

**PENNSYLVANIA GAME COMMISSION**

**SGL #109 ARCHERY RANGE PROJECT**

Northwest Region  
Greene Township  
Erie County

**Table of Contents**

Bid Notice	(Provided Separately with Solicitation)
Terms and Conditions	(Provided Separately with Solicitation)
Specifications	4 Pages
PA Prevailing Wages	7 Pages (Determination No. 23-08065)
Reciprocal Limitations Act Form	4 Pages
Worker Protection and Investment Certification Form	1 Page
Technical Specifications	33 Pages
Drawings	4 - (Provided Separately with Solicitation)

## 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:

Foster Schaffer, Engineering Consultant  
Pennsylvania Game Commission  
2001 Elmerton Avenue  
Harrisburg, PA 17110  
Office: 717-787-4250, ext. 73322  
Email: [c-fschaffe@pa.gov](mailto:c-fschaffe@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 (estimated to be December 13, 2023) and shall terminate on **June 28, 2024**. All Work must be completed and accepted by this date. The Game Commission expects most of the work on this project to commence when weather conditions allow in early Spring 2024. However, it is recommended that the Contractor complete the clearing, grubbing and grading operations during the Winter months..

**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.
4. **Worker Protection and Investment Certification Form** - The form is attached. The Contractor shall complete the certification on the bottom of the form and submit it within two days after the bid opening.

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

Project Name:	State Game Lands #109 Archery Range
Awarding Agency:	PA Game Commission
Contract Award Date:	11/15/2023
Serial Number:	23-08065
Project Classification:	Building/Heavy/Highway
Determination Date:	10/2/2023
Assigned Field Office:	Pittsburgh
Field Office Phone Number:	(412)565-5300
Toll Free Phone Number:	(877)504-8354
Project County:	Erie County

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

<b>Project: 23-08065 - Building</b>	<b>Effective Date</b>	<b>Expiration Date</b>	<b>Hourly Rate</b>	<b>Fringe Benefits</b>	<b>Total</b>
Asbestos & Insulation Workers	8/1/2022		\$39.36	\$28.51	\$67.87
Boilermakers	6/1/2014		\$40.90	\$26.16	\$67.06
Bricklayer	5/1/2022		\$31.24	\$23.16	\$54.40
Carpenters - Piledriver/Welder	1/1/2023		\$40.63	\$21.22	\$61.85
Carpenters - Piledriver/Welder	1/1/2024		\$42.13	\$21.97	\$64.10
Carpenters - Piledriver/Welder	1/1/2025		\$43.38	\$22.72	\$66.10
Carpenters - Piledriver/Welder	1/1/2026		\$44.63	\$23.47	\$68.10
Carpenters, Drywall Hangers, Framers, Instrument Men, Lathers, Soft Floor Layers	5/1/2023		\$34.37	\$17.89	\$52.26
Carpenters, Drywall Hangers, Framers, Instrument Men, Lathers, Soft Floor Layers	5/1/2024		\$35.92	\$17.89	\$53.81
Carpenters, Drywall Hangers, Framers, Instrument Men, Lathers, Soft Floor Layers	5/1/2025		\$37.47	\$17.89	\$55.36
Carpenters, Soft Floor Layers	5/1/2021		\$31.72	\$17.29	\$49.01
Cement Masons	5/1/2022		\$31.89	\$17.61	\$49.50
Drywall Finisher	5/1/2022		\$24.54	\$22.75	\$47.29
Drywall Finisher	5/1/2023		\$25.51	\$24.03	\$49.54
Drywall Hanger	5/1/2018		\$30.51	\$16.05	\$46.56
Electricians & Telecommunications Installation Technician	6/1/2022		\$34.25	\$27.73	\$61.98
Electricians & Telecommunications Installation Technician	6/1/2023		\$35.50	\$28.73	\$64.23
Elevator Constructor	1/1/2023		\$56.14	\$42.83	\$98.97
Glazier	6/1/2021		\$28.70	\$11.65	\$40.35
Glazier	6/1/2022		\$21.00	\$22.35	\$43.35
Glazier	6/1/2023		\$21.00	\$22.35	\$43.35
Iron Workers	6/1/2022		\$33.07	\$32.10	\$65.17
Iron Workers	6/1/2023		\$33.57	\$32.68	\$66.25
Laborers (Class 01 - See notes)	5/1/2023		\$24.84	\$20.02	\$44.86
Laborers (Class 01 - See notes)	5/1/2024		\$26.09	\$20.27	\$46.36
Laborers (Class 01 - See notes)	5/1/2025		\$27.34	\$20.52	\$47.86
Laborers (Class 01 - See notes)	5/1/2026		\$28.59	\$20.77	\$49.36
Laborers (Class 01 - See notes)	5/1/2027		\$30.09	\$21.02	\$51.11
Laborers (Class 02 - See notes)	5/1/2019		\$21.94	\$18.92	\$40.86
Laborers (Class 03 - See notes)	5/1/2023		\$25.49	\$20.02	\$45.51
Laborers (Class 03 - See notes)	5/1/2024		\$26.74	\$20.27	\$47.01
Laborers (Class 03 - See notes)	5/1/2025		\$27.99	\$20.52	\$48.51
Laborers (Class 03 - See notes)	5/1/2026		\$29.24	\$20.77	\$50.01
Laborers (Class 03 - See notes)	5/1/2027		\$30.74	\$21.02	\$51.76
Landscape Laborer (Skilled)	1/1/2020		\$21.64	\$16.98	\$38.62
Landscape Laborer (Skilled)	1/1/2023		\$23.79	\$18.28	\$42.07
Landscape Laborer (Skilled)	1/1/2024		\$24.79	\$18.53	\$43.32
Landscape Laborer (Skilled)	1/1/2025		\$25.79	\$18.78	\$44.57
Landscape Laborer (Skilled)	1/1/2026		\$26.79	\$19.03	\$45.82
Landscape Laborer (Tractor Operator)	1/1/2020		\$21.94	\$16.98	\$38.92
Landscape Laborer (Tractor Operator)	1/1/2023		\$24.09	\$18.28	\$42.37



