PENNSYLVANIA GAME COMMISSION

HOWARD NURSERY
NEW 4,240 SQ.FT. FORESTRY HEADQUARTERS BUILDING
Howard Township, Centre County

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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:

Matthew Spotts, Architectural Designer
Pennsylvania Game Commission
2001 Elmerton Ave
Harrisburg PA 17110
Office: 717-787-4250 Ext 73614
Email: matspotts@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 **August 30, 2026**. 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.

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

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. **Restrictions for Associations with Russia and Belarus Act 57 of 2023** – PA General Assembly.

5. **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.

6. **Public Works Employment Verification Form** - The form is attached. The Contractor shall complete the form and submit it within two days after the bid opening.

BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES

Project Name:	Howard Nursery-New Forestry Headquarters Building
General Description:	Construction of a new 4,240 sq. ft. conventional framed office building complete with site work, utility tie-ins, cathedral ceiling areas, exterior facade of composite siding and masonry, interior gypsum wall board finishes, flooring finishes, architectural casework and complete Mechanical, Plumbing and Electrical work as required for full functioning office building.
Project Locality	Howard Township
Awarding Agency:	PA Game Commission
Contract Award Date:	2/5/2026
Serial Number:	25-10780
Project Classification:	Building/Heavy/Highway
Determination Date:	12/18/2025
Assigned Field Office:	Altoona
Field Office Phone Number:	(814)940-6224
Toll Free Phone Number:	
Project County:	Centre County

BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES

Project: 25-10780 - Building	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Asbestos & Insulation Workers	7/1/2024		$43.00	$29.86	$72.86
Asbestos & Insulation Workers	6/30/2025		$44.50	$29.86	$74.36
Boilermaker (Commercial, Institutional, and Minor Repair Work)	3/1/2024		$36.71	$19.13	$55.84
Boilermakers	1/1/2023		$51.27	$35.30	$86.57
Bricklayer	6/1/2025		$38.65	$23.52	$62.17
Bricklayer	12/1/2025		$39.15	$24.02	$63.17
Bricklayers, Stone Masons, Pointers, Caulkers, Cleaners	5/4/2025		$40.63	$20.03	$60.66
Bricklayers, Stone Masons, Pointers, Caulkers, Cleaners	5/3/2026		$42.48	$20.03	$62.51
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	6/1/2025		$34.76	$20.91	$55.67
Cement Finishers & Plasterers	5/4/2025		$32.23	$22.27	$54.50
Cement Finishers & Plasterers	5/3/2026		$34.23	$22.27	$56.50
Cement Finishers & Plasterers	5/3/2027		$33.49	$25.01	$58.50
Cement Masons	1/1/2025		$31.97	$21.47	$53.44
Cement Masons	1/1/2026		$32.97	$22.47	$55.44
Drywall Finisher	1/1/2025		$34.01	$24.63	$58.64
Drywall Finisher	6/1/2025		$35.16	$25.98	$61.14
Electricians & Telecommunications Installation Technician	12/27/2024		$50.86	$32.69	$83.55
Electricians & Telecommunications Installation Technician	12/26/2025		$53.11	$33.72	$86.83
Elevator Constructor	1/1/2025		$63.40	$40.03	$103.43
Elevator Constructor	1/1/2026		$61.26	$45.78	$107.04
Glazier	9/1/2024		$26.00	$26.95	$52.95
Glazier	9/1/2025		$28.00	$27.67	$55.67
Iron Workers	6/1/2024		$32.99	$34.30	$67.29
Iron Workers	6/1/2025		$34.76	$34.73	$69.49
Laborers (Class 01 - See notes)	1/1/2024		$26.31	$17.79	$44.10
Laborers (Class 01 - See notes)	1/1/2025		$28.31	$17.82	$46.13
Laborers (Class 01 - See notes)	1/1/2026		$29.31	$18.82	$48.13
Laborers (Class 01 - See notes)	1/1/2027		$30.31	$19.82	$50.13
Laborers (Class 02 - See notes)	1/1/2024		$29.56	$17.79	$47.35
Laborers (Class 02 - See notes)	1/1/2025		$30.66	$17.82	$48.48
Laborers (Class 02 - See notes)	1/1/2026		$31.66	$18.82	$50.48
Laborers (Class 02 - See notes)	1/1/2027		$32.66	$19.82	$52.48
Laborers (Class 03 - See notes)	1/1/2024		$28.66	$17.79	$46.45
Laborers (Class 03 - See notes)	1/1/2025		$31.56	$17.82	$49.38
Laborers (Class 03 - See notes)	1/1/2026		$32.56	$18.82	$51.38
Laborers (Class 03 - See notes)	1/1/2027		$33.56	$19.82	$53.38
Laborers (Class 04 - See notes)	1/1/2024		$25.31	$17.79	$43.10
Laborers (Class 04 - See notes)	1/1/2025		$27.31	$17.82	$45.13

BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES

Project: 25-10780 - Building	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Laborers (Class 04 - See notes)	1/1/2026		$28.31	$18.82	$47.13
Laborers (Class 04 - See notes)	1/1/2027		$29.31	$19.82	$49.13
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)	1/1/2025		$26.09	$18.78	$44.87
Landscape Laborer (Tractor Operator)	1/1/2026		$27.09	$19.03	$46.12
Landscape Laborer	1/1/2025		$25.37	$18.78	$44.15
Landscape Laborer	1/1/2026		$26.37	$19.03	$45.40
Marble Mason	5/1/2025		$37.20	$19.24	$56.44
Marble Mason	5/1/2026		$39.15	$19.24	$58.39
Millwright	6/1/2020		$41.68	$20.32	$62.00
Operators (Class 01 - see notes)	7/1/2024		$36.87	$21.42	$58.29
Operators (Class 01 - see notes)	7/1/2025		$37.97	$21.82	$59.79
Operators (Class 01 - see notes)	7/1/2026		$39.12	$22.17	$61.29
Operators (Class 02 -see notes)	7/1/2024		$32.87	$21.42	$54.29
Operators (Class 02 -see notes)	7/1/2025		$33.35	$21.82	$55.17
Operators (Class 02 -see notes)	7/1/2026		$34.50	$22.17	$56.67
Operators (Class 03 - See notes)	7/1/2024		$29.70	$21.42	$51.12
Operators (Class 03 - See notes)	7/1/2025		$30.80	$21.82	$52.62
Operators (Class 03 - See notes)	7/1/2026		$31.95	$22.17	$54.12
Operators (Class 04 - Chief of Party (Surveying and Layout))	7/1/2025		$30.40	$21.82	$52.22
Operators (Class 04 - Chief of Party (Surveying and Layout))	7/1/2026		$31.55	$22.17	$53.72
Operators (Class 04 - Instrument Person (Surveying & Layout))	7/1/2025		$29.40	$21.82	$51.22
Operators (Class 04 - Instrument Person (Surveying & Layout))	7/1/2026		$30.55	$22.17	$52.72
Operators (Class 04 - Rodman/Chainman (Surveying and Layout))	7/1/2025		$28.95	$21.82	$50.77
Operators (Class 04 - Rodman/Chainman (Surveying and Layout))	7/1/2026		$30.10	$22.17	$52.27
Painters Class 6 (see notes)	6/1/2024		$32.14	$24.93	$57.07
Painters Class 6 (see notes)	6/1/2025		$34.16	$25.81	$59.97
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	1/1/2025		$41.88	$22.72	$64.60
Piledrivers	1/1/2026		$43.13	$23.47	$66.60
Plasterers	6/1/2024		$33.14	$21.04	$54.18
Plumber/Pipefitter	5/1/2023		$41.36	$29.72	$71.08
Plumber/Pipefitter	5/1/2025		$45.30	$29.91	$75.21
Roofers (Composition)	5/1/2024		$44.13	$34.77	$78.90
Roofers (Composition)	5/1/2025		$46.03	$34.77	$80.80
Roofers (Shingle)	5/1/2024		$34.35	$22.20	$56.55
Roofers (Slate & Tile)	5/1/2024		$37.35	$22.20	$59.55
Sheet Metal Workers	6/1/2024		$43.09	$43.14	$86.23

BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES

Project: 25-10780 - Building	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Sheet Metal Workers	6/1/2025		$45.02	$44.71	$89.73
Sign Makers and Hangars	7/15/2024		$32.32	$25.82	$58.14
Sign Makers and Hangars	7/15/2025		$33.48	$26.41	$59.89
Sprinklerfitters	4/1/2024		$46.45	$28.62	$75.07
Sprinklerfitters	4/1/2025		$49.75	$29.21	$78.96
Terrazzo Finisher	5/1/2024		$35.66	$20.76	$56.42
Terrazzo Finisher	5/1/2025		$36.32	$21.68	$58.00
Terrazzo Grinder	5/1/2024		$36.42	$20.76	$57.18
Terrazzo Grinder	5/1/2025		$37.10	$21.68	$58.78
Terrazzo Mechanics	5/1/2024		$36.44	$22.51	$58.95
Terrazzo Mechanics	5/1/2025		$37.17	$23.43	$60.60
Tile & Marble Finisher	5/1/2025		$35.31	$16.99	$52.30
Tile & Marble Finisher	5/1/2026		$37.26	$16.99	$54.25
Tile Setter	5/1/2025		$37.20	$19.24	$56.44
Tile Setter	5/1/2026		$39.15	$19.24	$58.39
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)	1/1/2025		$36.89	$23.52	$60.41
Truckdriver class 2 (see notes)	1/1/2026		$38.39	$24.02	$62.41
Window Film / Tint Installer	10/1/2019		$25.00	$2.63	$27.63

BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES

Project: 25-10780 - Heavy/Highway	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Carpenter	1/1/2025		$41.10	$22.09	$63.19
Carpenter	1/1/2026		$42.35	$22.84	$65.19
Carpenter Welder	1/1/2025		$42.60	$22.09	$64.69
Carpenter Welder	1/1/2026		$43.85	$22.84	$66.69
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	1/1/2024		$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	5/29/2023		$52.56	$29.99	$82.55
Electric Lineman	6/3/2024		$53.97	$31.05	$85.02
Iron Workers (Bridge, Structural Steel, Ornamental, Precast, Reinforcing)	6/1/2024		$32.99	$34.30	$67.29
Iron Workers (Bridge, Structural Steel, Ornamental, Precast, Reinforcing)	6/1/2025		$34.76	$34.73	$69.49
Laborers (Class 01 - See notes)	1/1/2024		$32.10	$25.50	$57.60
Laborers (Class 01 - See notes)	1/1/2025		$33.60	$26.00	$59.60
Laborers (Class 01 - See notes)	1/1/2026		$34.60	$27.00	$61.60
Laborers (Class 02 - See notes)	1/1/2024		$32.26	$25.50	$57.76
Laborers (Class 02 - See notes)	1/1/2025		$33.76	$26.00	$59.76
Laborers (Class 02 - See notes)	1/1/2026		$34.76	$27.00	$61.76
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)	1/1/2024		$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)	1/1/2024		$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)	1/1/2024		$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)	1/1/2024		$33.10	$25.50	$58.60
Laborers (Class 07 - See notes)	1/1/2025		$34.60	$26.00	$60.60
Laborers (Class 07 - See notes)	1/1/2026		$35.60	$27.00	$62.60
Laborers (Class 08 - See notes)	1/1/2024		$34.60	$25.50	$60.10
Laborers (Class 08 - See notes)	1/1/2025		$36.10	$26.00	$62.10
Laborers (Class 08 - See notes)	1/1/2026		$37.10	$27.00	$64.10
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)	1/1/2024		$38.59	$24.03	$62.62
Operators (Class 01 - see notes)	1/1/2025		$40.39	$24.23	$64.62
Operators (Class 01 - see notes)	1/1/2026		$41.96	$24.66	$66.62
Operators (Class 02 -see notes)	1/1/2024		$38.33	$24.03	$62.36

BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES

Project: 25-10780 - Heavy/Highway	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Operators (Class 02 -see notes)	1/1/2025		$40.13	$24.23	$64.36
Operators (Class 02 -see notes)	1/1/2026		$41.70	$24.66	$66.36
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 03 - See notes)	1/1/2026		$38.05	$24.66	$62.71
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 04 - See notes)	1/1/2026		$37.59	$24.66	$62.25
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 05 - See notes)	1/1/2026		$37.34	$24.66	$62.00
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-A	1/1/2026		$44.96	$24.66	$69.62
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
Operators Class 1-B	1/1/2026		$43.96	$24.66	$68.62
Painters Class 1 (see notes)	6/1/2022		$34.45	$22.82	$57.27
Painters Class 2 (see notes)	6/1/2024		$38.09	$24.93	$63.02
Painters Class 2 (see notes)	6/1/2025		$40.36	$25.81	$66.17
Painters Class 3 (see notes)	6/1/2024		$40.66	$24.93	$65.59
Painters Class 3 (see notes)	6/1/2025		$43.68	$25.81	$69.49
Painters Class 4 (see notes)	6/1/2019		$28.20	$20.06	$48.26
Painters Class 5 (see notes)	6/1/2019		$22.91	$20.06	$42.97
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	1/1/2025		$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)	1/1/2025		$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)	1/1/2025		$36.89	$23.52	$60.41
Truckdriver class 2 (see notes)	1/1/2026		$38.39	$24.02	$62.41

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%	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 FOREIGNCOUNTRY) 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).

Signature ***Date***
Name (Printed)
Title of Certifying Official (Printed)
Contractor/Grantee Name (Printed)

Russia Belarus Certification

Background

Pennsylvania Act 57 of 2023 states that persons associated with Russia or Belarus may not bid on, submit a proposal for, enter into, be a party to or renew a contract with a Commonwealth agency for the provision of goods or services. Per Act 57, the Pennsylvania Treasury Department will publish a list of such persons.

To be compliant with this Act, the contracting officer will review the list published by Treasury as part of the determination of contractor responsibility prior to contract award. This process is outlined below. This completed document should be attached to the contract.

Instructions

1. Access the "Act 57 – Russia" list on the Pennsylvania Treasury's Divestment Page: List-Pursuant-to-Act-57-of-2023-Russia.pdf (patreasury.gov)
2. Search for the supplier on the list. Use the name as listed on the supplier's proposal/bid submission.
3. Complete the attestation below and attach to the contract. Suppliers appearing on the Treasury-published list are deemed not responsible and may not be issued a contract.

Attestation

On Date, I, Name or Attesting Individual, verified that Name of Supplier is not on the list of individuals doing business with Russia and Belarus, as accessed via the link above.

_____

Signature of Attesting Individual

RESTRICTIONS FOR ASSOCIATIONS WITH RUSSIA AND BELARUS ACT - ENACTMENT

Act of Dec. 14, 2023, P.L. 433, No. 57 **Cl. 29**

An Act

Preventing the Commonwealth from dealing with persons associated with the Government of Russia or the Government of Belarus; and imposing duties on the Treasury Department and the Attorney General.

