

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE	PAGE OF PAGES 1
2. AMENDMENT/MODIFICATION NO. 0002	3. EFFECTIVE DATE 19 August 2003	4. REQUISITION/PURCHASE REQ. NO. W25PHS-3176-0938	5. PROJECT NO. (If applicable)	
6. ISSUED BY District Engineer U.S. Army Engineer District, Philadelphia Wanamaker Building, 100 Penn Square East Philadelphia, PA 19107-3390	CODE	7. ADMINISTERED BY (If other than Item 6) U.S. Army Engineer District, Philadelphia Attention: Contracting Division, Denise DeTitta Wanamaker Building, 100 Penn Square East Philadelphia, PA 19107-3390	CODE	
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)			(√)	9A. AMENDMENT OF SOLICITATION NO. DACW61-03-R-0032
			X	9B. DATED (SEE ITEM 11) July 21, 2003
				10A. MODIFICATION OF CONTRACTS/ORDER NO.
				10B. DATED (SEE ITEM 13)
CODE	FACILITY CODE			

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers tended. is extended, is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:

(a) By completing Items 8 and 15, and returning 0 copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

SHORELINE PROTECTION, TOWNSEND INLET TO CAPE MAY INLET, CAPE MAY COUNTY, NEW JERSEY

**13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS,
IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.**

(√)	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
	D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor is not, is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

THE DATE FOR RECEIPT OF PROPOSALS IS CHANGED TO 12 NOON, LOCAL TIME, FRIDAY, AUGUST 29, 2003

SEE ADDITIONAL CHANGES ATTACHED

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)	
15B. CONTRACTOR/OFFEROR (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY _____ (Signature of Contracting Officer)	16C. DATE SIGNED

14. DESCRIPTION OF AMENDMENT (continued)

a. SF 1442 AND BIDDING SCHEDULE: Section 00010, Page 3 - Please delete page 00010-3 in its entirety and substitute the new page of the same number, annotated Amendment No. 0002, attached hereto.

b. SECTION 00800 - SPECIAL CONTRACT REQUIREMENTS:

(1) SECTION 00800 - SPECIAL CLAUSES, SC-17 INSURANCE REQUIREMENTS, first paragraph: Please delete this paragraph in its entirety and replace it with the following:

"Evidence of the following insurance shall be provided to the Contracting Officer prior to commencement of work and shall be maintained throughout the period of performance. **Contractor shall co-insure the state of New Jersey and the City of Avalon under General Liability Insurance, as noted below in paragraph (a).**"

(2) SECTION 00801, Page 5, Paragraph D, "Key Personnel and Organization," subparagraph 1.: Please delete the reference to a "Certified Industrial Hygienist."

(3) SECTION 00815 Wage Rates: Please delete this section in its entirety and substitute the new section of the same number, annotated Amendment No. 0002, attached hereto.

c. TECHNICAL SPECIFICATIONS:

(1) SECTION 01010 SUMMARY OF WORK: Please delete this section in its entirety and substitute the new section of the same number, annotated Amendment No. 0002, attached hereto.

(2) SECTION 01355 ENVIRONMENTAL PROTECTION. Please delete this section in its entirety and substitute the new section of the same number, annotated Amendment No. 0002, attached hereto.

(3) SECTION 01450 CONTRACTOR QUALITY CONTROL, Subparagraph 3.4.2 CQC System Manager: Please change the fourth sentence to read as follows:

"The CQC System Manager shall be assigned **no other duties.**"

(3) SECTION 01500 TEMPORARY CONSTRUCTION

a. Paragraph 2.3, "PROJECT AND SAFETY SIGNS": Please change the last sentence of this paragraph to read:

"The Contractor shall include "The State of New Jersey" **and the "NJDEP Bureau of Coastal Engineering"** as the project sponsors."

b. Paragraph 3.2 TEMPORARY CONSTRUCTION, subparagraph 3.2.1 General: Please insert the following after last sentence of this subparagraph:

"Wherever stone is to be stockpiled on sand, the area shall be prepared for use by placing geotextile and base material as specified herein and as shown on the contract drawings. Geotextile shall be as specified in Section 02215 GEOTEXTILE and base material shall be NJDOT I-5."

(4) SECTION 01720 SURVEY REQUIREMENTS

14. DESCRIPTION OF AMENDMENT (continued)

a. Paragraph 1.4 HYDROGRAPHIC SURVEY EQUIPMENT: Please change the first sentence of this paragraph to read as follows:

"Hydrographic Surveys will be conducted to meet USACE Performance Standards **for Navigation and Dredging Support**, as defined in the Hydrographic Surveying Manual EM 1110-2-1003."

b. Subparagraph 3.2.5.2 Overlap Between Topographic and Hydrographic Surveys: Please change this paragraph to read:

"The minimal overlap between the land and hydrographic surveys shall be **5** feet."

(5) Sections 02215 GEOTEXTILE, 02271 SEAWALL CONSTRUCTION, 02390 MARINE MATTRESSES, and 02400 STORM WATER OUTFALL PIPE EXTENSIONS: Please delete these sections in their entirety and substitute the new sections of the same numbers, annotated Amendment No. 0002, attached hereto.

d. CONTRACT DRAWINGS:

(1) Drawing Nos. 61915, 61917, 61918, 61919, 61920, 61921, 61922, 61923, 61925, 61926, 61927, 61929, 61931, and 62050 - Please delete these drawing numbers in their entirety and substitute the revised sheets, of the same Drawing Numbers, with a revision date of 18 Aug 2003, attached hereto.

(2) Please add the reference drawing depicting the borrow area.

e. Please indicate receipt of this amendment on Standard Form 1442 (SOLICITATION, OFFER, AND AWARD) as Amendment No.0002. Failure to acknowledge all amendments may be cause for rejection of the bid.

PRICE SCHEDULE
(To be attached to SF 1442)

Description	Estimated Quantity	Unit	Unit Price	Estimated Amount
1. Mobilization/Demobilization	1	JOB	LS	\$
2. Excavation and Disposal of Existing Stone	1	JOB	LS	\$
3. Excavation and Disposal of Underlying Soil	1	JOB	LS	\$
4. Toe Stone	1	JOB	LS	\$
5. Marine Mattresses	1	JOB	LS	\$
6. Underlayer Stone	1	JOB	LS	\$
7. Capstone	1	JOB	LS	\$
8. Geotextile	1	JOB	LS	\$
9. Outfall Extensions	1	JOB	LS	\$
10. Reinforcement of Bulkhead	170	LF	\$	\$
11. Concrete Fill	1	JOB	LS	\$
12. Removal of Piles	1	JOB	LS	\$
13. Replacement of Timber Cap Board	1	JOB	LS	\$

TOTAL ESTIMATED AMOUNT: \$

General Decision Number NJ030002

Superseded General Decision No. NJ020002

State: New Jersey Construction Type:

BUILDING

HEAVY HIGHWAY

County(ies):

ATLANTIC	CUMBERLAND	OCEAN
BURLINGTON	GLOUCESTER	SALEM
CAMDEN	MERCER	
CAPE MAY	MONMOUTH	

Building (excluding single family homes and apartments up to and including 4 stories), Heavy (does not include the counties of BURLINGTON, CAMDEN, GLOUCESTER, AND SALEM) Highway Construction Projects.

Modification Number	Publication Date
0	06/13/2003

COUNTY(ies):

ATLANTIC	CUMBERLAND	OCEAN
BURLINGTON	GLOUCESTER	SALEM
CAMDEN	MERCER	
CAPE MAY	MONMOUTH	

ASBE0014C 05/01/2000

Rates	Fringes
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BURLINGTON (townships of Edgewater Park, Lumberton, Sampton, Shamong, Tabernacle, Westhampton, & Willingboro), CAMDEN, & GLOUCESTER COUNTIES:

ASBESTOS WORKERS/INSULATORS

(includes the application of all insulating materials, protective coverings, coatings, and finishes to all types of mechanical systems. Also the application of firestopping material, openings and penetrations in walls, floors, ceilings, curtain walls and all lead abatement).

28.12	13.74
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 ASBE0042B 07/15/1999

Rates	Fringes
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SALEM COUNTY:

ASBESTOS WORKERS

23.99	9.89
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 ASBE0085A 06/01/1994

Rates	Fringes
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ASBESTOS WORKERS/INSULATORS

Includes the application of all insulating materials, protective coverings, coatings, and finishes to all types of mechanical systems

ZONE 1	20.20	6.35
ZONE 2	18.30	6.825

ASBESTOS WORKERS ZONE DEFINITIONS

ZONE 1: ATLANTIC, BURLINGTON (Bass River and Washington Twps.); CAPE MAY, CUMBERLAND AND OCEAN (Eaglewood, Lacy, Little Egg Harbor, Long Beach, Ocean, Stafford, Tuckerton, and Union Twps.) COUNTIES.

ZONE 2: MONMOUTH (Remainder of County)

ASBE0089G 07/01/2002		
	Rates	Fringes
BURLINGTON (includes the townships of Bordentown, Burlington, Chesterfield, Easthampton, Florence, Mansfield, Mount Holly, New Hanover, North Hanover, Pembereton, Roebling, Springfield, Wrightstown, & Woodland); MERCER COUNTY; MONMOUTH (includes the townships of Allentown, Blansingburg, Brielle, Englishtown, Farmingdale, Freehold, Howell, Manasquan, Millstone, Roosevelt, Sea Crit, South Belmar, Spring Lake Heights, Upper Freehold, Wall, & West Belmar); & OCEAN (includes the townships of Beachwood, Berkeley, Breton Woods, Brick, Cederwood Park, Dover, Gillford Park, Island Beach, Island Heights, Jackson, Lakehurst, Lakewood, Manchester, New Egypt, Ocean Gate, Pine Beach, Plumstead, South Toms River & Toms River) COUNTIES:		
ASBESTOS WORKERS/INSULATORS		
Includes the application of all insulating materials, protective coverings, coatings, and finishes to all types of mechanical systems		
	29.78	15.97

BOIL0028C 01/01/2002		
	Rates	Fringes
BOILERMAKERS	32.03	44%+4.61

BRNJ0005A 11/01/2000		
	Rates	Fringes
BRICKLAYERS, STONEMASONS, MARBLE MASONS, CEMENT MASONS, (Excludes Building Construction for Mercer County), PLASTERERS, TILE LAYERS, & TERRAZZO WORKERS		
	27.85	12.70

CARP0031B 05/01/2003		
	Rates	Fringes
MERCER COUNTY (Remainder)		
CARPENTERS & INSULATORS	31.92	13.73
MILLWRIGHTS	31.92	13.73

CARP0454B 07/01/2001		
	Rates	Fringes
DOCK BUILDERS & PILEDRIVERMEN	27.45	16.79+A

FOOTNOTE:

A. PAID HOLIDAYS: New Year's Day, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Veteran's Day, Presidential Election Day, and Thanksgiving Day; provided employee works any of the 3 days in the 5-day work week preceeding the holiday and the first work day after the holiday.

CARP0623A 05/01/2003		
	Rates	Fringes
ATLANTIC, BURLINGTON, CAMDEN, CAPE MAY, CUMBERLAND, GLOUCESTER AND SALEM COUNTIES		
CARPENTERS, INSULATORS, MILLWRIGHTS AND SOFT FLOOR LAYERS		
	31.92	13.73

CARP0781A 05/01/2003

	Rates	Fringes
MERCER COUNTY (Beginning from the present Post Office in Lawrenceville to a point Northward through the present "Radio Site" to the junction of Rosedale Road and Read's Mill Road to the junction of Pennington and Mount Rose Road to the Somerset County line, again starting at the present Post Office in Lawrenceville and Eastward to the junction of Brunswick Pike and Delaware and Raritan Canal Bridge taking the center of the Road to CLarksville then South on Providence Line Road to the Pennsylvania Railroad then East on Dutch Neck North to Grover's Mills to the Middlesex County Line)		

CARPENTERS	31.92	13.73
MILLWRIGHTS	31.92	13.73

CARP0999B 12/03/1994

	Rates	Fringes
CAMDEN, GLOUCESTER AND SALEM COUNTIES		
TERRAZZO FINISHERS	12.93	5.05

CARP0999C 12/03/1994

	Rates	Fringes
ATLANTIC AND MONMOUTH COUNTIES:		
TILE FINISHERS	8.45	13%

CARP0999D 12/03/1994

	Rates	Fringes
CAMDEN, GLOUCESTER AND SALEM COUNTIES		
TILE FINISHERS	12.72	5.05

CARP0999E 12/03/1994

	Rates	Fringes
CAMDEN, GLOUCESTER AND SALEM COUNTIES		
MARBLE FINISHERS	12.95	5.05

CARP1456G 05/01/2001

	Rates	Fringes
DIVERS		
	37.13	23.56
DIVER TENDERS		
	27.67	23.56

CARP1456H 05/01/2001

	Rates	Fringes
MERCER AND MONMOUTH COUNTIES		
DOCK BUILDERS & PILEDRIVERMEN	30.39	23.56

CARP2018A 05/01/2003

	Rates	Fringes
OCEAN COUNTY		
CARPENTERS	31.92	13.73
MILLWRIGHTS	31.92	13.73

CARP2212B 05/01/2003

	Rates	Fringes
BURLINGTON, MERCER, MONMOUTH AND OCEAN COUNTIES		
SOFT FLOOR LAYERS	31.92	13.73

CARP2250A 05/01/2003

	Rates	Fringes
MONMOUTH COUNTY		
CARPENTERS	31.92	13.73
MILLWRIGHTS	31.92	13.73

 ELEC0269D 04/01/2003

	Rates	Fringes
BURLINGTON (Area North of a line following the West and South limits of Burlington Borough from the Delaware River in a Southeasterly direction to the Burlington - Mt Holly Road, South-Southeast along this Road to and including the Town of Mount Holly, East along the Pennsylvania Railroad to and including New Lisbon and continuing along the Pennsylvania Railroad to Ocean County Line), AND MERCER COUNTIES		
LINE CONSTRUCTION (EXCEPT RAILROAD WORK):		
Linemen, Cable Splicers, Equipment Operators and Technicians	37.21	47%
Truck Drivers, Groundmen and Winch Operators	29.77	47%