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

<b>Project: 23-08065 - Building</b>	<b>Effective Date</b>	<b>Expiration Date</b>	<b>Hourly Rate</b>	<b>Fringe Benefits</b>	<b>Total</b>
Landscape Laborer (Tractor Operator)	1/1/2024		\$25.09	\$18.53	\$43.62
Landscape Laborer (Tractor Operator)	1/1/2025		\$26.09	\$18.78	\$44.87
Landscape Laborer (Tractor Operator)	1/1/2026		\$27.09	\$19.03	\$46.12
Landscape Laborer	1/1/2020		\$21.22	\$16.98	\$38.20
Landscape Laborer	1/1/2023		\$23.37	\$18.28	\$41.65
Landscape Laborer	1/1/2024		\$24.37	\$18.53	\$42.90
Landscape Laborer	1/1/2025		\$25.37	\$18.78	\$44.15
Landscape Laborer	1/1/2026		\$26.37	\$19.03	\$45.40
Millwright	6/1/2020		\$41.68	\$20.32	\$62.00
Operators (Class 01 - see notes)	5/1/2022		\$32.10	\$19.79	\$51.89
Operators (Class 01 - see notes)	5/1/2023		\$32.75	\$20.69	\$53.44
Operators (Class 02 -see notes)	5/1/2022		\$31.43	\$19.79	\$51.22
Operators (Class 02 -see notes)	5/1/2023		\$32.08	\$20.69	\$52.77
Operators (Class 03 - See notes)	5/1/2022		\$27.25	\$19.79	\$47.04
Operators (Class 03 - See notes)	5/1/2023		\$27.90	\$20.69	\$48.59
Operators (Class 04 - Chief of Party (Surveying and Layout))	5/1/2021		\$27.77	\$19.29	\$47.06
Operators (Class 04 - Chief of Party (Surveying and Layout))	5/1/2023		\$28.92	\$20.69	\$49.61
Operators (Class 04 - Rodman/Chainman (Surveying and Layout))	5/1/2020		\$26.30	\$18.74	\$45.04
Operators (Class 04 - Rodman/Chainman (Surveying and Layout))	5/1/2023		\$27.90	\$20.69	\$48.59
Operators (Class 04 - Surveying Instrument Man)	5/1/2020		\$26.59	\$18.74	\$45.33
Operators (Class 04 - Surveying Instrument Man)	5/1/2023		\$28.19	\$20.69	\$48.88
Painters (Bridges, Stacks, Towers)	5/1/2020		\$25.87	\$19.95	\$45.82
Painters (Brush and Roller)(Commercial)	5/1/2022		\$24.29	\$22.75	\$47.04
Painters (Brush and Roller)(Commercial)	5/1/2023		\$25.26	\$24.03	\$49.29
Painters (Brush and Roller)(Industrial)	5/1/2022		\$24.79	\$22.75	\$47.54
Painters (Spray and Sandblasting)(Commercial)	6/1/2021		\$24.54	\$21.03	\$45.57
Painters (Spray and Sandblasting)(Commercial)	5/1/2022		\$25.04	\$22.75	\$47.79
Painters (Spray and Sandblasting)(Commercial)	5/1/2023		\$26.01	\$24.03	\$50.04
Painters (Spray and Sandblasting)(Industrial)	5/1/2022		\$25.54	\$22.75	\$48.29
Painters Class 6 (see notes)	5/1/2020		\$23.62	\$19.95	\$43.57
Pile Driver Divers (Building, Heavy, Highway)	1/1/2023		\$58.70	\$21.22	\$79.92
Pile Driver Divers (Building, Heavy, Highway)	1/1/2024		\$60.95	\$21.97	\$82.92
Pile Driver Divers (Building, Heavy, Highway)	1/1/2025		\$62.82	\$22.72	\$85.54
Pile Driver Divers (Building, Heavy, Highway)	1/1/2026		\$64.70	\$23.47	\$88.17
Piledrivers	1/1/2023		\$39.13	\$21.22	\$60.35
Piledrivers	1/1/2024		\$40.63	\$21.97	\$62.60
Piledrivers	1/1/2025		\$41.88	\$22.72	\$64.60
Piledrivers	1/1/2026		\$43.13	\$23.47	\$66.60
Plasterers	6/1/2022		\$26.57	\$19.08	\$45.65
Plasterers	6/1/2023		\$32.14	\$20.54	\$52.68
plumber	6/1/2022		\$44.63	\$25.22	\$69.85
plumber	6/1/2023		\$46.98	\$25.87	\$72.85



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

<b>Project: 23-08065 - Building</b>	<b>Effective Date</b>	<b>Expiration Date</b>	<b>Hourly Rate</b>	<b>Fringe Benefits</b>	<b>Total</b>
plumber	6/1/2024		\$50.08	\$25.87	\$75.95
plumber	6/1/2025		\$53.28	\$25.87	\$79.15
plumber	6/1/2026		\$56.38	\$25.87	\$82.25
plumber	6/1/2027		\$59.48	\$25.87	\$85.35
Pointers, Caulkers, Cleaners	12/1/2022		\$35.47	\$20.88	\$56.35
Roofers	5/1/2023		\$33.00	\$17.66	\$50.66
Roofers	5/1/2024		\$35.03	\$17.18	\$52.21
Sheet Metal Workers	7/1/2021		\$38.76	\$30.00	\$68.76
Sheet Metal Workers	7/1/2022		\$39.50	\$31.43	\$70.93
Sheet Metal Workers	8/1/2023		\$41.00	\$32.94	\$73.94
Sign Makers and Hangars	7/15/2022		\$30.54	\$24.35	\$54.89
Sign Makers and Hangars	7/15/2023		\$31.76	\$24.63	\$56.39
Sprinklerfitters	4/1/2023		\$44.33	\$28.04	\$72.37
Steamfitters	6/1/2022		\$42.15	\$27.32	\$69.47
Steamfitters	6/1/2023		\$44.10	\$28.37	\$72.47
Stone Masons	12/1/2022		\$38.56	\$23.61	\$62.17
Terrazzo Finisher	12/1/2022		\$36.13	\$18.03	\$54.16
Terrazzo Mechanics	12/1/2022		\$35.49	\$20.32	\$55.81
Tile Finisher	12/1/2022		\$28.76	\$17.34	\$46.10
Tile Setter	12/1/2022		\$35.64	\$21.81	\$57.45
Truckdriver class 1(see notes)	1/1/2023		\$33.18	\$22.21	\$55.39
Truckdriver class 1(see notes)	1/1/2024		\$34.93	\$22.71	\$57.64
Truckdriver class 1(see notes)	1/1/2025		\$36.43	\$23.21	\$59.64
Truckdriver class 1(see notes)	1/1/2026		\$37.93	\$23.71	\$61.64
Truckdriver class 2 (see notes)	1/1/2023		\$33.64	\$22.52	\$56.16
Truckdriver class 2 (see notes)	1/1/2024		\$35.39	\$23.02	\$58.41
Truckdriver class 2 (see notes)	1/1/2025		\$36.89	\$23.52	\$60.41
Truckdriver class 2 (see notes)	1/1/2026		\$38.39	\$24.02	\$62.41
Truckdriver class 3 (see notes)	1/1/2016		\$28.23	\$16.98	\$45.21
Wallcoverer	5/1/2022		\$24.54	\$22.75	\$47.29
Window Film / Tint Installer	10/1/2019		\$25.00	\$2.63	\$27.63



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

<b>Project: 23-08065 - Heavy/Highway</b>	<b>Effective Date</b>	<b>Expiration Date</b>	<b>Hourly Rate</b>	<b>Fringe Benefits</b>	<b>Total</b>
Carpenter	1/1/2023		\$38.60	\$20.59	\$59.19
Carpenter	1/1/2024		\$40.10	\$21.34	\$61.44
Carpenter	1/1/2025		\$41.35	\$22.09	\$63.44
Carpenter	1/1/2026		\$42.60	\$22.84	\$65.44
Carpenter Welder	1/1/2023		\$40.10	\$20.59	\$60.69
Carpenter Welder	1/1/2024		\$41.60	\$21.34	\$62.94
Carpenter Welder	1/1/2025		\$42.85	\$22.09	\$64.94
Carpenter Welder	1/1/2026		\$44.10	\$22.84	\$66.94
Carpenters - Piledriver/Welder	1/1/2023		\$40.63	\$21.22	\$61.85
Carpenters - Piledriver/Welder	1/1/2024		\$42.13	\$21.97	\$64.10
Carpenters - Piledriver/Welder	1/1/2025		\$43.38	\$22.72	\$66.10
Carpenters - Piledriver/Welder	1/1/2026		\$44.63	\$23.47	\$68.10
Cement Finishers	1/1/2023		\$34.14	\$25.05	\$59.19
Cement Finishers	1/1/2024		\$35.14	\$26.30	\$61.44
Cement Finishers	1/1/2025		\$35.94	\$27.50	\$63.44
Cement Masons	1/1/2020		\$32.84	\$21.10	\$53.94
Electric Lineman	8/29/2022		\$62.66	\$28.08	\$90.74
Electric Lineman	9/4/2023		\$64.68	\$29.01	\$93.69
Iron Workers (Bridge, Structural Steel, Ornamental, Precast, Reinforcing)	6/1/2023		\$33.57	\$32.68	\$66.25
Laborers (Class 01 - See notes)	1/1/2023		\$29.95	\$25.50	\$55.45
Laborers (Class 01 - See notes)	1/1/2024		\$32.20	\$25.50	\$57.70
Laborers (Class 01 - See notes)	1/1/2025		\$33.70	\$26.00	\$59.70
Laborers (Class 01 - See notes)	1/1/2026		\$34.70	\$27.00	\$61.70
Laborers (Class 02 - See notes)	1/1/2023		\$30.11	\$25.50	\$55.61
Laborers (Class 02 - See notes)	1/1/2024		\$32.36	\$25.50	\$57.86
Laborers (Class 02 - See notes)	1/1/2025		\$33.86	\$26.00	\$59.86
Laborers (Class 02 - See notes)	1/1/2026		\$34.86	\$27.00	\$61.86
Laborers (Class 03 - See notes)	1/1/2023		\$30.50	\$25.50	\$56.00
Laborers (Class 03 - See notes)	1/1/2024		\$32.75	\$25.50	\$58.25
Laborers (Class 03 - See notes)	1/1/2025		\$34.25	\$26.00	\$60.25
Laborers (Class 03 - See notes)	1/1/2026		\$35.25	\$27.00	\$62.25
Laborers (Class 04 - See notes)	1/1/2023		\$30.95	\$25.50	\$56.45
Laborers (Class 04 - See notes)	1/1/2024		\$33.20	\$25.50	\$58.70
Laborers (Class 04 - See notes)	1/1/2025		\$34.70	\$26.00	\$60.70
Laborers (Class 04 - See notes)	1/1/2026		\$35.70	\$27.00	\$62.70
Laborers (Class 05 - See notes)	1/1/2023		\$31.36	\$25.50	\$56.86
Laborers (Class 05 - See notes)	1/1/2024		\$33.61	\$25.50	\$59.11
Laborers (Class 05 - See notes)	1/1/2025		\$35.11	\$26.00	\$61.11
Laborers (Class 05 - See notes)	1/1/2026		\$36.11	\$27.00	\$63.11
Laborers (Class 06 - See notes)	1/1/2023		\$28.20	\$25.50	\$53.70
Laborers (Class 06 - See notes)	1/1/2024		\$30.45	\$25.50	\$55.95
Laborers (Class 06 - See notes)	1/1/2025		\$31.95	\$26.00	\$57.95
Laborers (Class 06 - See notes)	1/1/2026		\$32.95	\$27.00	\$59.95
Laborers (Class 07 - See notes)	1/1/2023		\$30.95	\$25.50	\$56.45



