1 ton of refuse per hour.	D2s	<input type="checkbox"/>	<input type="checkbox"/>
f. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

7. Impact on Plants and Animals			
The proposed action may result in a loss of flora or fauna. (See Part 1. E.2. m.-q.) <i>If "Yes", answer questions a - j. If "No", move on to Section 8.</i>		<input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may cause reduction in population or loss of individuals of any threatened or endangered species, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2o	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in a reduction or degradation of any habitat used by any rare, threatened or endangered species, as listed by New York State or the federal government.	E2o	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may cause reduction in population, or loss of individuals, of any species of special concern or conservation need, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2p	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may result in a reduction or degradation of any habitat used by any species of special concern and conservation need, as listed by New York State or the Federal government.	E2p	<input checked="" type="checkbox"/>	<input type="checkbox"/>

e. The proposed action may diminish the capacity of a registered National Natural Landmark to support the biological community it was established to protect.	E3c	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. The proposed action may result in the removal of, or ground disturbance in, any portion of a designated significant natural community. Source: _____	E2n	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. The proposed action may substantially interfere with nesting/breeding, foraging, or over-wintering habitat for the predominant species that occupy or use the project site.	E2m	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h. The proposed action requires the conversion of more than 10 acres of forest, grassland or any other regionally or locally important habitat. Habitat type & information source: _____	E1b	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i. Proposed action (commercial, industrial or recreational projects, only) involves use of herbicides or pesticides.	D2q	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j. Other impacts: _____		<input type="checkbox"/>	<input type="checkbox"/>

8. Impact on Agricultural Resources			
The proposed action may impact agricultural resources. (See Part 1. E.3.a. and b.)		<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES
<i>If "Yes", answer questions a - h. If "No", move on to Section 9.</i>			
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may impact soil classified within soil group 1 through 4 of the NYS Land Classification System.	E2c, E3b	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may sever, cross or otherwise limit access to agricultural land (includes cropland, hayfields, pasture, vineyard, orchard, etc).	E1a, E1b	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may result in the excavation or compaction of the soil profile of active agricultural land.	E3b	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may irreversibly convert agricultural land to non-agricultural uses, either more than 2.5 acres if located in an Agricultural District, or more than 10 acres if not within an Agricultural District.	E1b, E3a	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may disrupt or prevent installation of an agricultural land management system.	E1 a, E1b	<input type="checkbox"/>	<input type="checkbox"/>
f. The proposed action may result, directly or indirectly, in increased development potential or pressure on farmland.	C2c, C3, D2c, D2d	<input type="checkbox"/>	<input type="checkbox"/>
g. The proposed project is not consistent with the adopted municipal Farmland Protection Plan.	C2c	<input type="checkbox"/>	<input type="checkbox"/>
h. Other impacts: _____		<input type="checkbox"/>	<input type="checkbox"/>

9. Impact on Aesthetic Resources The land use of the proposed action are obviously different from, or are in sharp contrast to, current land use patterns between the proposed project and a scenic or aesthetic resource. (Part 1. E.1.a, E.1.b, E.3.h.) <i>If "Yes", answer questions a - g. If "No", go to Section 10.</i>			
		<input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Proposed action may be visible from any officially designated federal, state, or local scenic or aesthetic resource.	E3h	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in the obstruction, elimination or significant screening of one or more officially designated scenic views.	E3h, C2b	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may be visible from publicly accessible vantage points: i. Seasonally (e.g., screened by summer foliage, but visible during other seasons) ii. Year round	E3h	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
d. The situation or activity in which viewers are engaged while viewing the proposed action is: i. Routine travel by residents, including travel to and from work ii. Recreational or tourism based activities	E3h E2q, E1c	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
e. The proposed action may cause a diminishment of the public enjoyment and appreciation of the designated aesthetic resource.	E3h	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. There are similar projects visible within the following distance of the proposed project: 0-1/2 mile 1/2 -3 mile 3-5 mile 5+ mile	D1a, E1a, D1f, D1g	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

10. Impact on Historic and Archeological Resources The proposed action may occur in or adjacent to a historic or archaeological resource. (Part 1. E.3.e, f. and g.) <i>If "Yes", answer questions a - e. If "No", go to Section 11.</i>			
		<input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may occur wholly or partially within, or substantially contiguous to, any buildings, archaeological site or district which is listed on the National or State Register of Historical Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places.	E3e	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may occur wholly or partially within, or substantially contiguous to, an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory.	E3f	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may occur wholly or partially within, or substantially contiguous to, an archaeological site not included on the NY SHPO inventory. Source: _____	E3g	<input checked="" type="checkbox"/>	<input type="checkbox"/>

d. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>
e. If any of the above (a-d) are answered “Moderate to large impact may occur”, continue with the following questions to help support conclusions in Part 3:			
i. The proposed action may result in the destruction or alteration of all or part of the site or property.	E3e, E3g, E3f	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii. The proposed action may result in the alteration of the property’s setting or integrity.	E3e, E3f, E3g, E1a, E1b	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii. The proposed action may result in the introduction of visual elements which are out of character with the site or property, or may alter its setting.	E3e, E3f, E3g, E3h, C2, C3	<input checked="" type="checkbox"/>	<input type="checkbox"/>

11. Impact on Open Space and Recreation			
The proposed action may result in a loss of recreational opportunities or a reduction of an open space resource as designated in any adopted municipal open space plan. (See Part 1. C.2.c, E.1.c., E.2.q.) <i>If “Yes”, answer questions a - e. If “No”, go to Section 12.</i>		<input checked="" type="checkbox"/> NO <input type="checkbox"/> YES	
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in an impairment of natural functions, or “ecosystem services”, provided by an undeveloped area, including but not limited to stormwater storage, nutrient cycling, wildlife habitat.	D2e, E1b E2h, E2m, E2o, E2n, E2p	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in the loss of a current or future recreational resource.	C2a, E1c, C2c, E2q	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may eliminate open space or recreational resource in an area with few such resources.	C2a, C2c E1c, E2q	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may result in loss of an area now used informally by the community as an open space resource.	C2c, E1c	<input type="checkbox"/>	<input type="checkbox"/>
e. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

12. Impact on Critical Environmental Areas			
The proposed action may be located within or adjacent to a critical environmental area (CEA). (See Part 1. E.3.d) <i>If “Yes”, answer questions a - c. If “No”, go to Section 13.</i>		<input checked="" type="checkbox"/> NO <input type="checkbox"/> YES	
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in a reduction in the quantity of the resource or characteristic which was the basis for designation of the CEA.	E3d	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in a reduction in the quality of the resource or characteristic which was the basis for designation of the CEA.	E3d	<input type="checkbox"/>	<input type="checkbox"/>
c. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

13. Impact on Transportation

The proposed action may result in a change to existing transportation systems.

NO

YES

(See Part 1. D.2.j)

If "Yes", answer questions a - f. If "No", go to Section 14.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Projected traffic increase may exceed capacity of existing road network.	D2j	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in the construction of paved parking area for 500 or more vehicles.	D2j	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action will degrade existing transit access.	D2j	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action will degrade existing pedestrian or bicycle accommodations.	D2j	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may alter the present pattern of movement of people or goods.	D2j	<input type="checkbox"/>	<input type="checkbox"/>
f. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

14. Impact on Energy

The proposed action may cause an increase in the use of any form of energy.

NO

YES

(See Part 1. D.2.k)

If "Yes", answer questions a - e. If "No", go to Section 15.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action will require a new, or an upgrade to an existing, substation.	D2k	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. The proposed action will require the creation or extension of an energy transmission or supply system to serve more than 50 single or two-family residences or to serve a commercial or industrial use.	D1f, D1q, D2k	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may utilize more than 2,500 MWhrs per year of electricity.	D2k	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may involve heating and/or cooling of more than 100,000 square feet of building area when completed.	D1g	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Other Impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

15. Impact on Noise, Odor, and Light

The proposed action may result in an increase in noise, odors, or outdoor lighting.

NO

YES

(See Part 1. D.2.m., n., and o.)

If "Yes", answer questions a - f. If "No", go to Section 16.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may produce sound above noise levels established by local regulation.	D2m	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in blasting within 1,500 feet of any residence, hospital, school, licensed day care center, or nursing home.	D2m, E1d	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may result in routine odors for more than one hour per day.	D2o	<input checked="" type="checkbox"/>	<input type="checkbox"/>

d. The proposed action may result in light shining onto adjoining properties.	D2n	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may result in lighting creating sky-glow brighter than existing area conditions.	D2n, E1a	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

16. Impact on Human Health

The proposed action may have an impact on human health from exposure to new or existing sources of contaminants. (See Part 1.D.2.q., E.1. d. f. g. and h.)
If "Yes", answer questions a - m. If "No", go to Section 17.

NO

YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action is located within 1500 feet of a school, hospital, licensed day care center, group home, nursing home or retirement community.	E1d	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. The site of the proposed action is currently undergoing remediation.	E1g, E1h	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. There is a completed emergency spill remediation, or a completed environmental site remediation on, or adjacent to, the site of the proposed action.	E1g, E1h	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. The site of the action is subject to an institutional control limiting the use of the property (e.g., easement or deed restriction).	E1g, E1h	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may affect institutional control measures that were put in place to ensure that the site remains protective of the environment and human health.	E1g, E1h	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. The proposed action has adequate control measures in place to ensure that future generation, treatment and/or disposal of hazardous wastes will be protective of the environment and human health.	D2t	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. The proposed action involves construction or modification of a solid waste management facility.	D2q, E1f	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h. The proposed action may result in the unearthing of solid or hazardous waste.	D2q, E1f	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i. The proposed action may result in an increase in the rate of disposal, or processing, of solid waste.	D2r, D2s	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j. The proposed action may result in excavation or other disturbance within 2000 feet of a site used for the disposal of solid or hazardous waste.	E1f, E1g E1h	<input checked="" type="checkbox"/>	<input type="checkbox"/>
k. The proposed action may result in the migration of explosive gases from a landfill site to adjacent off site structures.	E1f, E1g	<input checked="" type="checkbox"/>	<input type="checkbox"/>
l. The proposed action may result in the release of contaminated leachate from the project site.	D2s, E1f, D2r	<input checked="" type="checkbox"/>	<input type="checkbox"/>
m. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

17. Consistency with Community Plans

The proposed action is not consistent with adopted land use plans.
 (See Part 1. C.1, C.2. and C.3.)
 If “Yes”, answer questions a - h. If “No”, go to Section 18.

NO

YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action’s land use components may be different from, or in sharp contrast to, current surrounding land use pattern(s).	C2, C3, D1a E1a, E1b	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action will cause the permanent population of the city, town or village in which the project is located to grow by more than 5%.	C2	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action is inconsistent with local land use plans or zoning regulations.	C2, C2, C3	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action is inconsistent with any County plans, or other regional land use plans.	C2, C2	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may cause a change in the density of development that is not supported by existing infrastructure or is distant from existing infrastructure.	C3, D1c, D1d, D1f, D1d, E1b	<input type="checkbox"/>	<input type="checkbox"/>
f. The proposed action is located in an area characterized by low density development that will require new or expanded public infrastructure.	C4, D2c, D2d D2j	<input type="checkbox"/>	<input type="checkbox"/>
g. The proposed action may induce secondary development impacts (e.g., residential or commercial development not included in the proposed action)	C2a	<input type="checkbox"/>	<input type="checkbox"/>
h. Other: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

18. Consistency with Community Character

The proposed project is inconsistent with the existing community character.
 (See Part 1. C.2, C.3, D.2, E.3)
 If “Yes”, answer questions a - g. If “No”, proceed to Part 3.

NO

YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may replace or eliminate existing facilities, structures, or areas of historic importance to the community.	E3e, E3f, E3g	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may create a demand for additional community services (e.g. schools, police and fire)	C4	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may displace affordable or low-income housing in an area where there is a shortage of such housing.	C2, C3, D1f D1g, E1a	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may interfere with the use or enjoyment of officially recognized or designated public resources.	C2, E3	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action is inconsistent with the predominant architectural scale and character.	C2, C3	<input type="checkbox"/>	<input type="checkbox"/>
f. Proposed action is inconsistent with the character of the existing natural landscape.	C2, C3 E1a, E1b E2g, E2h	<input type="checkbox"/>	<input type="checkbox"/>
g. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

**Environmental Analysis of the
South Brooklyn Marine Terminal Port Infrastructure Improvement Project
NY State Environmental Quality Review Act (SEQR)
Full Environmental Assessment Form (FEAF)
Addendum**

Part I**1.1 Section B Government****Approvals Funding for the Project:**

Funding sources for the Proposed Project include:

- New York City Office of the Mayor capital funding
- New York State (NYS) Energy Research & Development Authority (NYSERDA)
- U.S. Department of Transportation (USDOT) Port Infrastructure Development Program (PIDP) Grant
- NYC Industrial Development Agency (NYCIDA)

Other Project Approvals

Federal agencies:

- US Army Corps of Engineers (USACE): Section 404 (Clean Water Act); Section 10 (Rivers and Harbors Act)
- National Oceanic and Atmospheric Administration (NOAA) Fisheries: Endangered Species Act (of 1973) (Section 7 Consultation), Magnuson-Stevens Fisheries Conservation and Management Act
- U.S. Coast Guard (USCG): Local Notice to Mariners
- Federal Aviation Administration (FAA): Obstruction Evaluation (Temporary and Permanent)

State Agencies:

- NYSDEC: Article 15 (Excavation and Fill in Navigable Waters); Article 25 (Tidal Wetlands); State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges for Construction Activities, Docks and Moorings; Section 401 Water Quality Certification; Long Island Well Permit; Water Withdrawal Permit for construction dewatering activities
- NYS Historic Preservation Office (SHPO): National Historic Preservation Act Section 106 Consultation. SHPO determined No Adverse Effect upon historic properties on March 21, 2022.
- New York State Department of State (NYSDOS): Coastal Consistency Determination

Other local agencies:

- NYC Department of City Planning (NYCDCP): NYC Waterfront Revitalization Program (WRP) Coastal Consistency Determination
- NYC Public Design Commission (PDC): Design approval for permanent structures on City-owned property
- NYC Department of Transportation (NYCDOT): Coordination and review of transportation analyses

- Fire Department of the City of New York (FDNY): Coordination of potential relocation of existing fire hydrants
- NYC Department of Small Business Services (NYCSBS) Waterfront Construction Permit
- NYC Department of Environmental Protection (NYCDEP) Construction Noise Control Plan pursuant to the City of New York Administrative Code (Chapter 28 Title 15) Citywide Construction Noise Mitigation. Coordination and review of storm drainage, new outfalls or sewer connections
- NYC Department of Buildings (NYCDOB): Issues building permits and enforces safety regulations to protect workers and the general public during construction
- Mayoral Zoning Override: potential need to override requirements governing development or use within or over a railroad right of way or yard

No zoning changes are anticipated to be required for the Proposed Project.

C. Planning and Zoning

The Proposed Project is located in a M3-1 manufacturing zone.

Manufacturing districts are designated for creation of a range of industrial and manufacturing activities important to New York City's economy. M3 districts are designated for areas with heavy industries that generate noise, traffic, or pollutants. Typical uses include power plants, solid waste transfer facilities and recycling plants, and fuel supply depots. Even with this designation, all operations must conform to minimum performance standards. M3 districts are usually located near the waterfront and buffered from residential areas. M3-1 districts require a maximum floor area ration (FAR) of 2.0 and a Permitted Sign regulated surface area of 6x street frontage. Parking requirements vary by use in M3-1 zoning districts. The Project Area is within the Southwest Brooklyn Industrial Business Zone (IBZ).

The Proposed Project is located in a NYS Heritage Area (Harbor Park). NYS Heritage areas are a state-local partnership established to preserve and develop areas that have special significance to New York State.

The Project Area is located within the mapped coastal zone of New York State and within the area covered by the New York City Waterfront Revitalization Program. The Project Area is also within a mapped Significant Maritime and Industrial Area (SMIA) and a Priority Maritime Activity Zone (PMAZ). (Figure 1) Refer to SBMT Environmental Analysis Section 3.2 (Land Use, Zoning and Public Policy) for a detailed discussion of issues related to land use, zoning, and policy and planning efforts in the vicinity of the Project Area.