 ELEC0269E 04/01/2003

	Rates	Fringes
BURLINGTON COUNTY (Area North of a line following the West and South limits of Burlington Borough from the Delaware River in a Southeasterly direction to the Burlington - Mount Holly Road, South-Southeast along this road to and including the Town of Mount Holly, East along the Pennsylvania Railroad to and including New Lisbon and continuing along the Pennsylvania Railroad to the Ocean County Line) AND MERCER COUNTIES		
ELECTRICIANS & CABLE SPLICERS	37.21	47.3%+.25

 ELEC0351A 10/01/2001

	Rates	Fringes
ATLANTIC; BURLINGTON (Edgewater park, Delanco, Delran, Cinnaminson, Moorestown, Mount Laurel, Wilingsboro, Hainesport, Lumberton, Medford, Evesham Townships; and the portion of Shamong, Tabernacle, and Woodland Townships North of the Central Railroad of New Jersey Line; and the portion of Burlington, Westhampton, Easthampton, South Hampton and Pemberton Townships South of a line starting at the Delaware River and following the Southern boundary of Burlington Borough to the Burlington - Mount Holly Road, along this road to Mount Holly around but excluding Mount Holly to the Pennsylvania Railroad along the Pennsylvania Line through, but excluding, Pemberton, through but excluding New Lisbon to the Ocean County line and that portion south of the Central Railroad of New Jersey line running through Chatsworth); CAMDEN; CAPE MAY; CUMBERLAND; GLOUCESTER; and SALEM COUNTIES:		
ELECTRICIANS & CABLE SPLICERS	32.89	51.05%+.20

 ELEC0351C 10/01/2001

	Rates	Fringes
ATLANTIC; BURLINGTON (Edgewater park, Delanco, Delran, Cinnaminson, Moorestown, Mount Laurel, Wilingsboro, Hainesport, Lumberton, Medford, Evesham Townships; and the portion of Shamong, Tabernacle, and Woodland Townships North of the Central Railroad of New Jersey Line; and the portion of Burlington, Westhampton, Easthampton, South Hampton and Pemberton Townships South of a		

line starting at the Delaware River and following the Southern boundary of Burlington Borough to the Burlington - Mount Holly Road, along this road to Mount Holly around but excluding Mount Holly to the Pennsylvania Railroad along the Pennsylvania Line through, but excluding, Pemberton, through but excluding New Lisbon to the Ocean County line and that portion south of the Central Railroad of New Jersey line running through Chatsworth); CAMDEN; CAPE MAY; CUMBERLAND; GLOUCESTER; and SALEM COUNTIES:

LINEMAN, HEAVY EQUIPMENT OPERATOR, &		
CABLE SPLICERS	32.89	52.05%
GROUNDMAN	27.95	52.05%

ELEC0400A 06/03/2002

	Rates	Fringes
MONMOUTH AND OCEAN COUNTIES		
ELECTRICIANS & CABLE SPLICERS	36.01	40.75%

ELEC0400B 06/02/1997

	Rates	Fringes
MONMOUTH AND OCEAN COUNTIES		
LINE CONSTRUCTION (Excluding Railroad construction):		
Lineman, Equipment Operator, and Cable Splicer	28.96	18.75%+5.83
Groundman	27.01	18.75%+5.83

ELEC0999A 12/03/1994

	Rates	Fringes
BURLINGTON, CAMDEN, CAPE MAY, CUMBERLAND, GLOUCESTER, MONMOUTH, OCEAN AND SALEM COUNTIES:		
LINE CONSTRUCTION (RAILROAD ONLY):		
Linemen	16.96	25%
Line Equipment Operator	16.20	25%
Groundman Winch Operator	13.07	25%
Groundman	11.06	25%
Dynamite Man	14.20	25%
Street Light Mechanic	12.97	25%
Line Equipment Mechanic	12.90	25%

ELEV0005C 06/19/2000

	Rates	Fringes
ELEVATOR MECHANICS	33.395	6.935+A

FOOTNOTE:

- A. PAID HOLIDAYS: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day
PAID VACATION: Employer contributes 4% of basic hourly rate as vacation pay credit for 5 years or more of service, and 2% for 6 months to 5 years of service.

ENGI0825B 07/01/2002

	Rates	Fringes
POWER EQUIPMENT OPERATORS:		
BUILDING CONSTRUCTION PROJECTS; HEAVY;		
HIGHWAY; ROAD; STREET AND SEWER PROJECTS:		
GROUP 1	32.87	17.15+A+B
GROUP 2	31.28	17.15+A+B
GROUP 3	29.37	17.15+A+B
GROUP 4	27.74	17.15+A+B

GROUP 5	26.03	17.15+A+B
GROUP 6	34.59	17.15+A+B

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Autograde - Combination Subgrader; base metal spreader and 7 base trimmer (CMI and similar types); autograde placer, trimmer, spreader combination (CMI and similar types); autograde slipform paver (CMI and similar types); backhoe; central power plants (all types); concrete paving machines; cranes (all types, including overhead and straddle traveling type); cranes; gantry; derricks (land or floating); drillmaster, quarrymaster (down the hole drill) rotary drill; self propelled hydraulic drill; self-powered drill; dragline; elevator graders; front end loaders (5 yds. and over); gradalls; grader; raygo; locomotive (large); mucking machines; pavement and concrete breaker, i.e.; superhammer and hoe ram; pile driver; length of boom including length of leads, shall determine premium rate applicable; roadway surface grinder; scooper (loader and shovel); shovels; tree chopper with boom; trench machines.

GROUP 2: "A" frame; backhoe (combination); boom attachment on loaders (rate based on size of bucket) not applicable to pipehook, boring and drilling machines; brush chopper; shredder and tree shredder; tree shearer; cableways; carryalls; concrete pump; concrete pumping system; pumpcrete and similar types; conveyors, 125 ft. and over; drill doctor including dust collector, maintenance); front end loaders (2 yds. but less than 5 yds.); graders (finisher); groove cutting machine (ride on type); header planer; hoists; (all types hoists, shall also include steam, gas, diesel, electric, air hydraulic, single and double drum, concrete brick shaf't caisson, snorkel roof, and/or any other similar type hoisting machines, portable or stationary, except Chicago boom type); hoists (Chicago boom type); hydraulic cranes, 10 tons and under, hydro-axle; jacks screw air hydraulic power operated unit or console type (not hand jack or pile load test type); log skidder; pans; pavers (all concrete; pumpcrete machines; squeezecrete and concrete pumping (regardless of size); scrapers; side booms; straddle carrier; ross and similar types; winch truck (hoisting).

GROUP 3: Asphalt curbing machine; asphalt plant engineer; asphalt spreader; autograder tube finisher and texturing machine (CMI and similar types); autograde curercrete machine (CMI and similar types); autograde curb trimmer and sidewalk; shoulder; slipform (CMI and similar types); bar bending machines (power); batchers; batching plant and crusher on side; belt conveyor systems; boom type skimmer machines, bridge deck finisher; bulldozers (all); car dumpers (railroad); compressor and blower type units (used independently or mounted on dual purposes trucks, on job site or in conjunction with job site in loading and unloading of concrete, cement, fly ash, instancrete, or similar type materials); compressor (2 or 3) (battery); concrete finishing machines; concrete saws and cutters (ride on type); concrete spreaders; hetzel; rexomatic and similar types; concrete vibrators, conveyors; under 125 ft.; crushing machines; ditching machine; small (ditchwitch or similar type); dope pots (mechanical with or without pump); dumpsters elevator; fireman; fork lifts (economobile; lull and similar types of equipment); front end loaders (1 yd. and over but less than 2 yds.). generators (2 OR 3) in battery; giraffe grinders; graders and

motor patrols; gunnite machines (excluding nozzle); hammer vibratory (in conjunction with generator); hoist (roof, tugger, aerial platform hoist and house cars); hoppers; hopper doors (power operated); ladders (motorized); laddervator; locomotive; dinky type; maintenance; utility man; mechanics; mixers (except paving mixers); motor patrols and graders; pavement breakers, small; self-propelled ride on type (also maintaining compressor or hydraulic unit); pavement breaker; truck mounted; pipe bending machine (power); roller; black top; scales; power; seaman pulverizing mixer; shoulder widener; silos; skimmer machines (boom type); steel cutting machine; services and maintaining tractors; tug captain; vibrating plants (used in conjunction with unloading); welder and repair mechanics, concrete cleaning/decontamination machine operator, directional boring machine, heavy equipment robotics operator/technician, master environmental maintenance technician, ultra high pressure waterjet cutting tool system operator/maintenance technician, vacuum blasting machine operator/maintenance technician.

GROUP 4: Brooms and sweepers, chippers, compressor (single), concrete spreaders (small type), conveyor loaders (not including elevator graders), engines, large diesel (1620 H.P.) and staging pump, farm tractors; fertilizing equipment (operation and maintenance) fine grade machine (small type); formline graders (small type); front loader (under 1 yd.); generator (single); grease, gas, fuel and oil supply trucks; heaters (nelson or other type including propane, natural gas or flow-type units); lights; portable generating light plants; mixers; concrete small; mulching equipment (operation and maintenance) pumps (4 inch suction and over including submersible pumps); pumps (2 or less than 4" suction and over including submersible pumps); pumps (diesel engine and hydraulic) immaterial of power road finishing machines (small type); rollers; grade; fill or stone base; seeding equipment (operation and maintenance of); sprinkler and water pump trucks steam jennies and boilers, stone spreader; tamping machines; vibrating ride-on; temporary heating plant (nelson or other type, including propane, natural gas or flow type untis); water and sprinkler trucks; welding machines (gas, diesel, and/or electric converters of Any type, single; two or three in a battery); welding systems, multiple (rectifier transformer type); wellpoint systems.

GROUP 5: Oiler.

GORUP 6: Helicopter Pilot.

FOOTNOTES:

- A. PAID HOLIDAYS: New Year's Day; Washington'd Birthday, Memorial Day; Independence Day; Labor Day, Veteran's Day, Thanksgiving Day, and Christmas Day
- B. Employee receives 20% Premium Pay for Hazardous Waste Work.

 ENGI0825C 07/01/2002

	Rates	Fringes
POWER EQUIPMENTS OPERATORS		
TANK ERECTION:		
GROUP 1	35.36	17.15+A+B
GROUP 2	34.52	17.15+A+B
GROUP 3	36.50	17.15+A+B
GROUP 4	32.43	17.15+A+B
GROUP 5	27.22	17.15+A+B

FOOTNOTES:

- A. PAID HOLIDAYS: New Year's Day; Washington's Birthday
Memorial Day; Independence Day; Labor Day; Veteran's Day,
Thanksgiving Day; and Christmas Day.
- B. Employee receives 20% premium pay for hazardous waste work.

TANK ERECTION CLASSIFICATIONS

- GROUP 1: Operating Engineers--on all Cranes, derricks, etc.
with booms including jib 140 ft. or more above the ground.
- GROUP 2: Operating Engineers--on all equipment, including
cranes derricks, etc. with booms including jib, less than 140
ft. above the ground.
- GROUP 3: Helicopters--Pilot.
- GROUP 4: Air compressors, welding machines and generators (gas,
diesel, or electrical driven equipment and sources of power from
a permanent plant, i.e., steam, compressed air, hydraulic or
other power, for the operating of any machine or automatic tools
used in the erection, alteration, repair and dismantling of
tanks and any and all "DUAL PURPOSE" trucks used on the
construction job site.
- GROUP 5: Oiler.

ENGI0825D 07/01/2002

	Rates	Fringes
POWER EQUIPMENT OPERATORS:		
[STEEL ERECTION]:		
GROUP 1	34.64	17.15+A+B
GROUP 2	34.73	17.15+A+B
GROUP 3	32.34	17.15+A+B
GROUP 4	29.78	17.15+A+B
GROUP 5	28.25	17.15+A+B
GROUP 6	26.49	17.15+A+B
GROUP 7	37.00	17.15+A+B

FOOTNOTES:

- A. PAID HOLIDAYS: New Year's Day, Washington's Birthday,
Memorial Day, Independence Day, Labor Day, Veteran's Day,
Thanksgiving Day, and Christmas Day.
- B. Employees receive 20% premium pay for hazardous waste work.

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

[STEEL ERECTION]

- GROUP 1: Cranes - (all cranes, land or floating with booms
including job 140 ft. and over, above ground); derricks-(all
derricks, land or floating with boom including jib 140 ft.
and over, above ground).
- GROUP 2: Cranes - (all cranes, land or floating with booms
including jib less than 140 ft. above ground); derricks (all
derricks, land or floating with booms including jib, less than
140 ft. above ground).
- GROUP 3: "A" frame; cherry pickers 10 tons and under; hoists;
all types hoists shall also include steam, gas, diesel,
electric, air hydraulic, single and double drum, concrete, brick
shaft caisson, or any other similar type hoisting machines,
portable or stationary, except Chicago boom type; jacks-screw
air hydraulic power operated unit console type (not hand jack or
pile load test type) side booms.
- GROUP 4: Aerial platform used hoist; compressor, 2 or 3 in
battery; elevators or house cars; conveyors and tugger hoists;
fireman; forklift; generators, 2 or 3 maintenance-utility man;

rod bending machine (power); welding machines--(gas or electric, 2 or 3 in battery, including diesels); captain power boats; tug master power boats.