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

Project: 23-08065 - Heavy/Highway	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Laborers (Class 07 - See notes)	1/1/2024		\$33.20	\$25.50	\$58.70
Laborers (Class 07 - See notes)	1/1/2025		\$34.70	\$26.00	\$60.70
Laborers (Class 07 - See notes)	1/1/2026		\$35.70	\$27.00	\$62.70
Laborers (Class 08 - See notes)	1/1/2023		\$32.45	\$25.50	\$57.95
Laborers (Class 08 - See notes)	1/1/2024		\$34.70	\$25.50	\$60.20
Laborers (Class 08 - See notes)	1/1/2025		\$36.20	\$26.00	\$62.20
Laborers (Class 08 - See notes)	1/1/2026		\$37.20	\$27.00	\$64.20
Millwright	6/1/2020		\$41.68	\$20.32	\$62.00
Millwright	6/1/2023		\$45.50	\$23.72	\$69.22
Millwright	6/1/2024		\$47.59	\$23.72	\$71.31
Millwright	6/1/2025		\$49.72	\$23.72	\$73.44
Operators (Class 01 - see notes)	1/1/2023		\$36.79	\$23.58	\$60.37
Operators (Class 01 - see notes)	1/1/2024		\$38.59	\$24.03	\$62.62
Operators (Class 01 - see notes)	1/1/2025		\$40.39	\$24.23	\$64.62
Operators (Class 02 -see notes)	1/1/2023		\$36.53	\$23.58	\$60.11
Operators (Class 02 -see notes)	1/1/2024		\$38.33	\$24.03	\$62.36
Operators (Class 02 -see notes)	1/1/2025		\$40.13	\$24.23	\$64.36
Operators (Class 03 - See notes)	1/1/2023		\$32.88	\$23.58	\$56.46
Operators (Class 03 - See notes)	1/1/2024		\$34.68	\$24.03	\$58.71
Operators (Class 03 - See notes)	1/1/2025		\$36.48	\$24.23	\$60.71
Operators (Class 04 - See notes)	1/1/2023		\$32.42	\$23.58	\$56.00
Operators (Class 04 - See notes)	1/1/2024		\$34.22	\$24.03	\$58.25
Operators (Class 04 - See notes)	1/1/2025		\$36.02	\$24.23	\$60.25
Operators (Class 05 - See notes)	1/1/2023		\$32.17	\$23.58	\$55.75
Operators (Class 05 - See notes)	1/1/2024		\$33.97	\$24.03	\$58.00
Operators (Class 05 - See notes)	1/1/2025		\$35.77	\$24.23	\$60.00
Operators Class 1-A	1/1/2023		\$39.79	\$23.58	\$63.37
Operators Class 1-A	1/1/2024		\$41.59	\$24.03	\$65.62
Operators Class 1-A	1/1/2025		\$43.39	\$24.23	\$67.62
Operators Class 1-B	1/1/2023		\$38.79	\$23.58	\$62.37
Operators Class 1-B	1/1/2024		\$40.59	\$24.03	\$64.62
Operators Class 1-B	1/1/2025		\$42.39	\$24.23	\$66.62
Painters (Bridges, Stacks, Towers)	5/1/2022		\$26.79	\$22.75	\$49.54
Painters (Bridges, Stacks, Towers)	5/1/2023		\$27.76	\$24.03	\$51.79
Painters (Brush and Roller)(Industrial)	5/1/2022		\$24.79	\$22.75	\$47.54
Painters (Brush and Roller)(Industrial)	5/1/2023		\$25.76	\$24.03	\$49.79
Painters (Spray and Sandblasting)(Industrial)	5/1/2022		\$25.54	\$22.75	\$48.29
Painters (Spray and Sandblasting)(Industrial)	5/1/2023		\$26.51	\$24.03	\$50.54
Pile Driver Divers (Building, Heavy, Highway)	1/1/2023		\$58.70	\$21.22	\$79.92
Pile Driver Divers (Building, Heavy, Highway)	1/1/2024		\$60.95	\$21.97	\$82.92
Pile Driver Divers (Building, Heavy, Highway)	1/1/2025		\$62.82	\$22.72	\$85.54
Pile Driver Divers (Building, Heavy, Highway)	1/1/2026		\$64.70	\$23.47	\$88.17
Piledrivers	1/1/2023		\$39.13	\$21.22	\$60.35
Piledrivers	1/1/2024		\$40.63	\$21.97	\$62.60

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

<b>Project: 23-08065 - Heavy/Highway</b>	<b>Effective Date</b>	<b>Expiration Date</b>	<b>Hourly Rate</b>	<b>Fringe Benefits</b>	<b>Total</b>
Piledrivers	1/1/2025		\$41.88	\$22.72	\$64.60
Piledrivers	1/1/2026		\$43.13	\$23.47	\$66.60
Steamfitters (Heavy and Highway - Gas Distribution)	5/1/2022		\$48.43	\$40.28	\$88.71
Truckdriver class 1(see notes)	1/1/2023		\$33.18	\$22.21	\$55.39
Truckdriver class 1(see notes)	1/1/2024		\$34.93	\$22.71	\$57.64
Truckdriver class 1(see notes)	1/1/2025		\$36.43	\$23.21	\$59.64
Truckdriver class 1(see notes)	1/1/2026		\$37.93	\$23.71	\$61.64
Truckdriver class 2 (see notes)	1/1/2023		\$33.64	\$22.52	\$56.16
Truckdriver class 2 (see notes)	1/1/2024		\$35.39	\$23.02	\$58.41
Truckdriver class 2 (see notes)	1/1/2025		\$36.89	\$23.52	\$60.41
Truckdriver class 2 (see notes)	1/1/2026		\$38.39	\$24.02	\$62.41
Truckdriver class 3 (see notes)	1/1/2019		\$29.59	\$19.82	\$49.41



## 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.	Montana	7% all other products 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:

<b>STATE</b>	<b>PREFERENCE</b>
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%

<b>STATE</b>	<b>PROHIBITION</b>
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:

<b>STATE</b>	<b>PROHIBITION</b>
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: \_\_\_\_\_



**WORKER PROTECTION AND INVESTMENT CERTIFICATION FORM**

A. Pursuant to Executive Order 2021-06, *Worker Protection and Investment*. (October 21, 2021), the Commonwealth is responsible for ensuring that every worker in Pennsylvania has a safe and healthy work environment and the protections afforded them through labor laws. To that end, contractors and grantees of the Commonwealth must certify that they are in compliance with Pennsylvania's Unemployment Compensation Law, Workers' Compensation Law, and all applicable Pennsylvania state labor and workforce safety laws including, but not limited to:

1. Construction Workplace Misclassification Act
2. Employment of Minors Child Labor Act
3. Minimum Wage Act
4. Prevailing Wage Act
5. Equal Pay Law
6. Employer to Pay Employment Medical Examination Fee Act
7. Seasonal Farm Labor Act
8. Wage Payment and Collection Law
9. Industrial Homework Law
10. Construction Industry Employee Verification Act
11. Act 102: Prohibition on Excessive Overtime in Healthcare
12. Apprenticeship and Training Act
13. Inspection of Employment Records Law

B. Pennsylvania law establishes penalties for providing false certifications, including contract termination; and three-year ineligibility to bid on contracts under 62 Pa. C.S. § 531 (Debarment or suspension).