The General Assembly of the Commonwealth of Pennsylvania hereby enacts as follows:

Section 1. Short title.

This act shall be known and may be cited as the Restrictions for Associations with Russia and Belarus Act.

Section 2. Definitions.

The following words and phrases when used in this act shall have the meanings given to them in this section unless the context clearly indicates otherwise:

"Commonwealth agency." As defined in 62 Pa.C.S. § 103 (relating to definitions).

"Critical material" or "critical mineral." A material or mineral that:

(1) Has a significant economic importance for key sectors of the State or national economy.

(2) Has a high-supply risk due to import dependence or high levels of concentration in particular countries or regions.

(3) Lacks viable substitutes due to its unique properties and nature.

"Person." An individual, corporation, partnership, limited liability company, business trust, association, estate, trust, foundation, business entity or government entity who is owned or controlled by, or acting for or on behalf of, Russia or Belarus as defined by the Office of Foreign Assets Control of the United States Department of Treasury as of the effective date of this definition.

Section 3. List of persons associated with Russia or Belarus.

(a) Development of list.--Within 60 days of the effective date of this section, the Treasury Department shall publish a list of persons.

(b) Update of list.--The list under subsection (a) shall be updated annually.

Section 4. Restrictions.

If a person is found to be on the list under section 3, the person may not:

(1) Bid on, submit a proposal for, enter into, be a party to or renew a contract with a Commonwealth agency for the provision of goods or services.

(2) Submit a proposal for, be associated with or renew a grant issued by the Commonwealth.

(3) Submit a proposal for, receive or renew a tax credit offered by the Commonwealth.

Section 5. Notice and challenge.

(a) Notice.--The Treasury Department shall publish a list of persons on its publicly accessible Internet website under section 3.

(b) Challenge.--A person may challenge the person's inclusion on the list under section 3 by presenting proof of removal from the Specially Designated Nationals and Blocked Persons list

maintained by the United States Department of Treasury, Office of Foreign Assets Control, to the Treasury Department to be stricken from the list.

Section 6. Critical materials and critical minerals.

The Treasury Department shall develop a list of critical materials and critical minerals as identified as critical by the United States Department of the Interior under Executive Order 13817. A person who provides, obtains or supplies a mineral identified as critical minerals or materials to the Federal Government or United States domiciled business shall, upon notification to the Treasury Department, be removed from the list and exempted from any restrictions imposed by this act. The list shall be reviewed annually and updated by the Treasury Department.

Section 7. Exception.

The following shall apply:

(1) Notwithstanding any provision of this act to the contrary, money appropriated from the General Fund or awarded by a Commonwealth agency for use in a Pennsylvania-based project that would otherwise be restricted under section 4 shall be paid in full if a portion of the money was expended prior to the effective date of section 4.

(2) The exception under paragraph (1) shall not apply if the Commonwealth or Commonwealth agency has cause to cease payment of money appropriated or awarded for use in a Pennsylvania-based project that is unrelated to a restriction under section 4.

Section 8. Construction.

Nothing in this act shall be construed to prohibit transactions authorized by the Federal Government or under Federal law.

Section 9. Effective date.

This act shall take effect in 60 days.

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	202501368
Permit Holder	PA GAME COMMISSION ENGINEERING DIVISION
Address	2001 ELMERTON AVE HARRISBURG PA 17110
Building/Structure Name	GAME COMMISSION HOWARD NURSERY - FORESTRY HEADQUARTERS BLDG
Building Address	197 NURSERY RD HOWARD 16841
Political Subdivision:	HOWARD TOWNSHIP
County:	CENTRE
Approved use and occupancy classification(s)	B
Approved construction type	VB
Plan code	BUILDING

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	557417
Date Issued	11/17/2025

Brian N. Force
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 fullfillment of all required UCC obligations or establish the right to legally occupy the building or structure named below.

Drawing Index Number: 202501368 **File Number:** 557417
Building/Structure Name: GAME COMMISSION
Address: 197 NURSERY RD
HOWARD PA 16841

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

Inspector: Benjamin Bidelspach (814)441-8754 bbidelspac@pa.gov

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

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

Commonwealth of Pennsylvania

Public Works Employment Verification Form

Complete and return the form to the contracting Public Body prior to the award of the contract.

Company Legal Name: _____

Doing Business As: _____
(if different from Legal Name)

Mailing Address: _____
Street Address 1

_____
Street Address 2

_____
City State Zip Code

Check one: ☐ Contractor ☐ Subcontractor

Contracting Public Body: _____

Contract/Project Number: _____

Project Description: _____

Project Location: _____

Date Enrolled in E-Verify (MM/DD/YYYY): _____

As a contractor/subcontractor for the above referenced public works contract, I hereby affirm that as of today's date, _____**,** our company is in compliance with the Public Works Employment Verification Act ('the Act') through utilization of the federal E-Verify Program (EVP) operated by the United States Department of Homeland Security. To the best of my/our knowledge, all employees hired are authorized to work in the United States.

It is also agreed to that all public works contractors/subcontractors will utilize the federal EVP to verify the employment eligibility of each new hire within five (5) business days of the employee start date throughout the duration of the public works contract. Documentation confirming the use of the federal EVP upon each new hire shall be maintained in the event of an investigation or audit.

I,_____, authorized representative of the company above, attest that the information contained in this verification form is true and correct and understand that the submission of false or misleading information in connection with the above verification shall be subject to sanctions provided by law.

_____ _____
Authorized Representative Signature **Date of Signature**

Printed Name: _____

Phone Number: _____ **Email:** _____

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.

DRAWINGS

The following Drawings are included:

CS-1 Cover Sheet
SP-1 Existing Site Plan
SP-2 Proposed Building Site Plan
SP-3 Site Details
A-1 Floor Plan
A-2 Elevations, Sections, Details & Window Schedule
A-3 Sections & Building Sign Details
A-4 Wall Section & Details
A-5 Wall Section & Details
A-6 Enlarged Plan & Elevations
A-7 Reflected Ceiling Plan
A-8 Door & Room Finish Schedule
S-1 Structural Drawings
M-1 Mechanical Floor Plan & Details
P-1 Plumbing Isometric Drawings
E-1 Electrical Floor Plan & Light Fixture Schedule
E-2 Panel Schedule & Details

TECHNICAL SPECIFICATION SECTION No. 1 - SUMMARY OF WORK

1.1 – SCOPE OF PROJECT

The intent of this project, which is located at the Pennsylvania Game Commission (PGC) Howard Nursery, Howard Township, Centre County, is for the construction of a new approximate 40' x 100', 4.240 sq. ft. conventional framed structure to serve as the Pennsylvania Game Commission (PGC) New Forestry Headquarters Building. The project consists of constructing the building with poured concrete foundation, concrete floor slabs, wood framing, installing metal roofing, composite siding material and stone veneer facade, installing spray foam insulation, interior finishes including GWB & wood veneer, installing doors, windows, installation of HVAC, electrical and plumbing building systems and other building appurtenances. Connections of the utilities for the new building are part of this project and include the telephone, electric, sewer and water supply systems. The connections including trenching and backfilling will be the responsibility of the associated contract. The site is mainly level but will need some excavation and additional fill w/stone for the concrete work

1.2 – WORK AREA

The work area for this project is located at the Howard Nursery. The building address is 197 Nursery Rd, Howard, PA 16841.The property is owned by the PGC.

1.3 – WORK HOURS

The work hours at the project site are during regular PGC business hours which are Monday through Friday, 7:00AM to 3:30 PM. Work during different hours is permitted with prior approval by the PGC. Requests should be submitted two days in advance.

1.4 – ACCESS TO WORK AREA

Access to the work area is directly off North Eagle Valley Road (State Route 150) and onto Nursery Road, which leads to Howard Nursery. The Contractor is to review with PGC on available space to store equipment or materials on site, so that normal daily operations at the Regional Office are not interrupted.

1.5 – SITE LAYOUT AND PREPARATION

The PGC will locate the approximate building footprint and mark the floor elevation during the initial job conference. The Contractor is responsible for the new building construction, installing the required utility systems and/or lines and grading/placement of the concrete and stone parking area(s) around the new building.

1.6 – PERMITS, LAWS AND REGULATIONS

The Contractor shall procure and pay for all permits, licenses, inspections, conveniences, or other approvals necessary for the execution of the contract. *The only fee expected may or may not be a third-party inspection of the electrical meter base and trenching.* The PGC has secured a building permit from the PA Department of Labor & Industry (L&I) for construction of this building at no cost to the contractor. A copy of this 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 that the required inspections take place, and the project is not unduly delayed. ***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, safety measures, and/or other protective facilities.

All applicable Federal and State laws and regulations and regulations of all utilities, 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.

1.7 – ROAD PERMITS AND BONDING

The Contractor shall coordinate, acquire, pay for, and maintain for the duration of the project any and all permits or bonds required by local municipalities and/or PennDOT to utilize public roads and infrastructure for heavy hauling and related construction activities. Responsibilities shall include any pre or post construction inspections and related reports if required. All costs related to permitting and bonding public roadways and infrastructure shall be included with and incidental to the Bid submitted by the Contractor and will not be paid for separately.

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 Pennsylvania Game Commission 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	X	X		X			X	
WOOD POLE BUILDING FRAMING & ENGINEERIED LUMBER	X	X		X			X	
FOUNDATION PERMA COLUMN	X	X		X				
WOOD ROOF TRUSSES	X	X	X	X		X		
EXPOSED FASTENER & METAL ROOFING SYSTEMS	X	X		X	X	X		X
COMPOSITE SIDING	X	X		X	X			
IMITATION STONE VENEER, MORTAR & SAMPLE BOARD	X	X		X	X			
SNOW RAIL	X	X		X				
NEW SEAMLESS ALUMINUM GUTTERS & DOWNSPOUTING	X	X		X				
NEW ALUMINUM SOFFIT, FASCIA & TRIMS	X	X		X				
SPRAY FOAM INSULATION	X	X		X				
RIGID FOUNDATION INSULATION	X	X		X				
ALUMINIUM ENTRY DOORS, FRAMES & HARDWARE	X	X		X				X
INTERIOR WOOD DOORS, FRAMES & HARDWARE	X	X		X				
WINDOWS	X	X		X				
ARCHIECTURAL CASE WORK & COUNTERTOPS	X	X	X	X				
FIBERGLASS REINF. PLASTIC (FRP) WALL PANEL SYSTEM	X	X		X				
GYPSUM WALLBOARD INTERIOR FINISH	X	X		X				
FLOORING FINISHES INCLUDING WALK-OFF MAT, CARPET, LVP & CERAMIC TILE.	X	X		X	X			
WOOD VENEER PANELING, T&G CEILING FINSIH, TRIM	X	X		X	X			
PAINT & STAIN COLORS	X	X		X	X			
BATH ACCESSORIES	X	X		X				
SEALANTS	X	X		X			X	
PROJECT SCHEDULE				X				

MECHANCIAL CONSTRUCTION								
DESCRIPTION OF ITEMS TO BE SUBMITTED	MFR	PROD	SHDR	DeDa	SAMP	CERT	TESTS	WARR
HEAT PUMP & FURNACE	X	X		X				X
INSULATED DUCTORK	X	X	X	X				
THERMOSTAT/CONTROLS	X	X		X				
AIR REGISTERS AND DAMPERS	X	X		X				
PLUMBING CONSTRUCTION								
DESCRIPTION OF ITEMS TO BE SUBMITTED	MFR	PROD	SHDR	DeDa	SAMP	CERT	TESTS	WARR
ADA COMPLIANT WATER CLOSET	X	X		X				
WALL HUNG LAVAVTORY	X	X		X				
DRINKING FOUNTAIN	X	X		X				
COUNTERTOP SET IN SINK BASIN	X	X		X				
UTILTIY SINK	X	X		X				
LAVAVTORY & SINK FAUCETS	X	X		X				
HOT WATER HEATER	X	X		X				
4” FLOOR DRAIN	X	X		X				
DOMESTIC WATER SUPPLY PIPING	X	X		X				
MANIFOLD WATER DISTRIBUTION SYSTEM	X	X		X				
PIPING INSUALTION	X	X		X				
SANITARY SEWER PIPING								
HOSE BIB	X	X		X				
GRINDER PUMP SYSTEM & ALARM PANEL	X	X		X				
ELECTRICAL CONSTRUCTION								
DESCRIPTION OF ITEMS TO BE SUBMITTED	MFR	PROD	SHDR	DeDa	SAMP	CERT	TESTS	WARR
BATTERY BACK UP EMERGENCY EXIT SINAGE w/ EXIT LIGHTING	X	X		X				
LIGHTING FIXTURES & CONTROLS	X	X		X				
BATHROOM EXHAUST SYSTEM INCLUDING INLINE EXAUST FAN & DUCT WORK								
WIRING DEVICES AND DUPLEX RECEPTACLES	X	X		X				

ELECTRICAL POWER CONDUCTORS & CONDUIT	X	X		X				
GROUNDING AND BONDING ELECTRICAL SYSTEMS	X	X		X				
PANELS	X	X		X				

TECHNICAL SPECIFICATION SECTION No. 3 - EROSION AND SEDIMENTATION CONTROL

3.1 -SCOPE

This work is implementing the erosion and sedimentation control measures to protect the surrounding environment. Compliance is required with Chapter 102 of the Department of Environmental Protection's regulations is also required.

3.2 - PROCEDURE

The Contractor shall install a 12-inch diameter silt sock around the building site as indicated on the Site Plan drawing. The silt sock shall be anchored with 1" x 1" x 3' wood posts on 8-foot centers. The end of the silt sock shall be extended uphill so that water cannot flow around the barrier.

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 because of act or neglect of the Contractor.

The Contractor may, with the approval of the Game Commission, perform temporary seeding operations to maintain finished graded areas until the optimum time for performing permanent seeding. Areas that will be surfaced by stone to serve as parking areas of driveways do not need to be seeded.

Periodically remove accumulated sediments from control measures and dispose of in suitable work areas. Remove all temporary erosion and sediment pollution control measures upon completion of construction, unless otherwise directed by the Game Commission.

3.3 - MEASUREMENT AND PAYMENT

This price and payment shall constitute full compensation for the installation of soil erosion and sediment controls, including temporary seeding 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. 4 - EXCAVATION

4.1- SCOPE

This work involves the drilling, hauling, and disposal of all materials encountered for construction of the building foundations, installation of drainage pipes, water lines and other utilities, as indicated on the Drawings, or designated by the Game Commission.

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 buildings, and property.

The Contractor is required to contact the PA One Call System at 8-1-1 or 1-800-242-1776 (outside PA) prior to excavation operations at the site.

During excavation operations, keep the top surface graded for drainage. 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. **Excavation -** Remove all materials to the limits shown on the Drawings or as necessary to construct the pole foundations for the new building, installation of utility lines, new gravel parking area and roadway.