GROUP 5: Compressor, single, welding machine, single, gas, electric converters of any type, diesel; welding system multiple (rectifier transformer type); generator, single.

GROUP 6: Oiler staddle carrier.

GROUP 7: Helicopter pilot.

ENGI0825E 07/01/2002

	Rates	Fringes
POWER EQUIPMENT OPERATORS:		
OILOSTATIC MAINLINES & TRANSPORTATION PIPELINES:		
GROUP 1	33.50	17.15+A+B
GROUP 2	32.85	17.15+A+B
GROUP 3	29.71	17.15+A+B
GROUP 4	28.31	17.15+A+B
GROUP 5	26.49	17.15+A+B
GROUP 6	35.43	17.15+A+B

FOOTNOTES:

A. PAID HOLIDAYS: New Year's Day; Washington's Birthday, Memorial Day; Independence Day; Labor Day; Veteran's Day, Thanksgiving Day; and Christmas Day

B. Employee receives 20% premium pay for hazardous waste work.

OILOSTATIC MAINLINES AND TRANSPORTATION PIPE LINES

CLASSIFICATIONS

GROUP 1: Backhoe; cranes (all types); draglines; front-end loaders (5 yds. and over); gradalls; scooper (loader and shovel); koehring and trench machines.

GROUP 2: "A" frame; backhoe (combination hoe loader); boring and drilling machines; ditching machine, small; ditchwitch or similar type; fork lifts; front end loaders (2 yds and over but less than 5 yds.); graders, finish (fine); hydraulic cranes, 10 tons and under (over 10 tons - crane rate applies); side booms; and winch trucks (hoisting).

GROUP 3: Backfiller; brooms and sweepers; bulldozers; compressors (2 or 3 in battery); front-end loaders (under 2 yds.); generators; giraffe grinders; graders and motor patrols; mechanic; pipe bending machine (power); tractors; water and sprinkler trucks, welder and repair mechanic.

GROUP 4: Compressor (single); dope pots (mechanical with or with out pump); dust collectors; farm tractors; pumps (4 in. suction and over); pumps (2 or less than 4 in. suction); pumps; diesel engine and hydraulic (immaterial or power); welding machines; gas or electric converters of any type, single; welding machines, gas or electric converters of any type, 2 or 3 in battery multiple welders; wellpoint systems (including installation and maintenance).

GROUP 5: Oiler, grease, gas, fuel and supply trucks and tire repair and maintenance.

GROUP 6: Helicopter-pilot.

IRON0011B 07/01/2002

	Rates	Fringes
MONMOUTH AND OCEAN COUNTIES		
IRONWORKERS:		
Structural & Ornamental	29.53	24.10

Reinforcing	27.63	24.10
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IRON0068A 07/01/2002

	Rates	Fringes
BURLINGTON (Remainder), MERCER, MONMOUTH (South half), AND OCEAN (Middle third) COUNTIES		
IRONWORKERS:		
Structural, Ornamental	27.91	22.35
Reinforcing (Concrete Rods)	25.91	22.35

IRON0350A 07/01/2002

	Rates	Fringes
ATLANTIC, CAPE MAY, CUMBERLAND (Area East of a line drawn from Delaware Bay through the town of Cedarsville and upwards to the point where the county lines of Gloucester, Cumberland, and Atlantic meet), AND OCEAN (Remainder) COUNTIES		
IRONWORKERS:		
BUILDING CONSTRUCTION:		
Structural & Precast	28.70	19.35
Reinforced Concrete	27.70	19.35
Fence and Guardrail Erector	24.85	19.35
Windows	27.70	19.35
HIGHWAY CONSTRUCTION:		
Reinforced Concrete	25.40	19.35
Structural & Precast	27.75	19.35

IRON0399A 07/01/2002

	Rates	Fringes
BURLINGTON (Southern portion up to but not including Lumberton and Chatsworth Twps.), CAMDEN, CUMBERLAND (Remainder), GLOUCESTER, AND SALEM COUNTIES		
IRONWORKERS:		
Structural, Ornamental, and Reinforcing	31.35	14.20
Hazardous work	34.35	14.20

LABO0172A 03/01/2003

	Rates	Fringes
ATLANTIC, BURLINGTON, CAMDEN, CAPE MAY, CUMBERLAND, GLOUCESTER, MERCER, OCEAN AND SALEM COUNTIES		
LABORERS:		
GROUP 1	25.30	11.80+A
GROUP 2	25.50	11.80+A
GROUP 3	25.80	11.80+A
GROUP 4	26.00	11.80+A
GROUP 5	26.25	11.80+A
GROUP 6	29.80	11.80+A
GROUP 7	28.30	11.80+A

FOOTNOTE:

A. PAID HOLIDAYS: New Year's Day, Washington's Birthday, Memorial Day, Independence Day; Labor Day, Veteran's Day, Presidential Election Day, Thanksgiving Day, and Christmas Day, provided the employee works 3 days for the same Employer within a period of ten working days consisting of five working days before and five working days after the day upon which the holiday falls or is observed.

LABORERS CLASSIFICATIONS

GROUP 1: Common laborers, landscape laborers, railroad track laborers, flagmen, salamander tenders, pitman, dumpman, waterproofing laborers, rakers and tampers on cold patch work, and wrapping and coating of all pipes.

GROUP 2: Powder carrier, magazine tender, and signalman.

GROUP 3: Sewer pipe, laser men, conduit and duct line layer, power tool operator, jack hammer, chipping hammer, pavement breaker, power buggy, concrete cutter, asphalt cutter, sheet hammer and tree cutter operators, sandblasting cutting, burning and such other power tools used to perform work usually done manually by laborers.

GROUP 4: Wagon drill operator, timberman and drill master.

GROUP 5: Finisher, manhole, catch basin or inlet builder, form setter, rammer, paver, gunite nozzleman and stonecutter.

GROUP 6: Blaster.

GROUP 7: Hazardous waste laborer.(Excludes asbestos work).

LABO0172B 03/01/2002

	Rates	Fringes
LABORERS; FREE AIR TUNNEL:		
GROUP 1	27.25	12.95+A
GROUP 2	23.85	12.95+A
GROUP 3	23.70	12.95+A
GROUP 4	23.20	12.95+A

FOOTNOTE:

A. PAID HOLIDAYS: New Year's Day, Washington's Birthday, Memorial Day; Independence Day, Labor Day, Presidential Election Day, provided the employee works 3 days for the same Employer within a period of ten working days consisting of five working days before and five working days after the day upon which the holiday falls or is observed.

LABORERS; FREE AIR TUNNEL CLASSIFICATIONS

GROUP 1: Blasterers.

GROUP 2: Skilled men (including miners, drill runners, iron men, maintenance men, conveyor men, safety miners, riggers, block layers, cement finishers, rod men, caulkers, powder carriers, all other skilled men).

GROUP 3: Semi-skilled men (including chuck tenders, track men, nippers, brakemen, derail men, cable men, hose men, grout men, gravel men, form men, bell or signal men (top or bottom), form workers and movers, concrete workers, shaft men, tunnel laborers, all other semi-skilled).

GROUP 4: All others (including powder watchmen, change house attendants, top laborers).

LABO0172C 03/01/2002

	Rates	Fringes
ATLANTIC, BURLINGTON, CAMDEN, CAPE MAY, CUMBERLAND, GLOUCESTER, MERCER, MONMOUTH, OCEAN, SALEM, AND MIDDLESEX (Southern half) COUNTIES		

LABORERS - ASPHALT CONSTRUCTION:

STREET:

Head Rakers	23.60	12.95+A
Rakers & Screed Men	23.45	12.95+A
Tampers, Smothers, Kettlemen, Painters, Shovelers and		

Roller Boys	23.20	12.95+A
PLANT:		
Scale Mixers & Burner Men	21.90	11.70+A
Feeders and Dust Men	21.65	11.70+A

FOOTNOTE:

- A. PAID HOLIDAYS: New Year's Day, Washington's Birthday, Memorial Day; Independence Day; Labor Day; Veteran's Day, Presidential Election Day, Thanksgiving Day, and Christmas Day provided The Employee works 3 days for same employer within a period of ten working days consisting of five working days before and five working days after the day upon which the holiday falls or is observed.

LABO0222A 05/01/2002

	Rates	Fringes
BURLINGTON (Twps. of Cinnaminson, Delance, Delran, East Hampton, Edgewater Park, Evesham, Hainesport, Lumberton, Medford, Moorestown, Mount Laurel, Pemberton, Shamong, South Hampton, Tabernacle, West Hampton, Willingsboro and Woodland); CAMDEN; CUMBERLAND; GLOUCESTER; AND SALEM COUNTIES		

LABORERS (BUILDING CONSTRUCTION):

CLASS A	22.95	11.77
CLASS B	22.45	11.77
CLASS C	19.16	11.77

LABORERS CLASSIFICATIONS (BUILDING CONSTRUCTION)

CLASS A: Jack Hammer, Tamper, Motorized Tampers and Compactors, Street Cleaning Machines, Scaffold Builder, Hydro, Demolition Equipment, All types of Motorized Fork Lifts Riding Motor Buggy Operator, Bobcat Operator, Mortar Man, Burners, Nozzle Man on Gunite work.

CLASS B: All laborers not listed in Class A or C.

CLASS C: Laborers doing Janitorial-type light clean up work associated with the turnover of the project to the owner All Flagman, and those manning temporary heat of all types.

LABO0415A 05/01/2002

	Rates	Fringes
ATLANTIC; BURLINGTON (Twps. of Bass River and Washington); CAPE MAY; CUMBERLAND (Twps. of Commercial, Dawne, Fairfiled, Lawrence, Maurice, and Millville); AND OCEAN (That portion up to and including Lacy Twp.) COUNTIES		

LABORERS (BUILDING CONSTRUCTION):

CLASS A	22.95	11.77
CLASS B	22.45	11.77
CLASS C	19.16	11.77

LABORERS CLASSIFICATIONS (BUILDING CONSTRUCTION)

CLASS A: Jack Hammer, Tamper, Motorized Tampers and Compactors, Street Cleaning Machines, Scaffold Builder, Hydro Demolition Equipment, all types of Motorized Fork Lifts, Riding Motor Buggy Operator, Bobcat Operator, Mortar Man, Burners, Nozzle Man on Gunite work.

CLASS B: All laborers not listed in Class A or C.

CLASS C: Laborers doing Janitorial- type light clean up work associated with the turnover of the project to the owner All flagman, and those manning temporary heat of all types.

LABO0472A 03/01/2003

	Rates	Fringes
MONMOUTH COUNTY		
LABORERS (HEAVY AND HIGHWAY CONSTRUCTION):		
GROUP 1	25.30	11.80+A
GROUP 2	25.50	11.80+A
GROUP 3	25.80	11.80+A
GROUP 4	26.00	11.80+A
GROUP 5	26.25	11.80+A
GROUP 6	29.80	11.80+A
GROUP 7a	28.30	11.80+A
Group 7b	26.30	11.80+A

LABORERS CLASSIFICATIONS (HEAVY & HIGHWAY)

GROUP 1: Common laborers, landscape laborers, railroad track laborers, flagmen, salamander tenders, pitman, dumpman, waterproofing laborers, rakers and tampers on cold patch work, and wrapping and coating of all pipes, & Asphalt Laborers.

GROUP 2: Powder carrier, magazine tender, signalman, asphalt raker, and asphalt screedman

GROUP 3: Sewer pipe, laser men, conduit and duct line layer, power tool operator, jack hammer, chipping hammer, pavement breaker, power buggy, concrete cutter, asphalt cutter, sheet hammer and tree cutter operators, sandblasting cutting, burning, power tool operator, and such other power tools used to perform work usually done manually by laborers.

GROUP 4: Wagon drill operator, timberman and drill master.

GROUP 5: Finisher, manhole, catch basin or inlet builder, form setter, rammer, paver, gunite nozzleman, and stone cutter

GROUP 6: Blaster.

Group 7a: Hazardous waste laborer required to wear level A,B, or C personal protection.

GROUP 7b: Certified laborer working a hazardous waste removal project or site at a task requiring hazardous waste related certification, but who is not working in a zone requiring level A,B, or C personal protection.

FOOTNOTE:

A. PAID HOLIDAYS: New Year's Day, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Veteran's Day, Presidential Election Day, Thanksgiving Day, and Christmas Day provided the employee works 3 days for the same employer within a period of 10 working days consisting of 5 working days before and 5 working days after the day upon which the holiday falls or is observed

LABO0595A 05/01/2002

	Rates	Fringes
BURLINGTON (Remainder), MERCER, MONMOUTH, and OCEAN (Remainder) COUNTIES:		
LABORERS (BUILDING CONSTRUCTION):		
CLASS A	22.95	11.77
CLASS B	22.45	11.77
CLASS C	19.16	11.77

LABORERS CLASSIFICATIONS (BUILDING CONSTRUCTION)

CLASS A: Jack Hammer; Tamper; Motorized Tampers and Compactors
Street Cleaning Machines; Scaffold Builder; Hydro

Demolition Equipment; All types of Motorized Fork Lifts;
Riding Motor Buggy Operator; Bob Cat Operator; Mortar
Man; Burners; Nozzle Man on gunite Work.

CLASS B: All Laborers not listed in Class A or C.