**CERTIFICATION**

I, the official named below, certify I am duly authorized to execute this certification on behalf of the contractor/grantee identified below, and certify that the contractor/grantee identified below is compliant with applicable Pennsylvania state labor and workplace safety laws, including, but not limited to, those listed in Paragraph A, above. I understand that I must report any change in the contractor/grantee's compliance status to the Purchasing Agency immediately. I further confirm and understand that this Certification is subject to the provisions and penalties of 18 Pa. C.S. § 4904 (Unsworn falsification to authorities).

<i>Signature</i>	<i>Date</i>
<i>Name (Printed)</i>	
<i>Title of Certifying Official (Printed)</i>	
<i>Contractor/Grantee Name (Printed)</i>	

## 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, 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.

- Section 1 – Summary of Work
- Section 2 – E&S Control
- Section 3 – Clearing and Grubbing
- Section 4 – Earthwork
- Section 5 – Aggregates
- Section 6 – Concrete
- Section 7 – Shooting Station Shelters
- Section 8 – Target Stations
- Section 9 – Post Walls
- Section 10 – Guard Posts
- Section 11 – Mulch
- Section 12 – Chain Link Fence
- Section 13 – Handicapped Signs
- Section 14 – Seeding
- Section 15 – Metal Screen
- Section 16 – Install Shooting Tables

## DRAWINGS

The following drawings are included:

- 1 of 4 - Location Map, Site Plan and Notes
- 2 of 4 – Range Plan and Notes
- 3 of 4 - Shooting Station and Target Station Details
- 4 of 4 - Miscellaneous Details

## **TECHNICAL SPECIFICATION SECTION 1 - SUMMARY OF WORK**

### **1.1 – SCOPE OF PROJECT**

The intent of this project is to construct a new archery range on State Game Lands #109, Greene Township, Erie County. The project consists of clearing, grubbing and grading the work site, installing silt sock for erosion and sedimentation control, stripping sod from the work areas, constructing shooting station shelters, concrete sidewalks, target stations, post walls and guard posts, and installing a chain link fence around the perimeter of the new range. Construction of a stone surface parking area is also included in the project.

### **1.2 – WORK AREA**

The new archery range is on State Game Lands #109 which is in central Erie County. State Game Lands #109 is located about 8-miles south of the city of Erie. The project site is just east on PA Route 97 located off Sampson Road. The work area is a gently sloped wooded area accessible by a stone/dirt surface road. The site is owned by the Pennsylvania Game Commission (PGC).

### **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.

### **1.4 – ACCESS TO WORK AREA**

Access to the new range is from the stone access road which is connected to Sampson Road. The Contractor must keep roads open to travel and repair any damage to the roads and parking area caused by construction equipment.

### **1.5 – PROJECT LAYOUT**

The Contractor shall stake out the range features using the offset dimensions shown on the Drawings. The PGC will assist the Contractor with the project layout at a pre-construction meeting. The Contractor is responsible for horizontal and vertical layout. All stakes, targets, grade markers, etc. used to establish locations and lines are the responsibility of the Contractor.

### **1.6 – PERMITS, LAWS AND REGULATIONS**

The PGC has acquired a building permit from the PA Department of Labor & Industry (L&I) for construction of this project. The permit and inspection log are attached to this section of the specifications. The Contractor shall contact the L&I Inspector to keep him informed on



progress so that the required inspections can take place. Local building code officials have no jurisdiction over this project.

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.

Any violations incurred from improper execution of the above provisions shall be paid for by the Contractor. Loss of time on the project from such violations will not be tolerated.

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	202300958
Permit Holder	PA GAME COMMISSION ENGINEERING DIVISION
Address	2001 ELMERTON AVENUE HARRISBURG PA 17110
Building/Structure Name	GAME COMMISSION STATE GAME LANDS #109 - ARCHERY RANGE
Building Address	0 SAMPSON RD WATERFORD 16641
Political Subdivision:	GREENE TOWNSHIP
County:	ERIE
Approved use and occupancy classification(s)	B
Approved construction type	VB
Plan code	STRUCTURE

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	549481
Date Issued	9/19/2023

A handwritten signature in black ink, appearing to read "Joseph C. Martin".

Joseph C. Martin  
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:** 202300958  
**Building/Structure Name:** GAME COMMISSION  
**Address:** SAMPSON RD  
WATERFORD PA 16641

**File Number:** 549481

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

**Inspector:** Charles Van Nette (814)431-8339 cvannette@pa.gov

If unavailable, contact Central Office: 717-787-1291 jecole@pa.gov

REQUIRED	INSPECTION	INSPECTOR (PRINT)	INSPECTOR (SIGNATURE)	DATE ACCEPTED
Y	Footing Environment			
	Foundation			
Y	Concrete Under Slab/Floor			
	Underground Plumbing			
	Underground Mechanical			
	Underground Electrical			
	Plumbing Rough-in			
	Mechanical Rough-in			
	Electrical Rough-in			
D	Framing			
	Insulation			
	Fire Protection			
Y	Accessibility Final			
	Energy Final			
	Mechanical Final			
	Electrical Final			
	Plumbing Final			
	Building Final			
	Demolition Final			
	Alterations Final			
	Sign Final			
Y	Structure Final			

**TECHNICAL SPECIFICATION SECTION 2 - EROSION AND  
SEDIMENTATION CONTROL**

**2.1 -SCOPE**

This work is implementing the erosion and sedimentation control measures contained on the drawings and described herein. Compliance with Chapter 102 of the Department of Environmental Protection's regulations is also required.

**2.2 – PROCEDURE**

Protect the surrounding area by installing silt sock along the western and southern edges of the work site. Place cleared and grubbed material in the spoil area. Transport sod and excavated material from the range site to the spoil area. Use suitable excavated material for backfill of completed range features.

Permanently stabilize disturbed earth areas with seed and mulch according to Section 14 of these Technical Specifications. Temporary seeding and mulching can be performed to stabilize areas where construction has not been completed.

Failure to implement soil erosion and sediment pollution control measures may result in a cease and desist order, causing shutdown of the work. No extension of time, nor additional compensation will be granted if such a shutdown should occur as a result of act or neglect of the Contractor.

**2.3 - MEASUREMENT AND PAYMENT**

Linear Feet for the 12-inch Silt Sock..

**TECHNICAL SPECIFICATION SECTION 3 – CLEARING AND GRUBBING**

**3.1 -SCOPE**

This work is removing trees and brush in the project area.

**3.2 - PROCEDURE**

**General** – The limits of clearing and grubbing are shown on the “Site Plan” on Drawing 1. Do not cut trees or brush beyond the limits shown on the Site Plan.

**Project Area** – Cut down and remove all the trees and brush in the project area. Remove all stumps, brush, logs, trunks and woody debris from the footprint of the range. Dispose of this material in the soil area.

Merchantable timber is considered property of the Contractor. Salvage value is to be reflected in the unit price bid for the project.