Figure 1 Coastal Zone Map



1.2 Section D

D.2 Project Operations

- a.i. The purposes of upland excavation are to remove existing structures and paving and excavate to install new structural materials (i.e., support piles). The purpose of in-water dredging is to deepen the water column to allow vessels required for OSW construction and maintenance to access the port facility, including fully-laden draft depth.
- a.ii. Total excavation: 1,327,836 tons
- | | |
|-----------|--|
| In-water: | 428,423 tons (189,000 CY of silty sediments) |
| Upland: | 750,000 tons [asphalt, concrete and fill] |
| | 28,700 tons [buildings] |
| | + 10% contingency amount |

The total Proposed Project schedule will include onsite construction from November 2023 to the end of June 2026.

- a.iii. Sediments to be dredged are predominantly black silts adjacent to the solid fill “pier” structures (which are bulkheaded landfill, rather than pile-supported structures over water). The sediments are contaminated. Full information regarding sediment characteristics is supplied in the Sediment Data Usability Summary Report (DUSR) attached to the Permit Information Packet (PIP) as Appendix G. Upland excavated materials are anticipated to be fill previously placed as part of the original installation of the SBMT facility in 1960. The material may be beneficially reused depending on its suitability for such uses.
- a.iv. Excavated materials are anticipated to be disposed of offsite. Dredged sediments will be loaded on scows and will be dewatered and disposed of offsite in a manner adhering to all permit conditions. The material may be beneficially reused depending on its suitability for such uses.
- a.v. The total area to be dredged or excavated is approximately 40.3 acres, which includes approximately 14.2 acres of proposed marine dredging, plus approximately 26.1 acres of upland excavation (of pavement, structures, and excavation to install underground structures).
- a.vi. The maximum area to be worked at one time is 40.3 acres, the extent of the upland paving and structure removal, which is scheduled to be entirely removed during the early stage of work.
- a.vii. The maximum depth of dredging is -38.1 feet MLLW (-43.0 feet MHW; -43.9 feet MHWS). The maximum target depth of dredging is -38.1 ft MLLW, with an expected 2 feet of over-depth. Other areas of dredging require less depth due to reduced required clearance for design vessel drafts. See attached Permit Drawings in the PIP for detailed information of dredging depths.
- a.viii. No blasting will occur for excavation.
- a.ix. Summarize site reclamation goals and plan.

The Project Area will be partially reclaimed by new bulkhead and pile-supported structures, and the remainder will be left as dredged open bay habitat. The Proposed Project in-water habitats after construction will largely be similar unconsolidated silt sediment habitat. Anticipated changes in sediment chemistry are summarized in the Data Usability Summary Report (DUSR) attached to the JPA's PIP as Appendix G. The deepened habitat is expected to be recolonized by adjacent benthic invertebrate populations, and exposed sediments will eventually be covered by natural process of sedimentation. The Project Area has experienced net sedimentation since previous dredge operations.

In addition, approximately 0.16 acres of unvegetated tidal wetlands will be filled. However, the removal of the cofferdam and associated fill at 35W would reduce the volume of existing fill occupying the water column and the area of mudline disturbance by approximately 0.18 acres. In addition, the regrading of the slope associated with the installation of the wharf at 35N would temporarily disturb 0.50 acres of tidal wetland habitat, replacing it with similar material, and 0.74 acres of marine habitat. In total, approximately 0.02 acres of unvegetated tidal wetlands would be created.

- b.ii.* The Proposed Project will install new bulkhead replacement and reinforcement, and new wharves and fenders into marine and tidal habitats. This will involve installation of pipe piles and sheet piles into the benthic and tidal habitat, and overlaying platforms that will shade both marine and tidal habitats. One floating concrete platform will occupy the top of the water column. Dredging will deepen the water column in the areas adjacent to the existing solid fill “pier” structures.

Please see the JPA's PIP and Permit Drawings for detailed description of intended works.

- b.iii.* Bottom sediments will be disturbed by the installation of structures and dredging. Structures include pipe piles and sheet piles associated with bulkhead replacement, bulkhead reinforcement, and new wharf structures. Dredging will occur in an area of 14.2 acres and will deepen the water column in order to allow vessels to access the SBMT facility. Approximately 0.03 acres of marine habitats will be removed and an additional 0.64 acres will be shaded by proposed structures. Further detail is supplied in the PIP.

- e.iii.* *Where will the stormwater runoff be directed (i.e., on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?*

Stormwater runoff onsite will be directed into and treated by an updated stormwater management system. The improved stormwater system will divert stormwater from a portion of the site to the public wastewater system, with the remainder to receive treatment onsite from catch basins before discharge directly into Upper New York Bay.

During construction, a SWPPP (in conformance with NYCDEP SPDES GP-0-20-001) will be prepared, and NYSDEC stormwater guidance will be followed, as applicable. Refer to SBMT Environmental Analysis Section 3.11 (Water and Sewer) for further discussion of the water and sewer infrastructure in the Project Area.

- f.* *Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations?*

Pollutant sources that could affect air quality include mobile and stationary sources, and construction activities. Mobile sources are related to vehicular traffic or other moving sources, such as vehicles, airplanes, trains, or boats. Mobile sources are generally linked to projects that add vehicles to an area or “change traffic patterns by diverting vehicles.” Stationary sources are pollutants that are fixed in a location and can include “exhaust stack(s) used for the heating, hot water, ventilation, and air conditioning systems of a building” amongst other manufacturing or industrial processes such as generators. Construction and operation activities can generate dust and exhaust emissions from equipment and vehicles. Construction and operation equipment operating within the Project Area can add exhaust emissions under the proposed action.

Building boilers and material handling equipment, such as cranes, would be the sources of air emissions under the proposed action. Potential off-site mobile source emissions from traffic would not be significant. Refer to SBMT Environmental Analysis Section 3.15 (Air Quality) for a discussion of off-site and on-site emissions.

- m.i.* *Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both?*

Effects on community noise levels during construction and operation under the proposed action would include operation of construction equipment within the demolition and construction areas and the

equipment operations associated with the upgrade of SBMT as it serves as a staging facility and operations and maintenance base for the offshore wind industry. Noise levels at a given location are dependent on the type and quantity of construction or operational equipment to be operated, the acoustical utilization factor of the equipment (i.e., the percentage of time a piece of equipment is operating), whether the equipment is enclosed in a building or in the open field, and the distance from the equipment to a noise sensitive receptor. The Proposed Project would produce noise that would exceed existing ambient noise levels during both construction and operation. However, the noise increases above the ambient condition would not exceed the City noise control code standards. SBMT Environmental Analysis, Part 2 provides an assessment of potential adverse noise impacts for more information about noise during construction and operation. For detailed discussions of potential noise impacts during operations and construction, refer to SBMT Environmental Analysis Section 3.17 (Noise) and Section 3.20.4.3 (Noise and Vibration)

r. *Solid wastes management or disposal*

Approximately 1,327,836 tons of solid waste are anticipated to be created during construction.

Total excavation: 1,327,836 tons

In-water: 428,423 tons (189,000 CY)

Upland: 750,000 tons [asphalt, concrete and fill]
 28,700 tons [buildings]
 + 10% contingency amount

Dredged material (approximately 224,140 tons) will be disposed of at an appropriate upland site, in accordance with all applicable laws and permit requirements. Materials will be beneficially reused if the material is deemed suitable for such use

Upland fill (approximately 25,000 tons, included in the above) will be excavated to install structural piles (heavy lift pile), and for access, assessment, and replacement of utilities.

Construction waste is anticipated to be created throughout the 32-month period of construction, with a particular front loading of generation during initial site demolition.

Solid waste created during operation is expected to be negligible and incidental to operations (e.g., packing materials, office waste). Refer to SBMT Environmental Analysis Section 3.12 (Solid Waste and Sanitation) for further discussion of solid waste generation during operations.

PART II

1. Impact on land.

The Proposed Project involves a large volume of excavation and alteration of both upland and marine areas.

1.a. *The proposed action may involve construction on land where depth to water table is less than 3 feet.*

Water tables in the area are expected to be from 3 to 6 feet in depth. Excavation will be over areas reclaimed by filling.

1.d. *The proposed action may involve the excavation and removal of more than 1,000 tons of natural material.*

Approximately 1,327,836 tons of material will be dredged or excavated. The vast majority of this material is anticipated to be manmade or contaminated from anthropogenic sources.

Upland: Approximately 778,700 tons of material will be removed from the site, the majority of which is existing structures and pavement. Excavation of existing soils/fill is expected to be entirely or predominantly into previously placed material.

Marine: Approximately 428,423 tons of sediments will be dredged. The dredged sediments that are predicted to be a combination of original sediments, building fill or debris, and naturally occurring (though contaminated) sediment that has settled over dredged and built surfaces. The entirety of the Proposed Project footprint has been previously disturbed.

1.e. *The proposed action may involve construction that continues for more than one year or in multiple phases.*

Construction is anticipated to be active from November 2023 until the end of June 2026, a time span of 32 months. Construction will be ongoing during that time. Detailed descriptions of the construction activities, phasing, and schedule are provided in SBMT Environmental Analysis Section 3.20.2 (Overview of Construction Activities).

1.h. *Other:* The Proposed Project is located in the State's Coastal Zone Boundary as well as within the New York City WRP area.

Impact of Geological Features. The Proposed Project will not impact geological features.

1. *Impacts on Surface Water.*

The Proposed Project is water dependent. Dredging and in-water construction activities are required to upgrade the facility to serve the Proposed Project's purpose.

3.c. *The proposed action may involve dredging more than 100 cubic yards of material from a wetland or water body.*

The Proposed Project is anticipated to dredge approximately 189,000 cubic yards (CY) of material from Upper New York Bay. All dredging will occur in lands owned by the City of New York or where the City or NYCEDC has the right to perform dredging for navigational purposes.

3.d. *The proposed action may involve construction within or adjoining a freshwater or tidal wetland, or in the bed or banks of any other water body.*

The Proposed Project will involve installation of wharves within unvegetated tidal wetlands. The tidal wetlands, constructed slopes covered by bedding rock and riprap, are unable to support vegetation, and are classified as littoral zone (LZ) by NYSDEC. Approximately 0.16 acres of unvegetated tidal wetlands will be filled. However, the removal of the cofferdam and associated fill at 35W would reduce the volume of existing fill occupying the water column and the area of mudline disturbance by approximately 0.18 acres. In addition, the regrading of the slope associated with the installation of

the wharf at 35N would temporarily disturb 0.50 acres of tidal wetland habitat, replacing it with similar material, and 0.74 acres of marine habitat. In total, approximately 0.02 acres of unvegetated tidal wetlands would be created. Approximately 0.22 acres would be permanently shaded from the new structures installed over the unvegetated tidal wetland area.

Upland construction will be separated from tidal wetlands by impervious constructed surfaces, and in-water dredging will follow best practices (including using of a clamshell dredger with closed environmental bucket, using slow withdrawal speeds, and turbidity curtains where feasible) to limit potential increases in total suspended sediments (TSS) and turbidity.

Refer to SBMT Environmental Analysis Section 3.20.4.9 (Natural Resources) for a discussion of the potential impacts to wetlands during construction.

3.e The proposed action may create turbidity in a waterbody, either from upland erosion, runoff or by disturbing bottom sediments.

The Proposed Project will include dredging of, and structure installation into bottom sediments throughout the Project Area, which are anticipated to locally increase turbidity. Bottom sediments are predominantly unconsolidated silts. Dredging will follow best practices (including using of a clamshell dredger with closed environmental bucket, using slow withdrawal speeds, and turbidity curtains where feasible) to limit potential increases in TSS and turbidity. The increase in TSS levels above ambient during operations due to mechanical dredging could range up to 445 mg/L. Pile driving is estimated to produce TSS concentrations of approximately 5 to 10 mg/L above background levels within approximately 300 feet of the point of origin. These levels are below thresholds associated with physiological impacts on marine fauna. TSS levels are expected to quickly return to ambient conditions upon cessation of dredging, which would run 24 hours a day for a total of 140 days and would occur during the Summer and Fall of 2024 and Fall of 2025.

Refer to SBMT Environmental Analysis Section 3.20.4.9 (Natural Resources) for a discussion of turbidity during construction.

Further evaluation of dioxin in the post-dredging surface was performed, including calculation of surface weighted average concentrations (SWAC) in each area. Post-dredging SWACs are below the Class C threshold of 50 ng/kg (expressed as 2,3,7,8-TCDD-toxicity equivalents) in Areas 2.1B (35.1 ng/kg) and 2.2 (43.9 ng/kg), and slightly above in Area 1 (51.4 ng/kg). Post-dredging SWACs are above Class C in Areas 2.1A (89.8 ng/kg) and 2.3 (127.7 ng/kg). Based on these Class C exceedances, a one-foot sand cap would be placed post-dredging on the exposed surface of Areas 2.1A and 2.3. Placement of a clean sand cap in Areas 2.1A and 2.3 (approximately 5.6 acres of the approximately 14.2 acre dredging footprint) following dredging would achieve sediment quality across the Project Area that is equivalent to or better than current conditions when considered on an average, Project-wide basis. Continued deposition would bring surface concentrations to ambient levels in Upper New York Harbor. The placement of one-foot of clean sand in Areas 2.1A and 2.3 on the post-dredging surface would significantly reduce potential exposure of aquatic biota to residual contaminants.

Refer to SBMT Environmental Analysis Section 3.10.3 (Aquatic [Dredged Sediments]) for a discussion of dredging and sand capping.

Upland work will be subject to an New York State Department of Environmental Conservation (NYSDEC) stormwater pollution prevention plan (SWPPP), which is expected to minimize upland erosion and runoff.

3.i The proposed action may affect the water quality of any water bodies within or downstream of the site of the proposed action.

Dredging of benthic sediments and installation of structures into benthic sediments are expected to cause localized increases in TSS. Impacts to water quality will be minimized through use of a clamshell dredger with an environmental bucket (operated at slow withdrawal speeds) during

dredging. Additional in-water turbidity measures are anticipated to be used, including turbidity curtains where appropriate. Sediments are contaminated, and the suspension of sediments has the potential to temporarily increase concentrations of pollutants in the water column. As noted above, best management practices will be utilized during construction and dredging activities to minimize potential for sediment generation and transport.

All sediments are expected to settle within 1-2 days, returning water quality to baseline levels. Operation of the upgraded facility is anticipated to cause overall *de minimis* impacts to water quality of Upper New York Bay. Refer to SBMT Environmental Analysis Section 3.20.4.9 (Natural Resources) for a discussion of potential impacts to water quality.

Impact on Groundwater

The Proposed Project is not anticipated to significantly impact groundwater. Upland work is on reclaimed solid fill “pier” structures made of fill placed within Upper New York Bay in the 1960s (referred to as solid fill “pier” structures despite being landfill instead of pile-supported structures over water). The boundaries of the solid fill “pier” structures include a combination of and concrete bulkheads and riprap slopes on top of timber cribbing. The lot is metal entirely developed and has sixteen buildings on site, listed as built in 1931.

The buildings are in various states of repair and use. Groundwater within the solid fill “pier” structures is not used for drinking water. Dewatering will be localized to excavation operations. Dewatering effluent will be treated per regulations and permit conditions and discarded into “interpier” basin waters of the Gowanus Bay, which is part of the broader Upper New York Bay.

Impact on Flooding

The Proposed Project is within the mapped coastal zone and is altering water column depths and installing new structures in-water. The area is not within a designated floodway or coastal erosion hazard zone.

5.b, 5.c. The Project Area is within both the 100-year and 500-year floodplain. The Proposed Project design has altered to minimize intrusion into marine areas. See SBMT Environmental Analysis Section 1.3 (Project Description) and SBMT Environmental Analysis Section 2.1.2 (Future with Project Alternatives Considered) for further information. The Proposed Project design considers climate change and sea level rise. All structures are designed to be functional not only in current environmental conditions, but also were designed to be functional throughout anticipated environmental changes over the Proposed Project’s 25-year design lifespan, including a projected sea level rise of 1.8 feet, corresponding to the higher end of the “middle range” projection (75% percentile) established by the NYC National Panel on Climate Change (NPCC).

