

PENNSYLVANIA GAME COMMISSION
HEADQUARTERS BUILDING
EMERGENCY GENERATOR REPLACEMENT

PGC Headquarters Building
2001 Elmerton Avenue, Harrisburg, PA 17110
Susquehanna Township
Dauphin County

Table of Contents

Bid Notice	(Provided Separately with Solicitation)
Terms and Conditions	(Provided Separately with Solicitation)
Specifications	4 Pages
PA Prevailing Wages	13 Pages (Determination No. 21-03907)
Reciprocal Limitations Act	4 Pages
Technical Specifications	40 Pages
UCC Building Permit & Inspection Log	2 Pages
Project Drawings	6 Drawings

PROJECT SPECIFICATIONS

The Contractor shall comply with the *Contract Terms and Conditions* provided with the Bid Documents including but not limited to the following:

INSURANCE REQUIREMENTS – In accordance with the *Contract Terms and Conditions*, the Contractor is required to have in place during the term of the Contract and any renewals or extensions thereof, the following types of insurance, issued by companies acceptable to the Commonwealth and authorized to conduct such business under the laws of the Commonwealth of Pennsylvania:

- A. **Worker's Compensation Insurance** for all of the Contractor's employees and those of any subcontractor, engaged in Work at the site of the project as required by law.

- B. **Public Liability and Property Damage Insurance** to protect the Commonwealth, the Contractor, and any and all subcontractors from claims for damages for personal injury (including bodily injury), sickness or disease, accidental death and damage to property including the loss of use resulting from any property damage, which may arise from the activities performed under the Contract or the failure to perform under the Contract, whether such performance or non-performance be by the Contractor, by any subcontractor, or by anyone directly or indirectly employed by either. **The minimum amounts of coverage shall be \$250,000 per person and \$1,000,000 per occurrence for bodily injury, including death, and \$250,000 per person and \$1,000,000 per occurrence for property damage.** Such policies shall be occurrence rather than claims-made policies and shall not contain any endorsements or any other form designated to limit and restrict any action by the Commonwealth, as an additional insured, against the insurance coverage in regard to Work performed for the Commonwealth.

Prior to commencement of the Work under the Contract and at each insurance renewal date during the term of the Contract, the Contractor shall provide the Commonwealth with current certificates of insurance. **These certificates or policies shall name the Commonwealth AND Pennsylvania Game Commission as additional insured and shall contain a provision that the coverage's afforded under the policies will not be cancelled or changed until at least thirty (30) days written notice has been given to the Commonwealth.**

COMPLIANCE WITH LAW – The Contractor shall comply with all applicable federal and state laws and regulations and local ordinances in the performance of the Contract.

WORKMANSHIP - All Work shall be performed in a Workmanlike manner and all materials and labor shall be in strict and entire conformity with the Drawings and Specifications.

INSPECTION AND CHANGES - All Work is subject to inspection and acceptance by the Pennsylvania Game Commission. Any Work rejected as defective or unsuitable shall be

removed and replaced with suitable Work and materials at the sole cost of the Contractor to the complete satisfaction of the Game Commission.

Changes shall be in accordance with the *Contract Terms and Conditions*.

TEMPORARY SERVICES AND JOB CONDITIONS - The Contractor shall be responsible for providing any and all temporary facilities necessary to execute and protect the Work. The Contractor shall accept all conditions as found upon examination of the site and shall coordinate, plan, and execute the Work accordingly. The Contractor shall cooperate in the arrangements of the Work as necessary to least affect the administration or operations of existing buildings, facilities, and infrastructure. The Contractor shall keep the Work site clean at all times.

PREVAILING WAGE – Prevailing minimum wages apply to this project. See *Contract Terms and Conditions* and attached Prevailing Wage Determination.

The Contractor and each Subcontractor shall file a statement each week and a final statement at the conclusion of the Work on the contract with the contracting agency, under oath, and in form satisfactory to the Secretary, certifying that workmen have been paid wages in strict conformity with the provisions of the contract as prescribed by this section or if wages remain unpaid to set forth the amount of wages due and owing to each workman respectively. The PA Labor and Industry “Weekly Payroll Certification for Public Works Projects” form shall be used. The initial and final Payroll Certifications shall be notarized.

PAYMENT TERMS - A schedule of values is provided with the bid. Payment will be made on a monthly basis upon satisfactory completion of items listed on the Schedule of Values and in accordance with the *Contract Terms and Conditions*.

All payments due to the Contractor shall be processed after all Work has been inspected and approved by an agent of the Pennsylvania Game Commission. Payment will not be made for Work that is not progressing satisfactorily or for unsuitable or defective Work.

Payments may be withheld for failure to provide required documentation for the project including but not limited to required submittals / shop drawings and weekly submission of Certified Payrolls.

INVOICING – All Project invoices shall be submitted directly to:

Mr. Chris Clouser, Architectural Designer
Pennsylvania Game Commission
2001 Elmerton Avenue
Harrisburg PA 17110
Office: 717-787-4250 Ext:73620
Email: cclouser@pa.gov

All invoices must be submitted in black and white with no color and shaded areas. Invoices must include the Purchase Order Number, Contractor's SAP Vendor Number, and the Contractor's name and address as listed on the Purchase Order. Payment items on invoices shall match the items on the Purchase Order. Failure to submit invoices that meet these requirements will result in a delay of payment.

Please Note: Vendors are reminded to **NOT** include employer identification numbers, Social Security Numbers, bank account information, or other personally identifiable information on their invoices. That information is uniquely tied to your SAP Vendor Number and, for security purposes, should not be explicitly stated on an invoice.

CONTRACT TERM - The Contract shall commence upon delivery of Purchase Order to Contractor and shall terminate on **November 12, 2021**. Contract time is of the essence of the Project. All Work must be completed and accepted by this date.

EXCISE TAXES, PENNSYLVANIA SALES TAX - The Commonwealth is exempt from all Excise Taxes. See *Contract Terms and Conditions*.

OFFSET PROVISION - The Contractor agrees that the Commonwealth may set off the amount of any state liability or other debt of the Contractor or its subsidiaries that is owed to the Commonwealth and not being contested on appeal against any payments due the Contractor under this or any other contract with the Commonwealth.

PERFORMANCE SECURITY / CONTRACT BONDS – Within 10 days after award of the purchase order, the Bidder to whom the Contract is awarded, shall provide **Contract Performance Security** and a **Payment Bond** in a form acceptable to the Commonwealth for the amounts listed below and in accordance with the *Contract Terms and Conditions*.

A **Performance Bond** at one hundred percent (100%) of the contract amount, conditioned upon the faithful performance of the contract in accordance with the plans, specifications and conditions of the contract.

A **Payment Bond** in an amount equal to one hundred percent (100%) of the contract amount.

Performance and Payment Bonds shall be executed by a surety company authorized to do business in the Commonwealth and listed on the current U.S. Dept. of Treasury, Bureau of Fiscal Service, Department Circular 570 (<https://fiscal.treasury.gov/surety-bonds/list-certified-companies.html>). Bonds shall include a current Power of Attorney dated the same as the date of the bond. Bonds shall be made payable to the Commonwealth.

GUARANTY / WARRANTY – See *Contract Terms and Conditions* – all items are warranted for a period of one year following delivery by the Contractor and acceptance by the Commonwealth.

HOLD HARMLESS PROVISION - See *Contract Terms and Conditions* - The Contractor shall hold the Commonwealth harmless from and indemnify the Commonwealth against any and

all third party claims, demands and actions based upon or arising out of any activities performed by the Contractor and its employees and agents under this Contract, provided the Commonwealth gives Contractor prompt notice of any such claim of which it learns.

ADDITIONAL PROVISIONS -

Contractor shall comply with the conditions listed below in accordance with the *Contract Terms and Conditions*:

1. **Steel Products Procurement Act**
2. **Prohibition Against the Use of Certain Steel and Aluminum Products (Trade Practices Act)**
3. **Reciprocal Limitations Act** - The form GSPUR89 (*Reciprocal Limitations Act Requirements*) is attached. The Contractor shall complete the applicable portions of pages 3 and 4 of the form and submit the completed pages within two days after the bid opening.

**BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES**

Project Name:	PGC Headquarters Building Emergency Generator Replacement
Awarding Agency:	PA Game Commission
Contract Award Date:	6/16/2021
Serial Number:	21-03907
Project Classification:	Building
Determination Date:	5/12/2021
Assigned Field Office:	Harrisburg
Field Office Phone Number:	(717)787-4763
Toll Free Phone Number:	(800)932-0665
Project County:	Dauphin County

**BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES**

Project: 21-03907 - Building	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Asbestos & Insulation Workers	6/26/2017		\$32.00	\$26.51	\$58.51
Asbestos & Insulation Workers	7/2/2018		\$32.80	\$26.76	\$59.56
Asbestos & Insulation Workers	7/2/2019		\$33.80	\$27.26	\$61.06
Asbestos & Insulation Workers	6/29/2020		\$34.80	\$28.01	\$62.81
Boilermaker (Commercial, Institutional, and Minor Repair Work)	3/1/2017		\$28.52	\$18.22	\$46.74
Boilermaker (Commercial, Institutional, and Minor Repair Work)	3/1/2018		\$29.52	\$18.22	\$47.74
Boilermaker (Commercial, Institutional, and Minor Repair Work)	1/1/2019		\$29.26	\$18.48	\$47.74
Boilermakers	1/1/2017		\$44.26	\$33.36	\$77.62
Boilermakers	1/1/2018		\$46.26	\$33.36	\$79.62
Boilermakers	3/1/2018		\$45.89	\$33.73	\$79.62
Boilermakers	1/1/2019		\$45.51	\$34.11	\$79.62
Boilermakers	8/1/2019		\$47.21	\$34.11	\$81.32
Boilermakers	1/1/2021		\$49.32	\$34.90	\$84.22
Bricklayer (Pointer, Cleaner, Caulker, Cement Mason, Plasterer, Tile Setter)	5/1/2018		\$28.15	\$22.45	\$50.60
Bricklayers, Stone Masons, Pointers, Caulkers, Cleaners	5/1/2017		\$32.54	\$16.06	\$48.60
Bricklayers, Stone Masons, Pointers, Caulkers, Cleaners	5/1/2018		\$32.95	\$16.45	\$49.40
Bricklayers, Stone Masons, Pointers, Caulkers, Cleaners	5/1/2019		\$33.43	\$16.87	\$50.30
Bricklayers, Stone Masons, Pointers, Caulkers, Cleaners	5/3/2020		\$33.99	\$17.31	\$51.30
Bricklayers, Stone Masons, Pointers, Caulkers, Cleaners	5/1/2021		\$34.62	\$17.78	\$52.40
Carpenters, Drywall Hangers, Framers, Instrument Men, Lathers, Soft Floor Layers	6/1/2017		\$28.88	\$15.75	\$44.63
Carpenters, Drywall Hangers, Framers, Instrument Men, Lathers, Soft Floor Layers	6/1/2018		\$29.53	\$16.20	\$45.73
Carpenters, Drywall Hangers, Framers, Instrument Men, Lathers, Soft Floor Layers	6/1/2019		\$30.18	\$16.65	\$46.83
Carpenters, Drywall Hangers, Framers, Instrument Men, Lathers, Soft Floor Layers	6/1/2020		\$30.88	\$17.10	\$47.98
Carpenters, Drywall Hangers, Framers, Instrument Men, Lathers, Soft Floor Layers	6/1/2021		\$31.77	\$17.41	\$49.18
Cement Finishers & Plasterers	5/2/2021		\$27.25	\$20.25	\$47.50
Cement Finishers	5/1/2017		\$27.20	\$22.45	\$49.65
Cement Masons	5/1/2019		\$29.05	\$22.50	\$51.55
Cement Masons	5/1/2020		\$29.85	\$22.70	\$52.55
Cement Masons	5/1/2021		\$30.70	\$22.85	\$53.55
Drywall Finisher	5/1/2017		\$23.30	\$12.39	\$35.69
Drywall Finisher	5/1/2019		\$23.82	\$14.27	\$38.09
Drywall Finisher	5/1/2020		\$23.94	\$15.30	\$39.24
Electricians	6/1/2017		\$30.00	\$23.06	\$53.06
Electricians	6/1/2018		\$30.60	\$23.63	\$54.23
Electricians	6/1/2019		\$31.60	\$24.37	\$55.97

**BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES**

Project: 21-03907 - Building	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Electricians	6/1/2020		\$32.50	\$25.20	\$57.70
Electricians	6/1/2021		\$33.50	\$25.94	\$59.44
Elevator Constructor	1/1/2018		\$45.35	\$33.00	\$78.35
Elevator Constructor	1/1/2020		\$48.33	\$39.11	\$87.44
Elevator Mechanic	1/1/2019		\$46.80	\$34.13	\$80.93
Elevator Mechanic	1/1/2021		\$49.95	\$40.35	\$90.30
Glazier	5/1/2017		\$25.63	\$11.45	\$37.08
Glazier	5/1/2018		\$25.63	\$11.95	\$37.58
Glazier	5/1/2019		\$25.63	\$12.45	\$38.08
Glazier	5/1/2020		\$25.63	\$12.95	\$38.58
Glazier	5/1/2021		\$25.63	\$13.45	\$39.08
Iron Workers (Bridge, Structural Steel, Ornamental, Precast, Reinforcing)	7/1/2017		\$31.33	\$28.42	\$59.75
Iron Workers (Bridge, Structural Steel, Ornamental, Precast, Reinforcing)	7/1/2018		\$32.53	\$28.42	\$60.95
Iron Workers (Bridge, Structural Steel, Ornamental, Precast, Reinforcing)	7/1/2019		\$32.76	\$29.88	\$62.64
Iron Workers (Bridge, Structural Steel, Ornamental, Precast, Reinforcing)	7/1/2020		\$33.76	\$30.13	\$63.89
Laborers (Class 01 - See notes)	5/1/2017		\$20.86	\$13.33	\$34.19
Laborers (Class 01 - See notes)	5/1/2018		\$21.31	\$13.93	\$35.24
Laborers (Class 01 - See notes)	5/1/2019	4/30/2020	\$21.76	\$14.53	\$36.29
Laborers (Class 01 - See notes)	5/1/2020		\$22.21	\$15.13	\$37.34
Laborers (Class 01 - See notes)	5/1/2021		\$22.61	\$16.03	\$38.64
Laborers (Class 02 - See notes)	5/1/2017		\$22.86	\$13.33	\$36.19
Laborers (Class 02 - See notes)	5/1/2018		\$23.31	\$13.93	\$37.24
Laborers (Class 02 - See notes)	5/1/2019	4/30/2020	\$23.76	\$14.53	\$38.29
Laborers (Class 02 - See notes)	5/1/2020		\$24.21	\$15.13	\$39.34
Laborers (Class 02 - See notes)	5/1/2021		\$24.61	\$16.03	\$40.64
Laborers (Class 03 - See notes)	5/1/2017		\$24.31	\$13.62	\$37.93
Laborers (Class 03 - See notes)	5/1/2018		\$24.81	\$14.22	\$39.03
Laborers (Class 03 - See notes)	5/1/2019	4/30/2020	\$25.36	\$14.82	\$40.18
Laborers (Class 03 - See notes)	5/3/2020		\$25.96	\$15.42	\$41.38
Laborers (Class 03 - See notes)	5/2/2021		\$26.61	\$16.02	\$42.63
Laborers (Class 03 - See notes)	5/1/2022		\$27.31	\$16.62	\$43.93
Laborers (Class 03 - See notes)	4/30/2023		\$27.96	\$17.32	\$45.28
Laborers (Class 04 - See notes)	5/1/2017		\$25.81	\$13.62	\$39.43
Laborers (Class 04 - See notes)	5/1/2018		\$26.31	\$14.22	\$40.53
Laborers (Class 04 - See notes)	5/1/2019	4/30/2020	\$26.86	\$14.82	\$41.68
Laborers (Class 04 - See notes)	5/3/2020		\$27.46	\$15.42	\$42.88
Laborers (Class 04 - See notes)	5/2/2021		\$27.91	\$16.03	\$43.94
Laborers (Class 04 - See notes)	5/1/2022		\$28.81	\$16.62	\$45.43
Laborers (Class 04 - See notes)	4/30/2023		\$29.46	\$17.32	\$46.78
Laborers (Class 05 - See notes)	5/1/2017		\$26.31	\$13.62	\$39.93
Laborers (Class 05 - See notes)	5/1/2018		\$26.81	\$14.22	\$41.03
Laborers (Class 05 - See notes)	5/1/2019	4/30/2020	\$27.36	\$14.82	\$42.18

**BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES**

Project: 21-03907 - Building	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Laborers (Class 05 - See notes)	5/3/2020		\$27.96	\$15.42	\$43.38
Laborers (Class 05 - See notes)	5/2/2021		\$28.61	\$16.02	\$44.63
Laborers (Class 05 - See notes)	5/1/2022		\$29.31	\$16.62	\$45.93
Laborers (Class 05 - See notes)	4/30/2023		\$29.96	\$17.32	\$47.28
Laborers (Class 06 - See notes)	5/1/2017		\$22.86	\$13.33	\$36.19
Laborers (Class 06 - See notes)	5/1/2018		\$23.31	\$13.93	\$37.24
Laborers (Class 06 - See notes)	5/1/2019	4/30/2020	\$22.76	\$14.53	\$37.29
Laborers (Class 06 - See notes)	5/1/2020		\$24.21	\$15.13	\$39.34
Laborers (Class 06 - See notes)	5/1/2021		\$24.61	\$16.03	\$40.64
Marble Mason	5/1/2017		\$29.27	\$15.62	\$44.89
Marble Mason	5/1/2018		\$29.88	\$16.01	\$45.89
Marble Mason	5/1/2019		\$30.46	\$16.43	\$46.89
Marble Mason	5/1/2020		\$31.02	\$16.87	\$47.89
Marble Mason	5/1/2021		\$31.55	\$17.34	\$48.89
Millwright	5/1/2017		\$33.79	\$18.16	\$51.95
Millwright	5/1/2018	4/30/2019	\$34.41	\$18.64	\$53.05
Millwright	5/1/2019	4/30/2020	\$35.30	\$18.90	\$54.20
Millwright	5/1/2020		\$36.04	\$19.31	\$55.35
Operators (Building, Class 01 - See Notes)	5/1/2017		\$35.24	\$24.58	\$59.82
Operators (Building, Class 01 - See Notes)	5/1/2018		\$36.78	\$25.03	\$61.81
Operators (Building, Class 01 - See Notes)	5/1/2019		\$36.78	\$27.03	\$63.81
Operators (Building, Class 01 - See Notes)	5/1/2020		\$38.32	\$27.49	\$65.81
Operators (Building, Class 01 - See Notes)	5/1/2021		\$39.87	\$27.94	\$67.81
Operators (Building, Class 01A - See Notes)	5/1/2017		\$37.49	\$25.23	\$62.72
Operators (Building, Class 01A - See Notes)	5/1/2018		\$39.03	\$25.69	\$64.72
Operators (Building, Class 01A - See Notes)	5/1/2019		\$39.03	\$27.69	\$66.72
Operators (Building, Class 01A - See Notes)	5/1/2020		\$40.57	\$28.15	\$68.72
Operators (Building, Class 01A - See Notes)	5/1/2021		\$42.12	\$28.60	\$70.72
Operators (Building, Class 02 - See Notes)	5/1/2017		\$34.96	\$24.49	\$59.45
Operators (Building, Class 02 - See Notes)	5/1/2018		\$36.50	\$24.95	\$61.45
Operators (Building, Class 02 - See Notes)	5/1/2019		\$36.50	\$26.94	\$63.44
Operators (Building, Class 02 - See Notes)	5/1/2020		\$38.05	\$27.39	\$65.44
Operators (Building, Class 02 - See Notes)	5/1/2021		\$39.59	\$27.85	\$67.44
Operators (Building, Class 02A - See Notes)	5/1/2017		\$37.21	\$25.16	\$62.37
Operators (Building, Class 02A - See Notes)	5/1/2018		\$38.75	\$25.61	\$64.36
Operators (Building, Class 02A - See Notes)	5/1/2019		\$38.75	\$27.61	\$66.36
Operators (Building, Class 02A - See Notes)	5/1/2020		\$40.30	\$28.06	\$68.36
Operators (Building, Class 02A - See Notes)	5/1/2021		\$41.84	\$28.52	\$70.36
Operators (Building, Class 03 - See Notes)	5/1/2017		\$32.23	\$23.68	\$55.91
Operators (Building, Class 03 - See Notes)	5/1/2018		\$33.78	\$24.12	\$57.90
Operators (Building, Class 03 - See Notes)	5/1/2019		\$33.78	\$26.13	\$59.91
Operators (Building, Class 03 - See Notes)	5/1/2020		\$35.32	\$26.59	\$61.91
Operators (Building, Class 03 - See Notes)	5/1/2021		\$36.87	\$27.04	\$63.91
Operators (Building, Class 04 - See Notes)	5/1/2017		\$30.33	\$22.12	\$52.45

**BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES**

Project: 21-03907 - Building	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Operators (Building, Class 04 - See Notes)	5/1/2018		\$32.63	\$23.80	\$56.43
Operators (Building, Class 04 - See Notes)	5/1/2019		\$32.63	\$25.81	\$58.44
Operators (Building, Class 04 - See Notes)	5/1/2020		\$34.18	\$26.26	\$60.44
Operators (Building, Class 04 - See Notes)	5/1/2021		\$35.72	\$26.72	\$62.44
Operators (Building, Class 05 - See Notes)	5/1/2017		\$29.87	\$21.99	\$51.86
Operators (Building, Class 05 - See Notes)	5/1/2018		\$32.18	\$23.69	\$55.87
Operators (Building, Class 05 - See Notes)	5/1/2019		\$32.19	\$25.67	\$57.86
Operators (Building, Class 05 - See Notes)	5/1/2020		\$33.73	\$26.13	\$59.86
Operators (Building, Class 05 - See Notes)	5/1/2021		\$35.27	\$26.59	\$61.86
Operators (Building, Class 06 - See Notes)	5/1/2017		\$29.00	\$21.72	\$50.72
Operators (Building, Class 06 - See Notes)	5/1/2018		\$31.31	\$23.41	\$54.72
Operators (Building, Class 06 - See Notes)	5/1/2019		\$31.31	\$25.41	\$56.72
Operators (Building, Class 06 - See Notes)	5/1/2020		\$32.86	\$25.86	\$58.72
Operators (Building, Class 06 - See Notes)	5/1/2021		\$34.40	\$26.32	\$60.72
Operators (Building, Class 07A- See Notes)	5/1/2017		\$42.44	\$28.13	\$70.57
Operators (Building, Class 07A- See Notes)	5/1/2018		\$44.29	\$28.68	\$72.97
Operators (Building, Class 07A- See Notes)	5/1/2019		\$44.60	\$30.77	\$75.37
Operators (Building, Class 07A- See Notes)	5/1/2020		\$46.46	\$31.31	\$77.77
Operators (Building, Class 07A- See Notes)	5/1/2021		\$48.31	\$31.86	\$80.17
Operators (Building, Class 07B- See Notes)	5/1/2017		\$42.09	\$28.03	\$70.12
Operators (Building, Class 07B- See Notes)	5/1/2018		\$43.95	\$28.58	\$72.53
Operators (Building, Class 07B- See Notes)	5/1/2019		\$44.26	\$30.66	\$74.92
Operators (Building, Class 07B- See Notes)	5/1/2020		\$46.11	\$31.21	\$77.32
Operators (Building, Class 07B- See Notes)	5/1/2021		\$47.96	\$31.77	\$79.73
Painters Class 1 (see notes)	5/1/2017		\$23.47	\$13.32	\$36.79
Painters Class 1 (see notes)	5/1/2018		\$23.92	\$14.37	\$38.29
Painters Class 1 (see notes)	5/1/2019		\$24.57	\$15.22	\$39.79
Painters Class 1 (see notes)	5/1/2020		\$25.30	\$15.99	\$41.29
Painters Class 2 (see notes)	5/1/2017		\$25.60	\$13.32	\$38.92
Painters Class 2 (see notes)	5/1/2018		\$26.05	\$14.37	\$40.42
Painters Class 2 (see notes)	5/1/2019		\$26.70	\$15.22	\$41.92
Painters Class 2 (see notes)	5/1/2020		\$27.43	\$15.99	\$43.42
Painters Class 3 (see notes)	5/1/2017		\$31.35	\$13.32	\$44.67
Painters Class 3 (see notes)	5/1/2018		\$31.80	\$14.37	\$46.17
Painters Class 3 (see notes)	5/1/2020		\$33.18	\$15.99	\$49.17
Pile Driver Divers (Building, Heavy, Highway)	1/1/2016		\$48.10	\$17.37	\$65.47
Pile Driver Divers (Building, Heavy, Highway)	1/1/2017		\$49.13	\$17.95	\$67.08
Pile Driver Divers (Building, Heavy, Highway)	1/1/2020		\$53.10	\$19.70	\$72.80
Pile Driver Divers (Building, Heavy, Highway)	1/1/2021		\$54.75	\$20.10	\$74.85
Pile Driver Divers (Building, Heavy, Highway)	1/1/2022		\$56.40	\$20.50	\$76.90
Piledrivers	1/1/2018		\$33.55	\$18.55	\$52.10
Piledrivers	1/1/2019		\$34.30	\$19.30	\$53.60
Piledrivers	1/1/2020		\$35.40	\$19.70	\$55.10
Piledrivers	1/1/2021		\$36.50	\$20.10	\$56.60

**BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES**

Project: 21-03907 - Building	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Piledrivers	1/1/2022		\$37.60	\$20.50	\$58.10
Plasterers (Use Cement Finisher Rates)	5/1/2018		\$25.88	\$20.58	\$46.46
Plasterers	5/1/2017		\$25.03	\$20.58	\$45.61
Plasterers	5/1/2019		\$26.73	\$20.63	\$47.36
Plasterers	5/1/2020		\$27.48	\$20.83	\$48.31
Plasterers	5/1/2021		\$28.33	\$20.98	\$49.31
Plumber/Pipefitter	5/1/2017		\$35.82	\$24.51	\$60.33
Plumber/Pipefitter	5/1/2018		\$36.87	\$25.26	\$62.13
Plumber/Pipefitter	5/1/2019		\$37.52	\$26.41	\$63.93
Plumber/Pipefitter	5/1/2020		\$37.52	\$28.21	\$65.73
Plumber/Pipefitter	5/1/2021		\$38.77	\$28.46	\$67.23
Roofers (Composition)	5/1/2017		\$36.15	\$30.22	\$66.37
Roofers (Composition)	5/1/2018		\$37.15	\$31.27	\$68.42
Roofers (Composition)	5/1/2019		\$38.35	\$31.80	\$70.15
Roofers (Composition)	5/1/2020		\$39.50	\$32.30	\$71.80
Roofers (Shingle)	5/1/2016		\$25.70	\$19.17	\$44.87
Roofers (Shingle)	5/1/2019		\$28.50	\$20.87	\$49.37
Roofers (Shingle)	5/1/2020		\$29.50	\$21.25	\$50.75
Roofers (Slate & Tile)	5/1/2016		\$28.70	\$19.17	\$47.87
Roofers (Slate & Tile)	5/1/2016		\$28.70	\$19.17	\$47.87
Roofers (Slate & Tile)	5/1/2018		\$30.50	\$20.37	\$50.87
Roofers (Slate & Tile)	5/1/2019		\$31.50	\$20.87	\$52.37
Roofers (Slate & Tile)	5/1/2020		\$32.50	\$21.25	\$53.75
Sheet Metal Workers	6/1/2016		\$33.60	\$33.43	\$67.03
Sheet Metal Workers	6/1/2017		\$33.98	\$35.40	\$69.38
Sheet Metal Workers	6/1/2018		\$34.78	\$36.45	\$71.23
Sheet Metal Workers	6/1/2019		\$36.08	\$37.65	\$73.73
Sheet Metal Workers	6/1/2020		\$37.26	\$38.97	\$76.23
Sheet Metal Workers	6/1/2021		\$36.08	\$42.65	\$78.73
Sprinklerfitters	4/1/2017		\$37.40	\$21.74	\$59.14
Sprinklerfitters	4/1/2018		\$38.80	\$22.74	\$61.54
Sprinklerfitters	4/1/2020		\$38.90	\$26.42	\$65.32
Terrazzo Finisher	5/1/2017		\$31.64	\$15.62	\$47.26
Terrazzo Finisher	5/1/2018		\$32.35	\$15.91	\$48.26
Terrazzo Finisher	5/1/2019		\$33.04	\$16.22	\$49.26
Terrazzo Finisher	5/1/2020		\$32.26	\$18.48	\$50.74
Terrazzo Finisher	5/1/2021		\$33.23	\$19.03	\$52.26
Terrazzo Grinder	5/1/2020		\$32.95	\$18.48	\$51.43
Terrazzo Grinder	5/1/2021		\$33.94	\$19.03	\$52.97
Terrazzo Mechanics	5/1/2020		\$32.91	\$20.11	\$53.02
Terrazzo Mechanics	5/1/2021		\$33.83	\$20.78	\$54.61
Terrazzo Setter	5/1/2017		\$30.63	\$18.85	\$49.48
Terrazzo Setter	5/1/2018		\$31.23	\$19.25	\$50.48
Terrazzo Setter	5/1/2019		\$31.81	\$19.67	\$51.48

**BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES**

Project: 21-03907 - Building	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Tile & Marble Finisher	5/1/2017		\$26.89	\$13.86	\$40.75
Tile & Marble Finisher	5/1/2018		\$27.60	\$14.15	\$41.75
Tile & Marble Finisher	5/1/2019		\$28.29	\$14.46	\$42.75
Tile & Marble Finisher	5/1/2020		\$29.00	\$14.75	\$43.75
Tile & Marble Finisher	5/1/2020		\$28.96	\$14.79	\$43.75
Tile & Marble Finisher	5/1/2021		\$29.61	\$15.14	\$44.75
Tile Setter	5/1/2017		\$29.27	\$15.62	\$44.89
Tile Setter	5/1/2018		\$29.88	\$16.01	\$45.89
Tile Setter	5/1/2019		\$30.46	\$16.43	\$46.89
Tile Setter	5/1/2020		\$31.02	\$16.87	\$47.89
Tile Setter	5/1/2020		\$31.02	\$16.87	\$47.89
Tile Setter	5/1/2021		\$31.55	\$17.34	\$48.89
Truckdriver class 1(see notes)	5/1/2017		\$34.47	\$0.00	\$34.47
Truckdriver class 1(see notes)	5/1/2018		\$35.32	\$0.00	\$35.32
Truckdriver class 1(see notes)	5/1/2019		\$36.12	\$0.00	\$36.12
Truckdriver class 2 (see notes)	5/1/2017		\$34.54	\$0.00	\$34.54
Truckdriver class 2 (see notes)	5/1/2018		\$35.39	\$0.00	\$35.39
Truckdriver class 2 (see notes)	5/1/2019		\$36.19	\$0.00	\$36.19
Truckdriver class 3 (see notes)	5/1/2017		\$35.03	\$0.00	\$35.03
Truckdriver class 3 (see notes)	5/1/2018		\$35.88	\$0.00	\$35.88
Truckdriver class 3 (see notes)	5/1/2019		\$36.68	\$0.00	\$36.68
Window Film / Tint Installer	6/1/2019		\$24.52	\$12.08	\$36.60

**BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES**

Project: 21-03907 - Heavy/Highway	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Carpenter	5/1/2018		\$30.75	\$15.96	\$46.71
Carpenter	5/1/2019		\$31.51	\$16.55	\$48.06
Carpenter	5/1/2020		\$32.22	\$17.19	\$49.41
Carpenter	5/1/2021		\$33.12	\$17.74	\$50.86
Carpenters	5/1/2017		\$30.12	\$15.34	\$45.46
Cement Finishers	5/1/2016		\$26.40	\$22.35	\$48.75
Electric Lineman	5/29/2017		\$44.22	\$23.94	\$68.16
Electric Lineman	5/28/2018		\$45.25	\$24.94	\$70.19
Electric Lineman	5/27/2019		\$46.32	\$25.97	\$72.29
Electric Lineman	6/1/2020		\$47.42	\$27.04	\$74.46
Iron Workers (Bridge, Structural Steel, Ornamental, Precast, Reinforcing)	7/1/2017		\$31.33	\$28.42	\$59.75
Iron Workers (Bridge, Structural Steel, Ornamental, Precast, Reinforcing)	7/1/2018		\$32.53	\$28.42	\$60.95
Iron Workers (Bridge, Structural Steel, Ornamental, Precast, Reinforcing)	7/1/2019		\$32.76	\$29.88	\$62.64
Iron Workers (Bridge, Structural Steel, Ornamental, Precast, Reinforcing)	7/1/2020		\$33.76	\$30.13	\$63.89
Laborers (Class 01 - See notes)	5/1/2016		\$19.81	\$15.79	\$35.60
Laborers (Class 01 - See notes)	5/1/2017		\$20.36	\$16.29	\$36.65
Laborers (Class 01 - See notes)	5/1/2018		\$20.96	\$16.79	\$37.75
Laborers (Class 01 - See notes)	5/1/2019		\$21.61	\$17.29	\$38.90
Laborers (Class 01 - See notes)	5/1/2020		\$22.41	\$17.69	\$40.10
Laborers (Class 01 - See notes)	5/1/2021		\$23.21	\$18.09	\$41.30
Laborers (Class 01 - See notes)	5/1/2022		\$24.01	\$18.54	\$42.55
Laborers (Class 01 - See notes)	5/1/2023		\$24.81	\$18.99	\$43.80
Laborers (Class 01 - See notes)	5/1/2024		\$25.61	\$19.49	\$45.10
Laborers (Class 02 - See notes)	5/1/2016		\$26.43	\$15.79	\$42.22
Laborers (Class 02 - See notes)	5/1/2017		\$26.98	\$16.29	\$43.27
Laborers (Class 02 - See notes)	5/1/2018		\$27.58	\$16.79	\$44.37
Laborers (Class 02 - See notes)	5/1/2019		\$28.23	\$17.29	\$45.52
Laborers (Class 02 - See notes)	5/1/2020		\$29.03	\$17.69	\$46.72
Laborers (Class 02 - See notes)	5/1/2021		\$29.83	\$18.09	\$47.92
Laborers (Class 02 - See notes)	5/1/2022		\$30.63	\$18.54	\$49.17
Laborers (Class 02 - See notes)	5/1/2023		\$31.43	\$18.99	\$50.42
Laborers (Class 02 - See notes)	5/1/2024		\$32.23	\$19.49	\$51.72
Laborers (Class 03 - See notes)	5/1/2016		\$23.42	\$15.79	\$39.21
Laborers (Class 03 - See notes)	5/1/2017		\$23.97	\$16.29	\$40.26
Laborers (Class 03 - See notes)	5/1/2018		\$24.57	\$16.79	\$41.36
Laborers (Class 03 - See notes)	5/1/2019		\$25.22	\$17.29	\$42.51
Laborers (Class 03 - See notes)	5/1/2020		\$26.02	\$17.69	\$43.71
Laborers (Class 03 - See notes)	5/1/2021		\$26.82	\$18.09	\$44.91
Laborers (Class 03 - See notes)	5/1/2022		\$27.62	\$18.54	\$46.16
Laborers (Class 03 - See notes)	5/1/2023		\$28.42	\$18.99	\$47.41
Laborers (Class 03 - See notes)	5/1/2024		\$29.22	\$19.49	\$48.71
Laborers (Class 04 - See notes)	5/1/2016		\$23.77	\$15.79	\$39.56

**BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES**

Project: 21-03907 - Heavy/Highway	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Laborers (Class 04 - See notes)	5/1/2017		\$24.32	\$16.29	\$40.61
Laborers (Class 04 - See notes)	5/1/2018		\$24.92	\$16.79	\$41.71
Laborers (Class 04 - See notes)	5/1/2019		\$25.57	\$17.29	\$42.86
Laborers (Class 04 - See notes)	5/1/2020		\$26.37	\$17.69	\$44.06
Laborers (Class 04 - See notes)	5/1/2021		\$27.17	\$18.09	\$45.26
Laborers (Class 04 - See notes)	5/1/2022		\$27.97	\$18.54	\$46.51
Laborers (Class 04 - See notes)	5/1/2023		\$28.77	\$18.99	\$47.76
Laborers (Class 04 - See notes)	5/1/2024		\$29.57	\$19.49	\$49.06
Laborers (Class 05 - See notes)	5/1/2016		\$24.44	\$15.79	\$40.23
Laborers (Class 05 - See notes)	5/1/2017		\$24.99	\$16.29	\$41.28
Laborers (Class 05 - See notes)	5/1/2018		\$25.59	\$16.79	\$42.38
Laborers (Class 05 - See notes)	5/1/2019		\$26.24	\$17.29	\$43.53
Laborers (Class 05 - See notes)	5/1/2020		\$27.04	\$17.69	\$44.73
Laborers (Class 05 - See notes)	5/1/2021		\$27.84	\$18.09	\$45.93
Laborers (Class 05 - See notes)	5/1/2022		\$28.64	\$18.54	\$47.18
Laborers (Class 05 - See notes)	5/1/2023		\$29.44	\$18.99	\$48.43
Laborers (Class 05 - See notes)	5/1/2024		\$30.24	\$19.49	\$49.73
Laborers (Class 06 - See notes)	5/1/2016		\$23.86	\$15.79	\$39.65
Laborers (Class 06 - See notes)	5/1/2017		\$24.41	\$16.29	\$40.70
Laborers (Class 06 - See notes)	5/1/2018		\$25.01	\$16.79	\$41.80
Laborers (Class 06 - See notes)	5/1/2019		\$25.66	\$17.29	\$42.95
Laborers (Class 06 - See notes)	5/1/2020		\$26.46	\$17.69	\$44.15
Laborers (Class 06 - See notes)	5/1/2021		\$27.26	\$18.09	\$45.35
Laborers (Class 06 - See notes)	5/1/2022		\$28.06	\$18.54	\$46.60
Laborers (Class 06 - See notes)	5/1/2023		\$28.86	\$18.99	\$47.85
Laborers (Class 06 - See notes)	5/1/2024		\$29.66	\$19.49	\$49.15
Laborers (Class 07 - See notes)	5/1/2016		\$24.15	\$15.79	\$39.94
Laborers (Class 07 - See notes)	5/1/2017		\$24.70	\$16.29	\$40.99
Laborers (Class 07 - See notes)	5/1/2018		\$25.30	\$16.79	\$42.09
Laborers (Class 07 - See notes)	5/1/2019		\$25.95	\$17.29	\$43.24
Laborers (Class 07 - See notes)	5/1/2020		\$26.75	\$17.69	\$44.44
Laborers (Class 07 - See notes)	5/1/2021		\$27.55	\$18.09	\$45.64
Laborers (Class 07 - See notes)	5/1/2022		\$28.35	\$18.54	\$46.89
Laborers (Class 07 - See notes)	5/1/2023		\$29.15	\$18.99	\$48.14
Laborers (Class 07 - See notes)	5/1/2024		\$29.95	\$19.49	\$49.44
Laborers (Class 08 - See notes)	5/1/2016		\$24.63	\$15.79	\$40.42
Laborers (Class 08 - See notes)	5/1/2017		\$25.18	\$16.29	\$41.47
Laborers (Class 08 - See notes)	5/1/2018		\$25.78	\$16.79	\$42.57
Laborers (Class 08 - See notes)	5/1/2019		\$26.43	\$17.29	\$43.72
Laborers (Class 08 - See notes)	5/1/2020		\$27.23	\$17.69	\$44.92
Laborers (Class 08 - See notes)	5/1/2021		\$28.03	\$18.09	\$46.12
Laborers (Class 08 - See notes)	5/1/2022		\$28.83	\$18.54	\$47.37
Laborers (Class 08 - See notes)	5/1/2023		\$29.63	\$18.99	\$48.62
Laborers (Class 08 - See notes)	5/1/2024		\$30.43	\$19.49	\$49.92

**BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES**

Project: 21-03907 - Heavy/Highway	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Operators (Heavy, Class 01 - See Notes)	5/1/2017		\$33.80	\$24.16	\$57.96
Operators (Heavy, Class 01 - See Notes)	5/1/2018		\$35.35	\$24.61	\$59.96
Operators (Heavy, Class 01 - See Notes)	5/1/2019		\$35.35	\$26.61	\$61.96
Operators (Heavy, Class 01 - See Notes)	5/1/2020		\$36.90	\$27.06	\$63.96
Operators (Heavy, Class 01 - See Notes)	5/1/2021		\$38.44	\$27.52	\$65.96
Operators (Heavy, Class 01A - See Notes)	5/1/2017		\$36.05	\$24.82	\$60.87
Operators (Heavy, Class 01A - See Notes)	5/1/2018		\$37.60	\$25.27	\$62.87
Operators (Heavy, Class 01A - See Notes)	5/1/2019		\$37.60	\$27.27	\$64.87
Operators (Heavy, Class 01A - See Notes)	5/1/2020		\$39.14	\$27.73	\$66.87
Operators (Heavy, Class 01A - See Notes)	5/1/2021		\$40.69	\$28.18	\$68.87
Operators (Heavy, Class 02 - See Notes)	5/1/2017		\$33.52	\$24.07	\$57.59
Operators (Heavy, Class 02 - See Notes)	5/1/2018		\$35.07	\$24.52	\$59.59
Operators (Heavy, Class 02 - See Notes)	5/1/2019		\$35.07	\$26.52	\$61.59
Operators (Heavy, Class 02 - See Notes)	5/1/2020		\$36.61	\$26.98	\$63.59
Operators (Heavy, Class 02 - See Notes)	5/1/2021		\$38.16	\$27.43	\$65.59
Operators (Heavy, Class 02A - See Notes)	5/1/2017		\$35.78	\$24.72	\$60.50
Operators (Heavy, Class 02A - See Notes)	5/1/2018		\$37.32	\$25.19	\$62.51
Operators (Heavy, Class 02A - See Notes)	5/1/2019		\$37.32	\$27.19	\$64.51
Operators (Heavy, Class 02A - See Notes)	5/1/2020		\$38.87	\$27.64	\$66.51
Operators (Heavy, Class 02A - See Notes)	5/1/2021		\$40.41	\$28.10	\$68.51
Operators (Heavy, Class 03 - See Notes)	5/1/2017		\$30.60	\$23.21	\$53.81
Operators (Heavy, Class 03 - See Notes)	5/1/2018		\$32.15	\$23.66	\$55.81
Operators (Heavy, Class 03 - See Notes)	5/1/2019		\$32.15	\$25.66	\$57.81
Operators (Heavy, Class 03 - See Notes)	5/1/2020		\$33.69	\$26.12	\$59.81
Operators (Heavy, Class 03 - See Notes)	5/1/2021		\$35.24	\$26.57	\$61.81
Operators (Heavy, Class 04 - See Notes)	5/1/2017		\$29.47	\$22.88	\$52.35
Operators (Heavy, Class 04 - See Notes)	5/1/2018		\$31.01	\$23.32	\$54.33
Operators (Heavy, Class 04 - See Notes)	5/1/2019		\$31.01	\$25.33	\$56.34
Operators (Heavy, Class 04 - See Notes)	5/1/2020		\$32.55	\$25.79	\$58.34
Operators (Heavy, Class 04 - See Notes)	5/1/2021		\$34.10	\$26.24	\$60.34
Operators (Heavy, Class 05 - See Notes)	5/1/2017		\$29.02	\$22.74	\$51.76
Operators (Heavy, Class 05 - See Notes)	5/1/2018		\$30.56	\$23.20	\$53.76
Operators (Heavy, Class 05 - See Notes)	5/1/2019		\$30.56	\$25.20	\$55.76
Operators (Heavy, Class 05 - See Notes)	5/1/2020		\$32.11	\$25.65	\$57.76
Operators (Heavy, Class 05 - See Notes)	5/1/2021		\$33.65	\$26.11	\$59.76
Operators (Heavy, Class 06 - See Notes)	5/1/2017		\$28.14	\$22.49	\$50.63
Operators (Heavy, Class 06 - See Notes)	5/1/2018		\$29.68	\$22.93	\$52.61
Operators (Heavy, Class 06 - See Notes)	5/1/2019		\$29.68	\$24.94	\$54.62
Operators (Heavy, Class 06 - See Notes)	5/1/2020		\$31.23	\$25.39	\$56.62
Operators (Heavy, Class 06 - See Notes)	5/1/2021		\$32.77	\$25.84	\$58.61
Operators (Heavy, Class 07A - See Notes)	5/1/2017		\$40.73	\$27.63	\$68.36
Operators (Heavy, Class 07A - See Notes)	5/1/2018		\$42.58	\$28.18	\$70.76
Operators (Heavy, Class 07A - See Notes)	5/1/2019		\$42.89	\$30.27	\$73.16
Operators (Heavy, Class 07A - See Notes)	5/1/2020		\$44.74	\$30.82	\$75.56

**BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES**

Project: 21-03907 - Heavy/Highway	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Operators (Heavy, Class 07A - See Notes)	5/1/2021		\$46.59	\$31.37	\$77.96
Operators (Heavy, Class 07B - See Notes)	5/1/2017		\$40.38	\$27.53	\$67.91
Operators (Heavy, Class 07B - See Notes)	5/1/2018		\$42.23	\$28.09	\$70.32
Operators (Heavy, Class 07B - See Notes)	5/1/2019		\$42.54	\$30.17	\$72.71
Operators (Heavy, Class 07B - See Notes)	5/1/2020		\$44.39	\$30.72	\$75.11
Operators (Heavy, Class 07B - See Notes)	5/1/2021		\$46.25	\$31.26	\$77.51
Operators (Highway, Class 01 - See Notes)	5/1/2016		\$32.16	\$22.64	\$54.80
Operators (Highway, Class 01 - See Notes)	5/1/2017		\$32.93	\$23.87	\$56.80
Operators (Highway, Class 01 - See Notes)	5/1/2018		\$34.47	\$24.33	\$58.80
Operators (Highway, Class 01 - See Notes)	5/1/2019		\$34.47	\$26.33	\$60.80
Operators (Highway, Class 01 - See Notes)	5/1/2020		\$37.56	\$25.24	\$62.80
Operators (Highway, Class 01 - See Notes)	5/1/2021		\$39.10	\$25.70	\$64.80
Operators (Highway, Class 01a - See Notes)	5/1/2017		\$35.18	\$24.56	\$59.74
Operators (Highway, Class 01a - See Notes)	5/1/2018		\$36.72	\$25.01	\$61.73
Operators (Highway, Class 01a - See Notes)	5/1/2019		\$36.72	\$27.01	\$63.73
Operators (Highway, Class 01a - See Notes)	5/1/2020		\$39.81	\$25.92	\$65.73
Operators (Highway, Class 01a - See Notes)	5/1/2021		\$41.35	\$26.38	\$67.73
Operators (Highway, Class 02 - See Notes)	5/1/2016		\$30.98	\$22.31	\$53.29
Operators (Highway, Class 02 - See Notes)	5/1/2017		\$31.75	\$23.53	\$55.28
Operators (Highway, Class 02 - See Notes)	5/1/2018		\$33.30	\$23.98	\$57.28
Operators (Highway, Class 02 - See Notes)	5/1/2019		\$33.29	\$25.99	\$59.28
Operators (Highway, Class 02 - See Notes)	5/1/2020		\$36.38	\$24.90	\$61.28
Operators (Highway, Class 02 - See Notes)	5/1/2021		\$37.93	\$25.35	\$63.28
Operators (Highway, Class 03 - See Notes)	5/1/2016		\$30.28	\$22.10	\$52.38
Operators (Highway, Class 03 - See Notes)	5/1/2017		\$31.06	\$23.32	\$54.38
Operators (Highway, Class 03 - See Notes)	5/1/2018		\$32.59	\$23.80	\$56.39
Operators (Highway, Class 03 - See Notes)	5/1/2019		\$32.59	\$25.79	\$58.38
Operators (Highway, Class 03 - See Notes)	5/1/2020		\$35.69	\$24.69	\$60.38
Operators (Highway, Class 03 - See Notes)	5/1/2021		\$37.23	\$25.16	\$62.39
Operators (Highway, Class 04 - See Notes)	5/1/2016		\$29.82	\$21.98	\$51.80
Operators (Highway, Class 04 - See Notes)	5/1/2017		\$30.60	\$23.20	\$53.80
Operators (Highway, Class 04 - See Notes)	5/1/2018		\$32.14	\$23.66	\$55.80
Operators (Highway, Class 04 - See Notes)	5/1/2019		\$32.14	\$25.66	\$57.80
Operators (Highway, Class 04 - See Notes)	5/1/2020		\$35.23	\$24.57	\$59.80
Operators (Highway, Class 04 - See Notes)	5/1/2021		\$36.77	\$25.03	\$61.80
Operators (Highway, Class 05 - See Notes)	5/1/2016		\$29.31	\$21.83	\$51.14
Operators (Highway, Class 05 - See Notes)	5/1/2017		\$30.08	\$23.06	\$53.14
Operators (Highway, Class 05 - See Notes)	5/1/2018		\$31.63	\$23.51	\$55.14
Operators (Highway, Class 05 - See Notes)	5/1/2019		\$31.63	\$25.51	\$57.14
Operators (Highway, Class 05 - See Notes)	5/1/2020		\$34.72	\$24.42	\$59.14
Operators (Highway, Class 05 - See Notes)	5/1/2021		\$36.26	\$24.87	\$61.13
Operators (Highway, Class 06 - See Notes)	5/1/2016		\$32.40	\$22.70	\$55.10
Operators (Highway, Class 06 - See Notes)	5/1/2017		\$33.17	\$23.94	\$57.11
Operators (Highway, Class 06 - See Notes)	5/1/2018		\$34.71	\$24.39	\$59.10

**BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES**

Project: 21-03907 - Heavy/Highway	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Operators (Highway, Class 06 - See Notes)	5/1/2019		\$34.71	\$26.39	\$61.10
Operators (Highway, Class 06 - See Notes)	5/1/2020		\$36.25	\$26.85	\$63.10
Operators (Highway, Class 06 - See Notes)	5/1/2021		\$39.33	\$25.78	\$65.11
Operators (Highway, Class 06/A - See Notes)	5/1/2016		\$34.65	\$23.36	\$58.01
Operators (Highway, Class 06/A - See Notes)	5/1/2017		\$35.42	\$24.59	\$60.01
Operators (Highway, Class 06/A - See Notes)	5/1/2018		\$36.96	\$25.05	\$62.01
Operators (Highway, Class 06/A - See Notes)	5/1/2019		\$36.96	\$27.05	\$64.01
Operators (Highway, Class 06/A - See Notes)	5/1/2020		\$40.04	\$25.97	\$66.01
Operators (Highway, Class 06/A - See Notes)	5/1/2021		\$41.58	\$26.43	\$68.01
Operators (Highway, Class 07/A - See Notes)	5/1/2016		\$38.56	\$25.99	\$64.55
Operators (Highway, Class 07/A - See Notes)	5/1/2017		\$39.66	\$27.31	\$66.97
Operators (Highway, Class 07/A - See Notes)	5/1/2018		\$41.52	\$27.84	\$69.36
Operators (Highway, Class 07/A - See Notes)	5/1/2019		\$41.82	\$29.95	\$71.77
Operators (Highway, Class 07/A - See Notes)	5/1/2020		\$45.23	\$28.94	\$74.17
Operators (Highway, Class 07/A - See Notes)	5/1/2021		\$47.08	\$29.49	\$76.57
Operators (Highway, Class 07/B - See Notes)	5/1/2016		\$37.17	\$25.57	\$62.74
Operators (Highway, Class 07/B - See Notes)	5/1/2017		\$38.25	\$26.89	\$65.14
Operators (Highway, Class 07/B - See Notes)	5/1/2018		\$40.10	\$27.44	\$67.54
Operators (Highway, Class 07/B - See Notes)	5/1/2019		\$40.41	\$29.53	\$69.94
Operators (Highway, Class 07/B - See Notes)	5/1/2020		\$43.81	\$28.53	\$72.34
Operators (Highway, Class 07/B - See Notes)	5/1/2021		\$45.66	\$29.08	\$74.74
Painters Class 1 (see notes)	5/1/2018		\$23.92	\$14.37	\$38.29
Painters Class 2 (see notes)	5/1/2018		\$26.05	\$14.37	\$40.42
Painters Class 3 (see notes)	5/1/2018		\$31.80	\$14.37	\$46.17
Painters Class 3 (see notes)	5/1/2019		\$32.45	\$15.22	\$47.67
Pile Driver Divers (Building, Heavy, Highway)	1/1/2017		\$49.13	\$17.95	\$67.08
Pile Driver Divers (Building, Heavy, Highway)	1/1/2020		\$53.10	\$19.70	\$72.80
Pile Driver Divers (Building, Heavy, Highway)	1/1/2021		\$54.75	\$20.10	\$74.85
Pile Driver Divers (Building, Heavy, Highway)	1/1/2022		\$56.40	\$20.50	\$76.90
Piledrivers	1/1/2017		\$32.75	\$17.95	\$50.70
Piledrivers	1/1/2018		\$33.55	\$18.55	\$52.10
Piledrivers	5/1/2018		\$30.75	\$15.96	\$46.71
Piledrivers	1/1/2019		\$34.30	\$19.30	\$53.60
Piledrivers	5/1/2019		\$31.51	\$16.55	\$48.06
Piledrivers	5/1/2020		\$32.22	\$17.19	\$49.41
Piledrivers	5/1/2021		\$33.12	\$17.74	\$50.86
Steamfitters (Heavy and Highway - Gas Distribution)	5/1/2017		\$40.98	\$32.53	\$73.51
Truckdriver class 1(see notes)	5/1/2016		\$33.57	\$0.00	\$33.57
Truckdriver class 1(see notes)	5/1/2017		\$34.47	\$0.00	\$34.47
Truckdriver class 1(see notes)	5/1/2018		\$35.32	\$0.00	\$35.32
Truckdriver class 1(see notes)	5/1/2019		\$36.12	\$0.00	\$36.12
Truckdriver class 2 (see notes)	5/1/2015		\$32.64	\$0.00	\$32.64
Truckdriver class 2 (see notes)	5/1/2016		\$33.64	\$0.00	\$33.64
Truckdriver class 2 (see notes)	5/1/2017		\$34.54	\$0.00	\$34.54

**BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES**

Project: 21-03907 - Heavy/Highway	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Truckdriver class 2 (see notes)	5/1/2018		\$35.39	\$0.00	\$35.39
Truckdriver class 2 (see notes)	5/1/2019		\$36.19	\$0.00	\$36.19
Truckdriver class 3 (see notes)	5/1/2016		\$34.13	\$0.00	\$34.13
Truckdriver class 3 (see notes)	5/1/2017		\$35.03	\$0.00	\$35.03
Truckdriver class 3 (see notes)	5/1/2018		\$35.88	\$0.00	\$35.88
Truckdriver class 3 (see notes)	5/1/2019		\$36.68	\$0.00	\$36.68

RECIPROCAL LIMITATIONS ACT REQUIREMENTS

Please Complete Applicable Portion of Pages 3 & 4 and Return with Bid.

NOTE: These Requirements Do Not Apply To Bids Under \$10,000.00

I. REQUIREMENTS

- A.** The Reciprocal Limitations Act requires the Commonwealth to give preference to those bidders offering supplies produced, manufactured, mined or grown in Pennsylvania as against those bidders offering supplies produced, manufactured, mined or grown in any state that gives or requires a preference to supplies produced, manufactured, mined or grown in that state. The amount of the preference shall be equal to the amount of the preference applied by the other state for that particular supply.

The following is a list of states which have been found by the Department of General Services to have applied a preference for in-state supplies and the amount of the preference:

	STATE	PREFERENCE
1.	Alaska	7% (applies only to timber, lumber, and manufactured lumber products originating in the state)
2.	Arizona	5% (construction materials produced or manufactured in the state only)
3.	Hawaii	10%
4.	Illinois	10% for coal only
5.	Iowa	5% for coal only
6.	Louisiana	4% meat and meat products 4% catfish 10% milk & dairy products 10% steel rolled in Louisiana 7% all other products
7.	Montana	5% for residents * 3% for non-residents* *offering in-state goods, supplies, equipment and materials
8.	New Mexico	5%
9.	New York	3% for purchase of food only
10.	Oklahoma	5%
11.	Virginia	4% for coal only
12.	Washington	5% (fuels mined or produced in the state only)
13.	Wyoming	5%

- B.** The Reciprocal Limitations Act requires the Commonwealth to give preference to those bidders offering printing performed in Pennsylvania as against those bidders offering printing performed in any state that gives or requires a preference to printing performed in that state. The amount of the preference shall be equal to the amount of the preference applied by the other state for that particular category of printing.

The following is a list of states which have been found by the Department of General Services to have applied a preference for in-state printing and the amount of the preference:

	STATE	PREFERENCE
1.	Hawaii	15%
2.	Idaho	10%
3.	Louisiana	3%
4.	Montana	8%
5.	New Mexico	5%
6.	Wyoming	10%

- C.** The Reciprocal Limitations Act, also requires the Commonwealth to give resident bidders a preference against a nonresident bidder from any state that gives or requires a preference to bidders from that state or exclude bidders from states that exclude nonresident bidders. The amount of the preference shall be equal to the amount of the preference applied by the state of the nonresident bidder. The following is a list of the states which have been found by the Department of General Services to have applied a preference for in-state bidders and the amount of the preference:

STATE	PREFERENCE
1. Alaska	5% (supplies only)
2. Arizona	5% (construction materials from Arizona resident dealers only)
3. California	5% (for supply contracts only in excess of \$100,000.00)
4. Connecticut	10% (for supplies only)
5. Montana	3%
6. New Mexico	5% (for supplies only)
7. South Carolina	2% (under \$2,500,000.00) 1% (over \$2,500,000.00)
	This preference does not apply to construction contracts nor where the price of a single unit exceeds \$10,000.
8. West Virginia	2.5% (for the construction, repair or improvement of any buildings)
9. Wyoming	5%

STATE	PROHIBITION
1. New Jersey	For supply procurements or construction projects restricted to Department of General Services Certified Small Businesses, New Jersey bidders shall be excluded from award even if they themselves are Department of General Services Certified Small Businesses.

D. The Reciprocal Limitations Act also requires the Commonwealth not to specify, use or purchase supplies which are produced, manufactured, mined or grown in any state that prohibits the specification for, use, or purchase of such items in or on its public buildings or other works, when such items are not produced, manufactured, mined or grown in such state. The following is a list of the states which have been found by the Department of General Services to have prohibited the use of out-of-state supplies:

STATE	PROHIBITION
1. Alabama	Only for printing and binding involving "messages of the Governor to the Legislature", all bills, documents and reports ordered by and for the use of the Legislature or either house thereof while in session; all blanks, circulars, notices and forms used in the office of or ordered by the Governor, or by any state official, board, commission, bureau or department, or by the clerks of the supreme court . . . /and other appellate courts/; and all blanks and forms ordered by and for the use of the Senate and Clerk or the House of Representatives, and binding the original records and opinions of the Supreme Court . . . /and other appellate courts/
2. Georgia	Forest products only
3. Indiana	Coal
4. Michigan	Printing
5. New Mexico	Construction
6. Ohio	Only for House and Senate bills, general and local laws, and joint resolutions; the journals and bulletins of the Senate and house of Representatives and reports, communications, and other documents which form part of the journals; reports, communications, and other documents ordered by the General Assembly, or either House, or by the executive department or elective state officers; blanks, circulars, and other work for the use of the executive departments, and elective state officers; and opinions of the Attorney General.
7. Rhode Island	Only for food for state institutions.

*If the bid discloses that the bidder is offering to supply one of the above-listed products that is manufactured, mined, or grown in the listed state, it shall be rejected. Contractors are prohibited from supplying these items from these states.

II. CALCULATION OF PREFERENCE

In calculating the preference, the amount of a bid submitted by a Pennsylvania bidder shall be reduced by the percentage preference which would be given to a nonresident bidder by its state of residency (as found by the Department of General Services in Paragraph C_{above}). Similarly, the amount of a bid offering Pennsylvania goods, supplies, equipment or materials shall be reduced by the percentage preference which would be given to another bidder by the state where the goods, supplies, equipment or materials are produced, manufactured, mined or grown (as found by the Department of General Services in Paragraphs A and B above).

THIS FORM MUST BE COMPLETED AND RETURNED WITH THE BID

III. STATE OF MANUFACTURE

All bidders must complete the following chart by listing the name of the manufacturer and the state (or foreign country) of manufacture for each item. If the item is domestically produced, the bidder must indicate the state in the United States where the item will be manufactured. **This chart must be completed and submitted with the bid or no later than two (2) business days after notification from the Issuing Office to furnish the information. Failure to complete this chart and provide the required information prior to the expiration of the second business day after notification shall result in the rejection of the bid.**

ITEM NUMBER	NAME OF MANUFACTURER	STATE (OR FOREIGN COUNTRY) OF MANUFACTURE

IV. BIDDER'S RESIDENCY

A. In determining whether the bidder is a nonresident bidder from a state that gives or requires a preference to bidders from that state, the address given on the first page of this invitation to bid shall be used by the Commonwealth. If that address is incorrect, or if no address is given, the correct address should be provided in the space below:

Correct Address: _____

- B.** In order to claim the preference provided under Section I.B., Pennsylvania resident bidders must complete the following or have such information on file with the Issuing Office:
1. Address of bidder's bona fide establishment in Pennsylvania at which it was transacting business on the date when bids for this contract/requisition were first solicited: _____
 2. **a.** If the bidder is a corporation:
 - (1) The corporation is or is not incorporated under the laws of the Commonwealth of Pennsylvania.
 - (a) If the bidder is incorporated under the laws of the Commonwealth of Pennsylvania, provide date of incorporation: _____
 - (b) If the bidder is not incorporated under the laws of the Commonwealth of Pennsylvania, it must have a certificate of authority to do business in the Commonwealth of Pennsylvania from the Pennsylvania Department of State as required by the Pennsylvania Business Corporation Law (15 P.S. §2001). Provide date of issuance of certificate of authority: _____
 - (2) The corporation is or is not conducting business in Pennsylvania under an assumed or fictitious name. If the bidder is conducting business under an assumed or fictitious name, it must register the fictitious name with the Secretary of the Commonwealth and the office of the prothonotary of the county wherein the registered office of such corporation is located as required by the Fictitious Corporate Name Act, as amended 15 P.S. §51 et seq. Corporate bidders conducting business under an assumed or fictitious name must provide date of registry of the assumed or fictitious name: _____
 - b.** If the bidder is a partnership:
 - (1) The partnership is or is not conducting business in Pennsylvania under an assumed or fictitious name. If the bidder is conducting business under an assumed or fictitious name, it must file with the Secretary of the Commonwealth and the office of the prothonotary the county wherein the principal place of business is located as required by the Fictitious Name Act of May 24, 1945, P.L. 967, as amended 54 P.S. §28.1. Partnerships conducting business under an assumed or fictitious name must provide the date of filing of the assumed or fictitious name with the Secretary of the Commonwealth: _____
 - (2) The partnership is or is not a limited partnership formed under the laws of any jurisdiction other than the Commonwealth of Pennsylvania. If the bidder is an Out-of-state limited partnership, it must register with the Pennsylvania Department of State as required by the Act of July 10, 1981, P.L. 237, as amended, 59 Pa. C.S.A. §503. Out-of-state limited partnerships must provide the date of registry with the Pennsylvania Department of State: _____
 - c.** If the bidder is an individual:

He or she is or is not conducting business under an assumed or fictitious name. If the bidder is conducting business under an assumed or fictitious name, he or she must file with the Secretary of the Commonwealth and the office of the prothonotary in the county wherein the principal place of business is located as required by the Fictitious Name Act of May 24, 1945, P.L. 967, as amended, 54 P.S. §28.1. Individuals conducting business under an assumed or fictitious name must provide the date of filing of the assumed or fictitious name with the Secretary of the Commonwealth: _____

TECHNICAL SPECIFICATIONS

The following stipulations, specifications and description of Work are defined and described as Technical Specifications and it is understood and agreed that everything herein contained is hereby made part of the Contract. Wherever any feature of the Work is not fully set forth in these Technical Specifications and is necessary for the completion of Work, it shall be understood that the same is governed by the rules of the best prevailing practice for that class of Work, as determined by the Pennsylvania Game Commission and its representatives.

These Technical Specifications and any drawings, details, maps and/or plans forming a part thereof, will cover the furnishing of all labor, equipment, tools, materials, and related items necessary to perform the Work, as required under this Contract. The project consists of two construction contracts: Contract No. 1 Electrical Construction (*E.C.*) and Contract No. 2 General Construction (*G.C.*), indicated below are project documents relating to each individual contract.

- Section 1 – Summary of Work (*E.C. & G.C.*)
- Section 2 – Submittals (*E.C. & G.C.*)
- Section 3 – Selective Demolition (*E.C. & G.C.*)
- Section 4 – Diesel Fuel Underground Storage Tank Removal (*G.C.*)
- Section 5 – Compacted Backfill (*G.C.*)
- Section 6 – Aggregate (*E.C. & G.C.*)
- Section 7 – Concrete Unit Retaining Wall System (*G.C.*)
- Section 8 – Concrete (*E.C.*)
- Section 9 – Seeding (*G.C.*)
- Section 10 – Utility Trenching (*G.C.*)
- Section 11 – Electrical (*E.C.*)

ATTACHMENTS

The following Attachments are included (see separate attachments):

DRAWINGS:

- A-1 Project Location and Site Plans (*E.C. & G.C.*)
- A-2 Emergency Generator – New Retaining Wall Plan (*G.C.*)
- E001 Electrical – Legend, Symbols, Abbreviations & Specifications (*E.C.*)
- ED100 Electrical – Partial First Floor Plan – Demolition Electrical (*E.C.*)
- E100 Electrical – Partial First Floor Plan – New Work Electrical (*E.C.*)
- E500 Electrical – Details (Electrical Single Line Diagrams) (*E.C.*)

TECHNICAL SPECIFICATION SECTION NO. 1 - SUMMARY OF WORK

1.1 – SCOPE OF PROJECT

The scope of this project is to replace the existing 480/277 VAC 300 kW diesel powered emergency generator with a new 480/277VAC 350 kW natural gas emergency generator at the same location. The intent of this project to provide a more reliable emergency power source with increasing emergency power electrical capacities to support critical operations of the newly added Consolidated Dispatch Center and life safety code building systems within the Pennsylvania Game Commission Head Quarters building located at 2001 Elmerton Avenue, Harrisburg, Pennsylvania.

The project consists of two (2) Construction Contracts:

Contract No. 1 – Electrical:

Disconnect supporting building utilities and electrical circuitry to the existing emergency generator, remove generator and place in adjacent parking lot with wood timbers to distribute the loading and to allow rigging for future loading. Break up and remove existing generator pad and foundation. Furnish and install a new cast in place reinforcing concrete generator pad and foundation. Furnish and install a new natural gas-powered Caterpillar DG350 GC spark-ignited generator set with level 2 acoustic enclosure with lights. Provide for transportation of the generator to the site and all rigging required for placement of the new generator. Remove and replace existing automatic transfer switch with a new ASCO 300 series 600A “J” Frame front connected automatic transfer switch at the same location. Furnish and install a new generator annunciator, generator emergency shut off switch, electrical transformer and other electrical gear required for installation. Furnish and install a trailer mounted temporary generator with temporary electrical connections to maintain emergency power for the building during the course of work. Perform all rough and electrical wiring required for installation of new generator and supporting electrical gear and other electrical appurtenance/ related work.

Contract No. 2 - General:

Remove and dispose of 500-gallon diesel fuel underground storage tank. Demolish existing wood timber retaining wall system surrounding the generator on three sides. Excavate soils as required for the installation of a new retaining wall system. Furnish and install a new EP Henry Diamond Pro, or approved equal, retaining wall system to retain soils at three sides of the new emergency generator. Provide utility trenching, placement of aggregates for pipe bedding and backfill for new natural gas piping, new natural gas piping to be furnished and installed by others. Furnish and install a new 3” thick layer of landscape stone, 3’-0” wide at all four sides adjacent to new concrete generator pad/foundation and other building appurtenance/ related work. Perform seeding and soil stabilization of all disturbed soils.

1.2 – WORK AREA AND ACCESS

The work areas are located at the Southwest corner of the administrative wing of the building as shown on the drawings. The building will remain open to the public and staff during the construction period. The Contractor shall conduct his operations to minimize any disturbance to building operations during the project construction. The Contractor shall place signs, barricades, warning tapes, etc. on the inside and outside of the building to protect the public and staff from entering active work areas.

The Contractor is allowed to store equipment and materials and park personal vehicles for the construction workers in the Warehouse parking lot for the building. The Contractor shall install traffic barriers and signs to protect this area. The PGC staff that work in the building will also be parking in the same lot.

1.3 – WORK HOURS

The work hours at the project site are during regular PGC business hours which are Monday through Friday, 7:45AM to 4:00PM. Work during different hours must have prior written approval by the PGC. Requests for different working hours must be submitted in writing three days in advance. Electrical power distribution improvements will require existing electrical systems shut down to perform this work outside the normal working hours. Closely coordinate times to perform this electrical work not to disrupt building operations.

1.4 – PROTECTION OF BUILDING FEATURES

The Contractor is required to use adequate precautions and to install protective measures (plastic sheets, etc.) to protect existing building components, contents and surfaces from damage or dust/dirt contamination caused by construction operations. All dust, dirt and debris must be cleaned up during work hours. Storage of materials, tools and equipment must be coordinated with the PGC staff at the building, provide MSDS sheets for products stored and used within the building.

Any damage to building features caused by the project construction must be repaired by the Contractor to the satisfaction of the PGC.