Remove the stumps by excavating and/or pulling them out of the ground. Remove any roots, slash or small trees from the site. Conduct operations so that existing soil is retained at the site.

Burning is not permitted on PGC property.

All rocks and stones larger are to be removed from the range footprint. Dispose of the rocks and stones in the spoil area.

Use on-site soil material to fill stump holes. Perform minor grading operations to blend the surface into the existing contours.

**3.3 - MEASUREMENT AND PAYMENT**

Lump Sum.



**TECHNICAL SPECIFICATION SECTION NO. 4 - EARTHWORK**

**4.1- SCOPE**

This work is removal, hauling, and disposal of all materials encountered for construction of the new archery range as indicated on the Drawings, or designated by the Game Commission.

Stripping operations are only to remove the sod and top layer of organic soil for construction of the new range features.

Site grading is required; the range features shall be sloped to go with the existing site contours and grades. Grade the work area smooth and even so the ground surface slopes to meet the existing contours. This will be a gentle slope from the parking area on the eastern edge of the work site down to the western edge. The slope will be approximately 4 to 5-feet along the 210-foot distance in the work area.

**4.2 - PROCEDURE**

**A. General** - Follow all guidelines set forth in the Construction Industry Standards, OSHA 2207, of the Occupational Safety and Health Administration, U.S. Department of Labor. Protect the work, adjacent roadways, and property.

The Contractor is required to contact the PA One Call System at 1-800-242-1776 prior to earthmoving operations at the site.

The Contractor is responsible for laying out the new archery range and setting grade and line from the dimensions shown on the Drawings. Do not over-excavate because unauthorized excavation and replacement of materials in the over-excavated areas will not be measured and paid for. Replace over-excavated work with concrete, gravel, earth or other materials designated by, and at no additional cost to the Game Commission.

**B. Stripping** - Remove all materials to the limits shown on the Drawings or as necessary to construct the archery range. Do not strip sod and soil beyond the limits necessary for construction of the range features.

**C. Augering** – Use suitable equipment to auger holes for structure posts and fence posts. Auger and remove earth material to the required depths. Have the inspector check the depth of augered holes before proceeding with construction of the shooting station shelters and target stations.

**D. Disposal** – Suitable soil material can be used for backfill of range features. The Contractor is required to transport and stockpile the excess stripped material to the spoil area adjacent to the new range. The Contractor is responsible for repairing any damage to the existing field area caused by trucks and other equipment used to transport and spoil the stripped material.

**4.3 - MEASUREMENT AND PAYMENT**

Lump Sum.

**TECHNICAL SPECIFICATION SECTION NO.5 - AGGREGATES**

**5.1 - SCOPE**

This work is placing stone for construction of the parking lot and for the subbase of the concrete slabs and sidewalks. Construction of the handicapped parking area, surfacing in front of the shooting station shelters and backfilling around the target stations is also included.

**5.2 - MATERIALS**

Stone for the handicapped parking area shall be AASHTO #10 as specified in Section 703.2 of PennDOT Pub. 408.

Stone for construction of the parking lot and for the subbase of the concrete sidewalks shall be #2A coarse aggregate (Type A) as specified in Section 703.2 of PennDOT Pub. 408. #2A coarse aggregate shall also be used as backfill around the target stations and surfacing in front of the shooting station shelters.

Obtain the stone from a source listed in PennDOT Bulletin 14.

**5.3- PROCEDURE**

**A-Parking Area-** Place stone in the dry. Place the stone in one layer and compact with a roller to the required minimum thickness of 4-inches for the parking lot. Compaction of the stone shall be considered satisfactory on the basis of non-movement of the materials under compaction equipment. The #2A coarse aggregate shall be 2-inches thick in the handicapped parking area. Surface this area with a 2-inch layer of AASHTO #10 stone.

**B. Concrete Slabs and Sidewalks -** Grade the areas for the concrete slabs and sidewalks for placement of #2A coarse aggregate. Place a 4-inch layer of stone. Rake and compact as necessary to provide an even surface for formwork and concrete placement.

**C. Target Stations -** Place the stone around the installed target station posts. The top level of the stone should match the top of the sidewalk and existing ground around the target stations. The thickness of the stone should be around 8-inches. Rake the stone to provide an even surface for foot traffic; compaction of the stone in these areas is not required.

**D. Shooting Station Shelters -** Place the stone in front of the concrete floor slab around the installed shooting station shelter posts. The top level of the stone should match the top of the concrete floor slab. The thickness of the stone should be around 4-inches and should extend 2-feet from the edge of the concrete. Rake the stone to provide an even surface for foot traffic; compaction of the stone in these areas is not required.

**5.4 - MEASUREMENT AND PAYMENT**

Cubic yards for each type of stone (#2A coarse aggregate and AASHTO #10), measured by the average end area method or by three-dimensional volume method, as applicable.

**TECHNICAL SPECIFICATION SECTION NO. 6 – CONCRETE**

**6.1 - SCOPE**

This work is construction of the shooting station shelter slab and sidewalks at the new archery range. Foundations of the shooting station shelter posts and backfilling of terminal fence posts is also included in this Section.

**6.2 - MATERIALS**

**A – Concrete** - 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 PennDOT 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).
3. Ready-mixed concrete shall be mixed and delivered in accordance with ASTM Designation C94.

Polypropylene fibers shall be included in the concrete mix. Cement shall be Type IA or IIA conforming to ASTM C 150. All materials shall be obtained from sources listed in PennDOT Bulletin 14 or PennDOT Bulletin 15.

**B – Preformed Expansion Joint Filler** – Preformed expansion joint filler shall be ½-inch thick gray sponge rubber conforming to AASHTO M153, Type 1. Joint filler shall be solid sponge rubber; no reprocessed material will be accepted. Joint filler made of numerous pieces of sponge rubber which adhere to each other will not be accepted.

**C - Joint Seal Material** - The joint seal material shall conform to 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.

**D - 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.

### 6.3 – PROCEDURE

**A – Preparation of Concrete Foundation Areas** – Place and compact a 4-inch layer of #2A coarse aggregate to provide a stable, even surface for placement of concrete for the slabs and sidewalks. Moisten the surface of the aggregate before placing concrete.

**B – Expansion and Contraction Joints** - Place preformed expansion joint filler in every third joint and at intersections in the sidewalk as shown on the Drawings. Joints shall be every eight feet for the shooting station shelter slabs and every five feet for the sidewalks to the target stations. The joints in the shooting station shelter slabs should match the support post spacing. The joint material shall be clean and free of dust, grit, mud, oil or grease, and shall be held firmly in place to avoid displacement during concreting.

**C – Formwork** - Forms shall conform to the shapes, lines, grades, and dimensions of the concrete as called for on the Drawing. They shall be sufficiently tight to prevent leakage of mortar and shall be properly braced or tied together so as 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.

**D - 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.

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.

**E- Finishing Concrete** - All unformed surfaces shall be finished in accordance with the following requirements by a skilled concrete finisher:

Immediately after placement of concrete 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 broom finish to the top surface of unformed concrete. Light surface pitting and light trowel marks are not objectionable.

**F – Curing Concrete** - After finishing operations are completed, the concrete shall be membrane cured. 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.

**G – Protection of Concrete** - All concrete shall be protected against injury until final inspection and acceptance by the Game Commission.

During the construction 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.

**H – Sealing Expansion Joints** - Use a caulking gun to place a ½-inch bead of joint seal material over the preformed joint filler material in the expansion joints. Use masking tape on each side of the joint to prevent the joint seal material from leaking over the slab.

#### **6.4 - MEASUREMENT AND PAYMENT**

For concrete, 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 cement, fine and coarse aggregates; admixtures, forms, all

labor and equipment for mixing, placing, curing, finishing, repairing and forming; and all labor, materials, and appurtenances necessary to do and complete the work.

No separate measurement or payment for polypropylene fibers in the concrete mix.



**TECHNICAL SPECIFICATION SECTION NO. 7 – SHOOTING STATION SHELTERS**

**7.1 - SCOPE**

This work is construction of the shooting station shelters at the new archery range.