Class C Laborers doing Janitorial type light clean up
associated with the turnover of the project or part of
a project to the owner; All Flagman; and those manning
temporary heat of all types.

:

LABO1030A 04/01/2001

	Rates	Fringes
LABORERS: (The removal, abatement, enclosure and decontamination of personal protective equipment, chemical protective clothing and machinery relating to asbestos and/or toxic and hazardous waste of materials which shall include but not necessarily be limited to: the erection, moving, servicing and dismantling to all enclosures, scaffolding, barricades, and the operation of all tools and equipment normally used in the removal or abatement of asbestos and toxic and hazardous waste or materials, the labeling, bagging, cartoning, crating, or other packaging of materials for disposal; and the clean up of the work site and all other work incidental to the removal, abatement, encapsulation, enclosure, and decontamination of asbestos or toxic and hazardous waste materials; and in addition, all work tasks involved in the maintenance and operation of energy resource recover plants (co-generation plants).)		
LABORERS	21.85	10.12

PAIN0252H 05/01/2001

	Rates	Fringes
ATLANTIC, CAMDEN, CAPE MAY, CUMBERLAND, GLOUCESTER, SALEM, and parts of BURLINGTON and OCEAN (everything south of these cities in Burlington and Ocean Counties-Florence to Bustleton to Columbus to Jobstown to Pemberton to Onga Hat to Chatsworth to Whiting to Pinewald to Ocean Gate to Seaside Heights) COUNTIES: GLAZIERS		
	26.55	12.15

PAIN0711A 05/01/2000

	Rates	Fringes
ATLANTIC, BURLINGTON, CAMDEN, CAPE MAY, CUMBERLAND, GLOUCESTER, MONMOUTH, OCEAN, & SALEM COUNTIES: PAINTING, PAPERHANGING & ALLIED WORK SPRAYING, SANDBLASTING, DIPPING, POWER TOOLS (Over 115 volts) & PAPERHANGING PASTING APPARATUS WORK ON TANKS, BRIDGES, TOWERS, STACKS, & OPEN STRUCTURAL STEEL, WORK FROM CABLES & SWINGING SCAFFOLDS, EXTERIOR WORK ABOVE THREE STORIES		
	28.75	2.54+27%
	31.25	2.54+27%
REPAINT WORK & PREPARATION THEREFORE (including jobs where no major alterations are taking place but excluding bridges, stacks, elevated tanks & generating stations)		
	22.00	2.54+27%

PAIN0711H 05/01/2000

	Rates	Fringes
MERCER COUNTY		
PAINTERS:		
New Construction and		
Major Alterations	28.75	27%+2.55
Repaint Work	22.00	27%+2.55
Spraying or application of		
Hazardous or Dangerous		
Materials on Repaint Work	24.00	27%+2.55
Bridges, TV & Radio Towers,		
Structural Steel & Tanks above 3		
stories in height (30' or over),		
0 Smoke Stacks, Water Towers, Sand-		
1 Blasting, Steam Cleaning, Spraying,		
2 or application of Hazardous		
3 Materials	31.25	27%+2.55
4		
5 Paperhanging	25.60	27%+2.55
6 -----		
7		

8 PAIN0711J 08/01/1999

	Rates	Fringes
0 DRYWALL FINISHERS & TAPERS	28.25	11.23
1 -----		
2		

3 PAIN0711K 05/01/2000

	Rates	Fringes
5 MERCER, MONMOUTH and parts of BURLINGTON AND OCEAN (everything		
6 north of these cities in BURLINGTON and OCEAN COUNTIES Florence		
7 to Bustleton to Columbus to Jobstown to Pemberton to Onge		
8 Hat to Chatsworth to Whiting to Pinewald to Ocean Gate to		
9 Seaside Heights) COUNTIES:		
1		
2 GLAZIERS:	28.75	10.30
3 -----		
4		

5 PLAS0008I 05/01/2001

	Rates	Fringes
7 CAMDEN, GLOUCESTER and SALEM COUNTIES:		
8		
9 PLASTERERS	25.35	13.40
0 -----		
1		

2 PLAS0008L 11/01/2001

	Rates	Fringes
4 ATLANTIC, BURLINGTON, CAPE MAY, CUMBERLAND, MERCER, MONMOUTH &		
5 OCEAN COUNTIES:		
6		
7 PLASTERERS	28.50	13.40
8 -----		
9		

0 PLAS0699A 05/01/2002

	Rates	Fringes
2 CAMDEN, GLOUCESTER, AND SALEM COUNTIES		
3		

4	CEMENT MASONS	27.30	12.55
5	-----		
6			
7	PLUM0009I 03/01/2003		
8		Rates	Fringes
9	AIR CONDITIONING & REFRIGERATION		
0	MECHANICS	25.92	10.33
1			
2	SCOPE OF WORK:		
3	Installation of air conditioning and refrigeration equipment		
4	whose combined tonnage does not exceed 15 tons. Installation of		
5	water cooled air conditioning that does not exceed 10 tons		
6	(includes piping of compenent system and erection of water		
7	tower). Installation of air cooled air conditioning that does		
8	not exceed 15 tons. Installation of air conditioning equipment		
9	of the "Package-Unitary" rooftop type, the combined tonnage of		
0	which does not exceed 35 tons. Packaged Unitary Air Conditioning		
1	and Refreigeration Institute (ARI) as follows: "A unitary air		
2	conditioner consists of one or more cooling coil, and air moving		
3	device, a cpmpressor and condenser combination, and may include a		
4	heating function as well". Any and all related piping to the		
5	above installation will be done under the appropriate trade		
6	jurisdiction.		
7	-----		
8			
9	PLUM0009J 07/01/2001		
0		Rates	Fringes
1	BURLINGTON (from the town of Burlington City, to everything north		
2	along County Road Route 541 East also known as High Street, until		
3	it reaches the city of Mount Holly which is also Local 9		
4	territory, Madison Avenue in Mount Holly to State Road Route 38		
5			
6	East, again everything north along State Road Route 38 East		
7	until its cross over, State Road Route 206 and becomes County		
8	Road Route 530, continuing on including Pemberton Boro to south		
9	on Magnolia Road in Pemberton Township to Magnolia New Lisbon		
0	Road (Route 545), to south on Mount Holly Misery Road to State		
1	Road Route 70 East to the Ocean County Line), MERCER, MONMOUTH,		
2	AND OCEAN COUNTIES:		
3			
4	PLUMBERS & PIPEFITTERS	33.13	15.25
5	-----		
6			
7	PLUM0322A 05/01/2001		
8		Rates	Fringes
9	ATLANTIC; BURLINGTON (Ramainder) CAMDEN; CAPE MAY; CUMBERLAND;		
0	GLOUCESTER; AND SALEM COUNTIES		
1			
2	PLUMBERS/PIPEFITTERS	29.11	15.70
3	-----		
4			
5	ROOF0004A 06/01/1996		
6		Rates	Fringes
7	MONMOUTH COUNTY (Remainder), AND OCEAN (Remainder) COUNTIES		
8			
9	ROOFERS	24.22	11.75
0	-----		

1
2 ROOF0030D 05/01/2002
3
4 ATLANTIC, BURLINGTON, CAMDEN, CAPE MAY, CUMBERLAND, GLOUCESTER,
5 MERCER AND SALEM COUNTIES; and the following portions of MONMOUTH
6 AND OCEAN COUNTIES: West of a line starting from the point on
7 Route 70 where Burlington and Ocean Counties meet, Easterly along
8 Route 70 to Route 571, along Route 571 to Cassville, Easterly on
9 Route 528 to Van Hiseville, Northerly on Route 527 to Manalapan,
0 Westerly on Route 33 to the Monmouth County Line

	Rates	Fringes
1 ROOFERS:		
2 Shingle, slate and tile	19.25	6.17
3 All other work	26.00	13.05+A

4 FOOTNOTE:
5 A. PAID HOLIDAY: Election Day.

6 -----
7
8
9

0 SFNJ0669B 04/01/2003
1
2 ATLANTIC, BURLINGTON, CAPE MAY, CUMBERLAND, MERCER (Remainder),
3 MONMOUTH, OCEAN, AND SALEM (Remainder) COUNTIES

	Rates	Fringes
4 SPRINKLER FITTERS	34.30	6.10

5 -----
6
7
8 SFNJ0692C 05/01/2003

9
0 CAMDEN, GLOUCESTER, MERCER (Town of Trenton), AND SALEM (Penns
1 Grove, excluding Penns Grove Airport) COUNTIES

	Rates	Fringes
2 SPRINKLER FITTERS	37.27	11.80

3 -----
4
5
6 SHEE0019M 05/01/2003

	Rates	Fringes
7 CAMDEN, GLOUCESTER, & SALEM COUNTIES:		
8 SHEET METAL WORKER	33.18	17.90+H

9 H-Election Day is a paid holiday.
0
1
2 -----

3
4 SHEE0027B 06/01/2000
5
6 ATLANTIC, BURLINGTON, CAPE MAY, CUMBERLAND, MERCER, MONMOUTH AND
7 OCEAN COUNTIES

	Rates	Fringes
8 SHEET METAL WORKERS	31.00	15.38

9 -----
0
1
2
3
4 SUNJ1002A 12/07/1993

	Rates	Fringes
5 MERCER COUNTY		

6
7

8 CEMENT MASONS (BUILDING	19.60	8.83
9 CONSTRUCTION ONLY)		
0 -----		

1		
2 TEAM0331A 01/01/2003		
	Rates	Fringes
4 ATLANTIC AND CAPE MAY COUNTIES		
5		
6 TRUCK DRIVERS:		
7 GROUP 1	22.00	13.08+A+B
8 GROUP 2	22.15	13.08+A+B
9 GROUP 3	22.35	13.08+A+B
0 GROUP 4	22.50	13.08+A+B

1

2 FOOTNOTE:

3 A. PAID HOLIDAYS: New Year's Day; Washington's Birthday;

4 Memorial Day; Independence Day; Labor Day; Veteran's Day;

5 Presidential Election Day; Thanksgiving Day;& Christmas

6 Day; provided the employee works 3 days in the week in

7 which the holiday falls.

8

9 B. BREAVEMENT LEAVE: Any employee having a death in their

0 immediate family, which shall be parents, spouse, children

1 blood brothers or sisters, mother-in-law, and father-in-law

2 shall be given three (3) days time off with pay at the

3 time of death upon furnishing proof of said death. The

4 provision shall also apply to grandparents, when living

5 with the employee.

6

7 TRUCK DRIVERS CLASSIFICATIONS

8

9 GROUP 1: Striaight Truck Driver, Dump Truck Driver, Water Truck

0 Driver, Transit Mix Driver, Pickup Truck Driver, Tank Truck Driver

1 Track Truck Driver, Agitator Truck Driver, Concrete Mobile Unit

2 Driver, Tringer Bead Truck Driver, Ross Carrier Driver, Warehouse

3 Forklift Driver, A Frame Truck Driver, Gin Pole Truck Driver,

4 Form Truck Driver, Driver for Truck having Self Loading/Unloading

5 Attachment, & Vacuum Truck/Trailer.

6 GROUP 2: Trucks Towing Driver

7 GROUP 3: Trailer Truck Driver, Winch Truck Driver, Off Road Dump

8 Truck Driver, Fuel Truck Driver, Tractor Trailer (any trailer

9 driver), Asphalt Oil Distributor Driver, & Off Road Water Truck

0 Driver.

1 GROUP 4: Mechanics.

2 -----		
3		
4 TEAM0469D 05/01/2000		
	Rates	Fringes
6 BURLINGTON (Remainder), MERCER, MONMOUTH, AND OCEAN COUNTIES		
7		
8 TRUCK DRIVERS:		
9 GROUP 1	26.35	11.835+A
0 GROUP 2	26.40	11.835+A
1 GROUP 3	26.50	11.835+A
2 GROUP 4	26.60	11.835+A

3

4 FOOTNOTE:

5 A. Employees working or receiving pay for 80 days within a
6 year receive one week's paid vacation (48 hours); 125
7 days receive two weeks' vacation (96 hours); 145 days
8 receive 15 days (120 hours); 15 years seniority and 145
9 days receive 4 weeks vacation (160 hours).

0 PAID HOLIDAYS: New Year's Day; Washington's Birthday;
1 Memorial Day; Independence Day; Labor Day; Columbus Day;
2 Veteran's Day, General Election Day; Thanksgiving Day;
3 and Christmas Day provided the employee has been assigned
4 to work or "shapes" one day of the calendar week during
5 which the holiday falls. Employee receives \$3.00 per
6 hour premium pay for hazardous waste work.