1.5 – PERMITS, LAWS AND REGULATIONS

The PGC will secure a UCC building permit from the PA Department of Labor and Industry (L&I) for renovations and construction. A copy of the Building Permit will be provided to the contractor along with an inspection log checklist. The contractor shall notify the L&I inspector and coordinate with the PGC so the required inspections take place and the project is not delayed. Local building code officials have no jurisdiction over this project. The Contractor shall procure and pay for all other permits, licenses, inspections, conveniences, or other approvals necessary for the execution of the contract.

The Contractor shall comply with all laws, ordinances, rules, orders and regulations relating to the performance of the work, the protection of adjacent property, the maintaining of surface passageways, guard fences, and/or other protective facilities.

All applicable Federal and State laws and regulations, municipal ordinances and rules and regulations of all authorities, having jurisdiction over construction of the project shall apply to the contract throughout, and they shall be deemed to be included in the contract as a part, thereof, the same as though herein written out in full.

All regulations of the Occupational Safety and Health Act are in effect on this contract. It will be the Contractor's responsibility to make himself aware of all appropriate County, State and Federal regulations that apply to this contract.

Costs and expenses resulting from any violations and/or delays incurred from improper execution of the above provisions shall be the Contractor's responsibility.

1.6 – MEASUREMENT AND PAYMENT

1. ADMINISTRATION, MOBILIZATION, TERMS AND CONDITIONS, CONTRACT BONDS
 - a. This price and payment shall constitute full compensation for providing Performance and Payment Bonds, insurance coverage and certificates, compliance with the Terms and Conditions, and general project requirements except where specifically described and scheduled elsewhere, mobilization, demobilization, temporary facilities, municipal and state bonding requirements / fees and costs / inspections, and compliance with requirements of permits and approvals (not measured and paid for elsewhere) required for the project by the Contract Documents.
 - b. Unit of Measurement: Lump Sum.

TECHNICAL SPECIFICATION SECTION NO. 2 - SUBMITTALS

2.1 – SECTION INCLUDES/CONTENT

- A. Included in this section of the specifications is a list of approvals required for all materials incorporated into the project. The Department reserves the right to require additional approvals if necessary. No material, equipment or supplies listed herein shall be incorporated into the work until the Contractor has obtained prior approval from the Department.
- B. Submittals required by each prime contract are indicated in the description of items to be submitted, Paragraph 2.8.

2.2 - SUBMITTAL PROCEDURES

- A. Comply with the following or resubmission will be required:
 - 1. Indicate contract number and specification section on each item submitted.
 - 2. Signify approval by stamp, initialing and dating each item prior to submission to the Designer.
- B. Items requiring testing shall be forwarded directly to the approved laboratory. The Contractor shall pay all costs associated with testing.
- C. Expedite critical materials, equipment and shop drawings, and other required submissions.
- D. Incomplete submissions will be returned for resubmission.
- E. Use of substitutions for materials or details shown on the contract drawings or called for in these specifications require written approval from the Department.

2.3- PRODUCT DATA

- A. Manufacturer's printed directions and manufacturer's standard specifications showing all dimensions, cuts, finishes, etc., as well as catalog cuts and ratings of all material will be required and shall be submitted in advance prior to application and/or installation.

2.4- TESTS

- A. Submit required reports listing items tested, tests conducted and results obtained as specified.

2.5- CERTIFICATIONS

- A. Submit required certifications in written form identifying authorized representative, manufacturer, systems designer and other required data as specified.

2.6 - WARRANTIES

- A. Refer to Specifications for required warranties. Copies of proposed warranties specified for products shall accompany the designated submittal of that product.

2.7 - OPERATION AND MAINTENANCE MANUALS

- A. Manual Format (Use 3-ring binder):

1. Title page with the following information for each system covered:
 - a. Project Title and Contract Number (in capital letters)
 - b. Name of Company
 - c. Name of the individual to be called
 - d. Normal telephone numbers
 - e. Contractor's account number for project
2. Index listing all sections of the Manual.
3. Copies of all warranties for equipment or materials furnished in contract. (Index tabbed)
4. Complete system circuit diagrams, block diagrams, copies of all approved shop drawings, which shall clearly illustrate how all the components relate and how they are interconnected and a point wiring diagram.
5. Reports, testing analysis.
6. Operating instructions and maintenance instructions for all equipment and finish materials furnished.
7. All approved, shop drawings, descriptive data and any certifications.

2.8 - SUBMITTALS LIST

- A. Abbreviations

1. Mfr - for Manufacturer
2. Prod - for Producer or Supplier
3. SHDR - for Shop Drawings
4. DeDa - for Descriptive Data or Catalog Cuts
5. Samp - for Samples
6. Cert - for Certification
7. Tests - required Test Reports
8. Warr – for Warranties

GENERAL CONSTRUCTION								
DESCRIPTION OF ITEMS TO BE SUBMITTED	MFR	PROD	SHDR	DeDa	SAMP	CERT	TESTS	WARR
CONCRETE UNIT RETAINING WALL SYSTEM	X	X		X	X			
GEOGRID – EARTH TIE BACKS	X	X		X				
LANDSCAPE STONE	X	X		X	X			
UST SYSTEM CLOSURE NOTIFICATION FORM & RELATED DOCUMENTATION FOR UST REMOVAL				X			X	
SEEDING & SOIL STABILIZATION	X	X		X				
PROJECT SCHEDULE				X				
ELECTRICAL CONSTRUCTION								
SEE ELECTRICAL ENGINEERING CONSULTANT DRAWINGS AND SPECIFICATIONS ON DRAWING E-001 FOR ALL EMERGENCY GENERATOR PRODUCT SUBMITTAL REQUIREMENTS.								
CAT DG350 GC NATURAL GAS POWERED GENERATOR SET W/ LEVEL 2 ACCOUSTIC ENCLOSURE	X	X	X	X		X		X
ASCO 300 SERIES 600A “J” FRAME AUOTMATIC TRANSFER SWITCH	X	X	X	X				X
CONCRETE FOR GENERATOR PAD/FOUNDATION	X	X		X			X	
REINFORCING FOR CONCRETE GENERATOR PAD/FOUNDATION	X	X		X				
PROJECT SHCEDULE				X				

TECHNICAL SPECIFICATION SECTION NO. 3 – SELECTIVE DEMOLITION

3.1 - SCOPE

This work includes all rigging and staging as required for removal of the existing emergency generator and placement of the unit in the adjacent parking lot with wood timbers properly distributing the load in sections. It is intended for the existing generator to be salvaged in the future. Break-up and remove existing concrete generator pad and foundations and dispose of at an offsite location. Remove soils to the required depths to construct new concrete generator pad/foundation shown of Electrical Drawing E-500. This work shall be performed by the Electrical Contractor (E.C.)

Remove and dispose of existing timber retaining wall and supporting components and dispose of at an off-site location. Remove soils to the required depths for the construction of a new concrete segmental retaining wall system. This work shall be performed by the General Contractor (G.C.)

The E.C. and G.C. shall coordinate work schedules to perform this demolition work.

3.2 - PROCEDURE

- A. Perform the work in a manner to prevent damage or injury to property or the public. Provide barriers, warning lights and other protection as required. Protection devices shall be maintained until completion of work, or until removal may be directed by the Department. Restore any damage to grounds and building to original conditions or repair as directed at no additional cost.
- B. Use caution and wear appropriate protective clothing, including gloves and safety goggles while removing materials.
- C. Adopt a method for control and scheduling of loud noises.
- D. Carefully remove all materials scheduled for removal so that adjacent surfaces and finishes are not damaged.
- E. Leave all surrounding areas in a safe, clean condition.
- F. Provide a fire extinguisher at construction site during operations.
- G. Repair all damage to existing materials scheduled to remain, including damage to adjacent fixtures, finishes and materials damaged by work performed under this section

3.3 - SCHEDULING DEMOLITION

- A. All demolition-removal work must be done at times agreed upon by the representatives of the Department.
- B. Once commenced, work shall proceed as scheduled, in an efficient, quiet operation without delays or interruptions

3.4 - DISPOSITION OF UTILITIES

- A. Existing services and equipment, including any piping and/or conduits encountered that are not required to be removed shall be temporarily supported and maintained until permanent support has been restored.
- B. Existing soil lines, drain lines, water service, and gas pipes, electrical conduits and wires, telephone conduits and wires, and/or other similar obstructions in the way of demolition or new construction and which have been scheduled to be removed, shall be removed after they have been satisfactorily closed off and/or capped.

3.5 – CLEAN UP

- A. Debris and Rubbish: Remove debris and rubbish from the site daily. Do not allow to accumulate on site.
- B. Debris Control: Remove and transport debris in a manner as to prevent spillage on streets or adjacent areas.
 - 1. Any area either temporary or permanent over which hauling operations or other moving operations are conducted shall be kept clean and any debris shall be removed promptly by the Contractor.
 - 2. Streets, walks and drives, adjacent to the areas of construction, shall be kept clean and clear of obstructions at all times; they shall be kept clear of materials and debris to their full width and shall be maintained in such a manner as to permit safe and normal use.
 - 3. All dumpsters shall be safe guarded and tarped offed at the end of each day's work.
- C. Regulations: Local regulations regarding hauling and disposal apply.

3.6 – MEASUREMENT AND PAYMENT

This price and payment shall constitute full compensation for the removal and disposal of existing building materials and soils as specified and shown and as directed by PGC staff including but not limited to all labor, materials, equipment, supervision, accessories, disposal of waste and related work.

- A. Unit of Measurement: Lump Sum.

TECHNICAL SPECIFICATIONS SECTION NO. 4 – DIESEL FUEL UNDERGROUND STORAGE TANK REMOVAL

4.1 – SCOPE

The work included in this section consists of the excavation, removal, and disposal of a 500-gallon diesel fuel underground storage tank system currently in use at the site.

4.2 – PROCEDURE

A – General – The Contractor shall perform an on-Site inspection of the storage tank system and proximate areas to formulate a plan to safely remove and dispose of the UST and all associated appurtenance in a safe manner. All components of the UST system are to be removed from the site. Blasting, torch cutting or burning for this removal is not permitted, nor is the on-Site burning of any building materials or litter. The Contractor is permitted to salvage any components of the system for their own use, if desired.

The PGC will arrange for disconnection of the UST system from all electrical components before the project begins. The PGC will also have already identified (by means of ground penetrating radar (GPR) methods) all identifiable subsurface utilities, tanks or other potential subsurface features that may otherwise interfere with or guide the performance of the work.

B – Appurtenance Removal – Furnish all labor, equipment and materials necessary to completely disconnect and remove all the components connected with the operation of the UST system from the site. This includes (but may not be limited to) fill port/manway, all vent and product piping, and electrical conduit and wiring (as encountered). All system components will then be considered property of the Contractor and can be salvaged and/or sold by the Contractor to offset the cost of the project (or disposed, as desired).

C – Underground Storage Tanks Removal – All diesel UST removal activities should be conducted in general accordance with the PA DEP Technical Guidance Document #263-4500-601 (*Closure Requirements for Underground Storage Tank Systems*), as established under the Storage Tank and Spill Prevention Act (Act 32 of 1989, as amended, P.L. 169 25 Pa. Code, Sections 245.451-455). Specifically, closure activities should follow the procedures outlined in **Section VI** of the referenced document relating to permanent UST closure including, but not limited to, the following sub-tasks:

1. Complete and submit a *UST System Closure Notification Form* (2630-FM-BECB0127) to PADEP (as well as to the Dept. of Labor and Industry) not less than 30 days prior to the commencement of the removal.
2. Preparation of a Site-Specific Health and Safety Plan (HASP).
3. Place the appropriate PA 1-Call between 3 and 10 business days prior to conducting any on-Site work, in order to identify any subsurface utilities that may not have been previously identified by the GPR survey.
4. Monitoring for and mitigating flammable vapors.

5. Develop a plan for the management and disposal of all tank-related wastes including the tank, liquids and sludges, soil and associated debris (approximately 450 gallons of diesel fuel will require removal/disposal).
6. Submit a completed and signed *Storage Tanks Registration/Permitting Application Form* to the DEP within 30 days after the completion of the permanent closure.

D – Disposal – The tank and all associated appurtenances are to be removed from the site. The Contractor is encouraged to salvage and recycle as much of the waste materials as is possible. Materials that cannot be salvaged or recycled shall be disposed at an approved landfill or incinerator. The Contractor shall adhere to all DEP solid waste disposal regulations. The Contractor shall supply copies of tank destruction documents and any landfill receipts for the other materials to verify that proper disposal procedures were followed. Receipts for materials salvaged by the Contractor are not required.

E – Site Conditions – All debris, equipment and material are to be removed from the site. The Contractor shall leave the site in a clean and natural condition. The finished grade shall match the existing site contours. Refer to Section 8 of the Technical Specifications for requirements on seeding and site stabilization.

4.3 – MEASUREMENT AND PAYMENT

This price and payment shall constitute full compensation for UST removal including notifications, appurtenance removal, disposal, restoring site conditions, as specified and shown and as directed by PGC staff including but not limited to all labor, materials, equipment, supervision, accessories, disposal of waste and related work.

A. Unit of Measurement: Lump Sum.

TECHNICAL SPECIFICATION SECTION No. 5 - COMPACTED BACKFILL

5.1 - SCOPE

This work is backfilling to infill earthen voids created from the removal of the underground storage tank and for the installation of excavated earthen materials for the construction of the new concrete unit retaining wall system. Backfill shall be of suitable materials obtained from the required excavation as shown on the Drawings, or borrowed materials, or a combination there of as directed by the Game Commission.

5.2 - MATERIALS

Secure backfill materials from the required excavation and borrowed earthen materials. The backfill soils may contain cobbles and boulders which are not suitable for backfill around pipes or concrete foundations. Screening of the excavated soils may be necessary to separate objectionable stones and other debris from the backfill material. Materials shall be free from roots, brush, frozen and other objectionable materials, and stones having any dimension greater than three (3) inches. The Game Commission will decide the material's suitability for use as backfill during excavation operations.

5.3 - PROCEDURE

Conduct backfill operations so that the building foundations and utility lines are not damaged. At your own expense, and to the satisfaction of the Game Commission, repair or replace any structure damaged by your operations.

Place backfill in the dry. Place material in layers not exceeding four (4) inches in depth and compact each layer with vibratory compactors. Where working clearances permit, backfill may be placed in layers not exceeding eight (8) inches in depth, and compacted with a roller. Do not drop backfill materials, but scatter and bring up evenly. Add water or dry the backfill materials as necessary to attain as close to the optimum moisture content as possible during compaction. No free water shall drain off and adversely affect the underlying or adjacent materials. Acceptable compaction will be determined on the basis of non-movement of the material under the compaction equipment. If the density and/or moisture content of the backfill is not satisfactory, replace and/or re-compact the materials to the satisfaction of, and at no additional cost to the Game Commission.

5.4 - MEASUREMENT AND PAYMENT

This price and payment shall constitute full compensation for performing all compacted backfilling to the required depths for the construction of new building foundations, and utility trenches as specified and shown and as directed by PGC staff including but not limited to all labor, materials, equipment, supervision, accessories, disposal of waste and related work.

A. Unit of Measurement: Lump Sum.

TECHNICAL SPECIFICATION SECTION NO. 6 - AGGREGATE

6.1 - SCOPE

This work is providing a gravel subbase for concrete generator pad, with #2A coarse aggregate as shown on the Drawings. Work includes placement of aggregates and backfilling around underground conduit. Work includes placement of landscape stone at the perimeter of the new concrete generator pad.

6.2 - MATERIALS

A. Applicable Publications

AASHTO T 27 - Standard Method of Test for Sieve Analysis of Fine and Coarse Aggregates.

Pub. 408 - Specifications, Pennsylvania Department of Transportation.

Bulletin 14 - Aggregate Producers, Pennsylvania Department of Transportation.

B. Aggregates:

Aggregate used for the subbase of concrete slabs and concrete unit retaining wall leveling pads shall be Type C, #2A coarse aggregate, as specified in Section 703.2 of Pub. 408.

Aggregate used for backfilling behind concrete unit retaining walls shall be Type A, #57 coarse aggregate as specified in Section 703.2 of Pub. 408.

AASHTO #10 stone shall also be used to backfill around installed water lines, electric conduit and drainage pipes.

Obtain aggregates from a source listed in Bulletin 14.

New landscape stone to be furnished and installed shall match the type, size and color as existing.

6.3- SUBMITTALS

Submit a catalog cut or other information for aggregates origin of supply source to the PGC for review and approval before ordering any materials. Refer to submittal specification section for submission requirements.

6.4 - PROCEDURE

Place aggregates and stone in the dry, and not on frozen ground for concrete slab foundations. Conduct aggregate placement operations in such a way that the permanent structures are not damaged.

At concrete slab foundations, place stone in loose layers not exceeding 4 inches in depth and compact each layer with mechanical tampers or other approved means. If working clearances permit, place stone in loose layers not exceeding 8 inches in depth and compact each layer with rollers, tracked vehicles or other approved equipment. After compacting to the required thickness shown on the Drawings, accurately shape the foundation bed by a template to provide uniform contact for concrete placement.

Trenching and backfill around the drainpipes and utility lines are the responsibility of the other contractor's work. Other trades own their own trenching and backfill.

6.5 - MEASUREMENT AND PAYMENT

This price and payment shall constitute full compensation for providing all aggregates and the placement and compacting of aggregates to the required depths for the construction of new building foundations, concrete aprons and slabs and utility trenches as specified and shown and as directed by PGC staff including but not limited to all labor, materials, equipment, supervision, accessories, disposal of waste and related work. Aggregate used for replacing caved-in-material, and material excavated beyond the established payment lines will not be measured and paid for.

A. Unit of Measurement: Tons, measured by the weight slips from stone supplier, as applicable for the three types of aggregate used for the project.