C. Disposal – Suitable excavated materials will be used for backfill of drainage pipes, utility lines and building foundations. The excavated materials will also be used to establish the finished grade around the new building. This project is intended to be a balanced cut/fill job and the Contractor will not be required to transport extra material off the site.

4.3 - MEASUREMENT AND PAYMENT

This price and payment shall constitute full compensation for all excavation of soils to the required depths for the construction of new building foundations, concrete aprons and entry 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.

A. Unit of Measurement: Lump Sum.

TECHNICAL SPECIFICATION SECTION No. 5 - COMPACTED BACKFILL

5.1 – SCOPE

This work is backfilling around the completed concrete foundations, installed utility lines and compacted backfill as required for new poured concrete slab work with suitable materials obtained from the required excavation as shown on the Drawings, or as directed by the Game Commission.

5.2 - MATERIALS

Secure backfill materials from the required excavation. The onsite soil 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 subbase for paving, parking areas and around building perimeter with #2A modified aggregate as shown on the Drawings. Work includes required stone to eliminate any low or uneven spots. Related work includes #2B (AASHTO #57) for subbase under concrete slabs and walkways, #10 aggregate for backfill around drainage pipes, etc., #3A (AASHTO #3) for extension of existing stone berm along parking area and river gravel landscape material around perimeter of building and building signage location.

6.2 - 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.

6.3 - MATERIALS

1. Aggregate used for the subbase of concrete slabs shall be Type C, #2A modified aggregate, as specified in Section 703.2 of Pub. 408.

2. Aggregate used for subbase under concrete slab and concrete walkways and backfilling around the foundation drainpipes and parking areas shall be 2B AASHTO #57 aggregate as specified in Section 703.2 of Pub. 408.

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

4. #3A (AASHTO #3) stone shall be subbase material for parking area extension.

5. River Gravel Landscape – The river gravel landscaping provided under and around new observation deck and adjacent to split rail fencing to be ¾” – 1½” rounded natural earth tone blend of coloration installed in a 3” thick layer and placed over a 6 mil polyethylene black plastic weed landscape barrier.

6. Obtain aggregates from a source listed in Bulletin 14.

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 electrical and plumbing contractor's work. Electrical and plumbing 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 – VAPOR BARRIER

7.1 – SCOPE

This work is providing and installing a polyethylene vapor barrier under the concrete floor slab for the new building as shown on the Drawings.

7.2 – MATERIALS – The vapor barrier shall be a polyethylene sheet conforming to ASTM E 1745 and ASTM D4397 with a minimum thickness of 6 mils and a perm rating of <0.03 perms. No C&A film is to be used. Tape and seal all joints with approved pressure-sensitive or waterproof tape. Submit a catalog cut or other information for the vapor barrier from the manufacturer to the PGC for review and approval before ordering any materials.

7.3 - PROCEDURE

Prepare the #2B compacted aggregate subbase for the concrete floor slab according to the requirements of Section 6 of these Technical Specifications. Smooth the top surface of the stone subbase to lessen the chance of puncturing the vapor barrier. Install rigid foam insulation panels along the exterior edges of the floor slab. Place the vapor barrier on top of the stone subbase and under the insulation panels. Smooth and stretch the vapor barrier so there are no folds or creases. Make sure that the vapor barrier extends to the splash boards along all four sides of the concrete floor slab.

Cut the vapor barrier around the trench drains and vertical pipe. Use pressure-sensitive or waterproof tape along seams in the vapor barrier and around trench drains. Repair or replace any damaged or punctured sections in the vapor barrier.

7.4 – MEASUREMENT AND PAYMENT

This price and payment shall constitute full compensation for the installation of vapor barriers including vapor barrier tapes 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. No separate measurement or payment for vapor barrier used to repair cuts or holes.

A. Unit of Measurement: Lump Sum.

TECHNICAL SPECIFICATION No. 8 - STEEL REINFORCEMENT

8.1 - SCOPE

This work is furnishing and placing steel reinforcing bars and accessories such as chairs, clips, annealed steel wire ties and other supports and fasteners. Applicable portions of "Building Code Requirements for Reinforced Concrete" (ACI Standard 318) published by the American Concrete Institute applies to the design, material specifications, and material placement, except if modified by the contents of this Section. See Structural Drawings for addition drawing specifications and notes for steel reinforcement.

8.2 - MATERIALS

A 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.

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."

For ASTM A615, A616, and A617, bend test requirements for reinforcing bars shall be based upon 180 degree bends of full size bars around pins with diameters specified below.

Bend Test Requirements	
Bar Designation	Pin Diameter for Bend Test
#3, #4, #5	3.5 times the diameter of the bar
#6, #7, #8	5 times the diameter of the bar
#9, #10, #11	7 times the diameter of the bar

B Chairs - Chairs and other supports for steel reinforcing shall be of standard manufacture commonly used in practice.

C Clips - Clips and other fasteners shall be of standard manufacture commonly used in practice.

D Tie-Wire - Wire for tying concrete reinforcing shall be of annealed steel of standard manufacture commonly used in practice.

E **Welded Wire Fabric Reinforcing (WWF) -** ASTM A185/A185M-07 Standard Specification for Steel Welded Wire Reinforcement, Plain, Concrete with minimum 65ksi yield strength. See structural and Architectural drawings for exact sizing, spacing and locations.

8.3 - SUBMITTALS

Submit samples, manufacturer's literature, product certification, and shop drawings for all concrete reinforcing bars, fabrics and accessories to the PGC for review and approval before ordering any materials. Refer to submittal specification section for submission requirements.

8.4 - PROCEDURE

A **Drawings -** The Contract Structural Drawings show the size, typical shape, and position of reinforcement. Additional drawings required to facilitate the fabrication and placement of reinforcement shall be provided by the Contractor. Checked reinforcement drawings made to show placement details, bending details, and reinforcement lists shall be submitted in quadruplicate to the Department at least twenty (20) days before authorizing the fabricator to proceed with fabrication. These drawings will be reviewed by the Department and one print with comments and corrections will be returned to the Contractor. The comments and corrections made on these drawings by the Department does not relieve the Contractor of the responsibility of complying with the Contract Drawings and Specifications.

B **Bends -** Bend all bars cold. Use a portable bending machine to bend bars on site only with the approval of the Department. Do not bend any bars partially embedded in concrete. Bends shall not be sharper than 6 times the diameter of the bar:

C **Placement -** Place steel reinforcement in the concrete as shown on the Drawings. Before placement, thoroughly clean the surfaces of the reinforcement and of any metal supports. Remove flaky rust, loose mill scale, dirt, grease, oil, grout, membrane curing compound, or any other foreign substances which are objectionable. After being placed, the reinforcement shall be maintained in a clean condition until it is completely embedded in the concrete. Reinforcement shall be accurately placed, fastened at each intersection with wire or metal clips, and secured in position so that it will not be displaced during the placement of concrete. Special care shall be exercised to prevent any disturbance of the reinforcement in concrete that has already been placed.

8.5 - MEASUREMENT AND PAYMENT

This price and payment shall constitute full compensation for all steel reinforcement including furnishing of steel reinforcement, fabrication, placement, ties, clips and chairs 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. 9 – CONCRETE

9.1 - SCOPE

This work is furnishing all materials, plant, and equipment, and performing all labor for the manufacture, transporting, placing, finishing, patching, curing, and testing of concrete to be placed under the Contract. Concrete is to be used for the footings, floor slabs, walkways and curbing. The Contractor shall protect all concrete against injury until final inspection and acceptance by the Game Commission.

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.

9.2 - 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 he 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.

9.3 - 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. ConcreteType(s):
    a. Class AA and shall develop a minimum compressive strength of 3,500 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.

9.4 - 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. Synthetic fiber reinforcing should be added to the cement to meet ASTM C1609/C1609M. The fiber reinforcing shall meet ASTM C 1116/C 1116M for macro-chopped strands.

(2) Normal Strength Air-Entraining Portland Blast Furnace Slag Cement, Type IS-A, conforming to ASTM Designation C595. Synthetic fiber reinforcing should be added to the cement to meet ASTM C1609/C1609M. The fiber reinforcing shall meet ASTM C 1116/C 1116M for macro-chopped strands.

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

1. Exterior Concrete slabs, walkways and pads to have air-entrained admixture of 6% (±1%).

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. Preformed Expansion Joint Filler - Preformed expansion joint filler shall be of the size shown on the Drawings, shall be gray in color, and shall conform with the requirements of AASHTO M153, Type 1, sponge rubber. Joint filler shall be solid sponge rubber, and no reprocessed material will be accepted. Joint filler made of numerous pieces of sponge rubber which adhere to each other will not be acceptable. The material shall be stored as recommended by the manufacturer.

F. Sealant (Isolation Joint) -Joint sealant for top of isolation joint around precast trench drain and at all other joint locations as applicable to be high performance, self-leveling, 1- part polyurethane sealant with accelerated curing capacity to meet ASTM c-920, type S, Grade P, Class 25 by Sikaflex or approved equal. **(Gray).**

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.

9.5 – PREPARATION OF AREAS TO RECEIVE CONCRETE

For pole footings, 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. Place rigid foam insulation panels and vapor barrier. Install the splash boards on the outside edges of the building to act as forms.

9.6 - JOINTS AND EMBEDDED ITEMS

Place preformed expansion joint filler around the poles and in the expansion joint as shown on the Drawings. Place trench drains, drainage pipes and utility sweeps. All joint materials and embedded items shall be clean and free of dust, grit, mud, oil or grease, and shall be held firmly in place to avoid displacement during concreting.

9.7 - 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.

9.8 - 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.

9.9 - 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.

9.10 - 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 lines and surfaces	In 10 feet In 20 feet In 40 feet	1/4 inch 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

9.11 - FINISHING CONCRETE

A. General - Allowable deviations from plumb or level and from alignment, grades, and dimensions shown on the Drawings and as specified in Section 7.10 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 doorway ramps and front apron slab; apply a light broom finish for traction.

9.12 - 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 injury 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.

9.13 - MEASUREMENT AND PAYMENT

This price and payment shall constitute full compensation for all cast in place concrete including furnishing of concrete, forms, all labor, and equipment for mixing, placing, curing, finishing, repairing and forming and all laboratory and field tests 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: Cubic Yards, measured by the average end area method or by the three-dimensional volume method, as applicable.

TECHNICAL SPECIFICATION SECTION No. 10 – FRAMING LUMBER AND CARPENTRY

11.1 - SCOPE

This work is providing and installing the lumber and fasteners necessary to frame the building.

11.2 - MATERIALS

A. Dimension Lumber – The lumber used to frame the building should be of the sizes, spacing and arrangement shown on the Drawings. 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 or better

B. Engineered Lumber – The engineered lumber including glulam (glue-laminated timber) beam, and engineered lumber connectors should be of the sizes, spacing and arrangement shown on the Drawings.

C. Treated Lumber – Same as dimension lumber plus treatment by MCA (waterborne preservative), 0.4 pcf retention in conformance with the American Wood Preservers Association (AWPA). Use category UC2 for interior construction not in contact with the ground, use category UC3b for exterior construction not in contact with the ground and use category UC4a for items in contact with the ground.

D. Plywood – Structural composite lumber made from wood veneers with grain primarily parallel to member lengths, evaluated and monitored according to ASTM D5456 and manufactured with an exterior-type adhesive complying with ASTM D2559. The plywood shall have at least 2,600 psi extreme fiber stress in bending. Plywood for the heated/unheated wall to be good one side.

E. Exterior Sheathing System –

A. **Zip Sheathing** -Oriented-Strand-Board Wall Sheathing: Exposure 1, Structural 1 sheathing with factory-laminated water-resistive barrier facer and printed fastener location symbols.

1. Basis-of-Design: Huber Engineered Woods LLC; ZIP System® sheathing.

2. Characteristics

a. Span Rating and Performance Category: Not less than [24/16; Structural 1; 7/16 Performance Category] [32/16; Structural 1; 1/2 Performance Category] [40/20; Structural 1; 5/8 Performance Category].

b. Edge Profile: Tongue-and-Tongue along long edges and square-edge along 4 ft edges.

c. Weather Barrier Facer: Medium-density, phenolic-impregnated sheet material qualifying as an ASTM D779 Grade D weather-resistive barrier in accordance with ICC-ES AC38 – Water-Resistive Barriers.

A. Zip Tape - Zip System, taps, stretch tape and liquid flashing to be applied in accordance with manufacturers recommendations as detailed and further described below:

1. Assembly continuity: Coordinate sheathing installation with flashing and joint sealant sequencing and installation and with adjacent building air and moisture barrier components to provide complete, continuous air- and moisture- barrier.

2. Tape panel seams, penetrations, and facer defects or cracks with self-adhering seam tape [ZIP System™ flashing tape] to form continuous weathertight surface. Apply tape according to manufacturer's written instructions and requirements of ICC-ES applicable to tape application.

3. Flash penetrations, gaps, and cracks with liquid-applied flashing membrane [ZIP System™ liquid flash] to form continuous weathertight surface. Apply according to manufacturer's written instructions. Follow manufacturer’s recommendation for integration with self-adhering seam tape [ZIP System™ flashing tape].

4. Tape window and doors openings and radius penetrations with self-adhering flexible flashing tape [ZIP System™ stretch tape] to form continuous weathertight surface. Apply tape according to manufacturer’s written instructions and requirements of ICC-AC applicable to tape application.

E. Wood Posts – The wood posts to be 6”x 6” actual (5 ½” x 5 ½”) columns manufactured from #1 Southern Yellow Pine and rated for ground contact. Post to be secured and anchored into concrete ith approved standoff post base as detailed on drawings.

F. Fasteners – Of the sizes and type suited for the applications. Where rough carpentry is exposed to weather, in ground contact, in pressure-treated lumber, or in the area of high relative high humidity, provide fasteners of Type 304 stainless steel.

1. Nails, Brads and Staples: ASTM F1667
2. Power-Driven Fasteners: NES NER-272
3. Wood Screws: ASME B18.6.1
4. Lag Bolts: ASME B18.2.1(ASME B18.2.3.8M)
5. Bolts: Steel bolts complying with ASTM A307, Grade A (ASTM F568M, Property Class 4.6); with ASTM A563 hex nuts /washers where indicated.
6. Expansion Anchors: Anchor bolt and sleeve assembly made with carbon-steel components, zinc plated to comply with ASTM B633, Class FE/Zn 5.

11.3 - PROCEDURE

Construct the building frame according to the dimensions and layout shown on the Drawings.Provide extra framing lumber around doors and windows to provide the support necessary to install these items. All exterior wall sections to be framed with 2' x 6' studs on 16-inch centers. Base plates for these walls must be pressure treated. Provide temporary bracing for the building frame to maintain the integrity of the building as construction progresses.