7

8 TRUCK DRIVERS CLASSIFICATIONS

9

0 GROUP 1: Drivers on the following type vehicles: straight dumps,
1 flats, floats, pick-ups, container haulers, fuel, water
2 sprinkler, road oil, stringer, bead, hot pass, bus dumpcrete,
3 transit mixers, agitator mixer, half truck, winch truck, side-0-
4 matic, dynamite, power, x-ray, welding, skid, jeep, station
5 wagon, stringer, A-frame, all dual purpose trucks, truck with
6 mechanical tailgate, asphalt distributor, batch trucks, seeding,
7 mulching, fertilizer, air compressor trucks (in transit), parts
8 chaser, escort, scissor, Hi-lift, telescope, concrete breaker,
9 gin pole, stone, sand, asphalt distributor and spreader, nipper,
0
1 fuel trucks (drivers on fuel trucks, including handling of unit),
2 skid truck (debris container - entire unit), concrete mobile
3 trucks (entire unit), expediter (parts chaser), beltcrete trucks,
4 pumpcrete trucks, line truck, reel truck, wreckers, utility
5 trucks, tank trucks, warehousemen, warehouse partsmen, yardmen,
6 lift truck in warehouse, warehouse clerk, parts man, material
7 checkers, receivers shippers, binning men (materials cardex man);
8 drivers on the following type vehicle: broyhill coal tar epoxy
9 trucks, little-ford bituminous distributor, slurry seal truck or
0 vehicle, thiokol trackmaster pick-up (swamp cat pickup, bucket
1 loader dump truck and any rubber-tired tractor used in pulling
2 and towing farm wagons and trailers of any description, similar
3 type vehicles); off-site and on-site repair shop, team drivers,
4 vacuum or vac-all trucks (entire unit)

5

6 GROUP 2: Drivers on straight 3-axle materials; truck and floats

7

8 GROUP 3: Drivers on all euclid-type vehicles; euclids,
9 international harvesters, wabcos, caterpillar, koehring,
0 tractors, and wagons, dumpsters, straight, bottom, rear and side
1 dumps, carryalls and scrapers (not self-loading - loading over
2 the top), water sprinkler, trailers, water pulls and similar
3 types of vehicles; drivers on tractors and trailer type vehicles;
4 flat, floats, I-beam, low beds, water sprinkler, bituminous
5 transit mix, road oil, fuel bottom dump hopper, rear dump, office
6 shanty, epoxy, asphalt, agitator mixer, mulching, stringer,
7 seeding, fertilizing pole spread, bituminous distributor, water
8 pulls (entire unit) (tractor trailer), reel trailer and similar
9 types of vehicles

0

1 GROUP 4: Winch Trailer Drivers

2 -----

3

4 TEAM0676A 05/01/2002

5

6 BURLINGTON (Area West of the NJ Turnpike to the Delaware River),
7 CAMDEN, CUMBERLAND, GLOUCESTER AND SALEM COUNTIES

8

9 TRUCK DRIVERS:

	Rates	Fringes
0 GROUP 1	22.50	10.7375+A+B
1 GROUP 2	22.55	10.7375+A+B
2 GROUP 3	22.70	10.7375+A+B
3 GROUP 4	22.90	10.7375+A+B
4 GROUP 5	23.05	10.7375+A+B
5 GROUP 6	*	10.7375+A+B

6

7 FOOTNOTES:

8 A. Employee who has worked or received pay for 90 days
9 within a year prior to his anniversary date shall
0 receive 56 hours straight time vacation pay; for 3 years
1 but less than 8 years of service he will receive 100
2 hours of straight time vacation pay; 15 years or more he
3 will receive 165 hours of straight time vacation pay.

4 B. PAID HOLIDAYS: New Year's Day, Memorial Day,
5 Independence Day, Labor Day, Veteran's Day,
6
7 Presidential Election Day, Thanksgiving Day, Christmas
8 Day, and two personal holidays, Good Friday, and
9 Christmas Eve afternoon (provided employee works that
0 morning) on the condition that the employee works or is
1 available for work on at least two days in the week in
2 which the holiday occurs.

3

4 TRUCK DRIVERS CLASSIFICATIONS

5

6 GROUP 1: Warehouseman

7

8 GROUP 2: Dump truck, water truck, transit mix, pickup, tank,
9 track, agitator, concrete mobile unit, dytinger bead, tack
0 rig, ross carrier, warehouse forklift, A-frame, gin pole
1 form truck, truck having self-loading/unloading attachment,
2 straight

3

4 GROUP 3: Truckstowing

5

6 GROUP 4: Trailer winch off road dump, fuel, tractor trailer,
7 asphalt oil distributor, off road water truck

8

9 GROUP 5: Mechanics

0

1 *GROUP 6: Truck drivers, on hazardous waste removal work on a
2 state or federally designated hazardous waste site where
3 the truck driver is in direct contact with hazardous
4 materials and when personal protective equipment is
5 required for respiratory, skin and eye protection
6 the teamster shall receive \$2.25 per hour in addition to
7 the regular rate of pay including overtime pay.

8 -----

9
0 WELDERS - Receive rate prescribed for craft performing operation
1 to which welding is incidental.

2 =====

3
4 Unlisted classifications needed for work not included within
5 the scope of the classifications listed may be added after
6 award only as provided in the labor standards contract clauses
7 (29 CFR 5.5(a)(1)(ii)).

8 -----

9 In the listing above, the "SU" designation means that rates
0 listed under that identifier do not reflect collectively
1 bargained wage and fringe benefit rates. Other designations
2 indicate unions whose rates have been determined to be
3 prevailing.

4

5 WAGE DETERMINATION APPEALS PROCESS

6

7 1.) Has there been an initial decision in the matter? This can

8

9 be:

0

- 1 * an existing published wage determination
- 2 * a survey underlying a wage determination
- 3 * a Wage and Hour Division letter setting forth a
- 4 position on a wage determination matter
- 5 * a conformance (additional classification and rate)
- 6 ruling

7

8 On survey related matters, initial contact, including requests
9 for summaries of surveys, should be with the Wage and Hour
0 Regional Office for the area in which the survey was conducted
1 because those Regional Offices have responsibility for the
2 Davis-Bacon survey program. If the response from this initial
3 contact is not satisfactory, then the process described in 2.)
4 and 3.) should be followed.

5

6 With regard to any other matter not yet ripe for the formal
7 process described here, initial contact should be with the Branch
8 of Construction Wage Determinations. Write to:

9

0 Branch of Construction Wage Determinations
1 Wage and Hour Division
2 U. S. Department of Labor
3 200 Constitution Avenue, N. W.
4 Washington, D. C. 20210

5

6 2.) If the answer to the question in 1.) is yes, then an
7 interested party (those affected by the action) can request
8 review and reconsideration from the Wage and Hour Administrator
9 (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

0

1 Wage and Hour Administrator
2 U.S. Department of Labor
3 200 Constitution Avenue, N. W.
4 Washington, D. C. 20210

5

6 The request should be accompanied by a full statement of the
7 interested party's position and by any information (wage payment
8 data, project description, area practice material, etc.) that the
9 requestor considers relevant to the issue.

0

1 3.) If the decision of the Administrator is not favorable, an
2 interested party may appeal directly to the Administrative Review
3 Board (formerly the Wage Appeals Board). Write to:

4

5 Administrative Review Board
6 U. S. Department of Labor
7 200 Constitution Avenue, N. W.
8 Washington, D. C. 20210

9

0 4.) All decisions by the Administrative Review Board are final.

1

END OF GENERAL DECISION

COMPANY LEAD DREDGEMAN:		
Lead Dredgeman	27.56	6.45+a+b
TUG BOATS over 1,000 H.P. (with master or captain having license endorsed for 200 miles off shore):		
Tug Master	24.68	6.45+a+b
Tug Captain	23.69	6.45+a+b
Tug Chief Engineer	22.95	5.85+a+b
Tug Engineer	22.48	5.85+a+b
Tug Deckhand	18.13	5.85+a+b
TUG BOATS over 1,000 H.P. (without master or captain having license endorsed for 200 miles off shore):		
Tug Master	23.23	6.45+a+b
Tug Captain	22.15	5.85+a+b
Tug Engineer	22.48	5.85+a+b
Tug Deckhand	18.13	5.25+a+b
DRILL BOATS:		
Engineer	23.54	6.45+a+b
Blaster	23.81	6.45+a+b
Driller	23.55	6.45+a+b
Welder	23.30	5.85+a+b
Machinist	23.30	5.85+a+b
Tug Master	20.48	6.45+a+b
Tug Captain	19.53	5.85+a+b
Oiler	20.46	5.25+a+b
Tug Deckhand	15.97	5.25+a+b
Core Driller	18.56	5.25+a+b
DIVERS:		
Diver	40.88	6.45+a+b
Standby Diver	27.20	6.45+a+b
Tender	31.46	6.45+a+b
Standby Tender	22.61	5.85+a+b
DREDGING PIPELINE CABLE-LAYING:		
Leverman	28.18	6.45+a+b
Control Tower Operator	24.90	6.45+a+b
Rigger	18.42	5.25+a+b
Line up Operator, End Prep.	17.82	5.25+a+b
Diver	41.77	6.45+a+b
Diver Tender	25.93	6.45+a+b
ENGINEER:		
1st	24.90	6.45+a+b
2nd, 3rd & 4th	24.58	6.45+a+b
Electrician	24.48	6.45+a+b
Electro Hydro Tech.	20.14	5.85+a+b
Tug Master	26,15	6.45+a+b
Tug Captain	22.79	6.45+a+b

PREMIUMS: Additional 20% for hazardous material work

FOOTNOTES APPLICABLE TO ABOVE CRAFTS:

- a. PAID HOLIDAYS: New Year's Day, Martin Luther King Day, Memorial Day, Good Friday, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, and Christmas Day
- b. VACATION: Seven percent (7%) of the straight time rate multiplied by the total hours worked.

WELDERS - Receive rate prescribed for craft performing operation

to which welding is incidental.

=====
Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(ii)).

In the listing above, the "SU" designation means that rates listed under that identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISION

General Decision Number NJ030008

Superseded General Decision No. NJ020008

State: New Jersey Construction Type:

DREDGING

County(ies):

ATLANTIC	GLOUCESTER	OCEAN
BERGEN	HUDSON	SALEM
CAMDEN	MERCER	UNION
CAPE MAY	MIDDLESEX	
CUMBERLAND	MONMOUTH	

SELF PROPELLED HOPPER DREDGES, on the Atlantic Coast & tributary waters emptying into the Atlantic Ocean.

Modification Number Publication Date

0 06/13/2003

COUNTY(ies):

ATLANTIC	GLOUCESTER	OCEAN
BERGEN	HUDSON	SALEM
CAMDEN	MERCER	UNION
CAPE MAY	MIDDLESEX	
CUMBERLAND	MONMOUTH	

SUNJ2001A 05/24/1993

Rates

Fringes

SELF-PROPELLED HOPPER DREDGES:

Drag Tenders 8.21

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(ii)).

In the listing above, the "SU" designation means that rates listed under that identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

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3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

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U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISION

SECTION 01010

SUMMARY OF WORK

PART 1 GENERAL

1.1 SCOPE OF SECTION

This section presents a general description of the work to be accomplished under this contract.

1.2 DESCRIPTION OF WORK

The work includes construction of approximately 3000 linear feet of seawall along Townsends Inlet, in Avalon, Cape May County, New Jersey. The major items of work to be performed under this contract include, but are not limited to, the following:

- a. Removal of existing timber piles **at approximately Station 8+00.**
- b. Excavation of existing stone and underlying soils.
- c. **Reinforcing** existing timber bulkhead.
- d. Placement of toe stone.
- e. Placement of marine mattresses.
- f. Placement of underlayer stone.
- g. Placement of capstone.
- h. Filling space between new seawall and existing bulkhead with concrete.
- i. Extension of existing stormwater outfall pipes.

1.3 QUALIFICATIONS OF CONTRACTOR

The Contractor conducting the contract work shall possess a minimum of 10 years current experience in construction similar to this contract work in type and scope.

1.4 WORK CONDITIONS

1.4.1 Townsend Inlet Conditions

The Contractor shall note that the conditions in and about the work site are extremely dynamic and dangerous. The tidal currents are strong and the waves are rough. In addition, numerous commercial fishing and recreational vessels utilize the adjacent navigational channel and are present continuously. Barges and any other floating plants or vessels, utilized by the Contractor, shall be large enough to withstand the large wakes created by these large commercial and recreational vessels.

1.4.2 **Excavation for Access**

A minimum amount of excavation of the inlet, in the vicinity of the

construction, will be allowed to enable the Contractor to access the work area.

1.4.3 Inlet Bottom

The Contractor shall note that the inlet bottom in the vicinity of the work area may not be soft sand and may contain scattered stone.

1.4.4 Proximity of Work to Private Property

The location of work is in close proximity to private homes and properties. Consequently, the Contractor shall provide netting systems, a minimum of 10 feet high, to prevent damage to these properties from flying objects. Sufficient netting systems shall be erected to span the entire length of any active work area. The Contractor shall be responsible for any damage to private homes and properties adjacent to the work area that are a result of the Contractor's operations. **This netting system may be erected on the landside of the existing timber bulkhead.**

1.4.5 Protection **and Reinforcement** of Existing Bulkhead

The Contractor shall protect and ensure the stability of the existing timber bulkhead at all times while completing all contract operations. **Reinforcing** of specific areas is required as specified in Section 02271 SEAWALL CONSTRUCTION.

1.5 RESTRICTIONS ON WORK

1.5.1 Environmental Window

See Section 01355 ENVIRONMENTAL PROTECTION.

1.5.2 Work From the Water

Materials may be transported to the project site by either land-based or water-based transportation. Construction of the seawall, however, shall be accomplished from the water, i.e. the seaward side of the bulkhead. Only foot traffic shall be on the landward side of the bulkhead except in those areas, indicated on the contract drawings, available for staging materials and equipment. The Contractor shall note that the channel bottom in the vicinity of the seawall construction may not all be soft sand. The channel bottom in this area may contain scattered stone. This fact shall be considered when spudding a barge, etc. Also, the barges, etc. utilized by the Contractor shall be large enough to withstand the large wakes created by large commercial and recreational vessels.

1.5.3 Require Order of Work

The Contractor shall construct the seawall from the toe of the seawall towards the capstone crest.

1.5.4 Limitation on Excavation

Excavation of existing stone and underlying soil can not proceed more than 100 feet beyond the completed seawall (including placement of capstone).