**TECHNICAL SPECIFICATION SECTION NO. 7 - CONCRETE SEGMENTAL
RETAINING WALL SYSTEM**

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Retaining wall system constructed of concrete segmental retaining wall units.
- B. Geosynthetic reinforcement fabric
- C. Leveling pad base
- D. Drainage aggregate
- E. Backfill
- F. Drainage pipe
- G. Adhesives

1.02 REFERENCES

- A. American Association of State Highway Transportation Officials (AASHTO)
 - 1. AASHTO M288 Geotextile Specification for Highway Applications
 - 2. AASHTO Standard Specifications for Highway Bridges
- B. American Society for Testing and Materials (ASTM)
 - 1. ASTM C140 Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units
 - 2. ASTM C1262 Standard Test Method for Evaluating the Freeze-Thaw Durability of Manufactured Concrete Masonry Units and Related Concrete Units
 - 3. ASTM C1372 Standard Specification for Segmental Retaining Wall Units
 - 4. ASTM D448 Standard Classification for Sizes of Aggregate for Road and Bridge Construction
 - 5. ASTM D698 Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/f³)(600 kN-m/m³)
 - 6. ASTM D1556 Standard Test Method for Density and Unit Weight of Soil In Place by the Sand Cone Method
 - 7. ASTM D1557 Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/f³)(2700 kN-m/m³)
 - 8. ASTM D2487 Standard Classification of Soils for Engineering Purposes (Unified Soil Classification System)
 - 9. ASTM D2922 Standard Test Methods for Density of Soil and Soil-Aggregate In Place by Nuclear Methods (Shallow Depth)
 - 10. ASTM D3034 Standard Specification for Type PSM Poly(Vinyl Chloride) (PVC) Sewer pipe and Fittings
 - 11. ASTM D4318 Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
 - 12. ASTM D4595 Standard Test Method for Tensile Properties of Geotextiles by the Wide-Width Strip Method
 - 13. ASTM D5262 Standard Test Method for Evaluating the Unconfined Tension

- Creep Behavior of Geosynthetics
14. ASTM F405 Standard Specification for Corrugated Polyethylene (PE) Tubings and Fittings
 15. ASTM G51 Standard Test Method for Measuring pH of Soil for Use in Corrosion Testing

C. National Concrete Masonry Association (NCMA)

1. NCMA Design Manual For Segmental Retaining Walls, Second Edition, Second Printing (1997)
2. NCMA SRWU-1 Determination of Connection Strength Between Geosynthetics and Segmental Concrete Units
3. NCMA SRWU-2 Determination of Shear Strength Between Segmental Concrete Units

1.03 DEFINITIONS

- A. Backfill: Soil which is used as fill behind the drainage aggregate, and within the reinforced soil mass (if applicable).
- B. Drainage Aggregate: Material used within (if applicable), between, and directly behind the concrete retaining wall units.
- C. Filter Fabric: Material used for separation and filtration of dissimilar soil types.
- D. Foundation Soil: Soil mass supporting the leveling pad and reinforced soil zone of the retaining wall system.
- E. Geosynthetic Reinforcement: Material specifically fabricated for use as a soil reinforcement.
- F. Global Stability: The general mass movement of a soil reinforced segmental retaining wall structure and adjacent soil mass.
- G. Project Geotechnical Engineer: A registered engineer employed by the Owner to perform site observations, provide recommendations for foundation support, and verify soil shear strength parameters.

1.04 SUBMITTALS

- A. Submit the following in accordance with Section #2:
 1. Product Data: Material description and installation instructions for each manufactured product specified.
 2. Shop Drawings: Retaining wall system design, including wall elevation views, geosynthetic reinforcement layout, pertinent details, and drainage provisions. The shop drawings shall be signed by a registered professional engineer licensed in the state of wall installation.
 3. Design Calculations: Engineering design calculations prepared in accordance with the NCMA Design Manual For Segmental Retaining Walls, or the AASHTO Standard Specifications for Highway Bridges, Section 5.8 (whichever is applicable). Analysis of global stability must be addressed and incorporated into the shop drawings.
 4. Samples
 - a. Furnish one unit in the color and face pattern specified, if requested.
 - b. Furnish 12-inch square or larger piece of the geosynthetic reinforcement specified.

5. Test Reports: Independent laboratory reports stating moisture absorption and compressive strength properties of the concrete retaining wall units meet the Project Specifications when tested in accordance with ASTM C140, Sections 6, 8 and 9.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Deliver, store, and handle materials in accordance with manufacturer's recommendations, in such a manner as to prevent damage. Check the materials upon delivery to assure that proper material has been received. Store above ground on wood pallets or blocking. Remove damaged or otherwise unsuitable material, when so determined, from the site.
 1. Exposed faces of concrete wall units shall be free of chips, cracks, stains, and other imperfections detracting from their appearance, when viewed from a distance of 10 feet.
 2. Prevent mud, wet cement, adhesives and similar materials which may harm appearance of units, from coming in contact with system components.

1.06 EXTRA MATERIALS

- A. Furnish Owner with 3 replacement units identical to those installed on the Project.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Concrete Retaining Wall Units: "Anchor Diamond Pro Retaining Wall Units" as manufactured by EP Henry Corporation under license from Anchor Wall Systems or approved equal.
 1. Physical Requirements
 - a. Meet requirements of ASTM C1372, except the maximum water absorption shall be limited to 7 percent, and unit height dimensions shall not vary more than plus or minus 1/16 inch from that specified in the ASTM reference, not including textured face.
 - b. Unit Face Area: Not less than 1.0 square feet.
 - c. Color: Selected by the PGC Staff from manufacturer's full range of standard colors. EP Henry stock colors: Buff, Harvest Blend, Dakota Blend, Pewter Blend.
 - d. Face Pattern Geometry: Straight
 - e. Texture: Split Rock Face.
 - f. Include an integral concrete shear connection flange/locator.
- B. Geosynthetic Reinforcement: Polyester fiber geogrid or geotextile, or polypropylene woven geotextile, as shown on the Drawings.
- C. Leveling Pad Base
 1. Aggregate Base: Crushed stone or granular fill meeting the following gradation as determined in accordance with ASTM D448:

<u>Sieve Size</u>	<u>Percent Passing</u>
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1 inch	100
No. 4	35 to 70
No. 40	10 to 35
No. 200	3 to 10

- a. Leveling Pad Base Thickness: 8 inches (minimum compacted thickness).
- b. Leveling Pad Base Width: minimum 24 inches.

D. Drainage Aggregate: Clean crushed stone or granular fill meeting the following gradation as determined in accordance with ASTM D448:

<u>Sieve Size</u>	<u>Percent Passing</u>
1 inch	100
3/4 inch	75 to 100
No. 4	0 to 60
No. 40	0 to 50
No. 200	0 to 5

E. Backfill: Soil free of organics and debris and consisting of either GP, GW, SP, SW, or SM type, classified in accordance with ASTM D2487 and the USCS classification system.

- 1. Soils classified as SC and CL are considered suitable soils for segmental retaining walls with a total height of less than 15 feet unless the Plasticity Index (PI) is 20 or more.
- 2. Maximum particle size for backfill is 2 inches.
- 3. Unsuitable soils are organic soils and those soils classified as CH, OH, MH, OL, or PT.

F. Impervious Material: Clayey soil or other similar material which will prevent percolation into the drainage zone behind the wall.

G. Drainage Pipe: Perforated or slotted PVC or corrugated HDPE pipe manufactured in accordance with D3034 and/or ASTM F405. The pipe may be covered with a geotextile filter fabric to function as a filter.

H. Construction Adhesive: Exterior grade adhesive as recommended by manufacturer.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine the areas and conditions under which the retaining wall system is to be erected, and notify the PGC Staff in writing of conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected.
- B. Promptly notify the wall design engineer of site conditions which may affect wall performance, soil conditions observed other than those assumed, or other conditions that may require a reevaluation of the wall design.
- C. Verify the location of existing structures and utilities prior to excavation.

3.02 PREPARATION

- A. Ensure surrounding structures are protected from the effects of wall excavation.
- B. Excavation support, if required, is the responsibility of the Contractor, including the stability of the excavation and its influence on adjacent properties and structures.

3.03 EXCAVATION

- A. Excavate to the lines and grades shown on the Drawings. Over-excavation not approved by the PGC Staff will not be paid for by the Owner. Replacement of these soils with compacted fill and/or wall system components will be required at the Contractor's expense. Use care in excavating to prevent disturbance of the base beyond the lines shown.

3.04 FOUNDATION PREPARATION

- A. Excavate foundation soil as required for footing or base dimension shown on the Drawings.
- B. Fill over-excavated areas with suitable compacted backfill.

3.05 BASE COURSE PREPARATION

- A. Place base materials to the depths and widths shown on the Drawings, upon undisturbed soils, or foundation soils prepared in accordance with Article 3.04.
 - 1. Extend the leveling pad laterally at least 6 inches in front and behind the lowermost concrete retaining wall unit.
 - 2. Provide aggregate base compacted to 6 inches thick (minimum).
 - 3. Where a reinforced footing is required by local code official, place footing below frost depth.
- B. Compact aggregate base material to provide a level, hard surface on which to place the first course of units.
- C. Prepare base materials to ensure complete contact with retaining wall units. Gaps are not allowed.

3.06 ERECTION

- A. General: Erect units in accordance with manufacturer's instructions and recommendations, and as specified herein.
- B. Place first course of concrete wall units on the prepared base material. Check units for level and alignment. Maintain the same elevation at the top of each unit within each section of the base course.
- C. Ensure that foundation units are in full contact with natural or compacted soil base.
- D. Place concrete wall units side-by-side for full length of wall alignment. Alignment may be done by using a string line measured from the back of the block. Gaps are not allowed between the foundation concrete wall units.
- E. Place 12 inches (minimum) of drainage aggregate between, and directly behind the concrete wall units. Fill voids in retaining wall units with drainage aggregate. Provide

- a drainage zone behind the wall units to within 9 inches of the final grade. Cap the backfill and drainage aggregate zone with 9 inches of impervious material.
- F. Install drainage pipe at the lowest elevation possible, to maintain gravity flow of water to outside of the reinforced zone. Slope the main collection drainage pipe, located just behind the concrete retaining wall units, 2 percent (minimum) to provide gravity flow to the daylighted areas. Daylight the main collection drainage pipe through the face of the wall, and/or to an appropriate location away from the wall system at each low point or at 50 foot (maximum) intervals along the wall. Alternately, the drainage pipe can be connected to a storm sewer system at 50 foot (maximum) intervals.
 - G. Remove excess fill from top of units and install next course. Ensure drainage aggregate and backfill are compacted before installation of next course.
 - H. Check each course for level and alignment. Adjust units as necessary to maintain level and alignment prior to proceeding with each additional course.
 - I. Install each succeeding course. Backfill as each course is completed. Pull the units forward until the locating surface of the unit contacts the locating surface of the units in the preceding course. Interlock wall segments that meet at corners by overlapping successive courses. Attach concrete retaining wall units at exterior corners with adhesive specified.
 - J. Install geosynthetic reinforcement in accordance with geosynthetic manufacturer's recommendations and the shop drawings.
 - 1. Orient geosynthetic reinforcement with the highest strength axis perpendicular to the wall face.
 - 2. Prior to geosynthetic reinforcement placement, place the backfill and compact to the elevation of the top of the wall units at the elevation of the geosynthetic reinforcement.
 - 3. Place geosynthetic reinforcement at the elevations and to the lengths shown on the Drawings.
 - 4. Lay geosynthetic reinforcement horizontally on top of the concrete retaining wall units and the compacted backfill soils. Place the geosynthetic reinforcement within one inch of the face of the concrete retaining wall units. Place the next course of concrete retaining wall units on top of the geosynthetic reinforcement.
 - 5. The geosynthetic reinforcement shall be in tension and free from wrinkles prior to placement of the backfill soils. Pull geosynthetic reinforcement hand-taut and secure in place with staples, stakes, or by hand-tensioning until the geosynthetic reinforcement is covered by 6 inches of loose fill.
 - 6. The geosynthetic reinforcements shall be continuous throughout their embedment lengths. Splices in the geosynthetic reinforcement strength direction are not allowed.
 - 7. Do not operate tracked construction equipment directly on the geosynthetic reinforcement. At least 6 inches of compacted backfill soil is required prior to operation of tracked vehicles over the geosynthetic reinforcement. Keep turning of tracked construction equipment to a minimum.
 - 8. Rubber-tired equipment may pass over the geosynthetic reinforcement at speeds of less than 5 miles per hour. Turning of rubber-tired equipment is not allowed on the geosynthetic reinforcement.

3.07 BACKFILL PLACEMENT

- A. Place reinforced backfill, spread and compact in a manner that will minimize slack in the reinforcement.
- B. Place fill within the reinforced zone and compact in lifts not exceeding 6 to 8 inches (loose thickness) where hand-operated compaction equipment is used, and not exceeding 12 inches (loose thickness) where heavy, self-propelled compaction equipment is used.
 - 1. Only lightweight hand-operated compaction equipment is allowed within 4 feet of the back of the retaining wall units. If the specified compaction cannot be achieved within 4 feet of the back of the retaining wall units, replace the reinforced soil in this zone with drainage aggregate material.
- C. Minimum Compaction Requirements for Fill Placed in the Reinforced Zone
 - 1. Walls Less Than 15 Feet High: Compact to 95 percent of the soil's standard Proctor maximum dry density (ASTM D698) [modified Proctor maximum dry density (ASTM D1557)] for the entire wall height
 - 2. Increase compaction requirements for retaining walls with slope heights at the back of the reinforced soil zone greater than 5 feet above the top of wall. Verify compaction requirements with Project geotechnical engineer.
 - 3. Utility Trench Backfill: Compact utility trench backfill in or below the reinforced soil zone to 98 percent of the soil's standard Proctor maximum dry density (ASTM D698) modified Proctor maximum dry density (ASTM D1557), or as recommended by the Project geotechnical engineer. If the height from the utility to finish grade is higher than 30 feet, increase compaction to 100 percent of the standard Proctor density [modified Proctor density].
 - a. Utilities must be properly designed (by others) to withstand all forces from the retaining wall units, reinforced soil mass, and surcharge loads, if any.
 - 4. Moisture Content: Within 2 percentage points of the optimum moisture content for all wall heights.
- D. At the end of each day's operation, slope the last level of compacted backfill away from the interior (concealed) face of the wall to direct surface water runoff away from the wall face.
 - 1. The General Contractor is responsible for ensuring that the finished site drainage is directed away from the retaining wall system.
 - 2. In addition, the General Contractor is responsible for ensuring that surface water runoff from adjacent construction areas is not allowed to enter the retaining wall area of the construction site.
- E. Refer to Article 3.10 for compaction testing.

3.08 CAP UNIT INSTALLATION

- A. Apply adhesive to the top surface of the unit below and place the cap unit into desired position.
- B. Cut cap units as necessary to obtain the proper fit.
- C. Backfill and compact to top of cap unit .

3.09 SITE CONSTRUCTION TOLERANCES

- A. Site Construction Tolerances
 - 1. Vertical Alignment: Plus or minus 1-1/2 inches over any 10-foot distance, with a maximum differential of 3 inches over the length of the wall.
 - 2. Horizontal Location Control From Grading Plan
 - a. Straight Lines: Plus or minus 1-1/2 inches over any 10-foot distance.
 - b. Corner and Radius Locations: Plus or minus 12 inches.
 - c. Curves and Serpentine Radii: Plus or minus 2 feet.
 - 3. Immediate Post Construction Wall Batter: Within 2 degrees of the design batter of the concrete retaining wall units.
 - 4. Bulging: Plus or minus 1-1/4 inches over any 10-foot distance.

3.10 FIELD QUALITY CONTROL

- A. Installer is responsible for quality control of installation of system components. Employ a qualified independent third party to verify the correct installation of system components in accordance with these specifications and the Drawings.
- B. The Owner, at their expense, will retain a qualified professional to perform quality assurance checks of the installer's work.
- C. Correct work which does not meet these specifications or the requirements shown on the Drawings at the installer's expense.
- D. Perform compaction testing of the reinforced backfill placed and compacted in the reinforced backfill zone.
 - 1. Testing Frequency
 - a. One test for every 2 feet (vertical) of fill placed and compacted, for every 50 lineal feet of retaining wall.
 - b. Vary compaction test locations to cover the entire area of the reinforced soil zone, including the area compacted by the hand-operated compaction equipment.

3.11 ADJUSTING AND CLEANING

- A. Replace damaged units with new units as the work progresses.
- B. Remove debris caused by wall construction and leave adjacent paved areas broom clean.

3.12 MEASUREMENT AND PAYMENT

- A. Measurement of segmental retaining wall shall be on an installed square foot basis computed on the total face area of wall installed. Wall face area includes the bottom of the base course to the top of the wall, and the entire length of the wall.
- B. Payment for the wall will be made on a square foot basis at the agreed upon Contract Unit Price.
 - 1. Payment should be considered full compensation for labor, materials, equipment and testing required to install the wall in accordance with these specifications and the Drawings.
 - 2. Quantities may vary from that shown on the Drawings depending on existing topography. Change to the total quantity of wall face area will be paid or withheld at the agreed upon Contract Unit Price.

TECHNICAL SPECIFICATION SECTION NO. 8 – CONCRETE

8.1 - SCOPE

This work is furnishing all materials, plant, and equipment, and performing all labor for the manufacture, transporting, reinforcing bars, placing, finishing, patching, curing, and testing of concrete to be placed under the Contract. Concrete is to be used for the footings and slabs to construct a new generator pad and foundation. The Contractor shall protect all concrete against damage until final inspection and acceptance by the Game Commission. See Electrical Drawings for additional drawing specifications and notes for concrete construction. New generator pad and foundation shall be constructed by the E.C.