Frame interior wall sections with 2"x 4" and 2"x 6" studs were shown on 16-inch centers to receive the interior finishes. The base plates for interior walls must be pressure treated. Drill holes in the wall base plates (treated) for expansion anchors or use power actuated gun to secure completed wall panels to the concrete floor.

After construction is complete, remove all temporary bracing and waste lumber from the site.

11.4 - MEASUREMENT AND PAYMENT

This price and payment shall constitute full compensation for all framing lumber and carpentry including furnishing and erection of wood framing members, wood framing connectors and clips, anchors, fasteners 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. 11 – ROOF TRUSSES

11.1 - SCOPE

This work is providing and installing the wooden roof trusses for the new building as shown on the Drawings.

11.2 – TRUSS DESIGN

A. General Dimensions and Features – The trusses have a 6:12 pitch and 2-foot overhangs @ the eaves and gable ends. The trusses shall have an overall span length as indicated on truss design layout drawing, be spaced on 2-foot centers and include all cathedral and parallel chord truss designs as indicated on plan and applicable building sections. ***Trusses must include an 8-inch energy heel in the truss design.***

B. Design Loading – The roof trusses must have a roof load rating of 42.5 lbs/ SF ground snow load (snow load factor of 0.7) and a (*Risk Category II)* wind load rating of 25 lbs/SF and wind speed rating of 115 MPH minimum.

C. Design Drawings and Calculations – The design drawings and calculations for the trusses must be sealed and certified by a licensed professional engineer (valid Pennsylvania license). The drawings must be submitted for review by the PGC. The truss design shall conform with the applicable provisions of "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).

11.3 - PROCEDURE

Conform to the manufacturer's recommendations for storing, handling, installing and bracing of the trusses. Provide adequate temporary bracing of the trusses during installation.

Provide adequate permanent bracing of the top chords, bottom chords and web members of the trusses according to the manufacturer's recommendations. Install purlins for the roof panels on the top chord of the trusses. Secure the roof trusses to the building frame with galvanized steel hurricane ties or dimensional blocking. After construction is complete, ***provide all bracing for the roof trusses as required by the truss manufacturer.***

11.4 - MEASUREMENT AND PAYMENT

This price and payment shall constitute full compensation for all wood roof trusses including engineering design, manufacture, erection, and bracing 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. 12 – STANDING SEAM METAL ROOFING AND SNOW RAIL SYSTEMS

12.1 - SCOPE

This work is furnishing and installing a standing seam metal roofing system with continuous snow rails system at all roof eaves on the Forestry Headquarters Building, as shown on the Drawings.

12.2 – MATERIALS

A. Standing Seam Metal Roofing System – Snap on Seam, Fabral SSR 1 ½" is the basis of design and this metal roofing system.

1. Materials:
   a) Metallic-Coated Steel Sheet: aluminum-zinc alloy-coated steel sheet (Galvalume) complying with ASTM A 792/A 792M, Class AZ50/AZ55 coating designation; structural quality. Pre-painted by the coil- coating process to comply with ASTM A 755/A 755M.
   b) Material Gauge: 24 gauge.
   c) Exterior Finish: As selected from manufacturer's premium finishes.
   d) Color: Hunter Green 450
   e) Panel Coverage: 16 inches
   f) Panel Height: 1-1/2 inch.

2. Miscellaneous Materials
   a) Miscellaneous Metal Sub-framing and Furring: Provide manufacturer's standard sections as required for support and alignment of metal panel system.
   b) Panel Accessories: Provide components required for a complete, weather-tight panel system including trim, copings, fasciae, mullions, sills, corner units, panel clips, flashings, sealants, gaskets, fillers, panel closures, and similar items. Match material and finish of metal panels unless otherwise indicated.
   c) Flashing and Trim: Provide flashing and trim formed from same material as metal panels as required to seal against weather and to provide finished appearance. Locations include, but are not limited to, eaves, rakes, corners, bases, framed openings, ridges, fasciae, and fillers. Finish flashing and trim with same finish system as adjacent metal panels.
   d) Panel Fasteners: Self-tapping screws designed to withstand design loads.
   e) Panel Sealants: Provide sealant type recommended by manufacturer that are compatible with panel materials, are non-staining, and do not damage panel finish.
      1) Sealant Tape: Buytl
      2) Joint Sealant: One Part Poly
      3) Butyl-Rubber-Based, Solvent-Release Sealant: ASTM C 1311.

3. Fabrication
   a) General: Provide factory-formed metal roof panel system complying with ASTM E 1514 requirements.
   b) Provide panel profile, including major ribs and intermediate stiffening ribs, if any, for full length of panel.
   c) Form panels in continuous lengths, endlaps are not permitted.
   d) Field forming of panels shall be done by factory employees operating the machines.
   e) Fabricate metal panel joints with factory-installed butyl sealant that provide a weathertight seal and prevent metal-to-metal contact, and that minimize noise from movements.
   f) Sheet Metal Flashing and Trim: Fabricate flashing and trim to comply with manufacturer's recommendations and recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, metal, and other characteristics of item indicated.
      1) Form exposed sheet metal accessories that are without excessive oil canning, buckling, and tool marks and that are true to line and levels indicated, with exposed edges folded back to form hems.
      2) Seams for Other Than Aluminum: Fabricate nonmoving seams in accessories with flat-lock seams. Tin edges to be seamed, form seams, and solder.
      3) Sealed Joints: Form non-expansion, but movable, joints in metal to accommodate sealant and to comply with SMACNA standards.
      4) Conceal fasteners and expansion provisions where possible. Exposed fasteners are not allowed on faces of accessories exposed to view.
      5) Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal recommended in writing by metal panel manufacturer.

4. Finishes
   a) Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
   b) Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in same piece are unacceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.
   c) Steel Panels and Accessories: Two-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.

B. Underlayment – Fabral All Purpose High-Temperature Underlayment prevents moisture entry into structures by sealing uniformly to the substrate and around nail penetrations. Fabral All Purpose High-Temperature Underlayment is 50 ml thick and is supplied in 200 sq. ft rolls. Fabral All Purpose High-Temperature Underlayment is self-adhering and cold applied. No special adhesives, heat, or equipment are necessary to install Fabral All Purpose High-Temperature Underlayment when installed at 45° F and warmer.

C. Flashing Sections – The flashing sections shall be fabricated from the same material and finish as the metal roof panels.

D. Fasteners – 22-gauge steel in a two piece sliding clip arrangement allowing for thermal movement. The fasteners shall be concealed design. The nails and/or screws for attachment of fasteners and flashing sections shall be corrosion resistant as recommended by the metal roof panel manufacturer. Exposed fasteners shall be color matched to the roof panels.

E. Tape Sealant – Pressure sensitive, 100% solids, polyisobutylene compound sealing tape with release paper backing. The tape sealant shall be permanently elastic, non-sagging, non-toxic and non-staining tape seal approved by the metal roof panel manufacturer.

F. Caulk – One part polyurethane sealant as approved by the metal roof panel manufacturer.

G. Bar/Rail-Type Snow Retention Systems for Standing Seam Metal Roofs - Snow guard system to be installed at roof eaves of new building addition.

1. Basis of Design: ColorGard, manufactured by S-5! Metal Roof Innovations, Ltd.
2. Components:
   a) Clamps
      1) Manufactured from 6061-T6 aluminum extrusions conforming to ASTM B221 or aluminum castings conforming to ASTM B85 and to AA Aluminum Standards and Data.
      2) Set screws: 300 Series stainless steel, 18-8 alloy, 3/8 inch diameter, with round nose point.
      3) Attachment bolts: 300 Series stainless steel, 18-8 alloy, 8 mm or 10 mm diameter, hex flange bolt.

   b) Cross Members:
      1) Manufactured from 6061-T6 or 6005-T5 alloy and temper aluminum extrusions conforming to ASTM B221 and AA Aluminum Standards and Data.
      2) Receptacle in face to receive color-matched metal strips.
      3) Provide splice connectors ensuring alignment and structural continuity at end joints.

3. Color Strips: Same material and finish as roof panels; obtained from roof panel manufacturer.
4. Snow and Ice Clips:
   a. Aluminum, with rubber foot, minimum 3 inches wide.
      1) Model: SnoClip II or SnapClip II for standing seam heights 1" to 1.75"
5. Install system in accordance with manufacturer's instructions and approved Shop Drawings

H. Warranty

1. Material and Workmanship Warranty: Manufacturer agrees to repair or replace components of metal panel systems that fail in materials or workmanship within specified warranty period.
   a) Failures include, but are not limited to, Structural failures including rupturing, cracking, or puncturing. Deterioration of metals and other materials beyond normal weathering.
   b) Warranty Period: Two years from date of Substantial Completion.

2. Paint Finish Warranty: 30 years from date of Substantial Completion. If metallic colors are used, the "fade" part of the warranty shall be removed.
   a) 30 years for Kynar type finish.

3. Installer's Warranty: Submit installer's warranty, signed by Installer, covering the Work of this Section, including all components of roof panels for the following warranty period:
   a) Warranty Period: Two years from date of Substantial Completion

4. Weather-tight Warranty:
   a) Warranty Period: Twenty years from date of Substantial Completion

12.3 – SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of panel and accessory.
2. Submit a catalog cut or other information for the standing seam metal roof panels, underlayment, fasteners, tape sealant, snow guards and caulk from the manufacturers to the PGC for review and approval before ordering any materials.

B. Shop Drawings:

1. Include fabrication and installation layouts of metal panels; details of edge conditions, joints, panel profiles, corners, anchorages, attachment system, trim, flashings, closures, and accessories; and special details.
2. Accessories: Include details of the flashing, trim, and anchorage systems, at a scale of not less than 1-1/2 inches per 12 inches.
3. A Watertight Warranty is required, shop drawings or Fabrals standard details must be reviewed by the manufacturer prior to installation.

C. Samples: For each type of exposed finish required, prepared on Samples of size indicated below.
1. Metal Panels: 12 inches long by actual panel width. Include clips, fasteners, closures, and other metal panel accessories.
2. Include similar Samples of trim and accessories involving color selection.

D. Qualification Data: For Installer.

E. Product Test Reports: For each product, for tests performed by a qualified testing agency.

F. Sample Warranties: Provide 20-year WTW (Weather Tight Warranty) warranty.

12.4 - PROCEDURE

The metal roof panels shall be roll formed in continuous lengths from eave to ridge. The panels can be jobsite or factory formed in continuous lengths. Spliced panels are not acceptable. Fabricate the trim and flashing sections to the profiles shown on the Drawings.

Secure the underlayment on the existing wood roof deck. Install the panel fasteners on the prepared roof surface. Install the roof panels plumb, level and straight with seams and ribs parallel conforming to the pattern shown on the Drawings. Install the roof panels so that the system is weather-tight. Allow for expansion and contraction. The roof panels shall be installed according to the manufacturer's recommendations and approved shop drawings.

Install snow retention system at all roof eaves of the structure as shown on the Drawings.

Dispose of excess materials and remove debris from the site. Clean the work in accordance with the manufacturer's recommendations. Touch up minor scratches and abrasions. Replace damaged sections of the roof.

12.5 - MEASUREMENT AND PAYMENT

This price and payment shall constitute full compensation for a standing seam metal roofing system including shop drawings, underlayment, flashings, vented ridge, snow bar retention system, fasteners, and sealants 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. 13 – FIBER CEMENT SIDING AND STONE VENEER.

13.1 – SCOPE

This work is providing and installing the fiber cement siding both horizontal and shake profiles and stone veneer the new building structure. Colors to be verified before ordering, basis of design predicated color selections as specified below.

13.2 – MATERIALS

A. Fiber Cement Siding- Hardie Plank Lap Siding to be manufactured by JamesHardie "Dream Collection" 7-1/4" wide x 5/16" thick, smooth texture, with 6" exposure. Color to be Simply Beige. Install over a Weather Resistant Barrier that is attached to 7/16" Zip sheathing.

B. Fiber Cement Shake Siding- Hardie Shingle Siding to be manufactured by JamesHardie "Statement Collection" 15-1/4" wide x 1/4" thick, straight edge panel, with 6" exposure. Color to be Khaki Brown. Install over a Weather Resistant Barrier that is attached to 7/16" Zip sheathing.

C. Fiber Cement Trim- Hardie Trim to be manufactured by JamesHardie. Trim includes the following locations: door & window, freeze board & corner trim boards to be 3-1/2" wide x 3/4" thick smooth texture. Color to be painted "Forest Green" to correspond with Exterior Window Color & Metal Roof. Install over Weather Resistant Barrier that is attached to 7/16" Zip Sheathing.

D. Composite Trim Boards - Paintable PVC Trimboard: AZEK® PaintPro® Trimboard, designed with a natural appearance to compliment fiber cement, engineered wood, natural cedar and is engineered to be painted. Reversible with Traditional (Smooth)/Frontier (Woodgrain) finish. Installed complete with AZEK Cortex trim fastners and approved adhesives in accordance with all manufacturer recommendations and requirements or an approved equal manufacturer.

E. Stone Veneer- Imitation stone veneer to be Mountain Ledge Panels, "Russet" as manufactured by Eldorado Stone, complete with chiseled edge wainscot sill & Chiseled Edge Peaked Column caps 26"x 26" x 2 ½", color of both accents to be "Earth" .Install manufactured stone products in accordance with manufacturer's instructions using mortar less joints. Install architectural trim products in accordance with manufacturer's installation instructions. Install/Apply Related Materials specified above in accordance with type of substrate and manufactured stone manufacturer's installation instructions.

F. Panel Sealants-

1. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, non-sag, nontoxic, non-staining tape 1/2-inch wide and 1/8 inch thick.

2. Joint Sealant: ASTM C 920; elastomeric polyurethane, polysulfide, or silicone sealant; of type, grade, class, and use classifications required to seal joints in metal roof panels and remain weather-tight; and as recommended in writing by metal roof panel manufacturer.

13.3 - PROCEDURE

Install the fiber cement siding & shake horizontally. Siding to be installed over a W.R.B over 7/16" zip sheathing. Comply with siding manufacturer's written installation instructions applicable to products and applications indicated. Cut ends must be resealed with 100% acrylic latex primer or paint. Use durable, non-corrosive back flashing at butt joints that is non-reactive with fiber cement. Use corrosion resistant double hot-dipped galvanized or stainless-steel nails as required by manufacturer. Use appropriate PPE when cutting siding. Color of back flashing & caulking at joints to coordinate with siding color.

Install the stone veneer over a scratch coat on wire lath that is installed over 2 layers of W.R.B. and 7/16" zip sheathing. Follow all manufacturer's installation methods and fastening standards.

After construction is complete, remove all waste pieces of siding, trim, stone and fasteners from the site.

13.4 - MEASUREMENT AND PAYMENT

Lump Sum.