1.5.5 Covering Marine Mattresses With Underlayer Stone

Each marine mattress shall be covered with the required layer thickness of underlayer stone the same workday as the mattress is placed.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

-- End of Section --

SECTION 02215

GEOTEXTILE

PART 1 GENERAL

1.1 SCOPE OF SECTION

The work covered by this section consists of furnishing all labor, material and equipment, and performing all operations required for furnishing, hauling, and installing geotextile in the marine mattresses and behind the seawall.

1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D 123	(1996a) Standard Terminology Relating to Textiles
ASTM D 3786	(1987) Hydraulic Bursting Strength of Knitted Goods and Nonwoven Fabrics - Diaphragm Bursting Strength Tester Method
ASTM D 4355	(1999) Deterioration of Geotextiles from Exposure to Ultraviolet Light and Water (Xenon-Arc Type Apparatus)
ASTM D 4491	(1999a) Water Permeability of Geotextiles by Permittivity
ASTM D 4533	(1991; R 1996) Trapezoid Tearing Strength of Geotextiles
ASTM D 4632	(1991; R 1997) Grab Breaking Load and Elongation of Geotextiles
ASTM D 4751	(1999a) Determining Apparent Opening Size of a Geotextile
ASTM D 4833	(2000) Index Puncture Resistance of Geotextiles, Geomembranes, and Related Products
ASTM D 4873	(2001) Identification, Storage, and Handling of Geosynthetic Rolls and Samples

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-04 Samples

Geotextile; G,DO.

If requested by the Contracting Officer, the Contractor shall provide to the Government geotextile samples for testing to determine compliance with any or all the requirements in this specification. Samples shall be submitted within 5 days of the request. All samples provided shall be from the same production lot as will be supplied for the contract, and shall be the full manufactured width by at least 1 foot. Samples submitted for testing shall be identified by manufacturers lot designation.

SD-07 Certificates

Geotextile; G,DO.

The Contractor shall furnish the Contracting Officer no less than 7 days in advance of delivery of material to the work site, in duplicate, a mill certificate or affidavit signed by a legally authorized official from the company manufacturing the geotextile. The mill certificate or affidavit shall attest that the geotextile meets the chemical, physical and manufacturing requirements stated in these specifications.

1.4 SHIPMENT, HANDLING, AND STORAGE

1.4.1 Shipment

All geotextile shall be labeled, shipped, stored, and handled in accordance with ASTM D 4873 and as specified herein. Each roll shall be wrapped in an opaque and waterproof layer of plastic during shipment and storage. The plastic wrapping shall be placed around the geotextile roll in the manufacturing facility and shall not be removed until deployment. Each roll shall be labeled with the manufacturer's name, geotextile type, lot number, roll number, and roll dimensions (length, width, gross weight). At the time of installation, the geotextile will be rejected if it has defects, rips, holes, flaws, deterioration or damage incurred during manufacture, transportation or storage. Damaged geotextile shall be repaired or replaced at no additional cost to the Government.

1.4.2 Handling

No hooks, tongs, or other sharp instruments shall be used for handling geotextile. Geotextile shall not be dragged along the ground. Any geotextile determined to be damaged as a result of poor handling shall be removed from the site and replaced, at no additional cost to the Government, by additional geotextile meeting the requirements of this specification.

1.4.3 Storage

During all periods of shipment and storage, the geotextile shall be protected from direct sunlight, ultra-violet rays, temperatures in excess 140 degrees F or less if recommended by the manufacturer, mud, dirt, dust and debris. Geotextiles shall be stored in areas where water cannot accumulate, elevated off the ground, and protected from conditions that will affect the properties or performance of the geotextile.

PART 2 PRODUCTS

2.1 GEOTEXTILE

The geotextile shall be a non-woven pervious sheet of plastic yarn as defined by ASTM D 123. Fibers used in the manufacture of the geotextile shall consist of long-chain synthetic polymer composed of at least 85 percent by weight of polyolefins, polyesters, or polyamides. Stabilizers and/or inhibitors shall be added to the base polymer if necessary to make the filaments resistant to deterioration caused by ultraviolet light and heat exposure. Reclaimed or recycled fibers or polymer shall not be added to the formulation. Geotextile shall be formed into a network such that the filaments or yarns retain dimensional stability relative to each other, including the edges. The edges of the geotextile shall be finished to prevent the outer fiber from pulling away from the geotextile. The geotextile shall be manufactured in a width not less than 12 feet and shall meet the physical requirements shown on the following page:

PHYSICAL REQUIREMENTS

PROPERTY	TEST METHOD	ACCEPTABLE TEST RESULTS
Apparent Opening Size (AOS)	ASTM D 4751	U.S. Standard Sieve Nos. 70-100
Geotextile Permittivity	ASTM D 4491	0.7 sec ⁻¹ minimum.
Geotextile Permeability (kG)	ASTM D 4491	0.3 cm/sec minimum.
Puncture Strength (Unaged Geotextile)	ASTM D 4833	90 lbs minimum.
Bursting Strength (Unaged Geotextile)	ASTM D 3786	350 psi minimum.
Trapezoidal Tearing Strength (Unaged Geotextile)	ASTM D 4533	65 pounds minimum in any principal direction.
Grab Tensile Strength (Unaged Geotextile)	ASTM D 4632	150 lbs. min. in any principal direction.
Breaking Elongation (Unaged Geotextile)	ASTM D 4632	50% minimum in any principal direction.
Ultraviolet Degradation (Unaged Geotextile)	ASTM D 4355	50% strength retained at 500 hours.
Seam Strength (Unaged Geotextile)	ASTM D 4632	300 lb

Unaged geotextile is defined as geotextile in the condition received from the manufacturer or distributor. AOS is defined as the number of the U.S.

Standard Sieve having openings closest in size to the geotextile openings. All numerical values represent minimum average roll values, i.e., any roll in a lot shall meet or exceed the minimum in the table.

PART 3 EXECUTION

3.1 SCOPE

Geotextile shall be placed in the marine mattresses (as specified in Section 02390 MARINE MATTRESSES) and behind the new seawall, as indicated on the contract drawings.

3.2 INSTALLATION OF GEOTEXTILE FOR MARINE MATTRESSES

See Section 02390 MARINE MATTRESSES for installation of geotextile inside marine mattresses.

3.3 INSTALLATION OF GEOTEXTILE BEHIND SEAWALL

3.3.1 Scope

A double layer of geotextile shall be installed behind the seawall as indicated on the contract drawings.

3.3.2 Installation

The geotextile shall be placed with the long dimension perpendicular to the bulkhead. The strips shall be placed to provide a minimum width of 2 feet of overlap for each joint. If seamed, all seams shall satisfy seam strength requirements as specified herein. The geotextile shall be extended the lengths as indicated on the contract drawings. A strip of geotextile, in the long dimension, shall be one continuous piece and there shall be no seaming of individual geotextile pieces together to create this long dimension. Where existing stormwater outfalls exit the bulkhead, the Contractor shall cut the geotextile to expose these outfalls and provide for free drainage of these outfalls.

3.4 PROTECTION OF GEOTEXTILE DURING CONTRACT OPERATIONS

The geotextile shall be protected from damage during all contract operations. Any damage to the geotextile during its installation shall be replaced by the Contractor at his own expense.

In no case shall any type of equipment be allowed on unprotected geotextile.

Failure to comply with these requirements shall require replacement of the geotextile at the Contractor's expense.

3.5 REPAIR OF DAMAGED GEOTEXTILE

The following procedure shall be performed by the Contractor when repairing damaged sections of the geotextile during or following its installation:

- a. The damaged section of the geotextile shall be cut in a rectangular or square section and removed.
- b. An undamaged piece of geotextile of the same type shall be placed under the original fabric so that its edges over-lap the

cut area a minimum of 3 feet in all directions.

Geotextile which cannot be repaired shall be replaced.

3.6 CONTRACTOR QUALITY CONTROL

The Contractor shall include in the daily quality control reports, required by Section 01450 CONTRACTOR QUALITY CONTROL, the date(s) when the geotextile was covered with stone.

3.7 MEASUREMENT AND PAYMENT

3.7.1 Geotextile Behind Seawall

The work specified in this section for placing geotextile behind the seawall will not be measured for payment. All costs in connection therewith shall be included in the contract lump sum price for Price Item No. 8. "Geotextile."

3.7.2 Geotextile in Marine Mattresses

The work specified in this section for placing geotextile in marine mattresses will not be measured for payment. All costs in connection therewith shall be considered incidental to the marine mattresses and shall be included in the contract lump sum price for Price Item No. 5. "Marine Mattresses."

-- End of Section --

SECTION 02271

SEAWALL CONSTRUCTION

PART 1 GENERAL

1.1 SUMMARY

The work covered by this section consists of furnishing all labor, materials, plant, and equipment, and performing all operations required for construction of the seawall, as specified herein and as shown on the drawings. Also included is the requirements for removing existing timber piles and **reinforcing** an existing timber bulkhead.

1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM C 127	(2001) Specific Gravity and Absorption of Coarse Aggregate
ASTM C 131	(1996) Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion in the Los Angeles Machine
ASTM C 295	(1998) Petrographic Examination of Aggregates for Concrete

ENGINEERING MANUALS (EM)

CRD-C-144	(1992) Standard Test Method for Resistance of Rock to Freezing and Thawing
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1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-05 Design Data

Stone Source and Records; G,DO.

The proposed source of each size of stone specified herein shall be submitted for approval by the Contracting Officer no less than 14 days in advance of delivery of material to the work site.

The test data specified herein for those sources shall be submitted. In the event such data is unavailable, the Contractor shall procure the services of an industry-recognized testing laboratory to perform the required acceptance tests. The results of all acceptance tests shall be furnished to the Contracting Officer at least 30 days prior to the delivery of the stone to the work site. All testing shall be entirely at the Contractor's expense.

The Government will visit the selected quarry(s) to inspect rock quality at least 7 days before any stone delivery to the work site. The Contractor shall have a truck load of each stone type dumped at the quarry.

Plant Slips; G,DO.

The Contractor shall submit to the Contracting Officer, a plant slip indicating the delivery time, plant name and address, the weight of material delivered and the size. The slip shall be signed by the inspector or other designated person at the plant, for each load of stone delivered to the work site, at the time of delivery.

The Contractor's inspector or any other designated person shall physically inspect the delivered stone, separate unsuitable stone and accept the responsibility to replace any quantity of stone rejected by the Government's Inspection Team. If any quantity of unsuitable stone is placed, the Contractor is responsible for removing it and the Contracting Officer shall withhold appropriate (partial) payment.

SD-07 Certificates

Qualifications of Contractor; G,COR.

Qualifications of contractor completing the contract work shall be provided.

Work Plan; G,DO.

The procedures proposed for the accomplishment of the work specified in this section shall be submitted for approval by the Contracting Officer prior to the commencement of the work. The procedures shall provide for safe conduct of the work, careful removal and disposition of materials and protection of property which is to remain undisturbed. The procedures shall include a detailed description of the labor, materials, equipment, and methods to be used for each operation, including, but not limited to: **excavation for access to work site including where and how much material is to be excavated**; excavation of existing stone and underlying soil; stockpiling and sizing stones proposed for reuse; method for wasting excess existing stone and underlying soil; transportation, handling, storage, placement of the marine mattresses, placement various weight classes of stone, including but not limited to, capstone, underlayer stone, and toe stone, placement of the geotextile behind the seawall, placement of the concrete fill between the new seawall and the existing bulkhead, and, **replacement of the timber cap board**. The work plan shall

include proposed procedures (and frequency) for verification that contract requirements have been satisfied (including layer thicknesses and horizontal and vertical alignment) by utilization of divers, surveys, or other methods proposed and/or required per these specifications for this purpose. Upon approval of the work plan, the Contractor shall demonstrate the use of the personnel, materials, equipment and methods described in the approved work plan during the completion of a required test section, as specified herein.

Reinforcement of Bulkhead; G,DO.

The Contractor shall describe the personnel, materials, equipment and methods proposed for reinforcing the existing timber bulkhead. Shop drawings of each reinforcement location shall be submitted depicting the method of reinforcement for each location.

1.4 COORDINATION

The Contractor shall provide 72-hour advance notification to the COR prior to commencing the construction of the test section and prior to any diving operations. This advance notification to the COR will serve to facilitate coordination with the Government's various technical and project engineers and safety personnel who will conduct staff inspections.

1.5 STOCKPILE MANAGEMENT

The Contractor shall utilize an identification method for determining the type of stone in each stockpile for use by the field personnel.

1.6 CONSTRUCTION TOLERANCES

The finished surface shall not deviate from the lines and grades shown by more than the tolerances listed below. Tolerances are measured perpendicular to the indicated neatlines. Extreme limits of the tolerances given shall not be continuous in any direction for more than five (5) times the nominal stone dimension nor for an area greater than 200 square feet of the structure surface.

NEATLINE TOLERANCES

	ABOVE NEATLINE feet	BELOW NEATLINE feet
Capstone	1	0
Marine Mattresses	.5	.5

The intention is that the work shall be built generally to the required elevations, slope and grade and that the outer surfaces shall be even and present a neat appearance. Placed material not meeting these limits shall be removed or reworked as directed by the Contracting Officer. Payment will not be made for excess material which the Contracting Officer permits to remain in place.

1.7 SAFETY

A lifesaving skiff shall be manned and immediately available during all contract operations.

1.8 BORING LOGS

Boring logs for the contract are provided on the drawings.

PART 2 PRODUCTS

2.1 EXISTING STONE

Existing stone may be utilized (in combination with new stone) to construct the seawall. The Contractor shall utilize certified scales to determine if existing individual stones are acceptable for reuse in the project per the required gradations indicated below for new stone. The COR may disapprove any existing stones that do not appear to meet the quality requirements for new stone, specified herein.