Except as herein qualified, matters pertaining to measuring, placing and testing of concrete; materials used; construction of formwork; concrete finishing; curing of concrete; detailing, fabricating and placing of reinforcing and accessories shall be governed by the following codes and regulations:

- (a) Building Code Requirements for Reinforced Concrete (ACI 318)
- (b) Current "Manual of Standard Practice for Detailing Reinforced Concrete Structures" (ACI 315)
- (c) Current "Recommended Practice for Measuring, Mixing, and Placing Concrete" (ACI 304)
- (d) All matters in connection with concrete work, not otherwise specified, shall conform to the applicable sections of the Pennsylvania Department of Transportation Specification Publication 408.

8.2 – SUBMITTALS, TESTING AND CERTIFICATIONS

Obtain all concrete from a PennDOT approved source. Submit a concrete mix design for each supplier to the Game Commission for approval 3 days prior to placing concrete.

One set of four (4) standard test cylinders for each day's pour shall be taken and forwarded to an approved laboratory for testing. Two (2) cylinders shall be tested at the age of seven (7) days and two (2) cylinders tested at the age of twenty-eight (28) days. Three (3) copies of tabulated results of such tests shall be forwarded to the Game Commission for approval and distribution. All costs in connection with tests of concrete shall be borne by the Contractor.

Provide product information, and/or original certifications for the following items: cement, admixtures, aggregates, preformed expansion joint filler, epoxy bonding compound, joint seal material, and curing compound.

8.3 - COMPOSITION

Concrete shall be composed of Portland cement, water, fine and coarse aggregates and approved admixtures, all well mixed and brought to the proper consistency.

1. Concrete shall be Class A and shall develop a minimum compressive strength of 3,300 psi in twenty-eight (28) days.
2. Concrete shall be obtained from a batch plant currently approved by the Pennsylvania Department of Transportation (PennDOT) or the Department.
3. Ready-mixed concrete shall be mixed and delivered in accordance with ASTM Designation C94.

8.4 - MATERIALS

All materials shall be obtained from sources listed in PennDOT Bulletin 14 or PennDOT Bulletin 15 as applicable.

A. Cement - Cement shall be one of the following types:

1. Normal Strength Air-Entraining Portland Cement, Type IA or Type IIA, conforming to ASTM Designation C150.
2. Normal Strength Air-Entraining Portland Blast Furnace Slag Cement, Type IS-A, conforming to ASTM Designation C595.

B. Admixtures - Approved types of admixtures meeting ASTM Designation C260, increasing the plasticity and workability of the concrete may be used.

C. Water - Water for concrete shall be clean and free from injurious amounts of oil, acid, alkali, organic matter, or other deleterious substances.

D. Aggregates - Aggregates for concrete of normal weight shall conform to "Specifications for Concrete Aggregates" (ASTM C33).

E. Reinforcing Bars - Steel bars for concrete reinforcement shall be grade 60, deformed and shall conform with all the provisions of one of the standards listed below, except the "Bend Test Requirements" provisions of ASTM A615, A616 and A617 standards. Furnish and install all chairs, clips and tie wire commonly used in practice.

F. Joint Seal Material - The joint seal material shall conform with the requirements of ASTM C290 such as Sikaflex-2c or Sikadur 51 as manufactured by the Sika Corporation, Lyndhurst, New Jersey or an approved equal. The material shall be stored as recommended by the manufacturer.

G. Curing Compound - The curing compound shall be clear or translucent containing a red fugitive dye conforming to the requirements of AASHTO M148, Type 1-D, and must not affect water in any respect to injure fish life or impair or be detrimental to water for human consumption. The curing compound shall be stored as recommended by the manufacturer.

8.5 – PREPARATION OF AREAS TO RECEIVE CONCRETE

For new concrete generator foundation, excavate to the proper depth and grade. Remove any organic material from the areas to receive concrete.

For concrete slabs, place and compact #2A coarse aggregate as shown on the Drawings.

8.6 - FORMWORK

Forms shall conform to the shapes, lines, grades, and dimensions of the concrete as called for on the Drawings. They shall be sufficiently tight to prevent leakage of mortar and shall be properly braced or tied together to maintain the desired position and shape during and after placing concrete. Forms shall be removed in such a manner as to assure the complete safety of the structure.

8.7 - CONCRETE PLACEMENT

A. Depositing - Concrete shall be deposited in the presence of a representative of the Game Commission.

In all cases, concrete shall be deposited as nearly as practicable in its final position and not allowed to flow in a manner to permit or cause segregation and loss of slump. Once concreting is started, the operation shall be carried on continuously until the placing of the panel or section is completed. Concrete shall be placed in continuous, approximately horizontal layers, the depths of which generally shall not exceed twenty (20) inches.

All conveying equipment shall be of such size and design as to insure a practically continuous flow of concrete at the forms. Free falls of more than four (4) feet are not permitted.

Any concrete that has been contaminated by foreign matter or which has become so stiff that proper placing can not be assured, shall be wasted.

If unfavorable weather conditions exist, the Game Commission may order the work stopped, either before concreting has started or after it is in progress, until a suitable formwork or covering is set up on the site to protect fresh concrete from rain, hail, snow, or other unfavorable conditions.

B. Consolidation - Concrete shall be consolidated by vibration so that concrete is thoroughly worked around the reinforcement, around embedded items, and into corner of forms, eliminating all air or stone pockets which may cause honey-combing, pitting, or planes of weakness. Internal vibrators shall be of the largest size and the most powerful that can be properly used in the work, as described in Table 5.1.4 of ACI 309, and they shall be operated by competent workers. Vibrators shall not be used to transport concrete within the forms and shall not be attached to the reinforcing bars to consolidate concrete. Vibrators shall be inserted and withdrawn at points approximately eighteen (18) inches apart. At each insertion, the duration shall generally be between five (5) and fifteen (15) seconds, sufficient to consolidate concrete, but not sufficient to

cause segregation. A spare vibrator shall be kept at the job site during all concrete placing operations. Before continuing the placement operations, any displacement of reinforcement, forms, or embedded items because of placement or vibration shall be corrected. Concrete which has been segregated by over vibration shall be removed and discarded. Proper care shall be used to ensure that the vibrators does not penetrate or disturb layers which have partially hardened. If directed by the Game Commission, exposed form surfaces shall be spaded in addition to vibration to minimize bubbles in concrete surface.

8.8 - REMOVAL OF FORMS AND REPAIR OF CONCRETE

A. Removal of Forms - Forms shall be removed as soon as practicable to avoid delay in curing and to enable earliest repair of surface imperfections. The time of form removal shall be based on the effect on the concrete; there shall be no damage to the concrete, due either to the removal of support or to the form stripping operation. Forms shall be carefully removed to avoid injury to the concrete, and satisfactorily repair any concrete so damaged. Forms shall not be removed until twenty-four (24) hours has elapsed from concrete placement except when specifically authorized by the Game Commission. During cold weather, forms shall be kept in place for five (5) days, unless otherwise authorized by the Game Commission. The Contractor shall accept full responsibility for any damage to concrete incurred by stripping too early.

B. Repair of Concrete - Repair of concrete shall be performed by skilled workers and in the presence of a representative of the Game Commission. Repairs shall be completed within 48 hours after removal of forms. When directed by the Game Commission, the Contractor shall repair or remove and replace any concrete that does not meet the requirements of any portion of this Technical Specification. Any concrete which is not satisfactorily repaired shall be removed and replaced.

8.9- TOLERANCES

The concrete surfaces and reinforcing steel shall conform to the tolerance limits listed in the following tables. Permissible surface irregularities for the various classes of concrete surface finish as specified in "Finishing Concrete" section of these specifications are defined as "Finishes," and are to be distinguished from tolerances as described herein. The Contractor shall establish and maintain, in an undisturbed condition and until final completion and acceptance of the Project, sufficient control points and benchmarks to be used for reference purposes to check tolerances. Concrete work that exceeds the tolerance limits specified shall be satisfactorily remedied or removed and replaced by and at the expense of the Contractor.

CONCRETE TOLERANCES		
Variation from established lines	Change in 10 feet Maximum permissible	1/4 inch 1 inch
Variation from the plumb in	In 10 feet	1/4 inch

lines and surfaces	In 20 feet In 40 feet	3/8 inch 3/4 inch
Variation from the level or from the grades indicated on the Drawings for top of walls	In 10 feet In 20 feet In 40 feet	1/4 inch 3/8 inch 3/4 inch
Variation in thickness of slabs and walls	Minus Plus (Walls) Plus (Slabs)	1/4 inch 1/2 inch No limit
Footings:		
(1) Variation of dimensions in Plan	Minus Plus	1/2 inch 2 inches
(2) Misplacement or Eccentricity	Not more than	2 inches
(3) Reduction in thickness	Minus	5% of thickness

NOTE: No abrupt changes in line, grade or dimension will be permitted for any of the conditions listed above. Variations in thickness will be permitted only as "spot" conditions and shall not extend over large areas.

Reinforcement steel shall be fabricated in accordance with the fabricating tolerances given in ACI 315 and shall be placed conforming to the tolerance limits listed in the following table:

REINFORCEMENT STEEL TOLERANCES		
Variation for Protective Covering	With 2-inch cover With 3-inch cover	1/4 inch 1/2 inch
Variation from indicated spacing for individual bar		1/2 inch
Variation from lap	Minus Plus	0 inch No limit

8.10 - FINISHING CONCRETE

A. General - Allowable deviations from plumb or level and from alignment, grades, and dimensions shown on the Drawings and as specified are defined as "tolerances," and are to be distinguished from finishes as described herein. Finishing shall be completed immediately after removing the forms.

B. Formed Surfaces - All formed concrete surfaces shall be treated as described below by a skilled concrete finisher.

Holes shall be filled, and defective areas repaired immediately after form removal. Fins and irregularities shall be removed or corrected. There shall be no conspicuous offsets, bulges or misalignment of concrete.

C. Unformed Surfaces - All unformed surfaces shall be finished in accordance with the following requirements by a skilled concrete finisher:

Immediately after vibration is completed, the surface shall be leveled and screeded sufficiently to produce an even, uniform texture.

Floating shall be done by hand or power-driven equipment. Floating shall not start until some stiffening has taken place in the surface concrete and the moisture film or "shine" has disappeared. The floating should work the concrete no more than necessary to produce a surface that is uniform in texture and free of screed marks. Any necessary cutting or filling of surface to prevent irregularities should be done during the floating operations. Joints and edges shall be finished with edging tools at this time.

After floating is completed, apply a light steel trowel finish to the top surface of the floor slab concrete. Light surface pitting and light trowel marks are not objectionable. For the sidewalks, apply a light broom finish for traction.

8.11 - CURING AND PROTECTION

A. General - After finishing operations are completed, the concrete shall be membrane cured. A minimum of seven (7) consecutive days of curing and protection shall be required. The following definitions of air temperature and curing temperature are specified below, as they will be mentioned frequently in this section:

Air Temperature - The measured temperature in the shade, not in the direct rays of the sun, and away from artificial heat.

Curing Temperature - The temperature of the air immediately adjacent to concrete. Where concrete is not covered by forms or other protective coverings, or where protective coverings are considered inadequate, the curing temperature will be considered as being not more than the air temperature. During cold weather, the curing temperature is the temperature inside the forms, protective coverings or housings. The curing temperature for the first 24-hour period after placing concrete will be considered as not more than the temperature of the concrete at the time of its placement in the forms.

B. Insulation - High-low thermometers shall be provided and an accurate daily record of air and curing temperatures maintained during cold weather. These temperatures shall be submitted daily to the Game Commission. Curing temperatures shall be taken on the surface of the concrete and at representative locations on structures.

Adequate care shall be provided so that at any time during the curing period the curing temperature does not fall below 50°F. Any day during which the curing temperature drops below 50°F but remains above 35°F, will not be considered as day as a curing day and the duration of the curing period shall be extended accordingly. If at any time during the curing period, the curing temperature falls below 35°F, the contractor shall core and test the concrete at his own expense. The concrete shall be considered satisfactory and acceptable if the strength and durability requirements of Section 7.3.1 are met.

In moderate weather, when the forecasted air temperature is expected to be between 35°F and 50°F, in addition to membrane curing, insulated blankets shall be furnished and placed over concrete and forms.

During cold weather, when the forecasted air temperature is expected to be 35°F or lower, cure shall be by the methods prescribed for curing in moderate weather, and in addition, furnish and install canvas covered frames or some type of approved housing that will completely enclose the fresh concrete and forms. Also, sufficient approved heating apparatus (preferably steam equipment) shall be furnished to maintain the temperature of air surrounding the fresh concrete between 50°F and 80°F, for seven (7) days. Concrete covers shall be kept moist during the curing period. After seven (7) days, the temperature shall gradually be lowered within the housing to the outside temperature over a period of 72 hours. When heating apparatus is required, special care shall be provided to prevent the concrete from drying. Combustion heaters shall not be used during the first 24 hours unless adequate precautions are taken to prevent exposure of the concrete to exhaust gases which contain carbon dioxide. Arrangements shall be made for heating, covering, insulating, or housing the concrete work, in advance of placement, and they shall be adequate to maintain the required temperature without injury to the concrete due to concentration of heat.

Changes in air temperature immediately adjacent to the concrete during and immediately following the curing period shall be kept as uniform as possible, not exceeding five (5) degrees Fahrenheit in any one (1) hour or 50°F in any 24-hour period.

C. Membrane Curing - Finishing of the concrete surfaces shall be completed prior to the application of curing compound.

Curing compound shall be applied in two (2) coats, each coat covering 300 square feet of concrete surface per gallon. A pressure tank type spraying equipment shall be used, which shall provide continuous agitation of the compound during coating operations. Do not use ordinary orchard-type hand sprays. In order to insure thorough and complete coverage of the concrete surfaces, the first coat shall be applied by moving the spray gun back and forth in one direction, and the second coat immediately thereafter by moving the spray gun at right angles to the direction of the first coat.

The first coat shall be applied immediately after finishing operations are completed. The second coat shall be applied immediately after the first coat has set.

D. Protection - All concrete shall be protected against damage until final inspection and acceptance by the Game Commission.

During the curing period, the concrete shall be protected from damaging mechanical disturbances, such as load stresses, heavy shock, and excessive vibration. All finished concrete surfaces shall be protected from damage by construction equipment, materials, or methods, by application of curing procedures, and by rain or running water.

Until final inspection and acceptance by the Game Commission, the Contractor shall repair, or remove and replace any damaged concrete at no additional cost to the Game Commission.

8.12 - MEASUREMENT AND PAYMENT

Measurement will be in cubic yards, measured by the average end area method or by the three-dimensional volume method, as applicable.

Payment will be made at the unit price per cubic yard bid for "Concrete", which price shall include the furnishing of concrete, forms, all labor and equipment for mixing, reinforcing bars, placing, curing, finishing, repairing and forming; all laboratory and field tests, including the furnishing of test equipment as required and all labor, materials, and appurtenances necessary to do and complete the work.

TECHNICAL SPECIFICATION SECTION NO. 9 - SEEDING

9.1 - SCOPE

This work is securing a satisfactory stand of grass on the disturbed lawn areas and includes preparation of the seed bed, furnishing and placing lime and fertilizer, furnishing and sowing of seed, mulching, and maintaining and tending the seeded areas.

9.2 - APPLICABLE ACTS AND PUBLICATIONS

Bulletin 15 - Approved Construction Materials, Pennsylvania Department of Transportation.

Pub 408. - Specifications, Pennsylvania Department of Transportation.

9.3 - MATERIALS

A - Grass Seed - Use Formula B grass seed. The seed mix shall conform to Section 804.2(b) of Pub. 408. No seed shall contain Canada Thistle, Field Bindweed, Johnson Grass, Perennial Sowthistle, Quackgrass, Horse Nettle, Bedstraw, Corncockle, Brassica Kaber, Brassica Nigra, Wild Onion, or Wild Garlic.

With the approval of and at no additional cost to the PGC, you may add annual ryegrass seed to the mixture to secure a cover crop.

Deliver premixed seed in bags or other suitable containers, each fully labeled with the name, trademark, and warranty of the producer and with the mixture type, weedseed percentage, purity percentage, germination percentage, and mix formula or composition.

Do not use seed which has become wet, moldy, or otherwise damaged in transit or storage, has a mix date older than 9 months prior to seeding, or has a test date older than 6 months prior to seeding.

B - Fertilizer - Use dry formulation of 10-20-20-analysis. Fertilizer shall be delivered in bags or other suitable containers, each fully labeled and bearing the name, trademark, and warranty of the producer.

C - Lime - Conform to Section 804.2.(a).1 of Pub.408.

D - Mulches - Mulches shall be free from mature seedbearing stalks or roots of prohibited or noxious weeds as defined by law. Do not use mulches which are cut into lengths of less than 6 inches.

Mulches shall be either one or a combination of the following, shall contain no stems of tobacco, soybeans, or other coarse or woody materials.

1. - Hay - Timothy hay, mixed clover and timothy hay, or other approved native or forage grasses, well-cured to less than 20 percent moisture content by weight.

2. - Straw - Either wheat or oat straw, and reasonably free of viable seeds, well-cured to less than 20 percent moisture content by weight.

- 3. - **Wood Fiber** - Use wood fiber meeting the requirements of Section 805.2(a).1.c of Pub. 408.
- 4. - **Pellet Mulch** -. Use pellet mulch meeting the requirements of Section 805.2(a).1.d of Pub. 408.

E - Mulch Binders - Use one of the following mulch binders in accordance with Section 805.2(b) of Pub. 408. Use Recycled Cellulose Fiber, Wood Fiber, Nonasphaltic Emulsion, Polyvinyl Acetate, or a Mixture of Recycled Cellulose Wood Fiber and Wood Fiber. Obtain binders from a producer listed in Bulletin 15.