**7.2 - MATERIALS**

**A. Dimension Lumber** – The roof purlins and fascia should be regular dimension lumber. The lumber should conform to the following requirements.

1. Grading Agency – Southern Pine Inspection Bureau, Inc. (SPIB)
2. Nominal sizes – as indicated on the Drawings, S4S.
3. Moisture content – S-dry or MC19
4. Structural Grade – No. 2

**B. Treated Lumber** – Truss seats and support posts are pressure treated. Other characteristics for the truss seats are the same as dimension lumber. The support posts can be pressure treated dimensional posts or glue laminated columns manufactured from #1 Southern Yellow Pine.

The pressure treatment is ACQ (waterborne preservative), 0.4 pcf retention in conformance with the American Wood Preservers Association (AWPA). Use category UC3b for exterior construction not in contact with the ground (truss seats). Use category UC4a for items in contact with the ground (supports posts).

**C – Rebar** – Steel bars for post foundations shall be grade 60, #6 bar (14-inches long), deformed and shall conform with all the provisions of one of the standards listed below.

- 1 ASTM Designation A615 "Standard Specification for Deformed and Plain Steel Bars for concrete Reinforcement,"
- 2 ASTM Designation A616 "Standard Specification for Rail-Steel Deformed and Plain Bars for Concrete Reinforcement," or
- 3 ASTM Designation A617 "Standard Specification for Axle-Steel Deformed and Plain Bars for Concrete Reinforcement."

**D – Roof Trusses** – The trusses shall be fabricated from dimensional lumber and have a 4V:12H pitch and 1-foot overhangs. The span is 8-feet and the spacing of the trusses is on 4-foot centers. The roof trusses must have a roof load rating of 42.5 psf ground snow load (snow load factor of 0.7) and a wind load rating of 25 psf. Submit design calculations and drawings for the roof trusses for review and approval. The design drawings and calculations for the roof trusses must be sealed and certified by a licensed professional engineer (valid Pennsylvania license). The truss design shall conform to the

applicable provisions of the “National Design Specification for Stress-Grade Lumber and Its Fastenings” (National Forest Products Association) and “Design Specifications for Light Metal Plate Connected Wood Trusses” (TPI).

**E – Metal Roof Panels** – The roof panels (and gable end panels) shall be fabricated from galvanized steel sheet with a minimum coating of 0.90 oz/SF. The roof panels shall be minimum 26-gauge steel sheet stock capable of supporting the design roof loading. The panels shall be full length from ridge to eave. The ridge and eaves shall be fitted with continuous gaskets. The finish color of the panels is white. Trim pieces shall be metal sheet stock with the same finish characteristics as the panels and fabricated into ridge cap, corners and drip edges.

**F – Soffits and Fascia** – The fascia and soffits shall be white vinyl. The soffits shall be fully perforated. All trim pieces for the soffits and fascia shall be white vinyl.

**G – Fasteners** – All fasteners shall be corrosion resistant galvanized steel or chromium steel and recommended by the manufacturer to be used with ACQ pressure treated lumber. Refer to the listing below for an application guide for fasteners.

- 1) For lumber framing – Steel carriage bolts (nuts and washers) or #10 wood screws.
- 2) For metal roofing – Screw fasteners, cadmium plated self-tapping, hex head with washer and soft neoprene sealing ring finished to match the metal roof color.
- 3) For soffit and fascia – Prefinished white aluminum nails.
- 4) For insulation board – Nails with large plastic ring washers.
- 5) Roof Truss Ties – Simpson Strong Tie H1Z Hurricane Tie (Z-Max) with galvanized 8d nails.

**H – Bow Holders** – The bow holders shall be “Black Wall Bowtree” from Rinehart Targets, 1809 Beloit Avenue, Janesville, WI 53546.

### 7.3 – PROCEDURE

**A – Shelter Fabrication** – Construct the shooting station shelters according to the dimensions and layout shown on the Drawings. Excavate holes for the support posts and place rebar through the bottom of the posts as shown on the Drawings. Place a 6-inch thick concrete base in the bottom of the augered holes. Let the concrete cure for a minimum of 12-hours before setting posts. Place the support posts on the cured concrete bases. Backfill with concrete to a depth of 12-inches to hold the support posts plumb and secure. Install truss seats on the posts. Provide extra temporary bracing as required to keep the structures plumb. Install the roof trusses on the truss seats and use hurricane ties on each truss seat (4 ties per truss). Install purlins and fascia boards on the roof trusses. Provide an install extra dimension lumber to form the overhangs on the gable ends of the structures. Install the insulation board to the underside of the purlins between the trusses. Install the vinyl fascia and soffits on the roof overhangs.

**B – Concrete Slab** – Construct forms around the support posts for the concrete slab floor of the structures. Refer to Section 6 of these Technical Specifications for forming, placing, finishing and curing of the concrete floor slabs of the shooting station shelters.

**C – Bow Holders** – Mount the bow holders on the inside face of each support post on the target side of the shooting station shelters. Use the manufacturer supplied hardware to secure the bow holders. Mount the bow holders five feet above the surface of the concrete floor slab.

#### **7.4 - MEASUREMENT AND PAYMENT**

Measurement and payment for shooting station shelters will be made for each unit successfully constructed according to the size.

Refer to Section 6.4 for measurement and payment of the concrete floor slabs in the shelters.

Measurement and payment for the bow holders will be made for each unit mounted in the shooting station shelters.

**TECHNICAL SPECIFICATION SECTION NO. 8 – TARGET STATIONS**

**8.1 - SCOPE**

This work is fabrication and installation of the target stations at the new archery range.

**8.2 - MATERIALS**

**A – Pressure Treated Wood** – Wood for the target stations shall be Structural Grade No. 2, pressure treated ACQ (waterborne preservative) with a 0.4 pcf retention in conformance with the American Wood Preservers Association (AWPA) Standard UC3b.

**B – Fasteners** – Polymer plated suitable for use in pressure treated wood. #10 x 3-inch star drive flat head wood deck screws.

**C – Lag Bolts** – ¾” x 14-inch galvanized carriage bolts with galvanized nut and washer.

**D – Hinges** – 6-inch galvanized steel strap hinge with brass hinge pin (Stanley Part #17-1170 or approved equal).

**E – Hasps** – 6-inch zinc plated latch post safety hasp (Everbuilt Part #16076 or approved equal).

**F – Metal Roof Panels** – The roof panels shall be fabricated from galvanized steel sheet with a minimum coating of 0.90 oz/SF. The roof panels shall be minimum 26-gauge. The panels shall be full length. The finish color of the panels is white.

**G – Bow Holders** – The bow holders shall be “Black Wall Bowtree” from Rinehart Targets, 1809 Beloit Avenue, Janesville, WI 53546.

**8.3 – PROCEDURE**

Fabricate the target stations using the pressure treated lumber cut to size as shown on the Drawings. Secure the wood pieces with the specified fasteners (carriage bolts and deck screws). Install the hinges on the inside faces of the rear door boards. Make sure that the doors swing freely. Attach the hasps to the outside face of the target wall board.

Excavate holes for the wood posts on the spacing as shown on the drawings. Place the posts in the holes and hold the posts plumb and level during backfilling operations. Tamp the backfill in place in layers not exceeding six inches. Use a string to keep the posts in line.

Fabricate the roof frame and install on top of the target stations. Install the metal roof panels on the roof frames with suitable fasteners.

Mount the bow holders on the outside face of each outside support post on each target station. Use the manufacturer supplied hardware to secure the bow holders. Mount the bow holders five feet above the surface of the stone surrounding the target stations.

Backfill around the target stations with an 8-inch thick layer of #2A coarse aggregate. The top of the stone should be even with the sidewalk and ground. Rake the top surface of the stone so that it is flat and even.

NOTE – The PGC will supply and install the targets and locks on the installed stations.

#### **8.4 - MEASUREMENT AND PAYMENT**

Each for the target stations.

Each for the bow holders.

**TECHNICAL SPECIFICATION SECTION NO. 9 – POST WALLS**

**9.1 - SCOPE**

This work is fabrication and installation of the post walls behind the targets at the new archery range.