Impacts on Air

As required under the Clean Air Act (CAA) (42 USC § 7401 *et seq.*), the United States Environmental Protection Agency (USEPA) has established National Ambient Air Quality Standards (NAAQS) for seven contaminants, referred to as criteria pollutants (40 Code of Federal Regulations [CFR] part 50). The criteria pollutants are carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), particulate matter with diameters up to 10 µm (PM₁₀), particulate matter with diameters up to 2.5 µm (PM_{2.5}), lead (Pb), and sulfur dioxide (SO₂). The criteria pollutants of primary concern related to the Proposed Project are vehicle and/or construction equipment-related CO, PM₁₀ and PM_{2.5}, and O₃ precursors (nitrogen oxides [NO_x] and volatile organic compounds [VOCs]).

The CAA requires geographic areas to be designated according to ability to attain the NAAQS, and these areas are categorized for each criteria pollutant as:

- *Attainment Area* – Areas where no exceedance of NAAQS for a specific criteria pollutant occurred.

- *Nonattainment Area* – Areas where exceedance of NAAQS for a specific criteria pollutant occurred.
- *Maintenance Area* – Areas that have previously been designated as a nonattainment area but are still in need of efforts to maintain the improved conditions in the future. Most of the CAA rules for nonattainment areas are still applicable to a maintenance area.

If an area is designated as nonattainment for a criteria pollutant under the NAAQS, state governments must develop a State Implementation Plan (SIP) and implement control plans to reduce the emission level of that pollutant.

Per the National Ambient Air Quality Standards (NAAQS), the Project Area is in an area currently designated as:

- Moderate nonattainment for the 8-hour O₃.
- A PM_{2.5} and CO maintenance area.
- Attainment for all other criteria pollutants.

Activities within the study area that would produce new air emissions would include the following:

- Emissions from construction equipment;
- Vehicle emissions from construction workers commuting; trucks and marine vessels for transport of material to the site; and trucks and marine vessels for transport of the removal of excavated or dredged material, hazardous material, or other wastes to the appropriate off-site management facilities; and
- Emissions from operational equipment to be installed in the upgraded facility including ventilation, combustion, material handling equipment.

Because the Proposed Project is occurring within the City of New York, the *New York City Environmental Quality Review (CEQR) Technical Manual (2021)*, standards were referenced to determine the level of air quality analysis most appropriate for the Proposed Project. Refer to SBMT Environmental Analysis Section 3.15 (Air Quality) for the complete air quality assessment.

Construction Air Quality Impact

According to CEQR guidance, if a proposed action meets one or more of the following conditions, a construction air quality assessment is not likely to be warranted:

- Short-term construction duration (less than two years);
- Construction is not located near sensitive receptors; and
- Construction of multiple buildings.

Construction of the Proposed Project is anticipated to be completed within 32 months; therefore, the proposed construction would warrant a detailed impact assessment per the CEQR guidance. A detailed construction period air quality dispersion modelling was conducted to determine potential impacts to the community around the Project Area over the 32-month construction duration. No significant air quality impacts would occur under the proposed action. As described in SBMT Environmental Analysis Section 3.20.4.1 (Transportation), temporary increases of vehicle and marine vessel trips may be generated. However, the minimal number of trips is not anticipated to result in a significant air quality impact during construction.

Furthermore, all necessary measures would be implemented during demolition and construction to comply with the New York City Air Pollution Code relating to construction-related dust emissions. Pursuant to New York City Local Law 77, all construction equipment will use ultra-low sulfur diesel (ULSD) fuel and Best Available Technology (BAT) such as requiring all combustion equipment to be

equipped with Tier 4 engines as applicable to minimize potential effects of construction on air quality. Dust suppression measures also will be implemented, such as: trucks and tugs hauling loose material will have loads securely covered prior to leaving the Project Area to minimize airborne dust; and water will be used for demolition, excavation and transfer of soil and debris to avoid the suspension of dust into the air. Therefore, demolition and construction activities associated with the Proposed Project are not expected to result in potential significant adverse impacts to air quality. Refer to SBMT Environmental Analysis Section 3.20.4.2 (Air Quality) for the air quality assessment during construction.

Operational Air Quality Impact

After the completion of the construction activities, the proposed facility improvements would allow the storage, staging, and transfer of materials utilized in OSW projects, provide access to marine vessels, and serve as an O&M base for the OSW facilities. These long-term sources of new emissions are anticipated, but they are unlikely to consist of any stationary sources that require air permit or registration under NYSDEC air permitting regulations. Therefore, per the FEAF Part 2, no further quantifications of either criteria pollutants, air toxic pollutants, or Greenhouse Gas emissions are warranted, and the Proposed Project is not anticipated to cause any significant air quality impacts. Refer to SBMT Environmental Analysis Section 3.15 (Air Quality) for the complete air quality assessment.

Impact on Plants and Animals

- 7.b. *The proposed action may result in a reduction or degradation of any habitat used by any rare, threatened or endangered species, as listed by New York State or the federal government.*

The marine habitat of the Project Area is potentially utilized by Atlantic Sturgeon, shortnose sturgeon, loggerhead turtle, leatherback turtle, green turtle, and Kemp's ridley turtle. The dredging of sediments is anticipated to expose a post-dredging surface with residual contamination typical of an urban port with a long industrial history (see DUSR, JPA PIP Appendix G, for detailed analysis). Anticipated use of the Project Area by these species and potential exposure to sediment contamination are anticipated to be insignificant based on their habitat preferences and life history. Sturgeon are expected only to occur in Upper New York Bay during their seasonal migrations, and sea turtles are not expected to utilize the Project Area due to lack of resources. The area of marine habitat provided by the Project Area relative to the broader Upper New York Bay is infinitesimally small. The post-dredging surface is expected to be rapidly covered by ambient sediments from the surrounding area. Recolonization of the post-dredging surface by benthic species present in the area is also expected. In addition, a one-foot sand cap will be placed in areas 2.1A and 2.3 with elevated contaminant levels in the post-dredging surface. Placement of a clean sand cap following dredging would achieve sediment quality across the Project Area that is equivalent to or better than current conditions when considered on an average, Project-wide basis.

The habitat types required by federally protected avian and plant species are not present within or immediately adjacent to the Project Area, no impacts on these species are expected. While some state-listed avian species have been observed in the vicinity (Common tern, Peregrine falcon, Osprey, and American black duck), the Project Area has overall low value to these species due to low resource levels, high levels of disturbance, and overall low-quality habitat for nesting, roosting, and foraging. As such, the Project is expected to have a negligible impact on any rare, threatened, or endangered species. Refer to SBMT Environmental Analysis Section 3.9 (Natural Resources) for the assessment of potential impacts to threatened and endangered species.

- 7.d. *The proposed action may result in a reduction or degradation of any habitat used by any species of special concern and conservation need, as listed by New York State or the Federal government.*

The Proposed Project is anticipated to remove and shade small portions (0.03 acres and 0.70 acres, respectively) of marine habitat that may be utilized by Atlantic sturgeon, shortnose sturgeon, and sea

turtles. An area of 14.2 acres will be dredged and contaminated sediments removed. Residual contamination in the post-dredging surface is expected to be rapidly covered by ambient sediments and recolonized by benthic species from the surrounding area. In addition, a one-foot sand cap will be placed in areas 2.1A and 2.3 with elevated contaminant levels in the post-dredging surface. Placement of a clean sand cap following dredging would achieve sediment quality across the Project Area that is equivalent to or better than current conditions when considered on an average, Project-wide basis. As such, the Proposed Project is expected to have a negligible impact on habitat used by any species of special concern and conservation need. See the Permit Information Packet for more information. Refer to SBMT Environmental Analysis Section 3.9 (Natural Resources) for the assessment of potential impacts to species of special concern and conservation need.

7.g. *The proposed action may substantially interfere with nesting/breeding, foraging, or over-wintering habitat for the predominant species that occupy or use the project site.*

Please see SBMT Environmental Analysis Section 3.9 (Natural Resources) and the PIP Essential Fish Habitat Report (Appendix E) outlining expected habitat impacts and expected resident species. The site provides a common habitat type with limited resources for marine, avian, and mammal species (e.g., limited food resources, shelter opportunities, nesting). The Project Area is utilized by urban-tolerant species. Refer to SBMT Environmental Analysis Section 3.9 (Natural Resources) for the assessment of potential impacts the habitats for predominant species in the Project Area.

Impact on Agricultural Resources. There are no agricultural resources in the vicinity of the Proposed Project, so no impact is anticipated.

Impact on Aesthetic Resources. The Proposed Project will introduce strong visual contrast to key observation points on 2nd Avenue and 39th Street adjacent to the Project Area. However, there are no existing unobstructed views of aesthetic and visual resources from these key observation points, and the use of the Project Area would be done as-of-right for the existing M3-1 zoning district designation. All existing views of aesthetic and visual resources from the south and east of the Project Area are screened by urban and industrial development. Views from key observation points across Gowanus Bay and New York Bay would contain the Proposed Project, but the elements of the Proposed Project will blend into the existing urban and industrial environment of the Gowanus Bay waterfront. Therefore, the Proposed Project will have no significant adverse impacts on aesthetic and visual resources. Refer to SBMT Environmental Analysis Section 3.8 (Urban Design and Visual Resources) for the assessment of potential impacts to aesthetic and visual resources.

Impact on Historic and Archaeological Resources. The Project Area is adjacent to the National Register-eligible Bush Terminal Historic District and National Register-listed Navy Storehouse #2. On March 21, 2022, SHPO concurred that the Proposed Project will have No Adverse Effect upon historic properties (SBMT Environmental Analysis Appendix A). Refer to SBMT Environmental Analysis Section 3.7 (Historic and Cultural Resources) for more information.

Impact on Open Space and Recreation. The Project Area does not include open space. The Proposed Project would not impinge on any recreational resources or access thereof. Refer to SBMT Environmental Analysis Section 3.5 (Open Space) for more information.

Impact on Critical Environmental Areas. The Proposed Project does not occur in a Critical Environmental Area (CEA).

Impact on Transportation. The Proposed Project is not anticipated to result in a change to existing transportation systems. Refer to SBMT Environmental Analysis Section 3.14 (Transportation) for the complete transportation analysis.

Impact on Energy. Although the Proposed Project is anticipated to have a draw on energy, the energy level required is anticipated to be negligible considering public utility availability. Refer to SBMT Environmental Analysis Section 3.13 (Energy) for more information.

Impact on Noise, Odor, and Light. Although the Proposed Project will produce noise that exceeds existing ambient noise levels during both construction and operation, those increases will have no or small impact. Refer to SBMT Environmental Analysis Section 3.17 (Noise) for more information about noise during operations and SBMT Environmental Analysis Section 3.20.4.3 (Noise and Vibration) for information about noise and vibration during construction.

Impact on Human Health. Although the Proposed Project would create solid waste during construction and increases in turbidity and total suspended solids during dredging, there would be no impact on human health. Solid waste would be disposed of in an appropriate upland disposal site, and mitigation measures would be taken during dredging to minimize the release of contaminants. Refer to SBMT Environmental Analysis Section 3.18 (Public Health) for more information.

16.a. The proposed action is located within 1500 feet of a school, hospital, licensed day care center, group home, nursing home or retirement community.

Intermediate School (I.S.) 136 Charles O. Dewey is approximately 1500 feet southeast of the Project Area (separated from Project Area by 2nd and 3rd Avenues. Refer to SBMT Environmental Analysis Section 3.4 (Community Facilities and Services) for more information.

16.i. The proposed action may result in an increase in the rate of disposal, or processing, of solid waste.

The Proposed Project is anticipated to create approximately 1,327,836 tons of solid waste during construction. Materials will be beneficially reused if the material is deemed suitable for such use. Materials will be reused onsite if possible. If reuse is not possible, material will be disposed of in an appropriate upland disposal site.

16.l. The proposed action may result in the release of contaminated leachate from the project site.

Sediments proposed to be dredged are contaminated. Dredging is expected to cause increases in turbidity and total suspended solids (TSS) during dredging, and corresponding increases in contaminants could potentially occur and impact the water column. These increases are expected to be temporary as sediments settle. Dredged materials will be dewatered (decanted) onsite and disposed at an appropriate upland disposal facility, following all permit requirements. The material may be beneficially reused depending on its suitability for such uses.

Use of a clamshell dredger with a closed environmental bucket with slow withdrawal speed, in-water turbidity control measures, and barge overflow prevention methods are expected to minimize potential release of TSS, and associated contaminants into the water column.

The entire SBMT site has been accepted into NYSDEC's Brownfield Clean-up Program (BCP) (Site No. C224360 – South Brooklyn Marine Terminal Site). The program is intended to promote redevelopment of neglected brownfields and revitalize economically blighted communities. Refer to SBMT Environmental Analysis Section 3.10 (Hazardous Materials) for more information about potential impacts from hazardous materials during operations and SBMT Environmental Analysis Section 3.20.4.10 (Hazardous Materials) for more information about potential impacts from hazardous materials during construction.

Consistency with Community Plans. The Proposed Project is consistent with the existing zoning of area as a manufacturing zone. Refer to SBMT Environmental Analysis Section 3.2 (Land Use, Zoning and Public Policy) for more information about the Proposed Project's consistency with public policies and plans.

Consistency with Community Character. The Proposed Project is consistent with the community's industrial waterfront character. Refer to SBMT Environmental Analysis Section 3.2 (Land Use, Zoning and Public Policy) for more information about the Proposed Project's consistency the surrounding area and SBMT Environmental Analysis Section 3.19 (Neighborhood Character) for more information about the Proposed Project's potential impacts to the surrounding neighborhood character.

Appendix P Supplemental Air Quality and Climate Change Analysis

Environmental Analysis of the South Brooklyn Marine Terminal Port Infrastructure Improvement Project

Supplemental Air Quality and Climate Change Analysis
South Brooklyn Marine Terminal Port Infrastructure Improvement
Project

Prepared for: New York City Economic Development Corporation (NYCEDC) on
behalf of the City of New York

Prepared by: AECOM Technical Services, Inc.

July 2023

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1. Introduction

The purpose of the Proposed Project is to upgrade the South Brooklyn Marine Terminal (SBMT) to enable it to serve as a staging facility and operations & maintenance (O&M) base for the offshore wind (OSW) industry. The Proposed Project is needed to support the development of OSW power generation capacity to fulfil the State's mandate of 9,000 megawatts (MW) of OSW energy capacity by 2035, the United States' goal of 30 gigawatts (GW) of OSW capacity by 2030, and the City's *Offshore Wind NYC* plan. In the near term, the Proposed Project would be used to support the construction and staging of the Empire Wind Projects, which will bring offshore wind power capacity to the region, and the Proposed Project is expected to support other developers and OSW projects in the future. The Proposed Project also will support the O&M of the Empire Wind Projects.

The construction of the Proposed Project is anticipated to commence in November 2023 and is estimated to take approximately 32 months with completion expected at the end of June 2026. In 2026 through 2027, the Proposed Project will be used for staging operations to support the offshore construction of the Empire Wind Projects. It is assumed for purposes of this analysis that the use of the Proposed Project for other offshore wind projects will continue thereafter for the remainder of the port facility's anticipated useful life, estimated to be approximately 30 years. Beginning in 2028, SBMT also will support the O&M of the Empire Wind Projects during the Empire Wind Projects' lifetimes.

The following supplemental air quality analysis was performed according to New York State's Supplemental Scoping Comments for South Brooklyn Marine Terminal for the Environmental Impact Statement for Empire Offshore Wind, LLC's Proposed Wind Energy Facilities Offshore New York (February 16, 2022) and entails:

- Estimate foreseeable air pollutant emissions including criteria pollutants, hazardous air pollutants (HAPs), and greenhouse gases (GHG) during all phases of the Proposed Project, direct and indirect, including project-related upstream emissions, that can be reasonably estimated.
- Perform Clean Air Act General Conformity Rule analysis for the Federal approval action from United States Army Corps of Engineers (USACE).
- Assess the Proposed Project's consistency with the State's Climate Leadership and Community Protection Act (CLCPA).
- Evaluate how future physical climate risks were considered for the Proposed Project.