TECHNICAL SPECIFICATION SECTION No. 14 – SOFFITS AND FASCIA

14.1 - SCOPE

This work is providing and installing the soffits and fascia at the roof overhangs and covered entryways for the new building as shown on the Drawings.

14.2 – MATERIALS

A. Fiber Cement Soffits – Hardie Plank Soffit to be manufactured by JamesHardie "Dream Collection" 24" wide x 96" x 1/4"" thick, Non-Vented Smooth. Color to be Simply Beige. Install at roof eaves and roof rakes locations per manufacturers installation instructions.

B. Fiber Cement Beadboard Soffit – Beadboard Non-Vented Soffit to manufactured by JamesHardie, color to be Simply Beige. Alternate to manufacturer JameHardie, based on availability to be Allura, 5/16" thick x 4' x 8'. Soffit to be factory-finished with Allura Spectrum Coating, color Accessible Beige or color to match James Hardie "Simply Beige" color.

C. Fascia – Fascia shall be preformed, prepainted aluminum alloy (minimum 0.019 inch thick sheet stock) with plain surface and the finish color to be coordinated with roof finish "Forest Green"

E. Nails – Aluminum; use prefinished nails for soffits and fascia. Coordinate color in field.

F. Trim – Trim to match the same color as the material being finished.

G. Sealant – Silicone, single component, solvent curing, clear in color.

14.3 - PROCEDURE

Install all soffit sections and fascia including all applicable trim and wood blocking as required. Install fascia and trim sections with sealant as needed.

14.4 - MEASUREMENT AND PAYMENT

This price and payment shall constitute full compensation for fiber cement soffits and fascia at roof overhangs, including trims, fasteners and sealant 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. 15 – GUTTERS AND DOWNSPOUTS

15.1 - SCOPE

This work is providing and installing gutters and downspouts for the new building.

15.2 – MATERIALS

A. Gutters – Aluminum with baked on finish, color to match metal roof "Forest Green". Gutter shall be seamless for the length of the roof. Gutter shall be standard 6-inch width, .032 gauge minimum.

B. Downspouts – Aluminum with baked on finish, color to match metal roof "Forest Green". and 3-inch by 4-inch cross section.

C. Fittings, Hangers and Brackets – Aluminum fittings and brackets as recommended by gutter and downspout manufacturer with hidden hangers at 2'-0" on center maximum.

D. Rain Water Leaders-PVC SDR 35 PSM 4" diameter x 10' long pipe shall be manufactured from virgin rigid PVC (polyvinyl chloride) vinyl compounds with cell class of 12364 as dentified in ASTM D 1784, ASTM D 2321 and ASTM F 1668.

15.3 - PROCEDURE

Submit a catalog cut or other information for the gutter and downspout from the manufacturer to the PGC for review and approval before ordering any materials.

Install gutters on the roof eaves of the new building. Secure the gutters to the fascia with hidden hangers. Install downspout drop sections and end caps at the ends of the roof eaves as shown on the drawings. Connect downspout sections to the gutters and run the downspout along the edge of the building to the ground level and tie into PVC rainwater boots and leaders. Make sure the water drains away from the building properly. Route the downspouts to prevent any potential discharge from egress areas. See drawing P-1 for extension of rainwater leaders and discharge location.

15.4 - MEASUREMENT AND PAYMENT

This price and payment shall constitute full compensation for aluminum rain gutter and downspout system, hangers, fasteners, and sealants 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. 16 – INSULATION

16.1 - SCOPE

This work is providing and installing the insulation in the walls and ceiling of the new building and under the edges of the floor slab as shown on the Drawings.

16.2 – MATERIALS

A. Sprayed Polyurethane Foam Insulation – shall be JM Corbond IV closed-cell spray polyurethane foam (SPF) with a R value of 6.45 minimum per inch by Johns Manville or approved equal. The insulation for the walls R-20 Minimum and the ceiling R-49 minimum shall be conforming to ASTM E 2357 and all other applicable ASTM standards not listed below.

Insulation to conform to the following as applicable**:**

1. ASTM E 2357: Standard Test Method for Determining Air Leakage of Air Barrier Assemblies
2. ASTM E 84: Surface Burning Characteristics
3. ASTM E 2178: Standard Test Method for Air Permeance of Building Materials
4. ASTM E 96: Water Vapor Transmission of Materials
5. ASTM C 518: Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus
6. International Building Code, Section 2603.0 Foam Plastic
7. AC377: Acceptance Criteria For Spray-Foam Plastic Insulation
8. NFPA 285: Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Wall Assemblies Containing Combustible Components.

B. Sprayed on Thermal Barrier/Ignition Barrier Fire Resistant Paint – shall be No-Burn Plus THb intumescent white fire protective coating for interior locations of exposed spray polyurethane foam (SPF), in accordance with manufacturer application recomendations. Coating to meet and comply with the following:

<u>2018 International Building Code (IBC)</u>

1. Chapter 8 Interior Finish
    a) 803.1.1 Interior Wall and Ceiling Finish Materials NFPA 286
    b) 803.1.2 Interior Wall and Ceiling Finish Materials ASTM E84 or UL 723
    c) 803.4 Foam Plastics 803.4 Foam Plastics
2. Chapter 26 Plastic Chapter 26 Plastic
    a) 2603.4/2603.9 Thermal Barrier Special Approval
    b) 2603.4.1.6 Attics and Crawl Spaces

Applicable Standards

1. AC377 EC017
2. AC456 GSA PBS-P100
3. ANSI/ASHRAE/ICC/USGBC Standard 189.1 ICC/ASHRAE 700 NGBS
4. ANSI/NSF 51 IgCC
5. ASTM E84 LEED v3 2009 & v4
6. ASTM E96 NFPA 285
7. CARB NFPA 286
8. CDPH (CA Spec 01350) SCAQMD Rule 1113
9. CHPS UL 1715

C. Rigid Foam Panels – The insulation panels to be installed under the floor slab, shall be rigid foam (extruded polystyrene) panels conforming to ICC ES 96-24 and ASTM C578. The panels to be installed under the edges of the floor slab shall be 2 inches thick R-10.

16.3 - PROCEDURE

Install closed-cell spray polyurethane foam (SPF) insulation. Wall insulation shall be installed in all exterior stud wall cavities with minimum R-20 insulation value. Roof insulation shall be applied to underside of roof decking with a minimum R-49 insulation value, as indicated and shown on the drawings. Install (SPF) at rate and thickness as recommended by manufacturer.

Place rigid foam panels under the edges of the floor slab as shown on the drawings. The panels should extend 4-feet in from the perimeter of the building. Install ½-inch thick panels vertically at the splashboards on the edges of the concrete floor along the perimeter of the building.

16.4 - MEASUREMENT AND PAYMENT

This price and payment shall constitute full compensation for all building envelope thermal insulation systems including closed cell Sprayed Polyurethene Foam (SPF), rigid foundation insulation, insulation supports, fasteners, and sealants 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. 17 – SUSPENEDED CEILING SYSTEM

17.1 - SCOPE

This work is to furnish and install acoustical panels and metal suspension system to form a suspended ceiling system in the new building as shown on the Drawings. A suspended ceiling system is to be installed in the office, bathroom, and mechanical room only. The heated shop area is to have a metal panel ceiling.

17.2 – MATERIALS

A. Acoustical Panels – The acoustical panels to be white color, Item#1728 fine fissured square lay-in tile, 24 inches x 24 inches x 5/8-inch-thick panel meeting Class A fire performance from Armstrong World Industries, or a comparable equal product. The panels must be sag, mold, mildew and bacteria resistant.

B. Hanger Rods – Mild steel, zinc coated or protected with rust-inhibitive paint.

C. Metal Suspension System – Armstrong World Industries standard 15/16-inch metal suspension system or comparable product from USG Interiors, Inc. or Chicago Metallic Corporation. The finish color of the metal suspension system is white.

D. Metal Edge Moldings and Trim – Armstrong World Industries or comparable product by USG Interiors, inc. or Chicago Metallic Corporation.

17.3 - PROCEDURE

Examine the substrates, areas and conditions to which the drop ceiling components will attach or abut to see if there are problems with installing the drop ceiling. Correct those problems before installing the drop ceiling components. Examine acoustical panels before installation. Reject acoustical tiles that are wet, moisture damaged or mold damaged.

Measure each ceiling area and establish layout of acoustical panels to balance border widths at opposite edges of each ceiling. Avoid using less-than-half-width panels at borders and comply with the layout shown on the Drawings.

Install acoustical panels in compliance ASTM C636 and according to the manufacturer's recommendations.

Install hangers where required plumb and free from contact of other objects within the ceiling plenum. Install supplemental suspension members or hangers in the form of trapezes or equivalent devices. Secure wire hangers to ceiling suspension members and to supports above. Connect hangers directly to structures or to inserts, eye screws, or other devices that are secure and appropriate for each substrate and that will not deteriorate or otherwise fail due to age, corrosion or elevated temperatures. Space hangers not more than 48 inches on

center along each member supported directly from hangers and not more than 8 inches from the ends of each member. Install edge moldings and trim of type indicated at the perimeter of the drop ceiling areas and where necessary to conceal edges of the acoustical panels. Attach moldings to substrates at intervals not more than 16 inches on center and not more than 3 inches from the ends. Level the ceiling suspension system to a tolerance of 1/8 inch in 12 feet. Miter corners accurately and connect securely. Do not expose fasteners, including pop rivets on moldings or trim.

Install suspension system runners so that they are securely interlocked with one another. Remove and replace dented, bent or kinked members.

Clean exposed surfaces of acoustical panels, trim and edge moldings. Comply with the manufacturer's recommendations for cleaning and touchup of minor finish damage. Remove and replace panels and other ceiling components that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.

15.4 - MEASUREMENT AND PAYMENT

This price and payment shall constitute full compensation for all suspended ceiling systems including suspending grid, wall angle, hanger rods and hardware, and acoustic panels, 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. 18– WINDOWS

18.1 - SCOPE

This work is furnishing and installing vinyl-clad wood framed casement and fixed windows in the building. See Window schedule for sizes and configurations.

18.2 – MATERIALS

A. WOOD EXTERIOR WINDOWS

Provide windows complying with the performance requirements indicated and tested according to NAFS. Basis-of-Design Product: Subject to compliance with requirements provide Andersen Corporation; Andersen 400 Series windows or approved equal.

1. Construction:
    a. Frame: Finger-jointed or laminated veneer lumber capped with rigid vinyl, preservative treated WDMA I.S. 4.
    b. Interior Sash: Solid lumber, kiln dried and suitable for stain or painted finish, preservative treated WDMA I.S. 4.
    c. Exterior Sash: Co-extruded rigid vinyl or liquid-applied vinyl over finger-jointed lumber.
2. Wood Species: Clear pine.
3. Interior Finish: Custom: Clear Pine, custom stain applied in field.
4. Exterior Finish: Frame and Sash: AAMA 613 for color retention, Forest Green
5. Window Type: Casement and Specialty. See Drawings for configurations & sizes.
6. Performance Grade Requirements: Casement Performance Class LC and Grade, Non-Impact-Resistant
7. Air Infiltration Requirements: Air Infiltration Rate: < 0.3 cfm/sf².
8. Environmental Certifications: ENERGY STAR performance requirements.
9. Weatherstrip: Type and Material for Casement and fixed: Flexible vinyl bulb or vinyl covered foam gasket.
10. Attachment Flange: Type and Material for Casement: Integral rigid vinyl.
11. Hardware:
    a. Operator Gear Type and Material: Rotary, die-cast zinc and stainless-steel components.
    b. Hinge Type and Material: Concealed hinge and track, standard, 400 series galvanized steel.
    c. Crank Handle Material and Style: Die-cast zinc.
    d. Sash Lock Type and Material: Single actuation, die-cast zinc and engineered polymer components.
    e. Crank and Sash Lock Color, Traditional Series Series: Satin Nickel
12. NON-IMPACT-RESISTANT GLAZING
    a. Thermal Transmission (U-Factor), NFRC 100
    b. Solar Heat Gain Coefficient (SHGC), NFRC 200
    c. Visible Light Transmittance (VLT), NFRC 200

d. Sound Transmission Class (STC)/Outdoor Indoor Transmission Classification (OITC), ASTM E90:

13. Glass Units: Provide insulating glass units certified through Insulating Glass Certification Council as conforming to the requirements of IGCC and ASTM E2190.
    a. Manufacturer Designation: Andersen Low-E4 Glass.
    b. Glazing Configuration: Dual-pane.
    c. Seal and Spacer Type: Dual sealed insulating glass units with polyisobutylene primary seal, silicone secondary seal and stainless steel spacers.
    d. Glass Type: Fully tempered glass, ASTM C1048.
    e. Opacity: None.

18.3 – SUBMITTALS

Submit a catalog cut or other information for each type of window and from the manufacturers to the PGC for review and approval before ordering any materials.

18.4 - PROCEDURE

Install the windows according to the manufacturer's instructions. Install additional framing lumber and construct window rough opening as required to safely support the window opening within building walls. Install the windows in the blocked and framed openings and secure them according to the manufacturer's instructions. Caulk or insulate around the installed windows to provide a weather-tight seal. Install any trim pieces on the interior or exterior as required, including the interior sill. Test the operation of the windows and make any adjustments if necessary.

18.5 - PROCEDURE

Install the windows according to the manufacturer's instructions. Install additional framing lumber and construct window rough opening as required to safely support the window opening within building walls. Install the windows in the blocked and framed openings and secure them according to the manufacturer's instructions. Caulk or insulate around the installed windows to provide a weather-tight seal. Install any trim pieces on the interior or exterior as required, including the interior sill. Test the operation of the windows and make any adjustments if necessary.

18.6 - MEASUREMENT AND PAYMENT

This price and payment shall constitute full compensation for all new windows 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: Each. No separate measurement or payment for additional framing lumber and carpentry, caulking, or trim as required to install and finish the windows.

TECHNICAL SPECIFICATION SECTION No. 19 – DOORS

19.1 - SCOPE

This work is providing and installing the exterior entry doors and all interior doors in the new building as shown on the Drawings. Doors and frames shall include to have the necessary hardware, thresholds and/or weather-stripping/caulk as needed to provide for a tight seal.

19.2– MATERIALS

A. General – Refer to the door schedule on the drawings for details of hinge and swing requirements, sizes and lockset hardware. All locks (interior and exterior) are to be keyed alike. Manufacturers are quoted for hardware, locksets, gaskets, closers, etc. for the doors to set standards for performance and finish; other manufacturers are acceptable provided that their products are the same level of quality.

B. Aluminum-Framed Entrance Doors – Kawneer aluminum entrance, glass and glazing, door hardware and components. Basis-of-Design: 350 Swing Door; Medium stile, 3-1/2" vertical face dimension, 1-3/4" depth, 10" bottom rail, single acting for high traffic applications or approved equal. See Door Schedule on Drawings for sizes.