F - Water - Water shall be fresh and free from injurious amounts of oil, acid, alkali, salts, or other materials harmful to the growth of grass.

9.4 - PROCEDURE

Follow the procedures specified below. The amounts of seed, lime, fertilizer and mulch specified are the minimum acceptable. Employ modifications if they are deemed necessary, at no additional cost to the PGC, and accept full responsibility for obtaining a satisfactory stand of grass.

A - Preparation of Seed Bed by Shallow Tilling - After the areas to be seeded have been graded and approved by the PGC, thoroughly till the surfaces to a depth of 3 inches by discing, harrowing, or other approved means. Apply fertilizer and lime at a rate of 680 Lbs. and 4,000 Lbs. per acre respectively, and make sure that they are worked thoroughly into the soil to a depth of 3 inches and the tillage operations are sufficient to insure that the soil conditions are satisfactory for seeding. Smooth and bring the area to grade. Immediately prior to sowing, rake the soil to a depth of 3/4 inch. Rake in a direction parallel to the contour lines on the slope, and not uphill or downhill. Remove all sticks, stones, weeds, roots, and other objectionable materials appearing on the surface. Maintain the surface in a true and even condition during sowing of seed. In case of hydroseeding or grain drilling, apply limestone and fertilizer as specified in Section 19.3. At areas steeper than 3:1, till the surface horizontally by scarifying enough to break up the surface crust and eliminate irregularities resulting from soil erosion, and remove all objectionable materials from the surface.

B - Sowing - Sow the seed mixture on a still day at a rate specified in Section 804.2 of Pub. 408. Sow by hand or by approved sowing equipment in 2 applications, one-half the seed while the seeder is traveling in one direction and the other half while the seeder is traveling at right angle to the first direction. After sowing, rake, cultipack, or brush drag the surface very lightly, just deep enough to cover the seeds. Rake only in a direction parallel to the contour lines.

You may use hydroseeding or grain drilling, provided all methods and equipment are approved by the PGC. In case of hydroseeding, you may apply fertilizer and limestone at the time of sowing. In case of grain drilling, you may apply fertilizer at the time of sowing, provided the fertilizer does not come in contact with the seed. Drill only in a direction parallel to the contour lines. Do not sow seed on frozen or partially frozen ground. Inoculate the crownvetch according to Section 804.3(d) of Pub. 408.

C - Mulching - After sowing is completed, spread mulch uniformly over the entire seeded area at a rate of 3 tons (dry weight) per acre. The mulch shall be moist at the time of placement.

Apply wood fiber mulch hydraulically in accordance with the manufacturer's tank-mixing instructions. Wood fiber mulch may be incorporated into the slurry after the seed and soil supplements have been thoroughly mixed. Apply wood fiber mulch at a rate of 800 Lbs. per acre unless otherwise indicated by the manufacturer.

On slopes 6:1 or flatter, apply pellet mulch by hand or using a mechanical spreader immediately after seeding, at a rate of 2,615 Lbs. per acre. Thoroughly wet pellet mulch with water without dislodging mulch.

To prevent loss or bunching by wind and to form a soil-binding mulch, anchor the moist mulch to the soil with a mulch binder. Use mulch binders at the following rates:

Recycled Cellulose Fiber - 775 Lbs./Acre

Wood Fiber - 775 Lbs./Acre

Mixture of Recycled Cellulose Fiber and Wood Fiber - 775 Lbs./Acre

Nonasphaltic Emulsion - Manufacturer's Recommended Rate

Polyvinyl Acetate - Manufacturer's Recommended Rate

On slopes where machinery cannot be used, retain the mulch in place by some suitable means which will not be detrimental to subsequent operations.

9.5 - MAINTENANCE

At no additional cost to the PGC, maintain the seeded areas until all work under the Contract has been completed and accepted by the PGC. Maintenance shall include refilling rain-washed gullies, reseeding, reapplying fertilizer, lime and mulch, and removal of large and noxious weeds, as directed by the PGC.

9.6 - MEASUREMENT AND PAYMENT

This price and payment shall constitute full compensation for all seeding including soil amendments and stabilization of all distributed soils on site as specified and shown and as directed by PGC staff including but not limited to all labor, materials, equipment, supervision, accessories, disposal of waste and related work.

A. Unit of Measurement: Lump Sum.

TECHNICAL SPECIFICATION SECTION NO. 10 – UTILITY TRENCHING

10.1 - SCOPE

This work is for trenching of new natural gas piping extending from a new pressure reducing station to new meter location and to emergency generator location. New natural gas piping will be furnished and install by UGI Utilities Inc. New gas utility pressure reducing station and meter location shall be determined by UGI prior to start of work. This work shall include all trenching, pipe bedding, warning tape and backfill required to extend natural gas utilities to the new emergency generator site.

10.2 - GENERAL

The work and materials must comply with the requirements of UGI Utilities, Inc. UGI Utilities has been contacted and will be paid separately from this contract for services provided with extending natural gas utilities to the generator site. All work must be coordinated with the UGI utilities so that service is made available to operate the new natural gas-powered emergency generator.

10.3- MATERIALS

A. Stone Bedding - Stone for the bedding the conduit in the trench shall be AASHTO #10 as specified in Section 703.2 of PennDOT Pub. 408. Obtain the stone from a source listed in PennDOT Bulletin 14.

B. Warning Tape – Detectable yellow with black stripes (gas piping) warning tape 12” above top of new natural gas piping.

C. Backfill – Secure backfill materials from the required excavation and borrowed earthen materials. The backfill soils may contain cobbles and boulders which are not suitable for backfill around pipes. Screening of the excavated soils may be necessary to separate objectionable stones and other debris from the backfill material. Materials shall be free from roots, brush, frozen and other objectionable materials, and stones having any dimension greater than three (3) inches. The Game Commission will decide the material’s suitability for use as backfill during excavation operations.

10.4 - PROCEDURE

UGI shall indicate the trench location and trench limits at the site. Contact the PA One Call System by dialing 811 or 1-800-242-1776 at least three days prior but no more than ten days before excavation operations. Excavate the trench to the limits shown on the Drawings. Place AASHTO #10 stone to a depth of 6-inches in the bottom of trench for bedding of the piping. Backfill and cover to a depth of 6-inches over the conduit with AASHTO #10 stone. Install detectable warning tape 12-inches above piping. Compaction of the earthen backfill shall be considered satisfactory on the basis of non-movement of the materials under compaction equipment.

10.5 - MEASUREMENT AND PAYMENT

This price and payment shall constitute full compensation for providing all trenching to the required depths and aggregates to the required depths for the construction of new utility trenches as specified and shown and as directed by PGC staff including but not limited to all labor, materials, equipment, supervision, accessories, disposal of waste and related work. Aggregate used for replacing caved-in-material, and material excavated beyond the established payment lines will not be measured and paid for.

A. Trenching Unit of Measurement: Liner feet (L.F.), for utility trenching to the required depths including installation of waring tape and backfilling of trenches.

B. Unit of Measurement: Tons, measured by the weight slips from stone supplier, as applicable for placement of AASHTO #10 aggregate to the required depths used for pipe bedding and covering.

TECHNICAL SPECIFICATION SECTION NO. 11 – ELECTRICAL

11.1 - SCOPE

This work is to furnish and install a new natural gas-powered Caterpillar DG350 GC spark-ignited generator set, emergency generator, including an aluminum level 2 acoustic enclosure, automatic transfer switch, generator electrical panel, transformer, annunciator panel, new feeder cables, electrical circuitry, controls, and new emergency electrical systems to support the installation of the new emergency generator, as shown on the electrical Drawings.

11.2 – GENERAL

The drawings are indicative of the character and scope of the electrical work and are not intended to show all the details. The actual location of all wiring, electrical gear and equipment shall be determined at the site.

All work shall be manufactured, tested, and installed accordance with the National Electric Code (NEC) latest edition, the International Building Code (IBC) 2015 and all applicable local codes. The Contractor shall furnish a fire underwriter's certificate of inspection covering the work installed under this specification.

The project electrical construction shall include replacement of an existing emergency generator to expand future emergency power capacities for critical options and life safety systems in the building. Installation of new normal and emergency power distribution systems as required for connection of the new emergency generator and supporting electrical gear.

The Electrical Contractor shall provide PGC staff a minimum of five (5) days' written notice in advance of all electrical power shutdowns or disruptions, to perform the electrical work. All electrical shutdowns or electrical disturbances shall be closely coordinated with PGC staff and conducted outside of normal working hours. Written notice shall include means and methods for electrical work requiring temporary shutdown, extent of power loss and anticipated duration of time for loss of electrical power to perform electrical work. The existing electrical panel located within the Server Room is critical to PGC operations, electrical disturbances shall be minimized to the greatest extent.

11.3 – MATERIALS

A. New Emergency Generator, Automatic Transfer Switch, Transformer, Controls and Annunciator Panel – See Electrical drawings for new emergency generator, automatic transfer switch, electrical gear and all related electrical work and products required as part of this contract. The new emergency generator shall be a CAT DG 350 GC spark-ignited generator set; no approved equals will be accepted. Please contact Mr. Jeff Shiplet, Sales Engineer with Cleveland Brothers Power Systems, at 717-526-2121 or jshiplet@clevelandbrothers.com, for pricing and ordering.

B. Freight, Start-up and Commissioning – Freight, start-up and commissioning shall be provided by Cleveland Brothers Caterpillar, these services shall be obtained and paid for as part the electrical construction contract. Reactive load bank test shall be provided at the factory. A resistive load bank test shall be provided at start-up.

C. Rigging and Unloading – The electrical construction shall include all rigging and unloading required for setting the new emergency generator.

11.4 – SUBMITTALS

Submit a catalog cut and other manufacturers information for new emergency generator, automatic transfer switch, panelboards, transformers, wiring devices, circuitry, raceways and conduits to the PGC for review and approval before ordering any materials. Refer to submittal specification section and electrical specifications on Electrical drawings for submission requirements.

11.5 - PROCEDURE

The installation of every component in the electrical system must be performed according to the National Electric Code (NEC).

Install new generator shut off control and annunciator panel at ADA compliant heights within allowable reach ranges.

Natural Gas Utility connection for the generator is **NOT IN CONTRACT**. UGI will provide service to the generator, including pressure reducing station, PE gas service, obtain PennDot permits and restore any cuts, set gas meter and connect gas piping with valving to the generator.

The Electrical Contractor shall provide a 4-inch diameter, PVC electrical schedule 40, stub-up with sweep and all new conduit fittings as required to reuse existing electrical conduits at new cast in place concrete generator foundation. Coordinate location of new gas piping connection, with generator manufacturer and gas utility service.

Furnish and install a 200KVA temporary generator for the duration of project until new generator is ready to be connected and energized. Provide above ground cabling as required and connect temporary generator to line side of existing main circuit breaker in panel E-1. Coordinate exact location of temporary generator and cabling path with PGC staff.

11.6 – PAY ITEMS AND MEASUREMENT METHODS

Pay items are listed in the order they appear on the Bid Form and unless stated otherwise, the numbers correspond to the Pay Item Numbers on the Bid Form and the Purchase Order.

1. ADMINISTRATION, MOBILIZATION, TERMS AND CONDITIONS, CONTRACT BONDS

- a. This price and payment shall constitute full compensation for providing Performance and Payment Bonds, insurance coverage and certificates, compliance with the Terms and Conditions, and general project requirements except where specifically described and scheduled elsewhere, mobilization, demobilization, temporary facilities, municipal and state bonding requirements / fees and costs / inspections, and compliance with requirements of permits and approvals (not measured and paid for elsewhere) required for the project by the Contract Documents.
- b. Unit of Measurement: Lump Sum.

2. ELECTRICAL – EMERGENCY GENERATOR

- a. This price and payment shall constitute full compensation for providing a new 480/277VAC 350 kW natural gas emergency generator, Cat DG350 GC the size and type specified and shown and as directed by PGC staff. New generator shall include an aluminum level 2 acoustic enclosure. See Electrical Specifications on Drawing E001. Furnish and install new generator including feeder cabling, grounding/bonding, identification for electrical systems, unloading, rigging, testing and inspection, but not limited to all labor, materials, equipment, supervision, and related work required to provide new emergency generator.
- b. Unit of Measurement: Lump Sum.

3. ELECTRICAL – AUTOMATIC TRANSFER SWITCH (ATS)

- a. This price and payment shall constitute full compensation for replacing the existing 600A automatic transfer switch located in the basement Electrical Room with a new ASCO 300 Series 600A “J” frame automatic transfer switch, Type 1, at the same location as specified and shown and as directed by PGC staff. See Electrical Specifications on Drawing E001. Furnish and install new ATS including all supporting normal and emergency power cables, electrical hardware, grounding/bonding, identification for electrical systems, testing and inspection, but not limited to all labor, materials, equipment, supervision, and related work required to provide new ATS.
- b. Unit of Measurement: Lump Sum.

4. ELECTRICAL - TRANSFORMER

- a. This price and payment shall constitute full compensation for providing a transformer within the basement mechanical room connected to the existing panel board to support the new electrical connection of the generator panel board as specified and shown and as directed by PGC staff. See Electrical Specification on Drawing E001. Furnish and install transformer including, housekeeping pad electrical power conductors and cables, grounding/bonding, testing and inspection, but not limited to all labor, materials, equipment, supervision, and related work required to provide transformers.

b. Unit of Measurement: Lump Sum.

5. ELECTRICAL – EMERGENCY GENERATOR CONTROLS & ANNUNCIATOR PANEL

a. This price and payment shall constitute full compensation for providing generator emergency power off switch and generator annunciator panel as specified and shown and as directed by PGC staff. See Electrical Specification Drawing E100. Furnish and install electrical power conductors and conduits, hangers and supports, electrical hardware, cleaning, testing and inspection, but not limited to all labor, materials, equipment, supervision, and related work required to provide generator controls and annunciator panel.

b. Unit of Measurement: Lump Sum.

6. ELECTRICAL – TEMPORARY GENERATOR

a. This price and payment shall constitute full compensation for providing a 200KVA temporary generator for the duration of project until new generator is ready to be connected and energized. Provide above ground cabling as required and connect temporary generator to line side of existing main circuit breaker in panel E-1.

b. Unit of Measurement: will be per week cost to have a standby emergency generator on site and connected to existing electrical panel E-1 and include all transportation, fuels, and operation costs to maintain while on site.

COMMONWEALTH OF PENNSYLVANIA

DEPARTMENT OF LABOR AND INDUSTRY

Bureau of Occupational and Industrial Safety



UNIFORM CONSTRUCTION CODE

BUILDING PERMIT

The plans and specifications for the building or structure named below have been reviewed by the Department of Labor and Industry and found to be in compliance with the Pennsylvania Construction Code Law (1999, November 10, P.L. 491, No. 45).

Permit Number	202100405
Permit Holder	PA GAME COMMISSION ENGINEERING DIVISION
Address	2001 ELMERTON AVE HARRISBURG PA 17110
Building/Structure Name	GAME COMMISSION HEADQUARTERS
Building Address	2001 ELMERTON AV HARRISBURG 17110
Political Subdivision:	SUSQUEHANNA TOWNSHIP
County:	DAUPHIN
Approved use and occupancy classification(s)	B
Approved construction type	IIB
Plan code	MODIFICATION

This permit authorizes construction of the above named building or structure in accordance with the Pennsylvania Construction Code Act, its regulations and all plans and specifications approved by the Department. A copy of this permit shall be retained at the work site until the completion of all construction.

File Number	542299
Date Issued	4/27/2021

Ron F. Englar
Building Code Official

A highway access occupancy permit is required under S420 of the State highway Law (36 P.S.S 670-420) before driveway access to a commonwealth highway is permitted.

Uniform Construction Code (UCC)

INSPECTION LOG

THIS LOG MUST BE RETAINED AT THE CONSTRUCTION OR DEMOLITION SITE UNTIL THE COMPLETION OF ALL WORK AND MUST BE MADE AVAILABLE TO ALL DEPARTMENT CODE OFFICIALS, UPON REQUEST. All Inspections preceded by a "Y" must be performed in accordance with the approved construction documents and section 403.45 of the UCC before a "Certificate of Compliance or a Certificate of Occupancy and Use" will be issued. This document's only use is to inform the permit holder of required inspections and is to enable L&I staff to record the completion of these inspections during the course of the construction process. It is not intended to document the fulfillment of all required UCC obligations or establish the right to legally occupy the building or structure named below.

Drawing Index Number: 202100405 **File Number:** 542299
Building/Structure Name: GAME COMMISSION HEADQUARTERS
Address: 2001 ELMERTON AV
HARRISBURG PA 17110

Requests for inspections must be made in conformance with the Inspection Procedures Statement and should be directed to the inspector named below.

Inspector: Dustin Ellis (717)319-2759 duellis@pa.gov				
If unavailable, contact Central Office: 717-787-1291 jecole@pa.gov				
REQUIRED	INSPECTION	INSPECTOR (PRINT)	INSPECTOR (SIGNATURE)	DATE ACCEPTED
	Footing Environment			
	Foundation			
Y	Concrete Under Slab/Floor			
	Underground Plumbing			
Y	Underground Mechanical			
Y	Underground Electrical			
	Plumbing Rough-in			
Y	Mechanical Rough-in			
Y	Electrical Rough-in			
	Framing			
	Insulation			
	Fire Protection			
	Accessibility Final			
	Energy Final			
Y	Mechanical Final			
Y	Electrical Final			
	Plumbing Final			
	Building Final			
	Demolition Final			
Y	Alterations Final			
	Sign Final			
	Structure Final			