2. Air Pollutant Emissions Estimate

Pollutant sources that could affect air quality include mobile and stationary sources associated with construction and operation activities. Mobile sources are related to vehicular traffic or other moving sources, such as trucks and vessels. Stationary sources are fixed in a location and can include exhaust stacks used for the heating, hot water, ventilation, and air conditioning (HVAC) systems of a building. The emissions from both mobile and stationary sources related to the Proposed Project are considered in this supplemental analysis.

2.1 Pollutants of Concern

2.1.1 Criteria Pollutants

The National Ambient Air Quality Standards (NAAQS) are the basis to measure the effects of mobile and stationary pollutant sources in ambient air to protect public health and welfare from the adverse impacts associated with ambient air pollutants, as required under the Clean Air Act (CAA). The US Environmental Protection Agency (USEPA) has established NAAQS for six contaminants, referred to as criteria pollutants, and they are carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), particulate matter (including with diameters up to 10 µm [PM₁₀] and up to 2.5 µm [PM_{2.5}]), lead (Pb), and sulfur dioxide (SO₂). The criteria pollutants of primary concern related to the Proposed Project are vehicle and/or construction equipment-related CO, PM₁₀ and PM_{2.5}, and O₃ precursors (nitrogen oxides (NO_x) and volatile organic compounds (VOCs)).

The CAA requires geographic areas to be designated according to their ability to attain the NAAQS, and these areas are categorized for each criteria pollutant as:

- *Attainment Area* – Areas where no exceedance of NAAQS for a specific criteria pollutant occurred.
- *Nonattainment Area* – Areas where exceedance of NAAQS for a specific criteria pollutant occurred.
- *Maintenance Area* – Areas that have previously been designated as a nonattainment area but are still in need of efforts to maintain the improved conditions in the future. Most of the CAA rules for nonattainment areas are still applicable to a maintenance area.

If an area is designated as nonattainment for a criteria pollutant under the NAAQS, state governments must develop a specific State Implementation Plan (SIP) and implement control plans to reduce the emission level of that pollutant.

2.1.2 Hazardous Air Pollutants (HAPs)

In addition to the criteria pollutants, the CAA also lists 187 air toxins, known as HAPs. The CAA authorizes the USEPA to characterize and control emissions of these pollutants. However, unlike the criteria pollutants, the majority of HAPs do not have ambient air quality standards. Of the 187 HAPs with potential to be emitted from both stationary and mobile sources, 93 have been identified as Mobile Source Air Toxics (MSATs) and the following nine MSATs are priority MSATs:

- Acetaldehyde
- Acrolein
- Benzene
- 1,3-butadiene
- Diesel particulate matter plus diesel exhaust organic gases (diesel PM)
- Ethylbenzene
- Formaldehyde
- Naphthalene
- Polycyclic organic matter

2.1.3 Greenhouse Gas Emissions

GHG emissions trap heat in the atmosphere and contribute to global warming. Under Section 202(a) of the CAA, the USEPA has recognized the potential risks to public health and welfare and signed an endangerment finding regarding GHG emissions. The USEPA's finding states that six key current and projected concentrations of well-mixed GHG emissions in the atmosphere threaten the public health and welfare of current and future generations. These GHG pollutants include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). Each GHG is assigned a global warming potential (GWP). The global warming potential is the ability of a gas or aerosol to trap heat in the atmosphere. The global warming potential rating system is standardized to CO₂, which has a value of one. The equivalent CO₂ (CO₂e) rate is calculated by multiplying the emissions of each GHG by its GWP and adding the results together to produce a single, combined emissions rate representing all GHGs.

2.2 Emissions Sources

2.2.1 Off-site (Indirect) Sources

On-road traffic includes construction and operations worker commuting trips and truck deliveries. According to the off-site on-road traffic analysis results in Section 3.14 (Transportation) and Section 3.20 (Construction) of the SBMT Environmental Analysis, the estimated daily vehicle trips under the Future with Project condition under the construction and operational phases of the Proposed Project were used in association with the below assumptions:

- Each commuter vehicle trip would have a round trip over an average of 20 miles with an even split between expressways and local roadways.
- Each truck trip would have a round trip mostly traveling along the expressways from various potential destinations in New York City, Long Island, New Jersey, upper New York State, Connecticut, and Pennsylvania within a 100-mile radius around SBMT.

Air emissions would be generated by the operation of vessels in transit to and from the Proposed Project during the construction of the Proposed Project as well as during the Proposed Project's operations. The vessels associated with transit for OSW construction have been accounted for in the Empire Wind Projects' COP (May 2022), so they are not considered in this analysis.

2.2.2 On-site (Direct) Sources

During construction, the following emissions sources were considered in the analysis:

- Trucks and non-road equipment engine exhaust (including marine vessels); and
- Surface fugitive dust resulting from the movement of trucks on-site.

During operations, the following emissions sources were considered in the analysis:

- Berthing vessels and tug and barge set engine exhaust during the offloading and loading operations of WTG components. The berthing hoteling operating mode covers vessels that are moored, berthed, or docked at SBMT. When hoteling, a vessel either uses its auxiliary engines and boilers, or it uses shore power, if available. For this emission estimate purpose, it was assumed that no shore power is available. Vessel propulsion engines are not used in this mode. Auxiliary engine usage in this operating mode was considered in the analysis.
- Non-road equipment and on-site truck engine exhaust during material handling and transport.

2.2.3 Regional Cumulative Sources

In addition to the Proposed Project, the NYCDOT pedestrian ramp replacement operation would move to the Red Hook Container Terminal prior to Proposed Project construction, and the EW 1 Project's onshore substation would be constructed. Therefore, pollutant emissions, including GHG emissions, resulting from the operation of an emergency generator at the onshore substation and potential GHG emission leakages of sulfur hexafluoride from gas-insulated

switchgear installed at the onshore substation in the Study Area would have potential cumulative impacts. The EW 1 Project, including both direct and indirect emissions under construction and operations (Equinor, Empire Wind Project (EW1 and EW2) Construction and Operations Plan Appendix K, May 2022), would also have cumulative impacts on air emissions in the region.

2.3 Emissions Estimate

The air pollutants estimated consist of criteria pollutants, HAPs, and GHGs. Emissions were estimated for both the construction and operational phases of the Proposed Project. For the construction phase, emissions were estimated from end of 2023 to June 2026. For the Proposed Project's operations, emissions were estimated for two phases of operations: Operational Phase 1, during 2026 and 2027 when the proposed Project will be used for the staging and construction of the Empire Wind Projects; and Operational Phase 2, during 2028 and beyond when the Proposed Project will be used for O&M of the Empire Wind Projects as well as for staging and construction of other OSW projects.

2.3.1 Methodology

2.3.1.1 Engine Emissions

There are three categories of engine sources for which emissions were estimated:

- Commercial marine vessels (CMVs), including tugs;
- Nonroad equipment; and
- On-road trucks and commuter vehicles.

These engine emissions were quantified for the following three elements of the Proposed Project:

- Proposed Project Construction: Detailed construction activity schedule between 2023 and 2026 (see Section 3.20 (Construction) of the SBMT Environmental Analysis);
- Proposed Project's Operational Phase 1: Operational plan in terms of specific equipment model type, size, and usage and truck and commuter vehicle trips to be generated during 2026 and 2027 when the Proposed Project is being used for the Empire Wind Projects' staging and construction (see Section 3.14 (Transportation) and Section 3.15 (Air Quality) of supplemental environmental analysis to the FEAF and the operational data used for onshore facilities under the Empire Wind Projects' COP Appendix K, (May 2022); and
- Proposed Project's Operational Phase 2: From 2028 and beyond during the O&M phase of the Empire Wind Projects (see the operational data used for onshore facilities under the EW 1 and EW 2 Projects COP (May 2022), as well as the Proposed Project's use for construction and staging for other OSW projects.

During the Proposed Project construction, emissions would be generated from equipment, including excavators, loaders, cranes, commercial marine vessels, generators, impact drivers, and dump and concrete trucks, needed for the following construction operations:

- Site clearing, demolition, and excavation;
- Site fill, grading, and foundation construction;
- Material transportation;
- Material such as soil transferring among various sites within the Project Area;
- Building and structure construction; and
- Dredging and bulkhead reinforcement and replacement.

The estimates for sizes, types, operating hours, and number of units of construction engines to be used during each construction phase were based on SBMT preliminary engineering design and historical data for other similar projects. The detailed equipment bidding inputs were then distributed based on the construction schedule for the Proposed Project.

During Proposed Project's Operational Phase 1, sizes and operational hours of specific equipment, including cranes, forklifts, manlifts, and self-propelled modular transporters, were based on the onshore facility equipment inputs identified from the Empire Wind Projects' staging and construction (see Section 3.14 (Transportation) and Section 3.15 (Air Quality) of supplemental environmental analysis to the FEA and the Empire Wind Project's COP Appendix K, (Equinor, July 2021).

During Proposed Project's Operational Phase 2 under EW Projects O&M, one crane and one forklift and their annual operating hours were identified to be used at SBMT per the Empire Wind Project's COP Appendix K, (May 2022). Since the HVAC system within the O&M base would likely run on electricity, no stationary emission sources would occur in this operational phase.

Emission factors for each concerned pollutant including criteria pollutants, HAPs, and GHGs from on-site equipment engines were developed using the USEPA's "Motor Vehicle Emission Simulator" emission model (Version MOVES2014b) associated with the Kings County, New York (where the Proposed Project is located) model input parameters provided by the New York State Department of Environmental Conservation (NYSDEC) for each pollutant. The same model was also used to estimate on-site and off-site truck and commuter vehicle engine emission rates for each pollutant, including HAPs and GHGs. Marine vessel emissions were based on commercial marine vessels, including tug emission factors provided in USEPA's "Port Emissions Inventory Guidance: Methodologies for Estimating Port-Related and Goods Movement Mobile Source Emissions (April 2022),"¹ To be conservative, since project-specific engine tiers for the marine vessels were not available at the time of the analysis, the emission factors assumed the use of Tier 2 engines.

The below USEPA-recommended formula was used to calculate hourly emissions from equipment engine sources including cranes, front end loaders, forklift, SPMT, and other machines:

$$M_i = N \times HP \times LF \times EF_i$$

where:

- M_i = mass of emissions of i^{th} pollutants during inventory period;
- N = source population (units);
- HP = average rated horsepower;
- LF = typical load factor; and
- EF_i = average emissions of i^{th} pollutant per unit of use (e.g., grams per horsepower-hour) predicted by MOVES 2014b.

The annual emissions were calculated by multiplying the annual operational hours for each equipment on an annual basis with the estimated hourly emissions.

2.3.1.2 Fugitive Dust

During construction, fugitive dust emissions from construction truck travel on-site were calculated based on USEPA procedures provided in AP-42, Compilation of Air Pollutant Emissions Factors, Section 13.2.1. In order to minimize potential adverse air quality impacts from construction activities, measures would be implemented as practicable to reduce pollutant emissions in compliance with applicable regulations. These regulations, which are designed to minimize potential emissions, ensure compliance with the New York City Air Pollution Control Code regulating construction-related dust emissions. Pursuant to New York City Local Law 77, all construction diesel-powered equipment rated at 50 horsepower or more, and used on behalf of a City agency, would use ultra-low sulfur diesel (ULSD) fuel and Best Available Technology (BAT) to reduce emissions to the extent practicable, such as requiring all combustion equipment to be equipped with Tier 4 engines to minimize potential effects of construction on air quality. Dust suppression measures also would be implemented, such as:

- trucks and tugs hauling loose material would have loads securely covered prior to leaving the Project Area to minimize airborne dust; and

¹ USEPA, 2022. Port Emissions Inventory Guidance: Methodologies for Estimating Port-Related and Goods Movement Mobile Source Emissions. EPA-420-B-22-011. April 2022.

- water spray would be used for demolition, excavation and transfer of soil and debris to avoid the suspension of dust into the air.

The planned control of fugitive emissions during construction would result in reduction of PM emissions by 50 percent or greater. In addition, a Community Air Monitoring Plan (CAMP) would be implemented during subsurface work as part of the NYSDEC Brownfield Clean-up Program (BCP). Under the CAMP, particulate matter (PM) concentrations at the construction site would be monitored in real time at both downwind and upwind locations with an automated alert system. If the monitored level over a 24-hour time weighted average period exceeds the pre-set Action Level, mitigation techniques would be implemented to ensure no violation of the ambient standards would occur.

2.3.2 Estimated Emissions for All Proposed Project Phases

The estimated annualized pollutant emissions associated with engines and fugitive dust for each of three elements of the Proposed Project and the emission estimate methodologies described above are presented in **Table 2-1**.

Table 2-1 Total Projected Annual Emissions*

Year/Activity	VOC	NOx	CO	PM ₁₀	PM _{2.5}	SO ₂	HAPs	CO ₂ e
2024/Proposed Project Construction	0.7	9.1	4.1	0.6	0.5	0.1	0.1	6712.1
-On-Site Emissions	0.5	7.6	2.5	0.4	0.4	0.04	0.05	5256.5
-Off-Site Emissions from Vehicles	0.2	1.5	1.6	0.2	0.1	0.01	0.03	1455.6
2025/Proposed Project Construction	0.5	7.1	3.1	0.4	0.4	0.0	0.1	4184.0
-On-Site Emissions	0.4	6.1	1.9	0.3	0.3	0.02	0.04	3167.7
-Off-Site Emissions from Vehicles	0.1	1.0	1.2	0.1	0.1	0.01	0.02	1016.3
2026/Proposed Project Construction & Operational Phase 1	1.3	14.9	6.5	0.8	0.6	0.0	0.2	5868.7
Construction								
Year/Activity	VOC	NOx	CO	PM ₁₀	PM _{2.5}	SO ₂	HAPs	CO ₂ e
-On-Site Emissions	0.01	0.09	0.03	0.01	0.01	0.0	0.0	38.65
-Off-Site Emissions from Vehicles	0.01	0.13	0.19	0.02	0.01	0.0	0.0	129.4
Phase 1 Operation								
Year/Activity	VOC	NOx	CO	PM ₁₀	PM _{2.5}	SO ₂	HAPs	CO ₂ e
-On-Site Emissions	0.8	6.4	1.9	0.3	0.3	0.0	0.2	2990.9
-On-Site Emissions from Vessels	0.4	6.9	1.8	0.2	0.2	0.0	0.0	715.2
-Off-Site Emissions from Vehicles	0.1	1.4	2.6	0.2	0.1	0.0	0.0	1994.5
2027/Proposed Project's Operational Phase 1	1.3	14.7	6.3	0.8	0.6	0.0	0.2	5700.6
-On-Site Emissions	0.8	6.4	1.9	0.3	0.3	0.0	0.2	2990.9
-On-Site Emissions from Vessels	0.4	6.9	1.8	0.2	0.2	0.0	0.0	715.2
-Off-Site Emissions from Vehicles	0.1	1.4	2.6	0.2	0.1	0.0	0.0	1994.5
2028 and on/Proposed Project's Operational Phase 2	1.4	15.5	6.9	0.9	0.6	0.0	0.2	6380.7
-On-Site Emissions	0.9	6.8	2.0	0.3	0.3	0.0	0.2	3174.7
- On-Site Emissions from Vessels	0.4	6.9	1.8	0.2	0.2	0.0	0.0	715.2
-Off-Site Emissions from Vehicles	0.1	1.8	3.1	0.3	0.1	0.0	0.0	2490.8
GCR De Minimis Level	25	25	100	N/A	100	N/A	N/A	N/A

Notes: * Pollutants are reported in tons

Table 2-2 depicts the cumulative direct and indirect emissions with the potential to occur within the region in Kings County resulting from the Proposed Project and the EW 1 Project, including the onshore substation. The estimated air

emissions from the Proposed Project under both construction of the Proposed Project and the EW 1 Project's O&M activities would be minimal and are not expected to have a significant adverse impact on regional air quality during the operations of the EW 1 Project. Furthermore, as described in **Section 3.20.4.2** (Construction – Air Quality) of the Environmental Analysis, the pollutant concentrations from greater emissions during the Proposed Project's construction phases were predicted via dispersion modeling showing no exceedances of the NAAQS or the City's *de minimis* thresholds. Therefore, the Proposed Project would not result in adverse cumulative impacts to air quality.