1. Materials
   a. Aluminum Extrusions: Alloy and temper recommended by aluminum-framed entrance door manufacturer for strength, corrosion resistance, and application of required finish and not less than 0.090" (2.3 mm) wall thickness at any location for the main frame and door leaf members.
   b. Fasteners: Aluminum, nonmagnetic stainless steel or other materials to be non-corrosive and compatible with aluminum-framed entrance door members, trim hardware, anchors, and other components.
   c. Anchors, Clips, and Accessories: Aluminum, nonmagnetic stainless steel, or zinc-coated steel or iron complying with ASTM B 633 for SC 3 severe service conditions or other suitable zinc coating; provide sufficient strength to withstand design pressure indicated.
   d. Reinforcing Members: Aluminum, nonmagnetic stainless steel, or nickel/chrome-plated steel complying with ASTM B 456 for Type SC 3 severe service conditions, or zinc-coated steel or iron complying with ASTM B 633 for SC 3 severe service conditions or other suitable zinc coating; provide sufficient strength to withstand design pressure indicated.
   e. Weather Seals: Provide weather stripping with integral barrier fin or fins of semi-rigid, polypropylene sheet or polypropylene-coated material. Comply with AAMA 701/702.

2. Entrance Door Frame
   a. Trifab™ VG 450/451/451T.
   b. Non-Brackets and Reinforcements: Manufacturer's standard high-strength aluminum with nonstaining, nonferrous shims for aligning system components.

c. Fasteners and Accessories: Manufacturer's standard corrosion-resistant, nonstaining, nonbleeding fasteners and accessories compatible with adjacent materials. Where exposed shall be stainless steel.
d. Perimeter Anchors: When steel anchors are used, provide insulation between steel material and aluminum material to prevent galvanic action.
e. Packing, Shipping, Handling and Unloading: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
f. Storage and Protection: Store materials protected from exposure to harmful weather conditions. Handle storefront material and components to avoid damage. Protect storefront material against damage from elements, construction activities, and other hazards before, during and after storefront installation.

3. Glazing
   a. Glazing: Double pane thermally insulated tempered glazing, top glazing panel.
   b. Glazing Gaskets: Manufacturer's standard compression types; replaceable, extruded EPDM rubber.
   c. Spacers and Setting Blocks: Manufacturer's standard elastomeric type.
   d. Bottom glazing panel, shall be manufactures 1” thick insulated solid glazing infill panel with anodized aluminum skins, substrate with insulated core to match door/frame color.

4. Hardware: Provide manufacturer's standard hardware fabricated from aluminum, stainless steel, or other corrosion-resistant material compatible with aluminum; designed to smoothly operate, tightly close, and securely lock aluminum-framed entrance doors. Standard hardware shall include the following:
   a. Weather-stripping: Meeting stiles on pairs of doors shall be equipped with an adjustable astragal utilizing wool pile with polymeric fin. The door weathering on a single acting offset pivot or butt hung door and frame (single or pairs) shall be comprised of a thermoplastic elastomer weathering on a tubular shape with a semi-rigid polymeric backing. Sill Sweep Strips: EPDM blade gasket sweep strip in an aluminum extrusion applied to the interior exposed surface of the bottom rail with concealed fastener. Threshold: Extruded aluminum, one piece per door opening, with ribbed surface.
   b. Hinging: Kawneer top & bottom 4 1/2" x 4” ball bearing butt hinge.
   c. Exit Device: Kawneer 1686 concealed rod exit device with mortised type cylinder with CO-9 pull exit device.
   d. Closer: Best HD800 series door closer.
   e. Security Lock/Dead Lock: Inactive Leaf, one pair of Kawneer flush bolts
   f Cylinder/Core: Best Cormax,

B. Wood Interior Doors – The interior wood doors in the new building shall have the following features and characteristics. These doors are listed on the door schedule. The interior wood doors shall be supplied with lights and louvers as listed on the door schedule. USA Wood Door, Architectural Series PC, conform to the following specifications, but other manufacturers are acceptable.

1. Interior doors are wood veneer non-rated 3'-0" x 7'-0" panel 1-3/4" thick full flush with particleboard core.
2. Interior door frames with galvannealed 16 gage (minimum) steel double rabbet frame (knock down)
3. Factory applied baked on primer with a factory or field applied white enamel finish coat on frame applied according to the manufacturer's instructions
4. Tempered glass light panels and vision panels as indicated on drawings. Provide "straight bead" type wood lite beads at these locations.
5. Veneer to be plain sliced natural birch, with "Nutmeg" finish
6. Satin finish stainless steel hinges
7. Interior Door Hardware schedule is as follows:

    A. Dormakaba Best Access Systems 9K30N14D S3 passage with 626 satin chrome finish for the Door(s): 117, 104

    B. Dormakaba Best Access Systems 9K30L14D S3 privacy with 626 satin chrome finish for the Door(s): 121, 122, 123

    C. Dormakaba Best Access Systems 9K37AB14D S3 storeroom set with 626 satin chrome finish for Doors: 101,102
    Keying Best Cormax to existing PGC System.

    D. Dormakaba Best Access Systems 9K37AB14D S3 closet (RZ) set with 626 satin chrome finish, Ives FB358 manual flush bolt (top and bottom) US26D satin chrome for Doors: 110,119
    Keying Best Cormax to existing PGC System.

    E. Dormakaba Best Access Systems 9K37R14D S3 entrance/office set with 626 satin chrome finish for Doors: 105,107,111,112,113,114,115,116
    Keying Best Cormax to existing PGC System.

    F. Dormakaba Best Access Systems 9K37R14D S3 classroom set with 626 satin chrome finish, Rockwood LV-IY inverted Y louver, 12" h x 24" w, Dark Bronze finish for Doors: 108, 120
    Keying Best Cormax to existing PGC System.

    G. Equipped with 2114-4914A Rim Exit Device with Passage Lever 630 satin stainless-steel finish, Best HD800 series door closer. Rockwood K1050 (10"x34") kick plates (one side) with 630 satin stainless-steel finish for Doors: 109/B 124

H. Equipped with Rockwood RM3340 12" pull and 70B 3 ½" x 15" push plate with 630 satin stainless-steel finish, Best HD800 series door closer. Rockwood K1050 (10"x34") kick plates (one side) with 630 satin stainless-steel finish for Doors: 100/B

D. Keying – All Cormax cores shall be keyed to the PGC keying system. For a quote for keying or all hardware, you may contact Delbert Hiestand by calling 717-413-1328 or by his email delbert.hiestand@dormakaba.com

18.3 – SUBMITTALS

Submit a catalog cut and other information for the man doors, garage doors and accessories from the manufacturers to the PGC for review and approval before ordering any materials.

18.4 - PROCEDURE

Install the steel entry doors and frames according to the manufacturer's instructions. All steel surfaces of the doors and frames are to be factory primed and a factory or field painted finish. The finish coat of the steel doors and frames shall be a white outdoor grade enamel. The garage door tracks, torsion springs and garage doors are to be installed by a manufacturer's representative.

18.5 - MEASUREMENT AND PAYMENT

This price and payment shall constitute full compensation for all new doors, door frames, door hardware, and keying 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: Each according to the type of door as listed on the Proposal Form. No separate measurement or payment for the frames, accessories, door hardware and keys.

TECHNICAL SPECIFICATION SECTION NO. 20 – GYPSUM BOARD

20.1 – SCOPE

This work is to furnish and install gypsum boards on the interior wood framed walls and ceilings of the new addition. Finishing the gypsum board is also included a part of this section.

20.2 – MATERIALS

A. Gypsum Board – Gypsum board shall conform to ASTM C1396 and be 1/2" thick @ 16" centers at wall surfaces and 5/8" thick @ 24" centers at ceiling surfaces, use sag resistant gypsum ceiling board. Furnish and install 1/2" thick type moisture resistant gypsum board panels in all Baths. Acceptable manufacturers of gypsum board include American Gypsum, CertainTeed Corp., Georgia Pacific Gypsum LLC, Gold Bond, National Gypsum Company and USG Corporation.

B. Trim Accessories – Cornerbead an L-bead shall be galvanized steel sheet, rolled zinc, plastic or paper-faced galvanized steel sheet.

C. Joint Tape – Paper complying with ASTM C475.

D. Joint Compound – Provide a Level 4 gypsum finish at all wall and ceiling surfaces. For each coat use formulation that is compatible with other compounds applied on previous or successive coats.

1. Pre-filling: At open joints, rounded or beveled panel edges, and damaged surface areas, use setting-type taping compound.
2. Embedding and First Coat: For embedding tape and first coat on joints, fasteners and trim flanges, use drying-type, all-purpose compound.
3. Fill Coat: For second coat, use sandable topping drying-type, all-purpose compound.
4. Finish Coat: For third coat, use sandable topping drying-type, all-purpose compound, then smoothed and finish sanded, once dry and ready for painting.

E. Drywall Screws – Steel drill screws complying with ASTM C1002.

20.3– SUBMITTALS

Submit a catalog cut and other manufacturers information for all gypsum panels and gypsum finishing systems to the PGC for review and approval before ordering any materials. Refer to submittal specification section for submission requirements.

20.4 - PROCEDURE

A. Examination – Examine areas and substrates including wood framing for compliance with requirements and other conditions that will affect the installation of the gypsum board. Examine gypsum board panels before installation. Reject panels that are wet, moisture damaged and mold damaged. Proceed with installation only after unsatisfactory conditions have been corrected.

B. General Installation – Install panels across framing to minimize the number of abutting end joints and to avoid abutting end joints as much as possible. Stagger abutting end joints of adjacent panels not less than one framing member. Butt panels together for a light contact at edges and ends with not more than 1/16 inch of open space between panels. Locate edge and end joints over supports, except in ceiling applications where intermediate supports or gypsum board back-blocking is provided behind end joints. Do not place tapered edges against cut edges or ends. Stagger vertical joints on opposite sides of partitions. Do not make joints other than control joints at corners of framed openings. Form control and expansion joints with space between edges of adjoining gypsum panels. Attach panels to wood framing with drywall screws on 16-inch centers. Install cornerbead at outside corners and L-bead at exposed panel edges.

C. Finishing Gypsum Board – Treat joints, interior angles, edge trim, penetrations, fastener heads, surface defects and elsewhere as required to prepare gypsum board surfaces for finishing. Promptly remove residual joint compound from adjacent surfaces. Pre-fill open joints, rounded or beveled edges, and damaged surface areas. Apply joint tape over gypsum board joints. Finish panels to level 5 according to ASTM C840.

D. Protection – Protect adjacent surfaces from drywall compound and promptly remove from floors and other non-drywall surfaces. Protect installed products from damage from weather, condensation, direct sunlight, construction, and other causes during remainder of the construction period. Remove and replace panels that are wet, moisture and/or mold damaged.

20.5 - MEASUREMENT AND PAYMENT

This price and payment shall constitute full compensation for all gypsum board wall and ceiling assemblies including finishing 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. 21 – PAINTING & STAINING

21.1 - SCOPE

This work is painting the installed gypsum wallboard, gypsum ceilings, steel doors and door frames, Composite siding & trim materials and staining of all interior wood materials including trim, plywood/ T&G and 1" materials. All paint & stain colors to be selected by PGC.

21.2 – MATERIALS

A. Interior Coatings

Primer and topcoat paint shall be interior latex for all gypsum surfaces. The paint colors shall be selected by the PGC from full range of colors available. Acceptable paint manufacturers include Sherwin Williams, Benjamin Moore & Co., Duron, Inc., ICI Paints, PPG Architectural Finishes, Inc., and Pratt & Lambert. Sherwin Williams was selected for basis of design. Prime coat paint must comply with MPI #50 and topcoat paint must comply with MPI #44.

1. Gypsum wall and ceiling surfaces. Egg-Shel / Satin Finish:
   a) 1st Coat: S-W ProMar 200 Zero VOC Interior Latex Primer, B28W2600 (4 mils wet, 1.5 mils dry).
   b) 2nd Coat: S-W ProMar 200 Zero VOC Latex Egg-Shel, B20-12600 Series.
   c) 3rd Coat: S-W ProMar 200 Zero VOC Latex Egg-Shel, B20-12600 Series (4 mils wet, 1.7 mils dry per coat).

B. Exterior Coatings, including interior metal frames surfaces.

1. Pre-primed steel doors and frames. Semi-Gloss Finish:
   a) 1st Coat: S-W Pro Industrial Acrylic Semi-Gloss, B66-650 Series.
   b) 2nd Coat: S-W Pro Industrial Acrylic Semi-Gloss, B66-650 Series (2.0-4.0 mils dry per coat).

C. Exterior Trim Coatings, including Cement siding & composite trim board surfaces.

1. Pre-finished Composite Siding and Trim. Satin Finish
   a) 1st Coat: S-W Emerald Exterior Acrylic Satin, K-48 Series.
   b) 2nd Coat: S-W Emerald Exterior Acrylic Satin, K-48 Series. (2.1-2.5 mils dry per coat).

D. Interior Wood Trim.

1. Wood Trim. Stained with Satin Polyurethane Finish
   a) Stain: Minwax Premium Oil Wood Finish, Penetrating Stain, Semi-Transparent. 1-Coat Application

b) Polyurethane: Minwax Fast Drying Polyurethane, Warm Satin, Clear. 2-Coat application

21.3– SUBMITTALS

Submit a catalog cut and other manufacturers information for all interior and exterior coatings and finishes to the PGC for review and approval before ordering any materials. Refer to submittal specification section for submission requirements.

21.4 - PROCEDURE

Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 degrees F. Do not apply paints when relative humidity exceeds 85 percent; at temperatures less than 5 degrees F above the dew point; or to damp or wet surfaces. Apply paints according to the manufacturer's written instructions. Use applicators and techniques suited for the paint and substrate. If undercoats or other conditions show through the topcoat, apply additional coats until cured film has a uniform paint finish, color and appearance. Apply paints to produce a finish without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. At the end of each workday, remove rubbish, empty cans, rags, and other discarded materials from the building. Clean spattered surfaces. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces. Apply a prime coat according to MPI #50. Apply two topcoats according to MPI #44.

Apply all coatings and materials with the manufacturer's specifications in mind. Mix and thin coatings according to manufacturer's recommendations.

21.5 - MEASUREMENT AND PAYMENT

This price and payment shall constitute full compensation for applying all interior and exterior paint coating systems 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. 22 – FINISH FLOORING & CERMAIC TILE

22.1 - SCOPE

This work is to furnish and install finish flooring systems and all ceramic tile finishes including underlayment and accessories as shown on the Drawings.