**9.2 - MATERIALS**

**A – Pressure Treated Wood and Posts** – Wood planks and posts for the post walls shall be Structural Grade No. 2, pressure treated ACQ (waterborne preservative) with a 0.4 pcf retention in conformance with the American Wood Preservers Association (AWPA) Standard UC3b.

**B – Fasteners** – Polymer plated suitable for use in pressure treated wood. #10 x 4-inch star drive flat head wood deck screws.

**9.3 – PROCEDURE**

Excavate holes for the wood posts on the 6-foot spacing as shown on the drawings. Place the posts in the holes and hold the posts plumb and level during backfilling operations. Tamp the backfill in place in layers not exceeding six inches. Use a string to keep the posts in line.

The 2” x 12” wood planks shall be either 6-foot or 12-foot long. Attach the wood planks to the posts using the specified fasteners. Stagger joints in the wood planks on each post by starting a row with either a 6-foot or 12-foot section.

**9.4 - MEASUREMENT AND PAYMENT**

Linear Feet.

**TECHNICAL SPECIFICATION SECTION 10 – GUARD POSTS**

**10.1 -SCOPE**

This work is furnishing and installing wooden guard posts between the shooting station shelters and the parking area.

**10.2– MATERIALS**

**A - Guard Posts** - The guard posts shall have nominal dimensions of 8”x8” and conform to the following characteristics.

- 1) Southern Yellow Pine – Dimension Lumber
- 2) Structural Grade No. 2
- 3) Pressure Treated, ACQ (waterborne preservative), 0.40 pcf retention in conformance with American Wood Preservers Association Standards UC4A.

**10.3 - PROCEDURE**

Drill or auger the soil at the locations to the depth shown on the Drawings on 6-foot centers. Start the line of guard posts 2-feet from the north edge of the range. Set the posts plumb in the holes and backfill around the posts with the excavated material. Firmly tamp the backfill in 6-inch lifts around the posts. Place mulch around the guard posts after backfilling operations are complete.

**10.4 - MEASUREMENT AND PAYMENT**

Each.

**TECHNICAL SPECIFICATION SECTION 11 – MULCH**

**11.1 -SCOPE**

This work is installing mulch in the median area between the shooting station shelters and parking area.

**11.2 – MATERIALS**

Mulch consists of ground up hardwoods and colored black through a dyeing process. The dye must be an environmentally safe water-based product. The mulch must be at least double shredded so that it has an even, fine consistency.

**11.3 - PROCEDURE**

Install the guard posts in the median areas after completion of the shooting station shelters. Grade the median areas so that the base surface is relatively flat and even. Place mulch so that is around 6-inches thick and even with the top edge of the concrete slab and stone surface in the parking area.

**11.4 - MEASUREMENT AND PAYMENT**

Cubic yards measured by the average end area method.



**TECHNICAL SPECIFICATION NO. 12 - CHAIN LINK FENCE**

**12.1 - SCOPE**

This work is furnishing and installing chain link around the new archery range as shown on the Drawings.

**12.2 - MATERIALS**

**A - Fence** - Fabric, posts, and hardware shall meet the following requirements:

- 1. - Fabric** - Fabric shall be Class 2b, PVC-coated, galvanized steel wire fabric, conforming to the requirements of ASTM F 668 with the following modifications: The steel wire shall be at least 9 gauge. The color of the vinyl coating shall be forest green. The size of the mesh shall be 2 inches. The fabric shall be knuckled at both selvages. All cut ends shall be coated with vinyl, at the factory, during the weaving process.
- 2. - Posts** - Posts will be referred to as "terminal" or "line". Terminal posts include corner, angle, pull, and end posts. Line posts are also known as "intermediate" posts. Pipes for posts shall be of galvanized steel conforming with the requirements of either ASTM F 1083(Schedule 40) or ASTM F 1043(such as Allied SS 40 or equivalent) except that the weight of zinc coating shall not be less than 2 ounces per square foot. The nominal sizes of terminal and line posts shall not be less than 2 inches and 1-1/2 inches respectively.
- 3. - Top Rail** - Top rail shall not be less than 1-1/4 inch nominal size galvanized steel pipe conforming with the requirements of ASTM F 1083, Schedule 40, except that the weight of zinc coating shall not be less than 2 ounces per square foot.
- 4. - Bottom Wire** - Bottom wire shall be galvanized and vinyl-coated coil spring tension wire. The galvanized core wire shall not be less than 7 gage in size, and it shall be vinyl coated conforming to the same requirements as those of the fabric mentioned in Section 30.3A1 above.
- 5. - Braces** - When required, braces shall not be less than 1-1/4 inch nominal size galvanized steel pipe conforming with the requirements of ASTM F 1083, Schedule 40, except that the weight of zinc coating shall not be less than 2 ounces per square foot.
- 6. - Truss Rods** - When required, truss rods shall not be less than (3/8) inch diameter steel rods conforming with the requirements of ASTM F 626, except that the weight of the zinc coating shall not be less than 2 ounces per square foot. Truss rods shall be provided with suitable turnbuckles.
- 7. - Fittings** - All fittings shall conform with the requirements of ASTM F 626. Terminal post caps shall be fitted with stainless steel recessed allen wrench head set screws for anchoring the cap to the post.

**8. – Hardware** – All hardware (bolts, nuts, washers, etc.) shall be of commercial quality or better, and shall be galvanized in accordance with the requirements of AASHTO M 232.

**B - Concrete Footings** - Concrete footings for terminal posts shall be Class A concrete, conforming with the requirements of Section 8.2A of these Technical Specifications.

In lieu of Class A concrete mentioned above, concrete made from dry, packaged, combined materials conforming to ASTM C 387 may be used. 28 days compressive strength of the concrete shall not be less than 3,300 psi. Store the materials in accordance with the manufacturer's recommendations.

### **12.3 - SHOP DRAWINGS, TESTS, AND CERTIFICATIONS**

At least 5 days in advance of installation, submit shop drawings of fences to the PGC for review and approval. The shop drawings shall show type, size, and quality of all materials. Do not order any materials without the approval of the shop drawings.

### **12.4 - PROCEDURE**

**A – Placing Fence on Earth** – Identify post locations. Auger footing holes (9-inch-diameter for line posts and 15-inch-diameter for terminal posts). The depth of holes for line posts is 24-inches. The depth of holes for terminal posts is 36-inches. Set posts, centered and plumb, on the bottom of the holes. Place and tamp backfill. Use earth backfill for line posts and concrete backfill for terminal posts. Crown the finished surface to shed water.

**B – General** – Install fence posts in proper horizontal alignment with the top of the posts in proper vertical alignment. Posts shall be equally spaced not more than 10 feet apart.

Insert top rails through the base of the line post caps, with expansion couplings joining the rails to form a continuous brace for each stretch of fence between terminal posts. Outside sleeve type expansion couplings shall be at least 6 inches long and shall be installed at spacings recommended by the manufacturer. Securely fasten the top rails to the terminal and gate posts by rail ends and brace bands. Install bottom wire as shown on the Drawings.

Braces will be required only when recommended by the manufacturer. Install braces at terminal and corner posts, midway between the top rail and the bottom wire, extending from the terminal or corner post to the adjacent line posts. Place the truss rods with turnbuckles between the brace end on the line post and the bottom wire end on the terminal post.

Securely fasten the fabric to all posts, top rail, and bottom wire at intervals of not more than 14 inches. Fasten fabric to the outside or most commonly seen side of the posts. Place fabric parallel to the base surface. The nominal distance between the base surface and the fabric shall be 2 inches and shall not exceed 3 inches.

At no additional cost to the PGC, repair or replace all damaged fence components; and apply a manufacturer recommended vinyl repair paint to all exposed surfaces of fabric wire.

**12.5 - MEASUREMENT AND PAYMENT**

Linear foot, measured from center to center of terminal posts.

No separate measurement or payment will be made for excavation, backfilling and all other materials, and the costs of such shall be considered incidental to this work.