Table 2-2 Direct and Indirect Cumulative Emissions in Region

Year/Activity	VOC	NOx	CO	PM ₁₀	PM _{2.5}	SO ₂	HAPs	CO _{2e}
2024/Construction	9.77	231.09	51.59	5.89	5.63	4.92	0.99	20,647.7
-On-Site Emissions	0.5	7.6	2.5	0.4	0.4	0.04	0.05	5,256.5
-Off-Site Emissions from Vehicles	0.2	1.5	1.6	0.2	0.1	0.01	0.03	1,455.6
-Empire Wind Project in Kings County ⁽¹⁾	9.07	221.99	47.49	5.29	5.13	4.87	0.91	13,935.6
2025/Construction	13.45	320.79	68.88	7.67	7.45	7.07	1.37	23,974.3
-On-Site Emissions	0.4	6.1	1.9	0.3	0.3	0.02	0.04	3,167.7
-Off-Site Emissions from Vehicles	0.1	1.0	1.2	0.1	0.1	0.01	0.02	1,016.3
- Empire Wind Project in Kings County ⁽¹⁾	12.95	313.69	65.78	7.27	7.05	7.04	1.31	19,790.3
2026/Construction & Operational Phase 1	3.39	46.39	20.34	1.78	1.64	0.48	0.46	10,574.6
Construction								
-On-Site Emissions	0.01	0.09	0.03	0.01	0.01	0.0	0.0	38.65
-Off-Site Emissions from Vehicles	0.01	0.13	0.19	0.02	0.01	0.0	0.0	129.4
Phase 1 Operation								
-On-Site Emissions	0.8	6.4	1.9	0.3	0.3	0.0	0.2	2,990.9
-On-Site Emissions from Vessels	0.4	6.9	1.8	0.2	0.2	0.0	0.0	715.2
-Off-Site Emissions from Vehicles	0.1	1.4	2.6	0.2	0.1	0.0	0.0	1,994.5
- Empire Wind Project in Kings County ⁽¹⁾	2.07	31.47	13.82	1.05	1.02	0.48	0.26	4,153.0
-Onshore Substation Switchgear ⁽²⁾	N/A	N/A	N/A	N/A	N/A	N/A	N/A	552.9
2027/ Operational Phase 1	3.42	50.34	21.29	1.79	1.66	0.56	0.45	10,510.7
-On-Site Emissions	0.8	6.4	1.9	0.3	0.3	0.0	0.2	2,990.9
-On-Site Emissions from Vessels	0.4	6.9	1.8	0.2	0.2	0.0	0.0	715.2
-Off-Site Emissions from Vehicles	0.1	1.4	2.6	0.2	0.1	0.0	0.0	1,994.5
- Empire Wind Project in Kings County ⁽¹⁾	2.12	35.64	14.99	1.09	1.06	0.56	0.25	4,257.2
-Onshore Substation Switchgear ⁽²⁾	N/A	N/A	N/A	N/A	N/A	N/A	N/A	552.9
2028 and on/Operational Phase 2	1.94	22.01	12.5	0.99	0.79	0.014	0.24	8,612.0
-On-Site Emissions	0.9	6.8	2.0	0.3	0.3	0.0	0.2	3,174.7
- On-Site Emissions from Vessels	0.4	6.9	1.8	0.2	0.2	0.0	0.0	715.2
-Off-Site Emissions from Vehicles	0.1	1.8	3.1	0.3	0.1	0.0	0.0	2,490.8
- Empire Wind Project in Kings County ⁽¹⁾	0.54	6.51	5.6	0.19	0.19	0.014	0.04	1,678.4
-Onshore Substation Switchgear ⁽²⁾	N/A	N/A	N/A	N/A	N/A	N/A	N/A	552.9

Sources:

1) Equinor, *Empire Wind Project (EW1 and EW2) Construction and Operations Plan Appendix K, May 2022.*

2) Equinor, *March 13, 2023.*

3. General Conformity Applicability Analysis

The USEPA published final rules on General Conformity (40 CFR Parts 51 and 93) in the Federal Register on November 30, 1993, and subsequently revised the rules on March 24, 2010. The rules apply to federal actions in nonattainment or maintenance areas for any of the applicable criteria pollutants. The rules specify *de minimis* emission levels by pollutant to determine the applicability of conformity requirements on a project level.

A conformity applicability analysis is the first step of a conformity evaluation and assesses if a federal action must be supported by a conformity determination. The General Conformity Rule (GCR) would apply to the Proposed Project due to the following:

- The Proposed Project has federal funding;
- Some elements of the Proposed Project, such as in-water dredging, marine improvement, etc., would require a permit from the USACE.
- The Proposed Project would take place in an area currently designated as a nonattainment area for O₃ and a maintenance area for CO and PM_{2.5}. The pollutants of concern per the GCR are CO, PM_{2.5}, and the O₃ precursors, NO_x, and VOCs.

The GCR requires that potential emissions generated by the activity associated with a federal action be determined on an annual basis and compared to the annual *de minimis* levels for those pollutants (or their precursors) for which the area is designated as nonattainment or maintenance. If estimated annual emissions are below the respective *de minimis* thresholds, potential air quality impacts are deemed to be less than significant and a formal GCR determination is not required. Because Kings County (where SBMT is located) is within the New York City metropolitan area that has been classified as a severe nonattainment area for the 2008 8-hour O₃, a moderate nonattainment area for the 2015 8-hour O₃ NAAQS, and a maintenance area for CO and PM_{2.5} NAAQS, the *de minimis* levels are 25 tons for VOCs or NO_x, and 100 tons each for CO and PM_{2.5}.

Emissions for those pollutants applicable to the GCR analysis were calculated using the methodology described above for both on-site and off-site sources, direct and indirect under both construction and operational phases. Total calendar year annual emissions as summarized were then compared to the applicable *de minimis* thresholds to determine whether a formal GCR determination is required. A breakdown of predicted estimated tons per year for nonattainment and maintenance criteria pollutants is summarized in **Table 2-1**. The predicted annual emissions associated with the Proposed Project are below the applicable *de minimis* levels. Therefore, no formal conformity determination is required under the GCR requirements for the Proposed Project.

4. Greenhouse Gas Emissions and CLCPA Consistency

4.1 Greenhouse Gas Emission Limits and Targets

The CLCPA (Chapter 106 of the Laws of 2019) and Article 75 of the Environmental Conservation Law (ECL) require NYSDEC to promulgate regulations to establish a State-wide GHG emissions limit for 2030 that is 60 percent of 1990 GHG emissions, and for 2050 that is 15 percent of 1990 GHG emissions. The CLCPA requires that CO₂e emissions be calculated based on a 20-year GWP for GHGs that are not CO₂. GHGs in addition to CO₂ associated with the operation of the Proposed Project combustion equipment include CH₄ and N₂O.

An assessment of the Proposed Project's projected GHG emissions is provided in Section 2.3.2 (Estimated Emissions for All Proposed Project Phases) as CO₂e calculated using the 20-year global warming potentials adopted in 6 New York Codes, Rules, and Regulations (NYCRR) § 496.5 (GWP20). Section 2.3.2 (Estimated Emissions for All Proposed Project Phases) provides an assessment of Proposed Project-related GHG emissions, including direct mobile source emissions, and indirect mobile source emissions associated with the construction and operational phases. The Proposed Project's indirect upstream GHG emissions from on-site electricity use, and indirect upstream emissions attributable to the extraction, transmission and use of fossils fuels imported into the State are presented below in Section 4.2.1 (Upstream Indirect Operational Emissions).

4.2 Projected Greenhouse Gas Emissions

As noted above, in the Proposed Project's Operational Phase 1 from 2026 through 2027, the Proposed Project would be used for staging operations to support the offshore construction of the Empire Wind Projects. During the Proposed Project's Operational Phase 2 beginning in 2028, the facility would support the O&M of the Empire Wind Projects and also would be used for other OSW projects' construction and staging.

GHG emissions in terms of CO₂e have been quantified for the Proposed Project are summarized as follows:

- Direct and indirect GHG emissions during construction of the Proposed Project (see **Table 2-1**).
- Direct and indirect GHG emissions from mobile sources, respectively, during the Proposed Project's Operational Phases 1 and 2 (see **Table 2-1**).
- Indirect upstream GHG emissions from on-site electricity use during the Proposed Project's Operational Phases 1 and 2 (see **Table 2-1**).
- Indirect upstream GHG emissions attributable to the Proposed Project resulting from the extraction, transmission and use of fossils fuels during Operational Phases 1 and 2 (see **Table 4-3**).

The O&M base would be fully electric with high efficiency HVAC equipment. Rooftop Air Source Heat Pumps (RTUs) would be used to provide heating and cooling for the O&M base. It should be noted that HFCs used in RTUs with potential for leakage are also subject to the CLCPA. However, the quantification of such leakage cannot be reasonably estimated at this time. The equipment maintenance plan would consider periodic inspection and testing of the refrigerants to minimize the likelihood of leakage. When the refrigerant is removed in the future, it would be removed and stored in accordance with EPA regulations. Moreover, when newer refrigerants, such as R-454B with low GWP, are available in future, replacing refrigerants with low GWP would be considered when appropriate and when such replacement can be accomplished without reducing the RTUs' cooling and heating capacities.

4.2.1 Upstream Indirect Operational Emissions

Guidance and emission factors provided by NYSDEC on the State-wide Greenhouse Gas Emissions Report website² were used to estimate the upstream emissions attributable to the Proposed Project from on-site equipment diesel fuel use. For electricity use, information was used from USEPA's eGRID2020³ compilation of electric sector data for the NYC/Westchester subregion. Use of the current eGRID data source is a conservative estimate of GHG from indirect electric use; as the Empire Wind Projects, other renewable energy sources, and regulatory initiatives which affect the

² <https://www.dec.ny.gov/energy/99223.html>, Appendix A, Table A1.

³ <https://www.epa.gov/eGRID/download-data> eGRID2020 Data File (xlsx)SRL20 tab,

electric power sector take effect, the GHG emissions associated with the electric sector are expected to decrease over time. **Table 4-1** summarizes the GHG emission factors used for upstream emissions associated with the production and transport of the fuels used by the Proposed Project combustion sources. **Table 4-2** summarizes the emission factors to estimate the GHG emissions for power use associated with SBMT.

Table 4-1 Fossil Fuel Upstream Emission Factors (lb/MMBtu)

Fuel	CO ₂	CH ₄	N ₂ O	CO ₂ e
Diesel	14,599	119	0.25	24,638

Table 4-2 Electric Power Use Upstream Emission Factors (lb/MWh)

Power	CO ₂	CH ₄	N ₂ O	CO ₂ e
Electric Power Use	816.756	0.019	0.002	817.882

Table 4-3 provides estimates of the upstream indirect GHG emissions associated with operation of the Proposed Project for both Operational Phases. The construction support and staging values are total tons over Operational Phase 1 (i.e., Empire Wind Projects’ construction and staging period from 2026 to 2027). The Operational Phase 2 values represent annual tons per year of GHG emissions from 2028 onward. Estimated diesel fuel usage was developed from on-site equipment for each phase of Proposed Project operation. Additionally, electric use for building heating, cooling, and site-wide lighting were estimated for each phase of Proposed Project construction and operation. These usages were combined with the emission factors from **Table 4-1** and **Table 4-2** to estimate the GHG emissions from the Proposed Project’s operational phases.

Table 4-3 Upstream Indirect GHG Emissions Associated with Operation of the Proposed Project

Scenario ⁽¹⁾	Component	Usage	CO ₂	CH ₄	N ₂ O	CO ₂ e
Operational Phase 1: EW Projects’ Construction Support/Staging (2026-2027) ⁽¹⁾	On-Site Equipment Diesel Fuel Use	382,927 gal	844.2	6.9	0.014	1,424.8
	Electric Power Use	14,220 MWh	5,807.3	1.4	0.014	5,815.3
	Total		6,651.5	8.2	0.029	7,240.1
Operational Phase 2: EW Projects’ O&M and other OSW Projects’ Construction Support/Staging (2028 and on) ⁽²⁾	On-Site Equipment Diesel Fuel Use	203,927 gal/yr	449.6	3.7	0.0077	758.8
	Electric Power Use	7,422 MWh/yr	3,030.8	0.7	0.0074	3,035.0
	Total		3,480.4	4.4	0.0151	3,793.8

Notes:

1) Combined total tons for the entire construction support and staging period

2) Annual tons per year for the duration of the Operational Phase 2 period

4.2.2 2030 and 2050 Projections

To assist with reducing GHG emissions in future years as per the CLCPA guidelines, emissions in the years 2030 and 2050 are included in this supplemental study. As discussed above, **Table 2-1** and **Table 4-3** present the direct and indirect GHG emissions attributable to the Proposed Project’s Operational Phase 2 for 2028 and beyond (i.e., associated with the O&M phase of the Empire Wind Projects and other OSW projects’ staging and construction). The total CO₂e emissions for the Proposed Project are summarized in **Table 4-4**.

Table 4-4 Proposed Project Operational GHGs (as CO₂e) Emissions (tons)

Component	2030	2050
Direct On-site Equipment	3,174.7	3,174.7
Direct On-site Vessels	715.2	715.2
Indirect Mobile	2,490.8	2,490.8
Indirect Upstream (Diesel & Electric Use)	3,793.8	3,793.8
Total	10,174.5	10,174.5

4.3 Consistency with Climate Leadership and Community Protection Act

The Proposed Project would help to achieve CLCPA goals of:

- 60 percent of 1990 CO₂e emissions by 2030 state-wide (§75-0107 1. A.);
- 15 percent of 1990 CO₂e emissions by 2050 state-wide (§75-0107 1. B.);
- Reducing emissions from the electric sector by displacing fossil-fuel fired electricity with renewable electricity (§75-0103 13. B.); and
- 9 GW of OSW capacity by 2035 (§75-0103 13. E.).

GHG emissions have been minimized to the maximum extent practicable for the Proposed Project, as discussed below, and would be more than compensated for by supporting the development of the Empire Wind and other OSW projects. The Proposed Project is critical in supporting the development of offshore wind and helping New York State achieve the CLCPA's mandates. The power output by the WTGs associated with the Empire Wind Projects would begin to offset the GHG emissions from the Proposed Project and would increase over time as more WTGs are constructed. This beneficial result of the Proposed Project would grow over time as the Proposed Project continues to support the development of additional OSW projects. The Proposed Project will support the development of the Empire Wind Projects' approximately 2.1 GW of OSW capacity, which is 23 percent of the CLCPA's goal of 9 GW. Moreover, according to the New York State Energy Research and Development Authority (NYSERDA) Offshore Wind Port study (April 2022), in the "Planned Alternative" scenario, which includes SBMT, "New York state would avoid more than 8.7 million tons of GHG emissions, 1,800 tons of NO_x, 780 tons of SO₂, and 180 tons of PM_{2.5} compared to a business-as-usual scenario without OSW energy."

4.4 Minimization of Potential Impacts

The Proposed Project would undertake the following steps to minimize potential direct and indirect GHG emissions from the operation of SBMT:

- The Proposed Project would minimize GHG emissions by using electric power for building heating instead of using the existing natural gas lines to the existing SBMT facility. This would minimize direct GHG emissions from burning of fossil fuels and also would be a mitigation of future indirect GHG emissions. The new HVAC system to be installed would use alternative lower Global Warming Potential (GWP) refrigerants to be consistent with the CLCPA as high-GWP refrigerants regulated by USEPA are phasing out. As stated in Section 1 (Introduction), the purpose of the Proposed Project is to enable it to serve as a staging facility and operations & maintenance (O&M) base for the offshore wind (OSW) industry. By supporting the development of OSW projects, the Proposed Project would lead to lower indirect GHG emissions over time.
- The Proposed Project's O&M base would incorporate solar panels and stringent electric efficiency standards for lighting, heating, and cooling in accordance with Local Law 97, which regulates GHG emissions from buildings larger than 25,000 square feet, and LEED green building standards. This newly designed O&M base would result in a lower GHG footprint as compared to the existing buildings at SBMT.
- Additional reductions would be achieved by supplying vessels with wayside power cables in lieu of hoteling using onboard fossil fuel-fired engines. The use of shore power would enable the ships to remain operational while loading or unloading cargo at the 35th Street and 39th Street "Piers."