22.2 – MATERIALS

A. Resilient Tile Flooring. Basis of Design: Resilient plank flooring, adhesives and subfloor preparation products and accessories:

1. Provide Mannington Amtico Signature Wood Collection:

    a) Description: The Amtico Collection luxury vinyl plank, a layered construction consisting of a tough, clear, commercial urethane finish with aluminum oxide formula provides superior durability and resistance against scratching, abrasion and stains. An aesthetic layer utilizing the latest technology in imaging, texturing and finish and backing layers providing the support and foundation for the aesthetic layers. Colors are insoluble in water and resistant to cleaning agents and light.
    b) 20-year Commercial Product Warranty
    c) Pattern and Color: Pattern and Color selected from the range currently available from Mannington Amtico Collection Inc.
    d) Size: 6 in. x 36 in.
    e) Wear layer thickness: 40 mil
    f) Thickness: 0.098 in.
    g) Mannington Commercial, P.O. Box 12281, Calhoun, GA 30703, Ph. No. (800) 241-2262, www.manningtoncommercial.com/amtico

2. Adhesives - Provide Mannington adhesive for new construction or as recommended by the flooring manufacturer.

3. Provide ADA compliant thresholds of thickness and width as required to transition new flooring systems at new door openings.

4. Compliance: Comply with manufacturer's product data, including technical bulletins, product catalog, installation instructions, and product carton instructions for subfloor preparation, installation, and maintenance procedures.

5. Place resilient edge strips tightly butted to flooring, and secure with adhesive recommended by the edge strip manufacturer. Install edge strips at edges of flooring that would otherwise be exposed.

B. Ceramic Tile. Basis of Design: Ceramic tile flooring and wall finish, substrate preparation and accessories:

A. Ceramic Tile work shall be complete with trim, base and special shapes of same material and finish, as field tile. All materials shall be from one manufacturer. **SEE DRAWING A-8 FOR FINISH SELECTIONS**

B. Provide and install ceramic tile where indicated on the drawings. Install tile as recommended by the manufacturer. Color and texture as selected by Owner/Architect from manufacturer's standards.

C. Mortar and grout shall be commercial grade for wall and floor tile joints, as recommended by tile manufacturer for particular application. Color as specified on drawings.

D. Install in strict accordance with manufacturer's recommendations.

1. Install over backup system as recommended by Tile manufacturer.

2. Lay tile in grid pattern unless otherwise indicated. Layout tile work and center tile fields in both directions in each space or on each wall area. Adjust to minimize tile cutting. Provide uniform joint widths.

3. Install brushed chrome anodized aluminum Schluter-Schiene strip at areas abutting all carpet flooring. Miter corners and file smooth as necessary to remove barbed edges. Match thickness of ceramic tile in order that no edge is presented of either the tile or the Schluter strip. Prep concrete floor slab and install sloped concrete patch as required to taper lower finish floor slopes as required to align different materials.

4. Install brushed chrome anodized aluminum Schluter-Jolly strip on tile abutting wall materials or on top of ceramic tile base on millwork. Miter corners and file smooth as necessary to remove barbed edges. Match thickness of ceramic tile in order that no edge is presented of either the tile or the Schluter strip.

5. Install brushed chrome anodized aluminum Schluter-Reno-U strip at areas abutting all VCT flooring. Match thickness of ceramic tile in order that no edge is presented of either the tile or the Schluter strip. Prep concrete floor slab and install sloped concrete patch as required to taper lower finish floor slopes as required to align different materials.

C. Carpet

1. Submittals - **SEE DRAWING A-8 FOR FINISH SELECTIONS:**

A. Submit the following samples to the Architect for approval:

ITEM	QUALITY SIZE
Carpet	One each pattern and standard size.

B. Layout Drawings: Submit layout drawings of carpet installation for approval by the Architect. Indicate locations of seams, spaces to be covered and related work.

2. Delivery and Storage - Deliver carpet and other materials to the site in the manufacturer's bundles, clearly marked as to size, dye lot, and materials. Store materials in areas assigned and provide protection to prevent soiling and damage to the carpeting prior to installation.

3. Preparatory Work

   A. Inspect the subflooring before commencing the carpet installation. Notify the General Contractor and the Architect of any condition which would prevent proper installation of carpeting. Floors shall be swept clean and shall be dry and suitable for installation of carpeting. Ensure that doors swinging out over carpeted area have sufficient clearance. The initiation of installation will signal that conditions are proper to proceed and to expect satisfactory work. No claim to the contrary will be accepted after the initiation of the installation work.

   B. Provide a concrete surface primer over the entire floor slab to receive carpet to assure a clean, uniform, surface to which the carpet tile adhesive can stick. Carpet tiles are not to be adhered directly to the concrete slab and/or deck.

4. Installation

   A. Lay carpet tiles in the orientation as noted on the drawings.

   B. Any areas that have been flash patched with Ardex (or similar material) are first to be thoroughly dried for at least 24 hours. Then a primer is to be coated over the Ardex so the carpet adhesive does not absorb into the Ardex material. This is to dry thoroughly for 24 hours. Finally, the carpet tiles can be adhered down to the flooring.

5. Carpet Accessories

   A. Furnish and install carpet reducers where carpet butts resilient flooring. Carpet accessories shall be of vinyl unless noted otherwise. Catalog cuts and color samples shall be submitted for approval.

6. Cleaning Up

   A. After completion of the carpet installation, remove all waste and excess materials, tools, and equipment. Useable carpet pieces which remain shall be left at the job site and placed where directed by the Architect. Complete carpet installation shall then be thoroughly vacuumed using an upright beater type cleaner and left in a clean, perfect condition as approved by the Architec

7. Maintenance Instructions

   A. The carpet manufacturer shall provide six copies of a complete maintenance manual for use by the Owner and the building manager's personnel.

8. Manufacturer's Warranty

   B. The Contractor shall furnish the Owner the manufacturer's standard warranty against excessive wear, edge ravel and loss of static protection.

D. <u>Walk Off Mat</u>

SEE DRAWING A-8 FOR FINISH SELECTIONS.

.22.3 – SUBMITTALS

Submit a catalog cut and other manufacturers information for all finish flooring systems referenced above and wall base to the PGC for review and approval before ordering any materials. Refer to submittal specification section for submission requirements.

22.4 - PROCEDURE

Install flooring in strict accordance with the latest edition of flooring manufacturers installation guidelines. Failure to comply may result in voiding the manufacturer's warranty.

Test concrete surfaces to receive new seamless epoxy flooring systems for moisture vapor emissions (MVE). If test results are not within the flooring manufacturers allowable ranges, install manufacturer's mitigation systems to correct level of MVE.

Remove all existing flooring in Employees Restroom. Prepare all subfloors by thoroughly cleaning removing all oil, grease, dirt, sealers, curing compounds, and other contaminants. All laitance or weak concrete surfaces should be removed by mechanical means and concrete surfaces shall be patched and profiled before coatings are applied. All construction and expansion joints and cracks shall be addresses prior to application of seamless floor.

Protect installed flooring as recommended by the flooring manufacturer against damage from rolling loads, other trades, or the placement of fixtures and furnishings until inspected and accepted by the Department.

22.5 - MEASUREMENT AND PAYMENT

This price and payment shall constitute full compensation to furnish and install finish flooring systems and materials including an resilient vinyl plank flooring system, epoxy flooring system, underlayment, barriers, floor preparations, transition strips, thresholds, and vinyl base moldings of the size and type 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. 23 – ARCHITECTURAL CASE WORK

23.1 - SCOPE

A. Work of this Section includes all labor, materials, equipment, and services necessary to furnish and install all architectural casework as shown on the drawings and/or specified herein, including, but not limited to, the following: **See Drawing A-6 and A-8 for additional details, layouts and finishes.**

1. Pre-finished architectural base and wall cabinets as shown on drawings.
2. Heavy duty solid surface counter tops.
3. Wood trim including base, casing, paneling, 1”x trim and T&G ceiling finish.
3. Wood grounds, blocking, nailers, furring as required for work of this Section.
4. All hardware, finish fasteners, and sealants for work of this Section.

23.2 – MATERIALS

A. Quality Standards - The quality standards of the Architectural Woodwork Institute, "Architectural Woodwork Standards," 1st Edition, latest edition, shall apply to all workmanship, including materials and installation, for architectural casework, and by reference are made a part of this specification. All work shall conform to "Premium" grade requirements of the AWI "Architectural Woodwork Standards," unless otherwise modified herein.

B. Basic Requirements - Before proceeding with casework required to be fitted to other construction, obtain field measurements, and verify all dimensions of shop drawing details as required for accurate fit.

1. Compatibility of Grain and Color: The Department reserves the right to select materials for best compatibility between visually related members and veneers.
2. Inspect each piece of casework; do not use twisted, warped, bowed, or otherwise damaged or defective wood.

C. Cabinets

A. Cabinets shall include, but not be limited to the following features:

1. Drawers shall have heavy-duty metal guides on each side for smooth and easy operation. Where noted to provide locks, provide disc tumbler cylinder cam locks in nickel finish, type 8060 by National Cabinet Lock or equal. All door locks are to lock into the cabinets. No door locks are to lock into another door.

2. Doors shall have 120E, concealed, self-closing, full overlay, nickel finish, hinges, and 4" center, satin stainless pulls as approved by Architect.

3. Woodgrain laminate, where used, shall match from the drawer to the door below and be in a vertical orientation unless specifically noted otherwise.

4. Doors and drawers shall be full overlay design without any steps/reveals from the edge of the door to the edge of the cabinet box. Additional ¾" reveals are built-in to the overall millwork design package between cabinets and walls or bulkheads.

5. All cabinet boxes and door/drawer faces are to be built with Vertical grade laminate. All countertops, exposed cabinet tops, and shelving are to be built with Horizontal grade laminate.

E. Solid Surface Countertops and Backsplashes – Solid surface material thickness to be ½" minimum over approved substrate material. Color, Pattern and Finish to be selected from manufacturers standard color palette range. Provide all samples to PGC representative for verification of color. Solid Surface to by Wilsonart, Corian or like manufacturer.

F. Fasteners –

1. Wood Screws: FS FF-S-111, type, size, material and finish as required for the condition of use.
2. Nails: FS FF-N-105, type, size, material and finish as required for the condition of use.
3. Anchors: Type, size, material and finish as required for the condition of use.

23.3 – SUBMITTALS

Submit catalog cuts and other manufacturers information for all architectural casework with hardware and countertops to the PGC for review and approval before ordering any materials. Refer to submittal specification section for submission requirements.

A. Shop Drawings (Casework & Countertops.)

1. Shop drawings shall indicate all materials, thicknesses and finishes.
2. Shop drawings shall show all finish hardware, anchors, fastenings and accessories.
3. Shop drawings shall show all jointing, joint treatment and butt jointing in veneers.
4. Shop drawings for wood paneling must show complete elevations of units as well as panel matching required.

B. Samples: Submit samples of each of the following items:

1. Transparent finish for each species of wood veneer laminate plywood panels, twelve (12) inches square, for each finish specified or shown.

23.4 - PROCEDURE

A. Fabrication General

1. Install the work plumb, level, true and straight with no distortions. Shim as required using concealed shims. Install to a tolerance of 1/8" in 8'-0" for plumb and level (including countertops), and with 1/16" maximum offset in flush adjoining surfaces, 1/8" maximum offset in revealed adjoining surfaces.
2. Scribe and cut work to fit adjoining work and refinish cut surfaces or repair damaged finish at cuts.
3. Anchor woodwork to anchors or blocking built in or directly attached to substrates. Secure to grounds, stripping and blocking with countersunk, concealed fasteners and blind nailing as required for a complete installation.

B. Wood Trim

1. Install with minimum number of joints possible, using full-length pieces for each run. Stagger joints in adjacent and related members. Cope at returns, miter corner.
2. Joints of all trim and/or moldings shall be set tight, miter exterior angles and cope interior angles. Joints, except end joints less than twelve (12) feet apart, will not be permitted in straight runs of trim and/or moldings and rails.
3. Secure all trim and/or moldings with glue and blind nail with finishing nails. Set exposed nail heads in finished work and putty. Sand all work to remove any tool marks and irregularities.

C. Finishing

1. General: All finishing work of this Section shall be shop applied, unless otherwise noted, as specified below. All finishing shall match approved samples.

2. Field Touch-Up: Provide field touch-up as required, including the filling and touch-up of exposed job made nail or screw holes, refinishing of raw surfaces resulting from job fitting, repair of job inflicted scratches and mars, and final cleaning up of the finished surfaces.

D. Clean Up and Protection

1. Clean Up: At regular intervals during the course of the work, all debris and excess material shall be cleaned up and removed from the site. Upon completion of installation, clean all spaces of debris caused by woodwork installation.

2. Protection: Protect all casework from marring, defacement of other damage until final completion and acceptance of the project by the Owner. Repair or replace all defective units prior to final inspection. Any units that cannot be satisfactorily repaired shall be replaced with new units of same original design, at no additional cost to the Owner.

23.5 - MEASUREMENT AND PAYMENT

This price and payment shall constitute full compensation for all architectural casework, hardware (pulls), countertops, and finishing 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. 24 – INCIDENTALS

24.1 - SCOPE

This work is to furnish and install toilet accessories, fiberglass reinforced wall panel system and ceiling hatch/scuttle.

24.2 - MATERIALS

A. Toilet Accessories:

1. Toilet Paper Dispenser: Palmer Fixture Twin 9" Model RD0027 with 2-1/4" core. Include 3-3/8" adaptor and translucent cover or approved equal.

2. Paper Towel Dispenser: Bradley Model No. 250-15, stain finish stainless steel, surface mounted, Capacity: 525 multi-fold or 400 C-fold paper towels, tumbler lock and refill indicator or approved equal.

2. Liquid-Soap Dispenser: Provon TFX Model GOJ2745-12 with a 1200 ml capacity or approved equal. Provide two refills per unit.

3. Grab Bars: Bradley 812 Series, 1-1/2" outside diameter heavy-duty stainless-steel ADA compliant grab bars with concealed mounting or approved equal. Grab bars shall include No.4 satin finish that resist scratches.

4. Mirror: Bradley Model 740-1836 ADA compliant, fixed angle, tilt frame, satin finish 20-gauge stainless steel frame with welded corners, 18 inches by 36 inches or approved equal. Surface mount mirror with 3/4" by 3/4" frame, frame projects 4 inches at the top and tapers to 1 inch at the bottom. Provide 1/4" thick tempered glass mirror.

B. Fire Extinguishers: 20 lbs. ABC fire extinguishers fully charged and tested shall be furnished and installed by the PGC, not in contract, provided by PGC.

C. Fiberglass Reinforced Wall Panel System:

1. Furnish and install Fiberglass reinforced thermosetting polyester resin panel sheets complying with ASTM 5319 at all locations as indicated on drawings. Fiberglass reinforced panels (FRP) shall have a **Class A fire rating**. Color White.

2. Dimensions: Thickness – 0.090" nominal, Width – 4'-0" nominal, Length – 10'-0" or as indicated on drawings.

3. Properties: Resistant to rot, corrosion, staining, denting, peeling and splintering. Conforms to ASTM D 790 for flexural strength and ASTM D 638 for tensile strength. Impact strength of 72 ft. lbs./in ASTM 256.