2.2 NEW STONE

2.2.1 Quality

The stone shall be sound, durable and of suitable quality to ensure performance in the work and in the climate in which it is to be used. Stone shall be free from cracks, blast fractures, bedding, seams and other defects that would tend to increase its deterioration from natural causes or cause it to break apart due to the stresses caused by handling and placing operations. The stone shall be blocky and angular quarried material, with the least dimension not less than one-third the greatest dimension. Flat slabs, boulders, and parts of boulders will not be acceptable. The stone shall be clean and adequately free from all foreign matter. Any foreign material adhering to or combined with the stone as a result of stockpiling shall be removed prior to placement.

2.2.2 Testing

The following tests will be used by the Government to determine the acceptability of the stone selected by the Contractor.

PROPERTY	TEST METHOD	ACCEPTABLE TEST RESULTS
Petrographic	ASTM C 295	Fresh, interlocking, crystalline, with few vugs, no clay minerals and no soluble minerals.
Specific Gravity and Absorption	ASTM C 127	Minimum Unit Weight (dry) of 165 pounds per cubic foot. Absorption less than 1%.
Abrasion Resistance	ASTM C 131	Less than 20% loss for 500 revolutions.
Freezing/Thawing	CRD-C-144	Less than 10% loss for 12 cycles.

Additional testing shall be required if results from the tests, specified above, are close to the limits of acceptability. In the event test reports

are not available, as in the case of newly operated sources, the Contractor shall perform such tests as are necessary to determine the acceptability of the stone for use in the work.

2.2.3 Acceptance

Approval of a source of stone is not to be construed as approval of all material from that source. The right is reserved to reject materials from certain localized areas, zones, strata, or channels, when such materials are unsuitable for use as determined by the Contracting Officer. The Contracting Officer also reserves the right to reject individual units of produced specified materials in stockpiles at the quarry, all transfer points, and at the project construction site when such materials are determined to be unsuitable. During the contract period, both prior to and after materials are delivered to the job site, visual inspections and measurements of the stone materials may be performed by the Contracting Officer. If the Contracting Officer, during the inspections, finds that the stone quality, gradation or weights of stone being furnished are not as specified or are questionable, re-sampling and re-testing by the Contractor shall be required. Sampling of the delivered stone for testing and the manner in which the testing is to be performed shall be as directed by the Contracting Officer. This additional sampling and testing shall be performed at the Contractor's expense when test results indicate that the materials do not meet specified requirements. When test results indicate that materials meet specified requirements, an equitable adjustment in the contract price will be made for the sampling and testing. Any material rejected shall be removed or disposed of as specified and at the Contractor's expense.

2.2.4 Weight Classification of Stone

The stone shall be consist of weight classes per the following:

Description	Maximum Weight (W_{100})	Average Weight (W_{50})	Minimum Weight (W_0)
Capstone A	10 Tons	8 Tons	6 Tons
Capstone B	6.25 Tons	5 Tons	3.75 Tons
Underlayer	1430 Pounds	1000 Pounds	700 Pounds
Toe Stone A	5 Tons	4 Tons	3 Tons
Toe Stone B	1.25 Tons	1 Ton	.75 Tons

See drawings for locations of the various weight classes in the structure.

PART 3 EXECUTION

3.1 REMOVAL OF EXISTING TIMBER PILES

The Contractor shall remove the timber piles in the **location indicated on the contract drawings (approximately Station 8+00)**. **The piles shall be removed to a minimum elevation of one foot below the required subgrade for the new seawall in that particular location.**

3.2 REMOVAL OF EXISTING CONCRETE

Existing concrete rubble and slush concrete on the crest shall be removed and disposed of offsite at the Contractor's expense. **Concrete shall be removed from any stone proposed for reuse.**

3.3 TEST SECTION

The Contractor shall initially construct a **100** linear foot test section of the seawall construction at a location with a full-depth cross-section (i.e. not immediately adjacent to groins). The test section shall include excavation and construction of the complete cross-section in accordance with the Contractor's approved work plan. This test section shall be approved by the Contracting Officer prior to the initiation of any additional contract work.

3.4 EXCAVATION OF EXISTING STONE PROTECTION

3.4.1 General

Existing stone protection shall be excavated to the top of the underlying soil. Existing stone, proposed for reuse, shall be weighed to determine its acceptability for reuse. Existing stone, not for reuse or in excess of that required, shall be disposed of offsite at the Contractor's expense.

3.4.1.1 Weighing Existing Stone

If the stone is to be reused, it shall be weighed by means of a certified scale, approved by the COR, at the Contractor's expense. Scales shall be inspected by the New Jersey Bureau of Weights and Measures within 12 months before start of use for this project and the COR reserves the right to have the scales reinspected at any time. Stone shall be weighed when the moisture content of the stone, in the opinion of the Contracting Officer, is not excessive.

3.5 EXCAVATION OF UNDERLYING SOIL

3.5.1 Scope

The soil underlying the existing stone shall be excavated to the lines and grades indicated. These materials may include soil and soil intermixed with loose rock that has descended from the stone layer above. The locations of the existing geotubes are as indicated on the contract drawings. The Contractor shall excavate into or remove the geotubes as necessary to achieve the required subgrade. Any geotextile removed from the existing geotubes shall not be dumped or left in the inlet and shall be disposed of offsite at the Contractor's expense.

3.5.2 Disposal of Sand

All excavated sand shall be disposed of by dumping in the area adjacent to the new structure or the sand may be dumped on top of the adjacent, placed toe stones (Toe stones shall be surveyed and accepted by the COR prior to covering with sand). The sand shall not be dumped in a navigable channel and shall be kept at elevations below mean high water (MHW).

3.5.3 Disposal of Other Types of Soil

Any other type of soil encountered, e.g. clay, in the excavation shall be disposed of offsite at the Contractor's expense.

3.5.4 Disposal of Stone

Any stone encountered in the excavation of the underlying soil shall be

disposed of or reused as specified above for excavation of existing stone protection.

3.6 **REINFORCEMENT** OF BULKHEAD DURING CONSTRUCTION

The Contractor shall be responsible for ensuring the stability of, and protecting, the existing bulkhead during all contract operations. **Specific areas of the existing timber bulkhead require reinforcement due to the bulkhead's deteriorated condition. These areas are indicated on the contract drawings.** The piles in these areas are in sound condition but the sheets and wales are deteriorated. The Contractor shall **reinforce** these areas prior to conducting contract operations in those areas.

3.7 PLACING GEOTEXTILE

Geotextile shall be placed on the seawall, as indicated on the contract drawings, and as specified in Section 02215 GEOTEXTILE.

3.8 GENERAL GUIDELINES FOR PLACEMENT OF ALL STONE

Stones should not be dropped in loading, transit, or placement on the structure. Stones should be placed on the structure by feeling with the handling equipment to achieve contact when vision is obscured, i.e. below water, and then released.

The Contractor shall maintain the all stone until accepted by the Government and any material displaced by any cause shall be replaced at no additional cost to the Government, to the lines and grades shown on the drawings.

3.9 MARINE MATTRESS

The foundation for the marine mattresses shall be The marine mattresses shall be placed as specified in Section 02390 MARINE MATTRESSES

3.10 PLACING UNDERLAYER STONE

The stone shall not be dropped onto the mattress from a height greater than one foot. This restriction shall remain in effect for the full duration of underlayer stone placement, i.e., even after the mattress is entirely covered with stone.

3.11 PLACING CAPSTONE

The capstone layer shall consist of two layers of larger stones and shall be placed over the underlayer stone to the final elevation as shown on the drawings. The capstone shall be placed in such a manner as to produce a minimum practicable percentage of voids in the surface. The stones shall be closely fitted together and interlocked in a staggered pattern to prevent continuous joints in the seawall surface. Checkerboard type placement of capstone will not be permitted. Stones shall be selected for size and shape so that during their placement they will contact each adjacent stone and that upon completion of the work, all stone will be in close contact to assure no independent movement or sliding. The difference between adjacent stones in the crest of the seawall shall not be greater than 6 inches.

3.12 **REPLACEMENT OF TIMBER CAP BOARD**

The Contractor shall replace the timber cap board the full length of the

existing timber bulkhead.

3.13 MEASUREMENT AND PAYMENT

3.13.1 Mobilization and Demobilization

All costs connected with the mobilization and demobilization of the Contractor's plant and equipment required for the contract work will be paid for at the contract lump sum prices for these items as listed in the Price Schedule. Sixty percent (60%) of the lump sum price will be paid to the Contractor upon completion of his mobilization at the work site. The remaining forty percent (40%) will be included in the final payment for work under this contract.

3.13.1.1 Contractor Furnished Cost Data

In the event the Contracting Officer considers that the amount in these items (sixty percent) which represents mobilization, does not bear a reasonable relation to the cost of the work in this contract, the Contracting Officer may require the Contractor to furnish cost data to justify this portion of the price. Failure to justify such price to the satisfaction of the Contracting Officer will result in the payment of actual mobilization costs, as determined by the Contracting Officer, at the completion of mobilization. The payment of the remainder of these items will be included in the final payment under the contract. The determination of the Contracting Officer in these circumstances is not subject to appeal.

3.13.1.2 Mobilization and Demobilization Costs

All costs in connection with the mobilization and demobilization of the Contractor's plant and equipment as defined below shall be included in the contract lump sum price for Price Item No. 1., "Mobilization /Demobilization" as listed in the Price Schedule.

a. Mobilization shall include all costs for operations accomplished prior to commencement of operations; that is transfer of all plant and equipment to the work site and all other incidentals in advance of work on the project site.

b. Demobilization shall include general preparation for transfer of the plant and equipment to the Contractor's home or standby base, cleanup, and the transfer of plant and equipment to the home or standby base.

3.13.2 Excavation and Disposal of Existing Stone

The work specified in this section for the removal of existing stone will not be measured for payment. All costs in connection therewith shall be included in the contract lump sum price for Price Item No. 2. "Excavation and Disposal of Existing Stone." This price item includes either the cost to dispose of the existing stone offsite or the cost to rehandle the existing stone for reuse on the project.

3.13.3 Excavation and Disposal of Underlying Soil

The work specified in this section for the removal of existing underlying soil will not be measured for payment. All costs in connection therewith shall be included in the contract lump sum price for Price Item No. 3. "Excavation and Disposal of Underlying Soil." This price item includes the cost of dumping the sand onsite and disposal of other types of soil

encountered during excavation offsite.

3.13.4 Toe Stone

The work specified for providing the toe stone will not be measured for payment. All costs, in connection with the toe stone satisfactorily placed and accepted, shall be included in the contract lump sum price for Price Item No. 4., "Toe Stone." These price items shall include all costs in connection with: placing either existing stone that satisfies the size requirements for the toe stone, and/or, providing new stone for toe stone, and, after-placement surveys.

3.13.5 Marine Mattresses

The work specified for providing the marine mattresses will not be measured for payment. All costs, in connection with marine mattresses satisfactorily placed and accepted, shall be included in the contract lump sum price for Price Item No. 5. "Marine Mattresses."

3.13.6 Underlayer Stone

The work specified for providing the underlayer stone will **not be measured for payment**. All costs, in connection with the underlayer stone satisfactorily placed and accepted, shall be included in the contract **lump sum** price for Price Item No. 6. "Underlayer Stone." This price item shall include all costs in connection with: placing either existing stone that satisfies the size requirements for the underlayer stone, and/or, providing new stone for underlayer stone, and, after-placement surveys.

3.13.7 Capstone

The work specified for providing the capstone will not be measured for payment. All costs, in connection with the capstone satisfactorily placed and accepted, shall be included in the contract lump sum price for Price Item No. 7., "Capstone." These price items shall include all costs in connection with: placing either existing stone that satisfies the size requirements for the capstone, and/or, providing new stone for capstone, and, after-placement surveys.

3.13.8 **Reinforcement** of Bulkhead

The work specified in this section for the **reinforcement** of the existing bulkhead **will be measured for payment by the linear foot of reinforcement installed**. All costs in connection therewith shall be included in the contract **unit** price for Price Item No. 10. "**Reinforcement** of Bulkhead."

3.13.9 Removal of Piles

The work specified in this section for the repair of the existing bulkhead will not be measured for payment. All costs in connection therewith shall be included in the contract lump sum price for Price Item No. 12. "Removal of Piles."

3.13.10 **Replacement of Timber Cap Board**

The work specified in this section for the replacement of timber cap board will not be measured for payment. All costs, in connection with this work shall be included in the contract lump sum price for Price Item No. 13

"Replacement of Timber Cap Board."

-- End of Section --

SECTION 02390

MARINE MATTRESSES

PART 1 GENERAL

1.1 SCOPE OF SECTION

The work covered by this section consists of furnishing all labor, materials, plant and equipment and performing all operations required to provide marine mattresses.

1.2 SUBMITTALS

Government approval is required for submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Marine Mattress; G,DO

Contractor shall provide shop drawings, specifically for this contract, the fabrication of the marine mattresses including all braiding and connections.

SD-04 Samples

Geogrid; G,DO. Matstone; G,DO. Braid; G,DO. Connector; G,DO.

The Contractor shall furnish physical examples of the geogrid, matstone, and connectors that are physically identical to the materials to be used in the contract work.

SD-07 Certificates

Work Plan; G,DO.

The Contractor shall submit for approval his proposed plan for fabricating and filling the marine mattresses. Equipment, labor, materials, and methods shall be detailed for this task. (See Section 02271 SEAWALL CONSTRUCTION for requirement for work plan to install mattresses).

Marine Mattresses; G,DO.