- The use of diesel-powered equipment during construction of the Proposed Project would be temporary and would utilize equipment that meets up-to-date USEPA standards for diesel engines, as they are available.
- During the Proposed Project's Operational Phase 1, some equipment (crawler cranes, heavy lift forklifts, hydraulic lifts) needed by the Proposed Project to move the heaviest of the WTG components would not be readily available in non-fossil fuel-fired equipment. The Proposed Project would assess whether technologies become available which would supply the required safety carrying load capacity. Alternately, biofuels such as a biodiesel blend, may be used to reduce 100 percent fossil diesel GHG emissions.
- During the Proposed Project's Operational Phase 2, the same heavy lift equipment would remain in use from the first operational phase to support construction/staging of other OSW projects. The same assessment of alternative technologies would be carried through to assess whether non-diesel equipment is available to meet the same heavy lift demand.

The Proposed Project will be consistent with the CLCLA goals and objectives by minimizing onsite GHG emissions and by providing the support needed for OSW construction and O&M activities which will directly enable OSW companies to provide wind power needed to meet the CLCPA's goal of installed capacity and assist with achieving the CLCPA goals of reducing state-wide GHG emissions, specifically from the electric power sector.

5. Climate Change

This section evaluates the potential exposure to physical climate risks at the Proposed Project, aligning with the CLCPA, the Community Risk and Resiliency Act (CRRA), and the sea level rise projections as outlined in the NYCRR Title 6, Part 490 (6 NYCRR Part 490).

Climate change has already been affecting the public health, natural resources, and infrastructure within New York City (the City). As changes in the climate become more frequent and/or severe, it is anticipated that a variety of sectors will experience greater physical risks that result in infrastructure and environmental damage, as well as the loss of life. Physical climate risks often disproportionately impact disadvantaged communities, and the potential risks from climate change on the most vulnerable populations need to be considered.

In recent years, the City has experienced adverse impacts from both chronic and acute climate events such as increasing average annual temperatures, variable average annual precipitation patterns, sea level rise, extreme temperatures and precipitation, and extreme weather events such as tropical and extra-tropical cyclones, storm surges, flooding, and high wind events. In order to build more resilient projects, it is important to better understand the changing climate patterns influencing these events, associated risks, and potential next steps to mitigate these impacts.

5.1 Community Risk and Resiliency Act

The Community Risk and Resiliency Act (CRRA) was signed into law in 2014 and requires decisions regarding certain State permits and expenditures to consider impacts from extreme weather including storm surge, sea level rise, and flooding. The CRRA includes five major provisions:

- Official sea level rise projections;
- Consideration of future physical climate risk;
- Smart Growth Public Infrastructure Policy Act criteria;
- Guidance on natural resilience measures; and
- Model local laws concerning climate risk.

The CRRA also amends the State Smart Growth Public Infrastructure Policy Act, ECL Article 6, to add an additional smart growth criterion regarding mitigation of future climate physical risk (New York State, no date available [n.d.a.]).

Since climate hazards most relevant to offshore wind projects are effects of sea level rise and more frequent extreme precipitation on related onshore development, the Proposed Project's upgraded stormwater management system is being designed to accommodate for extreme storm events with rainfall intensity duration curves obtained from the Extreme Precipitation in New York and New England data, available at:

https://precip.eas.cornell.edu/#/data_and_products.

5.1.1 6 New York Code of Rules and Regulations Part 490

The CRRA required NYSDEC to adopt regulations establishing science-based sea-level rise projections for the State by January 1, 2016. The purpose of 6 NYCRR Part 490 is to help to ensure that sea-level rise projections are incorporated into decision-making processes in a consistent, transparent manner and will contribute to regulatory certainty. The regulation established projections of sea-level rise in three specified geographic regions (Long Island, New York City and the Lower Hudson River upstream to Kingston, and the Mid-Hudson River from Kingston upstream to the federal dam at Troy) over four different time intervals (2020s, 2050s, and 2080s, and the year 2100) (New York State, n.d.a.).

5.2 Affected Environment

This assessment of the potential physical climate risks focuses on the existing climate and projected trends for the Proposed Project for the following climate variables: temperature (average annual and extreme), precipitation (average annual and extreme), sea level rise, and other acute weather events such as tropical and extra-tropical cyclones, storm surge, flooding, and high wind events. Varying timescales are included throughout the discussion (e.g., specific year

ranges versus more vague timescales such as “mid-century”), as well as varying regions (e.g., State and City), and are reflective of the data available from each different source. Projection data was gathered for a mid-century timeframe⁴ to reflect construction and closeout periods, as well as to align with the CLCPA and specific GHG emissions reduction goals set by the state for the 2030, 2040, and 2050 milestone years.

The publications and data sources used to perform the physical climate risk analysis were derived from a comprehensive selection of the most recent publicly available climate change scientific papers, studies, and models, and include the New York City Panel on Climate Change (NPCC) 2019 assessment report (NPCC, 2019), New York State Energy Research and Development Authority (NYSERDA) ClimAID 2014 updated report (NYSERDA, 2014), the Fourth National Climate Assessment (NCA4) Northeast chapter (Dupigny-Giroux et al., 2018), and the National Oceanic and Atmospheric Administration (NOAA) State Climate Summary for the State (Frankson et al., 2022). The resources and tools reflect current best practices and respected research, analysis, and reporting of historic, present, and projected climate data. Other independently authored, peer-reviewed resources were used for more specific regional information, where available (Colle et al., 2013; Comarazamy et al., 2020; González et al., 2019; Gornitz et al., 2019; Horton et al., 2014; NHC & NOAA, n.d.; NYC Emergency Management, 2022; Rosenzweig et al., 2011; USEPA, 2021; and Zeng et al., 2019).

5.2.1 Greenhouse Gas Emission Pathways

The Intergovernmental Panel on Climate Change (IPCC) is an international body that assesses, reports, and shares climate change science and policies. The synthesis report written by the IPCC contains their most comprehensive climate change work. The most recent report is the Synthesis Report of the IPCC Fifth Assessment Report (AR5), published in 2014. The IPCC Sixth Assessment Report (AR6) is expected to be released in 2022.

The IPCC highlights four Representative Concentration Pathways (RCPs) which describe future global emission scenarios. RCPs are utilized for making projections on climate change impacts based on the likely emission scenarios that will occur. The AR5 defines four RCPs: immediate stringent mitigation to lower GHG emissions and limit global warming below 2 degrees Celsius (°C) (3.6 degrees Fahrenheit [°F]) (RCP2.6), intermediate emissions mitigation to limit to 2°C of global warming (RCP4.5), high-intermediate emissions with emissions peaking in 2060 and declining for the rest of the century (RCP6.5), and extremely high emissions consistent with no policy changes to reduce emissions (RCP8.5).

RCP4.5 & RCP8.5 emissions scenarios are typically referenced in this document, as the RCP4.5 encompasses a scenario limiting global warming to 2°C (3.6°F), as outlined in the Paris agreement, and the RCP8.5 scenario encompasses one where there are increased physical risks due to extremely high emissions.

5.2.2 Temperature

5.2.2.1 Average Annual Temperature

Average annual temperatures have been rising steadily in the State and the City since the early 1900s. The average annual temperature of the State has risen almost 2.5°F since 1900, with 2012 as the hottest year on record (Frankson et al., 2022). The City has experienced a 3.63°F cumulative rise in average annual temperatures from 1901 to 2012, more than 1°F above the State average (Horton et al., 2014). While average annual temperatures are increasing across the State, much of the increased temperatures have been observed during spring and winter, with summer temperatures experiencing only a slight increase (Frankson et al., 2022).

Average annual temperatures within the State and the City are expected to continue increasing from the baseline average annual temperature of 54.6°F observed between 1971-2000 through the next century. Average annual temperatures within the City are expected to increase by 1.5°F to 3.2°F by 2040, as compared to the baseline, under RCP4.5 and RCP8.5, respectively. By 2050, temperatures could rise by approximately 3.1°F to 6.6°F above the baseline under the RCP4.5 and RCP8.5 emissions scenarios, respectively (Horton et al., 2014). Even under the lower emission scenario, the State average annual temperatures are still expected to exceed record levels (Frankson et al., 2022).

⁴ The exact year or timeframe for “mid-century” may vary depending on the resource used, but generally includes the year 2050 or the timeframe between 2040-2060.

5.2.2.2 Extreme Heat

Extreme heat days within the State are typically defined as days with the maximum temperature exceeding 90°F, and heat waves are defined as an event with three or more consecutive days of extreme heat (González et al., 2019). Increases in average annual temperatures across the State and within the City have led to an increase in extreme heat events since the 1970s (Rosenzweig et al., 2011). As average annual temperatures continue to increase across the region, extreme heat events are also expected to increase (NPCC, 2019). Within the 2020s decade, there could be between two to 15 additional extreme heat days and up to three additional heat waves within the State under the RCP4.5 (lower) and RCP8.5 (higher) emissions scenarios, respectively. By 2050, there could be between ten to 44 additional extreme heat days and one to seven additional heat waves under the lower and higher emissions scenarios, respectively (Horton et al., 2014).

While the occurrence of extreme heat events can vary regionally across the State, more urban areas such as the City typically experience higher temperature extremes. Developed, urban areas tend to exacerbate the impacts of extreme heat due to increased areas of impervious and dark surfaces and lack of shade and tree cover. This effect of higher temperatures in urban environments than surrounding areas are referred to as “urban heat islands,” and can result in temperatures approximately 1°F to 7°F warmer during the day and 2°F to 5°F warmer during the night (USEPA, 2021).

5.2.3 Precipitation

5.2.3.1 Average Annual Precipitation

Average annual precipitation increased across the State between 1900 to 2012 by more than 0.5 inches per decade, or approximately 5.8 inches cumulatively. Over the same time period, the City observed a larger increase in precipitation of approximately 0.8 inches per decade, or 8.4 inches cumulatively (Horton et al., 2014).

Average annual precipitation within the State and the City is expected to continue rising throughout the century under both low and high emissions scenarios. When compared to the 1971 to 2020 baseline of 49.7 inches, the City precipitation is projected to rise between one percent to 13 percent by mid-century (Horton et al., 2014). A majority of this precipitation increase is expected to occur over the winter months, and projections estimate a possible ten percent to 15 percent increase in the City, and a 15 percent to 20 percent rise in the State for winter precipitation alone (Frankson et al., 2022; Horton et al., 2014).

5.2.3.2 Extreme Precipitation

Extreme precipitation in the State is commonly defined as days with one inch or more of precipitation; however, it can also be measured as two and four inches depending on the region (Horton et al., 2014). Extreme precipitation can occur throughout the year and comes from a variety of sources, such as thunderstorms, hurricanes and tropical cyclones, or snowstorms. Between 1971 to 2000, the State annually experienced an average of 13 extreme precipitation events over one inch, three extreme precipitation events over two inches and less than one extreme precipitation event over four inches (Horton et al., 2014). The average number of two-inch extreme precipitation events has risen since 1995 (Frankson et al., 2022).

Extreme precipitation events in the State are expected to rise under both RCP4.5 and RCP8.5, along with an increase in the duration of the event and intensity. Within the City specifically, one-inch extreme precipitation events could range from 13 to 17 events, while two-inch events could reach three to five occurrences by mid-century (Horton et al., 2014).

5.2.4 Sea Level Rise

The coastal regions of the State have experienced rising sea levels of approximately 13 inches since 1880, nearly double the global average sea level rise (SLR) of approximately seven inches (Frankson et al., 2022; Gornitz et al., 2019). Since 1900, decadal changes in these regions have averaged between 0.9 inches to 1.5 inches per decade, varying by region (Horton et al., 2014). The above average rate of SLR in the State is thought to be due to several factors such as thermal expansion, glacial isostatic adjustment (GIA), and gravitational responses from Antarctic ice melt (Gornitz et al., 2019). A majority of the experienced sea level rise is a result of thermal expansions of the ocean due to rising temperatures; however, ice melt is also a key factor (Horton et al., 2014). SLR can also exacerbate the intensity and frequency of tidal flooding and storm surge events.

SLR is expected to continue due to an increase in ocean thermal expansion, GIA, and ice loss in ice sheets, glaciers, and ice caps, as well as a decrease in land water storage (Horton et al., 2014). Projections indicate the potential for additional SLR of 12 to 48 inches by 2100 on a global level, with the State and the City expected to experience an above average increase in a range of 15 to 75 inches (Frankson et al., 2022; Horton et al., 2014). Projections under 6 NYCRR Part 490 indicate NYC itself could see an eight to 30 inches increase in sea levels by 2050, as compared to the 2000 to 2004 average baseline.

The design of the Proposed Project considers the effects of future SLR projections. The O&M base would be designed for SLR projections per the NYC Mayor's Office of Resiliency, Climate Resiliency Design Guidelines - Version 4.0 and the CRRRA's Flood Risk Management Guidance. A distinction is made between critical and non-critical facilities when applying a projection for SLR. A medium projection of 16 inches (or 1.33 feet) by the 2050s is applied to non-critical facilities; and a high projection of 30 inches (or 2.5 feet) by the 2050s is applied to critical facilities. Another distinction is made between critical and non-critical facilities and equipment in the required freeboard level. Per the City's Climate Resiliency Design Guidelines, the freeboard considered for non-critical facilities and equipment is 12 inches above the base flood elevation (BFE), while the freeboard for critical facilities and equipment is 24 inches above the BFE. However, as a more conservative approach, the NYS Flood Risk Management Guidance recommends 24 inches (or 2 feet) of freeboard above the projected BFE for non-critical facilities and 36 inches (or 3 feet) of freeboard above the projected BFE for critical facilities. The projected BFE for non-critical facilities combines the current BFE and the SLR medium projection. The projected BFE for critical facilities combines the current BFE and the SLR high projection.

The BFE at the Project Site is 13 feet (NAVD88). The SLR high projection for critical facilities is 2.5 feet, and the NYSDEC freeboard requirement for critical facilities is 3 feet. Therefore, the elevation of critical facilities for the Proposed Project must be a minimum of 18.5 feet. The minimum first floor elevation for critical facilities of the Proposed Project would be 21.83 feet (NAVD88). Therefore, the Proposed Project design elevation would be a minimum of 3.33 feet higher than the BFE, SLR high projection, and NYSDEC freeboard requirement for critical facilities.

The other features included in the design consideration are the non-critical facilities, which include bulkheads, wharf decks, and roadways. These structures would all remain above the Mean Higher High Water (MHHW) plus SLR under the high projection for the 2050s. These non-critical facilities would be submerged during flood events, but they would be designed to so with no damage.

5.2.5 Acute Weather Events

5.2.5.1 Hurricanes

Hurricanes are tropical cyclones (low pressure systems that develop over warm waters with organized deep convection, closed wind circulation, and a well-defined center) that occur in the Northern Hemisphere east of the Greenwich Meridian, in which the maximum sustained surface wind speed reaches 74 miles per hour (mph) or above (NOAA, n.d.a). Hurricane events are regarded as the most impactful storms experienced by coastal regions within the State, along with nor'easter storms. Hurricanes typically occur between July and October and bring extreme precipitation, wind, inland flooding, and storm surges throughout the State. Recently, the State felt the damaging impacts of Hurricanes Irene, Lee, and Sandy, which all occurred between 2011 to 2012. While tropical storms are an irregular occurrence within the inland regions of the State, Hurricane Irene resulted in a 500-year flood across the state (Horton et al., 2014).