**TECHNICAL SPECIFICATION SECTION 13 – HANDICAPPED SIGNS**

**13.1 -SCOPE**

This work is furnishing and installing signs on steel channel posts to delineate the handicapped parking spots.

**13.2 – MATERIALS**

**A – Steel Channel Posts** - The steel channel posts shall conform to the requirements of Section 1103.08(b) of PennDOT Pub. 408.

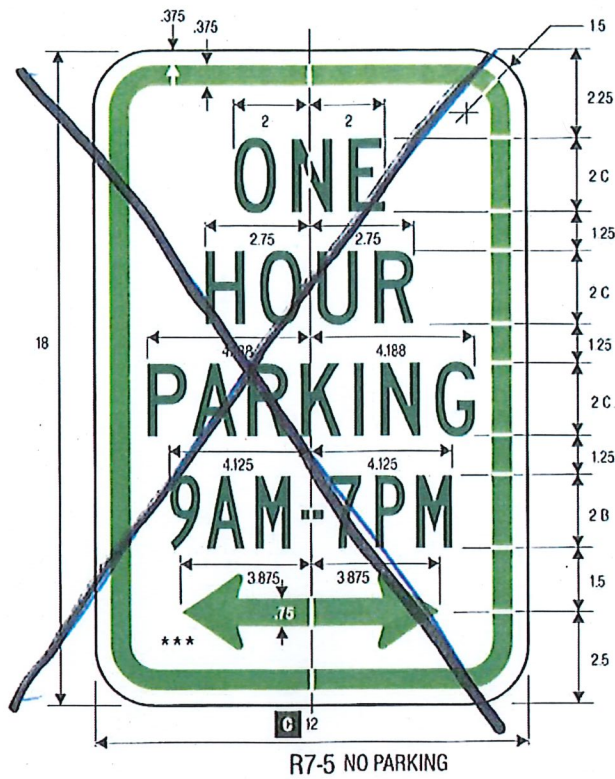
**B – Signs** - The sign shall conform to the dimensions and configurations for R7-8 signs as listed in the Manual on Uniform Traffic Control Devices (MUTCD), 2003 Edition from the Federal Highway Administration. A drawing for this sign is attached to this specification. The sign shall be on 0.080 aluminum sheet.

**13.3 - PROCEDURE**

The signs (R7-8) are to be placed on the back of the guard posts in the center of the handicapped parking spots. Secure the steel channel posts to the guard posts with galvanized hex head lag screws. The top of the post is to be 6-feet above finished grade. Secure the sign to the top of the post with corrosion resistant hardware as recommended by the sign manufacturer.

**13.4 - MEASUREMENT AND PAYMENT**

Each.



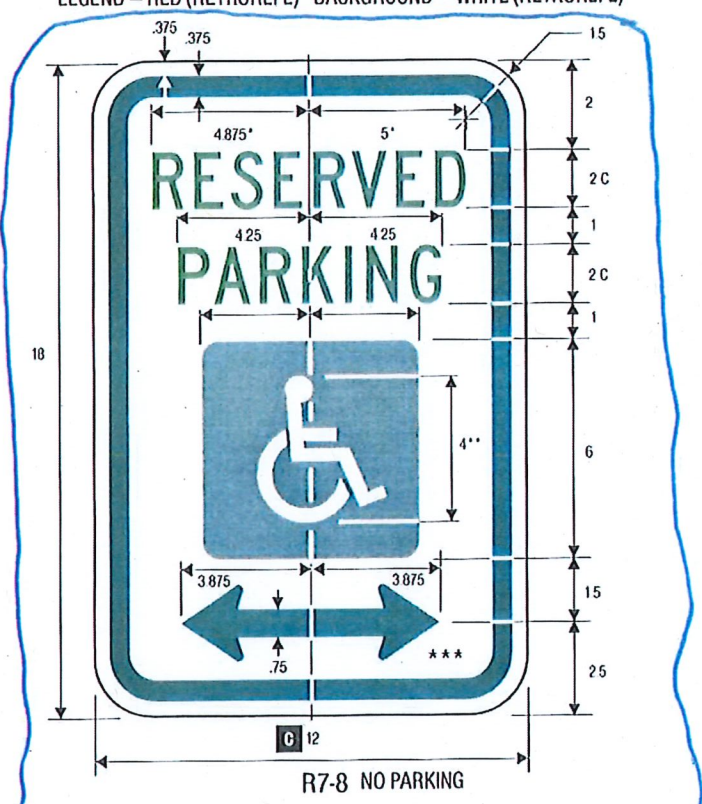
LEGEND - GREEN (RETROREFL) BACKGROUND - WHITE (RETROREFL)



LEGEND - RED (RETROREFL) BACKGROUND - WHITE (RETROREFL)



LEGEND - RED (RETROREFL) BACKGROUND - WHITE (RETROREFL)



LEGEND - GREEN (RETROREFL), WHITE SYMBOL ON BLUE (RETROREFL) BACKGROUND - WHITE (RETROREFL)

\*Reduce spacing 50%.

\*\*See page 6-31.

\*\*\*See page 6-2 for arrow design.

**TECHNICAL SPECIFICATION SECTION 14 - SEEDING**

**14.1 - SCOPE**

This work is securing a satisfactory stand of grass at disturbed areas on the archery range or where directed by the PGC, 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.

**14.2 - APPLICABLE ACTS AND PUBLICATIONS**

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

Pub 408. - Specifications, Pennsylvania Department of Transportation.

**14.3 - 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.

#### 14.4 - 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. 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.

**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.

#### **14.5 - 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.

#### **14.6 - MEASUREMENT AND PAYMENT**

Lump Sum.

**TECHNICAL SPECIFICATION SECTION NO. 15 – METAL SCREEN**

**15.1 - SCOPE**

This work is providing and installing metal screen on the bottom chord of the roof trusses in the shooting station shelters as shown on the Drawings. The screen closes off the entire bottom side of the roof trusses between the gables and truss seats.

**15.2 – MATERIALS**

**A. Metal Screen** – The screen shall be galvanized steel mesh. The wire is 28-gauge and the mesh size is 1/8-inch.

**B. Fasteners** – Galvanized steel staples.

**15.3 - PROCEDURE**

Attach the metal screen to the bottom of the bottom chord of the roof trusses and the inner truss seats with staples. Secure the screen so that there are no sags. Overlap the screen 2-inches at seams.

**15.4 - MEASUREMENT AND PAYMENT**

Square Feet.

**TECHNICAL SPECIFICATION SECTION NO. 16 – INSTALL SHOOTING TABLES**

**16.1 - SCOPE**

This work is installing shooting tables on the concrete floor slabs in the shooting station shelter at the archery range.

**16.2 - MATERIALS**

**A – Shooting Tables** – The PA Game Commission (PGC) will deliver the fabricated shooting tables to the range. Each shooting table has a painted steel frame and pressure treated plywood top and seat.

**B – Fastening System** – Hilti HIT-RE 100 adhesive anchoring system or other epoxy system meeting the requirements of ASTM C881-14, Type I, II, IV and V Grade 3, Class A, B and C. The bolts shall be Hilti HAS-R 304 stainless steel (1/4” diameter and 3” long) with AISI Type 304 stainless steel nuts conforming to ASTM F594 and AISI Type 304 stainless steel washers conforming to ASTM A240 and ANSI B18.22.1 Type A Plain.

Each shooting table has three base plates with four bolt holes in each plate. Use twelve fasteners to secure the new shooting tables to the existing concrete slabs.

**16.3 – PROCEDURE**

The PGC will deliver the shooting tables to the work site. The shooting tables can be lifted and maneuvered into place by hand with two workers.

Drill holes in the top of the existing concrete slab for the base plates of the shooting tables. Set the anchor bolts in the holes and secure with the epoxy anchor system. Conform to the manufacturer’s instructions for the epoxy anchoring system.

Allow the epoxy to cure before attaching the shooting tables. Set the shooting tables on the anchor bolts and secure with the nuts and washers.

**16.4 - MEASUREMENT AND PAYMENT**

Each for installing the shooting tables. No separate measurement or payment for the fastening system.