The Contractor shall furnish the Contracting Officer, in duplicate, a manufacturer's certificate or affidavit signed by a legally authorized official from the company manufacturing the mattresses, that all materials contained within that shipment meet the composition, physical, and manufacturing requirements stated in this specification. Certificate of compliance shall be submitted for the mattress prior to delivery to the work site.

SD-08 Manufacturer's Instructions

Marine Mattresses; G,DO.

Contractor shall provide manufacturer's recommendations for fabrication, lining with geotextile, filling, installation and repair of the marine mattresses.

1.3 DESCRIPTION

The non-metallic compartmental rectangular mattresses, comprised of structural geogrid and geotextile, shall be filled with matstone. The required width and depth of the mattress units shall be as shown on the drawings. The mattress units may be fabricated and filled off-site or on-site, for lifting into place.

NOTE: Mattresses, larger (but not thicker) than shown on the contract drawings, may be utilized, if approved by the manufacturer. The Contractor shall have the proper lifting equipment (including spreader bar) to lift and place the larger mattresses. The final approval for the use of larger mattresses shall be obtained from the Contracting Officer.

1.4 STORAGE

The geogrids shall be stored in conditions above -20 degrees F (-29 degrees C) and not greater than 140 degrees F (60 degrees C). The contractor shall prevent excessive mud, wet cement, epoxy, and like materials from affixing to the geogrid material.

1.5 ON-SITE TECHNICAL ASSISTANCE

The Contractor shall coordinate for a qualified representative of the marine mattress supplier to be present at the job site during the first week of installation to provide technical assistance as needed. The Contractor shall remain solely responsible for the quality of installation.

1.6 QUALIFICATIONS OF CONTRACTOR

The Contractor conducting the marine mattress placement work shall possess a minimum of 10 years experience in the construction of underwater structures.

PART 2 PRODUCTS

2.1 MARINE MATTRESSES

2.1.1 Structural Geogrid

The structural geogrid shall be an integrally formed grid structure manufactured of a stress resistant polypropylene or high density polyethylene material with molecular weight and molecular characteristics which impart high resistance to loss of load capacity or structural integrity when the geogrid is subjected to mechanical stress in installation and/or long-term environmental stress.

		MD/XMD ¹
Load Capacity		
True Initial Modulus at 1% Strain ²	lb/ft	18,160/29,470
Structural Integrity		

Junction Strength ³	lb/ft	1,432/1,233
Flexural Stiffness ⁴	mg-cm	750,000/
Torsional Stiffness ⁵	kg-cm/deg	4.8/

Dimensions

Aperture Size	in.	1.0/1.3
Percent Open Area	%	70
Minimum Thickness (any dimension)	in.	0.045

The geogrid product shall also meet the following durability requirements:

Ultraviolet Stability ⁶	98%
Resistance to installation damage (GP) ⁷ :	85%
Resistance to long term degradation ⁸ :	100%

Nominal roll size shall be 13.1 feet wide by 164 feet in length.

Notes:

¹ MD dimension is along roll length. XMD dimension is across roll width. Unless indicated otherwise, values shown are determined in accordance with ASTM D 4759. Brief descriptions of test procedures are given in the following notes.

² True resistance to elongation when initially subjected to a load measured via GRI GG1 without deforming test materials under load before measuring such resistance or employing "secant" or "offset" tangent methods of measurement so as to overstate tensile properties.

³ Load transfer capability measured via GRI GG2.

⁴ Resistance to bending force measured via ASTM D 1388.

⁵ Resistance to in-plane rotational movement measured by applying a 20 cm-kg moment to the central junction of a 9" x 9" specimen restrained at its perimeter (U.S. Army Corps of Engineers Methodology).

⁶ Retained strength after 500 hours of exposure per ASTM D 4355.

⁷ Resistance to loss of load capacity or structural integrity when subjected to mechanical stress in installation measured via ASTM D 5818 in a poorly graded gravel with a maximum 2 inch particle size (GP).

⁸ Resistance to loss of load capacity or structural integrity when subjected to chemically aggressive environments measured via EPA 9090 immersion testing.

2.1.1.2 Braid

The braid material shall be a hollow-core polyethylene braid and shall have a minimum diameter of 3/16 inch (nominal) with a breaking strength of not less than 400 lb load on a test specimen 36 inches in length. For UV stability, the braid material shall have a minimum carbon black content of 2.0% throughout.

2.1.1.3 Connectors

Bodkin connector rods shall be 3/8" diameter, round and composed of high density polyethylene.

2.1.1.4 Geotextile

Geotextile shall be as specified in Section 02215 GEOTEXTILE. The geotextile shall be placed inside the mattress prior to filling with matstone.

2.1.5 Matstone

2.1.5.1 Quality

Matstone may be crushed stone. The matstone shall be durable and of suitable quality to ensure suitable performance in the mattresses and the climate at the work site. Matstone shall be free from cracks, seams, and other defects that would tend to increase its deterioration in the mattresses. The inclusion of objectionable quantities of dirt, sand, clay, and rock fines shall not be permitted.

2.1.5.2 Gradation

Matstone used in the mattresses shall be a well-graded mixture with the following gradation:

Sieve Size (inches)	%, by Weight, Passing
3	100
2-1/2	90-100
2	35-70
1-1/2	0-15
3/4	0-5

(This gradation is NJDOT No. 2.)

PART 3 EXECUTION

3.1 ASSEMBLY OF MARINE MATTRESSES

3.1.1 Assembling Individual Mattresses

Empty mattress units shall be assembled as recommended by the manufacturer and as indicated on the contract drawings. The joints where the ends and baffles of each unit join the top or bottom of the unit shall be made with a mechanical connection between geogrid elements. All cut ends of braid material shall be knotted within 1 inch to 2 inch of the end to prevent raveling of the braid material. The braid material shall be securely knotted to the geogrid at all ends of all stitched seams, and at a spacing not to exceed 6 feet along any stitched seam. Pieces of braid material may be spliced end to end by securely knotting. The stitches along each seam shall be sufficiently tight to close the gap between the adjacent pieces of geogrid. The braid material shall be stitched through each pair of apertures along each seam at least once. The spacing of stitches shall be reasonably uniform at approximately 6 (minimum) stitches per foot along the entire length of each seam. Lifting hoops shall be formed by joining the top and bottom layers of grid from each unit by means of approved mechanical connections.

3.1.2 Geotextile

Each individual compartment of the marine mattresses shall be lined with geotextile. The geotextile shall be installed in each compartment such that full coverage of geotextile is provided on the top, bottom, and sides of the mattress. Geotextile coverage is not required on the diaphragms. The geotextile in each compartment shall be overlapped a minimum of one (1)

foot to allow movement, but ensure full coverage, during attachment to the geogrid. All fabric that is torn or punctured, prior to filling, shall be repaired or replaced by the Contractor at no additional cost to the Government. Unless otherwise approved by the Government, the repair shall consist of a patch of the same geotextile material placed over the ruptured area and lapped a minimum of 36 inches beyond the edge of any part of the rupture.

3.1.3 Filling with Matstone

The mattresses shall be pre-filled with matstone prior to placement as specified below. The matstone shall be carefully placed on the geotextile in the mattress. Stone filling operations shall carefully proceed with placement by hand or machine so as not to damage the geotextile, to assure a minimum of voids between the matstones, and to avoid deformation throughout the filling process. Undue bulging of the geogrid shall be avoided. The maximum height from which the matstone may be dropped into the basket units shall be 1 foot. The matstone shall be leveled with the top of the mattress to allow for proper closing of the lid. The geotextile shall be protected and carefully handled during the lid closing operation. The mattresses shall be closed over the matstone as recommended by the manufacturer.

3.2 INSTALLATION OF MATTRESSES

During movement and placement of the pre-filled mattresses the Contractor shall insure that the mattresses are supported throughout their entire length and that the mattress and fasteners are protected from being damaged. All adjoining mattresses shall be overlapped 1 foot along the entire perimeter of their contact surfaces in order to obtain a monolithic structure. Adjoining mattresses shall be set to the required lines and grades as shown on the contract drawings. The units shall be placed at the proper elevation, alignment and orientation as shown on the drawings. The procedure used in placement of the units shall be in accordance with the recommendations of the system supplier and as approved by the Contracting Officer. For lifting of each unit, a spreader beam and / or spreader bars shall be used in a manner that the unit is not subjected to severe bending or distortion and that the top and bottom layers of geogrid are tensioned uniformly across their width. Units should generally be lifted from a horizontal position. Personnel shall stay clear of the area beneath units and rigging during lifting.

3.3 REPAIRS OF MARINE MATTRESSES

Damaged geogrid shall be repaired by placing a geogrid patch over the damaged area such that it overlaps onto the acceptable geogrid material by at least one foot in all directions; the perimeter edges of the patch shall be attached to the mattress in accordance with the seaming requirements, above. Damaged braid shall be repaired by installing a new braided seam in accordance with above, and extending at least one foot in either direction beyond the location of the damaged braid.

3.4 SURVEYS

To confirm the proper placement of the marine mattresses, the Contractor shall conduct surveys as specified in Section 01720 SURVEY REQUIREMENTS.

3.5 CONTRACTOR QUALITY CONTROL

The Contractor shall conduct an inspection of each assembled mattress prior to and after filling with matstone. The results of these inspections shall be documented in the daily Quality Control reports required under Section 01450CONTRACTOR QUALITY CONTROL.

3.6 MEASUREMENT AND PAYMENT

The work specified in this section for providing marine mattresses shall be measured and payment will be made as specified in Section 02271 SEAWALL CONSTRUCTION.

-- End of Section --

SECTION 02400

STORM WATER OUTFALL PIPE EXTENSIONS

PART 1 GENERAL

1.1 SCOPE OF SECTION

The work covered by this section consists of furnishing all labor, materials, plant and equipment, and performing all operations required for extending existing storm water outfall pipes with concrete encased **ductile iron** pipe, as specified herein and shown on the drawings.

1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN WATER WORKS ASSOCIATION (AWWA)

AWWA C110	(1998) Ductile-Iron and Gray-Iron Fittings, 3 in. Through 48 in. (75 mm Through 1200 mm), for Water
AWWA C111	(2000) Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings
AWWA C151	(1996) Ductile-Iron Pipe, Centrifugally Cast, for Water or Other Liquids
AWWA C600	(1999) Installation of Ductile-Iron Water Mains and Their Appurtenances
AWWA C606	(1997) Grooved and Shouldered Joints

1.3 DELIVERY, STORAGE, AND HANDLING

Materials delivered to the site shall be inspected for damage, unloaded, and stored with a minimum of handling. Materials shall not be stored directly on the ground. The inside of pipes and fittings shall be kept free of dirt and debris. Rubber gaskets and flexible coupling shall be protected from exposure to direct sunlight over extended periods.

Materials shall be handled in such a manner as to insure delivery to the installation location in a sound, undamaged condition. Pipes shall be carried to the installation location, not dragged.

1.4 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. See Section 01330 SUBMITTAL PROCEDURES for all procedures related to the submission of

submittals.

The following shall be submitted:

SD-03 Product Data

Ductile Iron Pipe and Fittings; G COR.

Manufacturer's data and installation instructions shall be submitted to the Contracting Officer, for the **ductile iron** pipe, prior to installation.

SD-07 Certificates

Detailed Work Plan; G DO.

The Contractor shall submit to the Contracting Officer, for approval, prior to performing the work associated with extension of the stormwater outfalls, a detailed work plan for transporting and storing the materials, constructing the concrete encasement, installing the pipes, **and welding the bars to the flanged end section, as specified in this section and as shown on the contract drawings.**

Ductile Iron Pipe and Fittings.

Statement signed by an official authorized to certify on behalf of the manufacturer of a product, system or material, attesting that the product, system or material meets specified requirements. The statement must be dated after the award of the contract, must state the Contractor's name and address, must name the project and location, and must list the specific requirements which are being certified.

PART 2 PRODUCTS

2.1 DUCTILE-IRON PIPE

Ductile iron pipes shall be Class 50 with push-on type joints, conforming to AWWA C151 and AWWA C110 respectively. Rubber gaskets and lubricant shall conform to AWWA C111 and the pipe manufacturer's recommendations. Flanged end section shall also be Class 50 pipe.

2.2 CONCRETE

Unless otherwise specified, concrete and reinforced concrete shall conform to the requirements for 3000 psi concrete under Section 03300 CONCRETE.

PART 3 EXECUTION

3.1 GENERAL

The Contractor shall establish and maintain the drainage of the existing outfall pipes at all times throughout the entire contract. The outfall extensions shall be encased in concrete as indicated on the contract drawings. The new pipe shall act as a casing over the existing outfall.

The new pipe shall encase the existing pipe to the point that it abuts the bulkhead.

3.2 CONCRETE

Concrete shall be placed as specified in Section 03300 CONCRETE.

3.3 CUTTING OF PIPE

Unless otherwise recommended by the manufacturer and authorized by the Contracting Officer, cutting shall be done with an approved type mechanical cutter.

3.4 JOINTING

Push-on type joints shall be installed in accordance with AWWA C600 for buried lines or AWWA C606 above ground. Rubber gaskets shall be handled, lubricated where necessary, and installed in accordance with the pipe manufacturer's recommendations.

3.5 FLANGED END SECTION AND SCREEN

A flanged end section shall be installed at the end of each outfall extension as indicated on the contract drawings. Bar reinforcement shall be welded to the end of these flanged sections to act as a screen.

3.6 MEASUREMENT AND PAYMENT

The work specified in this section for the extension of the outfalls will not be measured for payment. All costs in connection therewith shall be included in the contract lump sum price for Price Item No. 9. "Outfall Extensions."

-- End of Section --