Projected trends in hurricane occurrence throughout the State are currently inconclusive due to several factors, one being individual storm path variability. While it is currently difficult to predict how hurricanes will impact the State in the future, it is likely that these storms will increase in intensity (Horton et al., 2014).

5.2.5.2 Extratropical Cyclones

Extratropical cyclones are storms that form due to contrasts in temperature between air masses (NOAA, n.d.a; NPS, 2019). Extratropical cyclone winds can vary greatly in speed, ranging from 10 mph to hurricane force winds (NOAA, n.d.a.; NPS, 2019). Extratropical cyclones are a natural part of the State climate and typically include nor'easters, blizzards, and other low pressure systems that bring precipitation. Nor'easter storms are regarded as one of the most impactful extratropical cyclones, and can generate extreme precipitation (rain or snow), hurricane-force winds, and extreme cold (Frankson et al., 2022; Horton et al., 2014). In 2016, a nor'easter dropped more than 30 inches of snow

in parts of the City, and areas of the State have experienced over 60 inches of snow from extratropical cyclone events within the last 10 years (Frankson et al., 2022). Extreme precipitation and storm surge from nor'easters have also caused inland and coastal flooding. These storms often last longer than hurricanes, which increases the potential for flooding, wind damage, and coastal erosion (Horton et al., 2014).

Projections for the frequency of extratropical cyclones in the State and the Northeast are uncertain due to the temporal, geographic, and seasonal variability around these storms; however, the intensity of these storms is projected to increase (Dupigny-Giroux et al., 2018; Frankson et al., 2022; Gonzalez et al., 2019). While projections for the intensity and frequency of extratropical cyclones are uncertain, recent research suggests extratropical cyclone impacts could potentially move further west, causing impacts over a larger region of the State (Colle et al., 2013; Horton et al., 2014).

5.2.5.3 Storm Surge

Storm surges are defined as an excess rise of water above the predicted tide, caused by a storm (NHC & NOAA, n.d.). While a variety of storms can cause a storm surge, tropical cyclones produce the largest surges. Nor'easters are another cause of storm surge, which occur more frequently and typically cause longer lasting storm surges than tropical cyclones. Hurricane Sandy most recently had the largest storm surge impact on the City and the State out of all storms in 2012. (Horton et al., 2014).

Projections are currently uncertain about how these storms will change in the future as a result of climate change (Horton et al., 2014). Nor'easter storms moving west would cause storm surge impacts over a larger region of the State (Colle et al., 2013; Horton et al., 2014). An increase in sea-level rise will also exacerbate the magnitude of impacts and increase the area affected by storm-surge events.

5.2.5.4 Flooding

The three main causes of flooding in the State are extreme precipitation, storm surge, and snowmelt. Flooding has occurred throughout the State during all times of the year; but is most common during the spring in north and central portion of the State due to snowmelt, while southern portion of the State and urban areas have more frequent floods during summer and fall due to tropical cyclones and less permeable surfaces. However, an increase in recent tropical cyclones have caused inland flooding across the State, as well (Frankson et al., 2022; Horton et al., 2014). Historic trends indicate coastal floods across the State and within the City typically occur once every 10 years (Horton et al., 2014). Some coastal regions within the City have seen an increase in tidal flooding, reaching as much as 15 days per year twice since 2008 (Frankson et al., 2022).

Due to an expected increase in extreme precipitation and sea level rise, as well as an increase in the intensity of tropical cyclones, it is expected that flooding events will occur more frequently within the State and the City. Sea-level rise by itself could increase the average coastal flood event from once per decade to once every three years within the City. NOAA sea level rise models indicate tidal floods are projected to increase drastically within the coastal regions of the City, potentially experiencing tidal floods 50 to 170 days per year (Frankson et al., 2022). The City's coastal regions are also projected to experience an increase in the frequency 100-year floods, potentially occurring 1.5 to 4.5 times more often than current conditions by 2050, and 100-year flood heights within these regions could reach 0.7 to 2.5 feet higher by 2050 (Horton et al., 2014). These flood projections only consider sea-level rise and do not take any expected increases in extreme precipitation or tropical storms into account.

5.2.5.5 High Wind Events

While high winds can occur because of differences in air pressure systems, high wind events within the State are most typically associated with tropical cyclones, nor'easters, and thunderstorms, all of which have the potential to create extreme wind speeds (NYC Emergency Management, 2022; Zeng et al., 2019). This means that high wind events can occur throughout the entire year across the State. While tropical cyclones bring about the strongest winds, nor'easters typically have a longer duration and the ability to produce hurricane-force winds, and also occur more frequently. Existing science behind wind patterns and speed can be complex, and the scientific consensus on observed historic trends is uncertain. However, some recent studies have indicated an eight percent global decrease in wind speed between 1980 to 2010, and another study found a global increase in wind speed of 0.4 miles per hour (mph) between 2010 to 2019 (Zeng et al., 2019).

Projections indicate the potential for high wind events to become more intense by mid-century due to rising temperatures causing storms to grow stronger, but the science is uncertain and there are many variables that could affect wind speeds, patterns, and high wind events (Frankson et al., 2022; Horton et al., 2014; Rosenzweig et al., 2011). The City's maximum gusts are projected to potentially reach up to 110 mph, a 30 mph rise from the historic maximum recorded between 1973 to 2017 (Comarazamy et al., 2020).

5.3 Environmental Impacts

Projected climate change trends indicate the potential for future physical climate risks from increasing temperatures (both average annual and extreme heat events), increasing precipitation (both average annual and extreme precipitation events), sea level rise, and unpredictable frequency and increasing intensity of tropical and extra-tropical storms, as well as the associated impacts to storm surge, flooding, and high wind events as a result of these predicted climate trends. Analysis and mitigation of these risks is required by the CLCPA, the CRRRA, as well as NYSDEC regulations and guidance.

5.3.1 Future Climate Risk without Project

In the Future without Project condition, the Proposed Project would not occur. Current uses in the Project Area by the existing marine operator would continue, and the DOT function at the site would be relocated to Red Hook Container Terminal in Red Hook, Brooklyn. Adjacent to the Project Area at SBMT, the Empire Wind 1 Project's underground cables and onshore substation would be constructed and then would operate. The land uses and zoning for the Project Area would remain unchanged. The existing uses in the Project Area would remain unchanged, resulting in continued underutilization of the site. There would be no changes to GHG emissions within the Project Area and no additional physical climate risk beyond what would be experienced from current activities. See Section 1.3 (Project Description) of the SBMT Environmental Analysis for more information about the Empire Wind 1 Project.

5.3.2 Future with Project

The following sections describe the potential physical risks that may be experienced for public health and disadvantaged communities, natural resources, and public services and infrastructure within the Project Area due to current and projected climate change conditions.

5.3.2.1 Public Health & Disadvantaged Communities

5.3.2.1.1 Public Health

Health impacts from climate change vary across communities and depend on social, socioeconomic, demographic, and other societal factors, as well as community adaptation efforts and the underlying vulnerability of individuals. Climate change related impacts have already begun affecting the health and well-being of residents throughout the State and the City. In 2013, extreme temperatures caused 133 deaths within the City, and studies predict extreme heat-related deaths could increase by 50 to 100 additional deaths per million people by 2050 (Horton et al., 2014). Climate change is affecting local air quality through increases in ground ozone levels, pollen and other allergens, and increased humidity causing indoor mold growth, and instances of morbidity and mortality related to air pollution have been increasing. Wildfire smoke is another hazard affecting air quality within the State and the City. Wildfire smoke can travel thousands of miles, sending air pollution downwind. The State and the City have experienced air pollution from wildfires most recently in 2016, 2018, and 2021. (Dupingy-Giroux et al., 2018; Hung et al., 2020; Wu et al., 2018). Increased occurrences of foodborne, waterborne, and vector-borne diseases are expected due to projected increases in precipitation and temperatures (Dupingy-Giroux et al., 2018; Horton et al., 2014). Extreme weather events such as flooding, extreme precipitation, and tropical and extra-tropical cyclones pose physical injury risk as well as mental health risks, and can also shut down and limit access to key emergency services and health facilities (Dupingy-Giroux et al., 2018; Zimmerman et al., 2019).

During construction, workers exposed to the elements outdoors could be exposed to climate change-related public health impacts, such as poor air quality and extreme heat events, which could occur regardless of Proposed Project activities. The Proposed Project would not significantly contribute to any adverse impacts to public health due to climate change.

5.3.2.1.2 Disadvantaged Communities

The CLCPA seeks to ensure that disadvantaged communities are not disproportionately burdened. The CLCPA defines disadvantaged communities as “communities that bear burdens of negative public health effects, environmental pollution, impacts of climate change, and possess certain socioeconomic criteria, or comprise high-concentrations of low- and moderate- income households.” Exposure to harmful environmental pollutants can cause adverse health effects which increase community vulnerability during extreme events. Access to important infrastructure such as air conditioning and electricity during extreme heat events is often limited for disadvantaged communities (Dupingy-Giroux et al., 2018). As climate change impacts occur more frequently and with higher intensity, disadvantaged communities are expected to face greater impacts than other communities. Some of these impacts include, but are not limited to, increased damages in flooding due to low-lying housing, older infrastructure, and non-permeable surfaces; less reliable access to electricity during extreme temperatures and storms; less reliable access to public infrastructure/transit; and more extreme temperatures due to the effects of urban heat islands and less green space.

The Proposed Project overlaps with disadvantaged communities, and all surrounding census tracts (2, 18, 53, 82, 84, and 101) immediately adjacent to the Project Area are disadvantaged communities as shown in Section 3.3.5 (Environmental Justice and Disadvantaged Communities) of the Environmental Analysis. All the Census Tracts in the EJ Study Area are disadvantaged communities based on environmental burdens/climate change risk. This is primarily driven by existing land use in the area (industrial and power generation), potential for projected extreme heat risk, and existing pollution burden associated with high traffic and air quality concerns. Census tracts 2, 82, 84, and 101 are disadvantaged communities based on population characteristics/health vulnerabilities. This is primarily driven by high percentages of residents with hospital visits due to asthma, COPD, and heart attacks, without health insurance, limited English proficiency, low income, and minority status.

The estimated criteria pollutant emissions and GHG in terms of CO₂e associated with the Proposed Project are summarized in **Table 2-1** for both short-term construction activities and operational activities during staging period (Phase 1) and long-term operational Phase 2 period, respectively. Under the long-term Phase 2, the Proposed Project would minimize air pollutant emissions, including GHG emissions, by using electric power for building heating via the HVAC system and by using alternative lower-GWP refrigerants instead of using the existing natural gas lines to the existing SBMT facility.

The Environmental Justice (EJ) analysis, included in Section 3.3 (Socioeconomic Conditions and Environmental Justice), establishes that the Proposed Project would not result in any disproportionately high and adverse effects on minority and low-income populations, and would be in compliance with all applicable state regulations related to EJ. As such, the Applicant’s EJ analysis fulfills the disadvantaged communities component of the CLCPA.

5.3.2.2 Natural Resources

Natural resources within and surrounding the Project Area have already been exposed to the impacts of climate change and are expected to continue experiencing worsening impacts. The frequency of drought events within the State could double by 2050, reducing freshwater resources across the state (Dupingy-Giroux et al., 2018; González et al., 2019). Extreme precipitation events have the potential to cause flooding and an increase in soil erosion throughout the State, especially in coastal areas. These events can also increase stormwater runoff, contaminating local waterways and degrading water quality. Sea level rise is also expected to cause erosion of coastal lands while contaminating freshwater sources, wetlands, and other ecosystems (Gowda et al., 2018).

A large majority of the Project Area is built out or paved and contains minimal natural resources that are already degraded as a result of previous development and climate change. As such, the Proposed Project would not contribute to climate-related impacts on natural resources within the Project Area.

5.3.2.3 Public Infrastructure & Services

Public infrastructure and other public services already experience impacts from climate change, and climate change is expected to add stress to existing infrastructure that is already aging and near the end of its service life. High wind events can damage power lines leading to electrical outages, down trees, and cause flying debris that can disrupt transportation and telecommunication infrastructure, and cause damage to buildings, structures, and vehicles (NYC Emergency Management, 2022; Zimmerman et al., 2019). Extreme heat is projected to increase consumer demand for electricity, straining the energy grid and leading to local black or brown outs, as well as increase water demand and

deteriorate public roads and transit infrastructure. Flooding from extreme precipitation events, storm surges, and sea level rise have the potential to damage ports, cause power outages, damage public roads and halt travel, and flood public transit systems leaving them inoperable for extended periods of time. These impacts can also disrupt emergency services that are at high demand during damaging events, which can cut off communities and impact their ability to function (Zimmerman et al., 2019).

While projections for sea level rise could reach up to 30 inches by 2050, the Project Area is not expected to experience significant damage, impediments to access, or complete inundation. Error! Reference source not found. and Error! Reference source not found.⁵ show how a potential sea level rise of two feet and three feet, respectively, above mean higher high water (MHHW) may impact the Project Area. Under the lower emissions scenario, sea level rise would minimally impact the Project Area and is not expected to adversely impact Proposed Project construction and operations. Under the higher emissions scenario, there may be some flooding or mild inundation experienced on the north end of the Project Area and could result in equipment being stored in inundated areas. Although sea level rise impacts would be minimal within the Project Area, rising sea levels can also increase the potential for flooding from high tides and coastal storm events.

Figure 5-1. Project Area with 2 feet of sea level rise above current MHHW



Source: NOAA, 2022

⁵ Screenshots derived from the NOAA sea-level rise viewer, which does not have a scale or north arrow.

Figure 5-2. Project Area with 3 feet of sea level rise above current MHHW



Source: NOAA, 2022

While the Proposed Project is not expected to contribute to climate-related impacts on public infrastructure and services, infrastructure damage from extreme weather events and flooding may impact the ability of workers to reach the Project Area or disrupt shipments of materials arriving by rail and roadway. However, these impacts would indirectly occur outside of the Project Area and would not be direct Proposed Project impacts.

5.4 Measures for Future Physical Climate Risk

The potential impacts of future physical climate risks associated with the Proposed Project were considered, and measures are included in the Proposed Project design to reduce the potential impact of these risks on the Proposed Project now and into the future, as discussed below. The Proposed Project has been designed to be consistent with guidance in the CRRRA and the relevant sea-level rise projections in 6 NYCRR Part 490.

The Proposed Project would avoid and minimize future physical climate risks through planning and design. The equipment, as staged, will be designed to accommodate impacts from flooding, high wind, and other climate-related conditions such as severe storms. The O&M base and temporary facilities would be designed in compliance with New York City Building Codes (NYCBC), including the American Society of Engineers Flood Resistant Design and Construction (ASCE Standard 24). The service operating vessel (SOV) platform would be designed to be consistent with the existing pavement surface, and final elevations of the pavement surface and SOV platform would be coordinated during design development. Additionally, the geotechnical considerations for the length of spud piles for the crew transfer vessel (CTV) would account for future sea level rise and storm surge projections during design development.

The Proposed Project’s future physical climate risk was considered, consistent with 6 NYCRR Part 490, the CLCPA, and the CRRRA, and the Proposed Project design is not expected to contribute to future physical climate risks impacting public health and disadvantaged communities, natural resources, public infrastructure and services, and other private property.

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Appendix Q Data Supporting the Transportation Analyses for Operations and Construction

	Total, Means of transportation	Drove alone	2-person carpool	3-person carpool	4-or-more-person carpool	Bus or trolley bus	Streetcar, trolley car, subway, or elevated	Railroad or ferryboat	Bicycle or walked	Taxicab, motorcycle or other means	Worked at home	Auto
Census Tract 0002.00, Kings County, New York	360	135	50	0	0	15	130	0	20	4	0	185
Census Tract 0018.00, Kings County, New York	1,025	355	95	30	75	75	330	25	45	0	0	555
Census Tract 0020.00, Kings County, New York	280	145	10	15	0	10	70	0	4	20	0	170
Total	1665	635	155	45	75	100	530	25	69	24	0	910
		38%	9%	3%	5%	6%	32%	2%	4%	1%	0%	55%

Adjusted mode split

38% 9% 3% 5% 6% 32% 2% 4% 1% 55%

Auto Vehicle Occupancy

1.22

Mode	Raw	Rounded
Drive	54.7%	55%
Subway	31.8%	32%
Bus	6.0%	6%
Ferry or Railroad	1.5%	2%
Bicycle or Walk	4.1%	4%
Taxi or Motorcycle	1.4%	1%
	99.6%	100%

2-009 Occupation (25) by Means of transportation to work (11)
 Current date: 2/7/2022 12:52:43 PM (Eastern Standard Time)

WORKPLACE	Occupation 25	Means of transportation to work 11	Output	Number of Workers
Census Tract 0002.00, Kings County, New York	Construction and excavation occupations	Total, Means of transportation (11)	Estimate	360
Census Tract 0002.00, Kings County, New York	Construction and excavation occupations	Drove alone	Estimate	135
Census Tract 0002.00, Kings County, New York	Construction and excavation occupations	2-person carpool	Estimate	50
Census Tract 0002.00, Kings County, New York	Construction and excavation occupations	3-person carpool	Estimate	
Census Tract 0002.00, Kings County, New York	Construction and excavation occupations	4-or-more-person carpool	Estimate	
Census Tract 0002.00, Kings County, New York	Construction and excavation occupations	Bus or trolley bus	Estimate	15
Census Tract 0002.00, Kings County, New York	Construction and excavation occupations	Streetcar, trolley car, subway, or elevated	Estimate	130
Census Tract 0002.00, Kings County, New York	Construction and excavation occupations	Railroad or ferryboat	Estimate	
Census Tract 0002.00, Kings County, New York	Construction and excavation occupations	Bicycle or walked	Estimate	20
Census Tract 0002.00, Kings County, New York	Construction and excavation occupations	Taxicab, motorcycle or other means	Estimate	4
Census Tract 0002.00, Kings County, New York	Construction and excavation occupations	Worked at home	Estimate	
Census Tract 0018.00, Kings County, New York	Construction and excavation occupations	Total, Means of transportation (11)	Estimate	1,025
Census Tract 0018.00, Kings County, New York	Construction and excavation occupations	Drove alone	Estimate	355
Census Tract 0018.00, Kings County, New York	Construction and excavation occupations	2-person carpool	Estimate	95
Census Tract 0018.00, Kings County, New York	Construction and excavation occupations	3-person carpool	Estimate	30
Census Tract 0018.00, Kings County, New York	Construction and excavation occupations	4-or-more-person carpool	Estimate	75
Census Tract 0018.00, Kings County, New York	Construction and excavation occupations	Bus or trolley bus	Estimate	75
Census Tract 0018.00, Kings County, New York	Construction and excavation occupations	Streetcar, trolley car, subway, or elevated	Estimate	330
Census Tract 0018.00, Kings County, New York	Construction and excavation occupations	Railroad or ferryboat	Estimate	25
Census Tract 0018.00, Kings County, New York	Construction and excavation occupations	Bicycle or walked	Estimate	45
Census Tract 0018.00, Kings County, New York	Construction and excavation occupations	Taxicab, motorcycle or other means	Estimate	
Census Tract 0018.00, Kings County, New York	Construction and excavation occupations	Worked at home	Estimate	
Census Tract 0020.00, Kings County, New York	Construction and excavation occupations	Total, Means of transportation (11)	Estimate	280
Census Tract 0020.00, Kings County, New York	Construction and excavation occupations	Drove alone	Estimate	145
Census Tract 0020.00, Kings County, New York	Construction and excavation occupations	2-person carpool	Estimate	10
Census Tract 0020.00, Kings County, New York	Construction and excavation occupations	3-person carpool	Estimate	15
Census Tract 0020.00, Kings County, New York	Construction and excavation occupations	4-or-more-person carpool	Estimate	
Census Tract 0020.00, Kings County, New York	Construction and excavation occupations	Bus or trolley bus	Estimate	10
Census Tract 0020.00, Kings County, New York	Construction and excavation occupations	Streetcar, trolley car, subway, or elevated	Estimate	70
Census Tract 0020.00, Kings County, New York	Construction and excavation occupations	Railroad or ferryboat	Estimate	
Census Tract 0020.00, Kings County, New York	Construction and excavation occupations	Bicycle or walked	Estimate	4
Census Tract 0020.00, Kings County, New York	Construction and excavation occupations	Taxicab, motorcycle or other means	Estimate	20
Census Tract 0020.00, Kings County, New York	Construction and excavation occupations	Worked at home	Estimate	

Table 1
Estimated Peak Hour Person-Trip Generation Characteristics
South Brooklyn Marine Terminal
Future Build Condition

Land Use	Size	Weekday Daily Person-Trip Rate	Saturday Daily Person-Trip Rate	Temporal Distribution (%)				Estimated Person-Trips			
				Weekday AM	Weekday MD	Weekday PM	Saturday MD	Weekday AM	Weekday MD	Weekday PM	Saturday MD
Office	22,000 SF	18 trips per 1,000 sf	3.9 trips per 1,000 sf	12.4%	11.0%	10.5%	14.1%	49	44	42	12
Warehouse	35,000 SF	2.36 trips per 1,000 gsf	0.20 trips per 1,000 gsf	10.0%	9.0%	11.0%	33.0%	8	7	9	2
Terminal Operations	85 EM							26	43	26	10
TOTAL PERSON-TRIPS =								83	93	76	24

Total Increments

Office = 22,000 SF
Fast Food= 35,000 SF
Terminal Operations 85 EM

Revised 03-21-22 (EDC's comments)

Table 2
Estimated Peak Hour Vehicle-Trip Generation Characteristics
South Brooklyn Marine Terminal
Future With-Action Condition

Land Use	Size	Truck Trip Rate Weekday	Truck Trip Rate Saturday	AM	Midday	PM	Saturday	In	Out	Estimated Person-Trips				Estimated Mode Split (AM, PM, SAT)						Estimated Truck-Trips (PCES)*																						
										Estimated Mode Split (MD)				Weekday AM			Weekday MD			Weekday PM			Saturday MD																			
										Weekday AM	Weekday MD	Weekday PM	Saturday MD	Auto	Taxi	Subway/ Railroad	Bus	Walk	Total	Auto	Taxi	Subway/ Railroad	Bus	Walk	Total	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out					
Office	22,000	0.32	0.01	10%	11%	2%	11%	50%	50%	49	44	42	12	50.0%	1.0%	31.0%	5.0%	13.0%	100.0%	50.0%	1.0%	31.0%	5.0%	13.0%	100.0%	1	1	1	2	1	1	0	0	0	0	0	0	0	0	0	0	
Warehouse	35,000	0.91	0.08	9.9%	8%	7%	28%			8	7	9	2	50.0%	1.0%	31.0%	5.0%	13.0%	100.0%	50.0%	1.0%	31.0%	5.0%	13.0%	100.0%	6	4	2	5	3	2	4	3	2	2	1	1					
Terminal Operations	85	30	30	0%	13%	0%	13%	50%	50%	26	43	26	10	50.0%	1.0%	31.0%	5.0%	13.0%	100.0%	2.0%	3.0%	6.0%	6.0%	83.0%	100.0%	0	0	0	8	4	4	0	0	0	8	4	4					
TOTAL =										83	93	76	24													8	5	3	15	8	7	5	3	2	10	5	5					

* A PCE factor of 2.0 was applied to convert trucks to passenger car equivalents

For Terminal Operations, the Truck Trip Rate is the number of Daily trucks (In and Out)

Truck Trip In/Out Split From NYCDOT		
Warehouse	In	Out
AM	67%	33%
MD	57%	43%
PM	60%	40%
Sat	42%	58%

Table 2
Estimated Peak Hour Vehicle-Trip Generation Characteristics
South Brooklyn Marine Terminal
Future With-Action Condition

Land Use	Size	Truck Trip Rate Weekday	Truck Trip Rate Saturday	AM	Midday	PM	Saturday	In	Out	Estimated Car-Trips												Estimated Vehicle-Trips											
										Weekday AM			Weekday MD			Weekday PM			Saturday MD			Weekday AM			Weekday MD			Weekday PM			Saturday MD		
										Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out
Office	22,000	0.32	0.01	10%	11%	2%	11%	50%	50%	22	20	2	20	9	10	19	3	16	5	3	3	24	20	3	21	10	11	19	3	16	6	3	3
Warehouse	35,000	0.91	0.08	9.9%	8%	7%	28%			4	3	1	3	2	2	4	1	3	1	1	0	10	7	3	8	5	4	9	4	5	3	1	1
Terminal Operations	85	30	30	0%	13%	0%	13%	50%	50%	11	11	0	3	1	1	11	0	11	1	0	0	11	11	0	11	5	5	11	0	11	9	4	4
TOTAL =										37	34	3	26	13	13	34	4	30	7	4	3	45	39	6	40	20	20	39	7	32	17	8	8

* A PCE factor of 2.0 was applied to convert trucks to passenger car equivalents

For Terminal Operations, the Truck Trip Rate is the number of Daily trucks (In and Out)

Truck Trip In/Out Split From NYCDOT		
Warehouse	In	Out
AM	67%	33%
MD	57%	43%
PM	60%	40%
Sat	42%	58%

Shuttle Bus Trips (PCEs)

Weekday AM			Weekday MD			Weekday PM			Saturday MD		
Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out
3	1.5	1.5	3	1.5	1.5	3	1.5	1.5	3	1.5	1.5

1 Shuttle bus = 1.5 PCEs

This table include shuttle bus trips

Land Use	Estimated Vehicle-Trips (PCEs)											
	Weekday AM			Weekday MD			Weekday PM			Saturday MD		
	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out
Office	24	20	3	21	10	11	19	3	16	6	3	3
Warehouse	10	7	3	8	5	4	9	4	5	3	1	1
Terminal Operations	11	11	0	11	5	5	11	0	11	9	4	4
Shuttle Buses	3	2	2	3	2	2	3	2	2	3	2	2
Total	48	41	8	43	22	22	42	9	33	20	10	10

Table 3
Estimated Peak Hour Person-Trip Generation Increments: Transit and Pedestrians
South Brooklyn Marine Terminal
Future With-Action Condition

Land Use	Estimated Person-Trips				Mode Split (AM, PM, SAT)			Mode Split (MD)			Weekday AM									Weekday Midday									Weekday PM									Saturday Midday												
	Weekday AM	Weekday MD	Weekday PM	Saturday MD	Subway/Railroad	Bus	Walk	Subway/Railroad	Bus	Walk	Subway/Railroad			Bus			Walk			Subway/Railroad			Bus			Walk			Subway/Railroad			Bus			Walk															
											Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out										
	TOTAL NET NEW PERSON-TRIPS =										26	23	2	4	4	0	11	10	1	18	9	9	5	3	3	42	21	21	24	3	21	4	0	3	10	1	9	5	3	2	1	1	1	10	5	5				
Office	49	44	42	12	31.0%	5.0%	13.0%	31.0%	5.0%	13.0%	15	14	2	2	2	0	6	6	1	14	6	7	2	1	1	6	3	3	13	2	11	2	0	2	5	1	4	4	2	2	1	0	0	2	1	1				
Warehouse	8	7	9	2	31.0%	5.0%	13.0%	31.0%	5.0%	13.0%	3	2	1	0	0	0	1	1	0	2	1	1	0	0	0	1	1	0	3	1	2	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0				
Terminal Operations	26	43	26	10	31.0%	5.0%	13.0%	6.0%	6.0%	83.0%	8	8	0	1	1	0	3	3	0	3	1	1	3	1	1	35	18	18	8	0	8	1	0	1	3	0	3	1	0	0	1	0	0	8	4	4				
TOTAL =	83	93	76	24											26	23	2	4	4	0	11	10	1	18	9	9	5	3	3	42	21	21	24	3	21	4	0	3	10	1	9	5	3	2	1	1	1	10	5	5

Total AM Ped Trips = 41

Total Midday Ped Trips = 65

Total PM Ped Trips = 37

Total SAT Ped Trips = 17

Table 3
 Estimated Peak Hour Person-Trip Generation Increments: Transit and Pedestrians
 South Brooklyn Marine Terminal
 Future With-Action Condition

Land Use	Estimated Person-Trips				Mode Split (AM, PM, SAT)			Mode Split (MD)			Subway												Bus											
	Weekday AM	Weekday MD	Weekday PM	Saturday MD	Subway/Railroad	Bus	Walk	Subway/Railroad	Bus	Walk	Weekday AM			Weekday MD			Weekday PM			Saturday MD			Weekday AM			Weekday MD			Weekday PM			Saturday MD		
											Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out
Office	49	44	42	12	31.0%	5.0%	13.0%	31.0%	5.0%	13.0%	15	14	2	14	6	7	13	2	11	4	2	2	2	2	0	2	1	1	2	0	2	1	0	0
Warehouse	8	7	9	2	31.0%	5.0%	13.0%	31.0%	5.0%	13.0%	3	2	1	2	1	1	3	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Terminal Operations	26	43	26	10	31.0%	5.0%	13.0%	6.0%	6.0%	83.0%	8	8	0	3	1	1	8	0	8	1	0	0	1	1	0	3	1	1	1	0	1	1	0	0
TOTAL	83	93	76	24	TOTAL NET NEW PERSON-TRIPS =						26	23	2	18	9	9	24	3	21	5	3	2	4	4	0	5	3	3	4	0	3	1	1	1

Table 3
 Estimated Peak Hour Person-Trip Generation Increments: Transit and Pedestrians
 South Brooklyn Marine Terminal
 Future With-Action Condition

Land Use	Estimated Person-Trips				Mode Split (AM, PM, SAT)			Mode Split (MD)			Walk												Total Pedestrian Trips											
	Weekday AM	Weekday MD	Weekday PM	Saturday MD	Subway/Railroad	Bus	Walk	Subway/Railroad	Bus	Walk	Weekday AM			Weekday MD			Weekday PM			Saturday MD			Weekday AM			Weekday MD			Weekday PM			Saturday MD		
											Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out
Office	49	44	42	12	31.0%	5.0%	13.0%	31.0%	5.0%	13.0%	6	6	1	6	3	3	5	1	4	2	1	1	24	21	3	21	10	11	20	3	17	6	3	3
Warehouse	8	7	9	2	31.0%	5.0%	13.0%	31.0%	5.0%	13.0%	1	1	0	1	1	0	1	0	1	0	0	0	4	3	1	4	2	2	4	1	3	1	1	0
Terminal Operations	26	43	26	10	31.0%	5.0%	13.0%	6.0%	6.0%	83.0%	3	3	0	35	18	18	3	0	3	8	4	4	12	12	0	40	20	20	12	0	12	10	5	5
TOTAL	83	93	76	24	TOTAL NET NEW PERSON-TRIPS =						11	10	1	42	21	21	10	1	9	10	5	5	41	37	4	65	32	33	37	5	33	17	8	8

Daily Employees:	
Weekday	85
Saturday	20

Terminal Operations

Employee Arrival and Departure Distribution

Time	Weekday In%	Weekday Out%	Weekday In	Weekday Out	Saturday In%	Saturday Out%	Saturday In	Saturday Out	Trucks	
									Weekday & Saturday In	Weekday & Saturday Out
12-1 AM										
1-2 AM										
2-3 AM										
3-4 AM										
4-5 AM	20%		17		0%		0		1	1
5-6 AM	30%		26		40%		8		1	1
6-7 AM	20%		17		40%		8		0	0
7-8 AM	10%		9		20%		4		0	0
8-9 AM	10%		9		0%		0		1	1
9-10 AM	10%		9						2	2
10-11 AM									2	2
11-12 AM									2	2
12-1 PM	25%	25%	21	21	25%	25%	5	5	2	2
1-2 PM	25%	25%	21	21	25%	25%	5	5	2	2
2-3 PM									2	2
3-4 PM		20%		17		0%		0	0	0
4-5 PM		20%		17		40%		8	0	0
5-6 PM		30%		26		40%		8	0	0
6-7 PM		20%		17		20%		4	0	0
7-8 PM		10%		9		0%		0	0	0
8-9 PM		0%		0					0	0
9-10 PM		0%		0					0	0
10-11 PM										
11-12 PM										
									15	15

 Peak Hours