4. Moldings: PCV trim thin wall semi-rigid extruded PVC. Provide inside and outside corners, meeting and edge trims as required for installation in accordance with the manufacturer's product specifications.

5. Base: FRP Base molding, 10' lengths complete with inside and outside corners and end caps. Color Black.

6. Accessories: White non-staining nylon drive rivets and adhesives complying with ASTM C 557. Adhesive to be manufactured and recommended by (FRP) manufacture or Titebond advanced polymer/panel adhesive in accordance with installation of Class A fire rated (FRP) panel . Install white silicone sealant.

7. Installation: Comply with manufacturers recommended procedures and installation sequence. Comply with all recommended preparation of back up surfaces.

D. Ceiling Hatch/Scuttle: 24" x 36" min. ceiling access door, 16-gauge steel door and frame, continuous hinge with key operated cam latch. Install in accordance with the manufacturer's product specifications

E. Landscape Metal Edging: 3" high x .24" thickness flexline metal landscape edging, weathering steel finish complete with 12" long galvanized spikes, joining plates and top edge folded lip. Manufactured by StraightCurve or approved equal.

24.3– SUBMITTALS

Submit a catalog cut and other manufacturers information for all toilet accessories, fiberglass reinforced wall panel system, and ceiling hatch to the PGC for review and approval before ordering any materials. Refer to submittal specification section for submission requirements

24.4 – PROCEDURE

Install all incidentals and building components in accordance with the manufacture's product specifications, applicable 2018 International Building Code provisions, and shop drawings. Comply with ICC/ANSI A117.1 guideline for mounting heights and locations of all toilet accessories and grab bars.

24.5 – MEASUREMENT AND PAYMENT

This price and payment shall constitute full compensation for all incidental building systems and components including toilet accessories, Fiberglass reinforced wall panel system, and ceiling hatch 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. 25 - SEEDING

25.1 - SCOPE

This work is securing a satisfactory stand of grass at all disturbed earth 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. Do not seed areas (parking area and driveways) that are shown to be surfaced by stone by the PGC. The limits of the parking area and driveways will be staked out by the PGC during building construction.

25.2 - APPLICABLE ACTS AND PUBLICATIONS

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

Pub 408. - Specifications, Pennsylvania Department of Transportation.

25.3 - MATERIALS

A - Grass Seed - Use grass seed conforming to section 804.2(b) of Pub. 408 and consisting of the following seeds and application rates.

Formula L	Max. % Weed	Purity% (Min.)	Germination % (Min.)	Seed Rate (Lbs./Acre)
Hard Fescue mixture (Festuca longifolia) A combination of improved certified varieties with no one variety exceeding 50%.	0.15	98	85	63
Creeping Red Fescue	0.15	98	85	41
Annual Ryegrass (Lolium Multiflorum)	0.15	98	90	12
Total Lbs./Acre				116

***** 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 Game Commission, you may add annual ryegrass seed to the mixture to secure a cover crop.

Seed shall be furnished fully tagged and delivered by separate varieties, separately packaged or bagged. Mix seed in the presence of a representative of the Game Commission.

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 - Fertilizer shall conform to the applicable act specified in Section 31.2 of these Technical Specifications. Use dry formulation of 10-20-20-analysis.

Fertilizers 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. **Straw -** Either wheat or oat straw, and reasonably free of viable seeds, well-cured to less than 20 percent moisture content by weight.
2. **Wood Fiber** - Use wood fiber meeting the requirements of Section 805.2(a).1.c of Pub. 408.

E - Mulch Binders - Use one of the following mulch binders in accordance with section 805.2(b) of Pub. 408: 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.

25.4 - PROCEDURE

Follow the procedures specified below. The amounts of seed, lime, fertilizer and mulch specified are the minimum acceptable. The Game Commission may, at its own expense, test the soils to determine if any modifications to the seed and soil requirements are necessary. Employ such modifications if they are deemed necessary, at no additional cost

to the Game Commission, 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 Game Commission, thoroughly till the surfaces to a depth of 3 inches by raking, 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.

B - Sowing - Sow the seed mixture on a still day at a rate specified in Section 31.3 of these Technical Specifications. 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 Game Commission. 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.

25.5 - MAINTENANCE

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

25.6 - 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. 27 – HEATING SYSTEM AND DUCTWORK ***Separation of Contract, to be awarded separate*** **with "Contract 2".**

27.1 – SCOPE

This work is providing and installing the heat pump(s), air handler(s), ductwork, registers, grilles and bath exhaust system that make up the new building's heating, venting and air-conditioning systems.

27.2 – MATERIALS

A. Heat Pump and Air Handler (typical for both) – Bosch Heat Pump BOVA-60RXB-M15S IDS LIGHT 5 TON, R-454B outside condensar unit, w/ BIVA-48RCB-M20X IDS PREMIUM 4 TON, R-454B indoor air handler/ furnace or an approved equal with the following characteristics.

1. 5-ton, Modulating Inverter System
2. All materials and workmanship to be guaranteed for one year from date of installation. Manufacturer's 5-year warranty on functional parts & compressor.
3. Minimum 18 SEER and 9.5 HSPF with matched 4-ton air handler
4. Variable speed blower motor
5. EHK-15B-15kW minimum emergency backup staged electric heat strips
6. Outdoor unit is to be equipped with snow legs
7. Outdoor unit is to be installed on concrete pad provided by G.C.

B. Thermostat – Bosch BCC100 Wi-Fi Thermostat or an approved equal.

C. Ductwork – To be sized and installed from the requirements and procedures of SMACNA. Metal ductwork to meet or exceed UCC code requirements. All supply ducts to be insulated as per code. Supply duct take-offs to be equipped with integrated dampeners capable of balancing the system.

D. Hanger Rods and Supports – Cadmium plated steel rods and nuts with Unistrut cross bar members.

E. Grills and Registers – Steel with baked white enamel finish.

F. Bath Exhaust System – Provide complete Bath Exhaust system for Men, Women and Unisex baths as indicated on the Mechanical Drawing. System shall be Fantech Model CVS300AInline Multi-Port Fan as manufactured by Systemair MFG Inc. or approved equal with the following Characteristics.

1. UL standard 507 listed and HVI 916 certified.
2. Constructed of 22 gauge galvanized sheet metal.
3. Four 4" inlet ports and One 6" exhaust port
4. Motor: Automatic reset thermal overload protection, permanently sealed self-lubricated ball bearing type.

5. 4” and 6” flex duct complete with all 90-degree elbow connections, stainless steel support anchors, silicone sealants, foil duct tape and all other applicable hardware required for installation in accordance with manufacturers product specifications.
6. PBV4 Bath Fan Grill unit complete with built-in damper. Provide (1) per Room locations.
7. FTD 7 -7 Day digital Control Timmer. Timmer to be located in Utility Room. See Electrical Drawings for exact mounting location.

27.3 - PROCEDURE

Conform to the manufacturer’s requirements when installing the heat pump, air handler and other components of the heating system. The drawings show the suggested size, location and layout of the ductwork and grilles/registers for each room in the building. Layout can be modified if air flows and system performance can be maintained. Mount ductwork with the applicable hardware.

Install the thermostats at the locations as indicated on the Mechanical Drawings. Make the required electrical connections to operate the system. Test the HVAC system and make any necessary balance adjustments in the ductwork. Demonstrate system to PGC on site staff.

Discharge the condensate line outside the exterior of the wall and properly seal the penetration with a weather-tight sealant.

27.4 - MEASUREMENT AND PAYMENT

This price and payment shall constitute full compensation for HVAC systems, ductwork, duct insulation and all related accessories including a thermostat 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. 28 – PLUMBING
***Separation of Contract, to be awarded separate* with "Contract 3".**

28.1 - SCOPE

This work is providing and installing the components of the water supply and sanitary sewer systems, including floor drains inside the building and all tie-in extensions required for connections to the existing water supply line and on-site septic system. Water treatment including testing, filter, UV light, softner, etc. to be under separate and coordinated by the PGC.

28.2 – MATERIALS, WATER SUPPLY & FITTINGS

A. Water Supply Pipe - The water supply (hot and cold) pipes shall be non-oxygen barrier PEX-A (cross-linked polyethylene) conforming to ASTM F876, ASTM F877 and NSF 14 & 61 or type "L" copper. Provide type "L" copper leads to connect water heater to PEX plumbing systems, 18" minimum from water heater.

B. Water Supply Fittings and Valves – Install fittings and clamps conforming to the PEX manufacturers product specifications. All fittings and valves shall be brass body per manufacturer. Hose bibbs to be brass anti-siphon frost proof with shut off valve mounted above.

C. Waste and Vent Pipe and Fittings – Schedule 40 PVC conforming with ASTM D1784, D1785 and D2665.

D. Pipe Cements – The solvent cement for making connections in PVC pipes and fittings shall conform to ASTM D2564. The primer for making connections in PVC pipes and fittings shall conform to ASTM F656.

E. Pipe Insulation – Self sealing elastomeric sleeves conforming to ASTM C534.

F. Supply Lines to Faucets and Toilets – Flexible braided stainless steel.

I. Floor Drain – The floor drain in the mechanical room shall be a 3-inch PVC general purpose floor drain equipped with a removable stainless-steel strainer such as an Oatey Model #43579.

F. Manifold System – Manabloc ½" x 18 Port Polysulfone Distribution System Manifold complete with ¼ turn shutoff valves, t-handle key valve, complying with NSF 14 and NSF 61-G approved for potable water systems and 10 – year limited warranty.

G. Ice Maker Refrigerator Connection – Sioux Chief series supply OxBox model#696-G1010XF complete with ¼-turn valves and outlet connection of ¼" conforming to NSF-372, IAPMO listed box and valve, ASSE 1010 arrester valve meets ASME a112.18.1.

28.3 – MATERIALS, PLUMBING FIXTURES

A. General – Refer to the elevations and fixture legend on the drawings for the layout of the bathroom and fixture installation location. Manufacturers and model numbers of fixtures are listed below to set a standard for performance, size and finish. Other manufacturers are acceptable provided that their products are the same or better level of quality.

B. Toilet – KOHLER Highline 2-piece Comfort Height Elongated Toilet (MFG# K-3493-RA-0) or approved equal meeting the following requirements.

1. White vitreous china construction
2. Elongated bowl and min. bowl rim height of 17" (ADA compliant)
3. Include or supply tank hardware, wax ring and elongated polypropylene finish white toilet seat
4. Pressure assist flushing system (1.4-gallon flush)
5. 12-inch rough-in

28.4 – MATERIALS, PLUMBING SINKS, AND FAUCETS

A. General – Refer to the elevations and fixture legend on the drawings for the layout of the utility sink and cabinets. Manufacturers and model numbers of fixtures are listed below to set a standard for performance, size and finish. Other manufacturers are acceptable provided that their products are the same or better level of quality.

B. Bathroom Sink – American Standard Comrade Wall Mount Bathroom Sink (MFG# 0124.024.020) or approved equal meeting the following requirements.

1. White, vitreous china construction
2. Pre-drilled 4" center faucet holes for center set faucet applications
3. Wall hanger for mounting included
4. ADA compliant
5. Rectangular shape, min. width 21", min. depth 18"

C. Bathroom Sink Faucet – American Standard Monterrey Gooseneck Spout Bathroom faucet (MFG# 7502.170.002) or approved equal meeting the following requirements.

1. Polished chrome finish
2. 4" centerset design
3. 2 handle lever design
4. Gooseneck spout (10" min. height)
5. ADA compliant

D. Utility Sink – Mop Service Basin model 63M, as manufactured by E.L. Mustee & Sons, Inc. or approved equal meeting the following requirements.

1. One-Piece molded fiberglass basin.
2. 24"x24"x 10"h, with not less than 1" wide shoulder.
3. Drain shall be integrally molded, complete with drain seal for installation of 3" ABS, PVC (Sch. #80) and iron pipe.
4. Removable stainless steel strainer.

E. Utility Sink Faucet – Mustee Service Faucet Model#63.600A, complying with ASME A112.18.1-2012/CSA B125.1-12

1. Heavy duty, rough brass, chrome plated
2. Wall mounted Brass dual handle
3. Eccentric inlets on 8" center
4. Vacuum Breaker
5. 6 GPM flow rate

F. Break Room Faucet – American Standard Colony Soft Gooseneck Spout faucet (MFG# 4275.550.002) or approved equal meeting the following requirements.

1. Polished chrome finish
2. 4" centerset design
3. 2 handle lever design
4. Gooseneck spout (10" min. height)
5. ADA compliant

G. Break Room Sink – Kohler Staccato Stainless-Steel single-basin commercial sink (Model# 3363-3-NA) meeting the following requirements.

1. Single bowl 20-inch width
2. 8-inch depth
3. Sound-absorption material applied
4. 18 gauge

28.5 – MATERIALS, WATER HEATER

A. Water Heater – The water heater shall be an electric water heater with the following features and characteristics:

1. AO Smith 40-gallon tank, short and 240 volts
2. Dual 5,500-watt copper, stainless or titanium elements
3. Minimum 9-year warranty on the tank
4. Minimum 25 GPH recovery @ 90°F
5. Factory installed temperature/pressure relief valve
6. Adjustable thermostat

B. Drip Pan – Black plastic (polyethylene) with pre-cut side opening for 1-inch drain fitting. The diameter of the drip pan shall be at least 2-inches greater than the outside diameter of the water heater. Raise drip pan and heater with suitable blocking to aid in draining the tank.

C. Thermal Expansion Tank – Proflo PFXT51, 2.1 gallon thermal pre-pressurized expansion tank.

28.6 - SUBMITTALS

Submit a catalog cut or other information for the utility sink, faucet, cabinets, light and countertops from the manufacturers to the PGC for review and approval before ordering any materials.

28.7 - PROCEDURE

Conform to the requirements of the International Plumbing Code for all work conducted under this section. Lay out supply, waste and vent pipes so that structural supports do not have to be cut or drilled through. Use applicable hangers/supports for all pipes where needed.

Provide all fixtures to make the water supply completely functional. Assemble the tank and features so that the system operates on a 40/60PSI range. Circuit breakers in panel box are provided by the electrical contract. Verify and coordinate exact tank location in field with other utilities.

Install ¾-inch pipe from well shut off as a branch line to the water heater and ½-inch connection for the faucets, shower and toilet. Install shut-off valves in the supply piping at the sinks and at the toilet. Install flexible stainless-steel supply pipe from the shut-off valves to the faucets and toilet. Cover the hot water supply pipes with sleeve insulation.

Waste and vent pipes shall be PVC. Use 1½-inch PVC for sink drains. Use 2-inch and 3-inch pipe for vents as shown on the sewage schematic. Use 3-inch PVC for the toilet drain and 4-inch PVC for the sewer lateral drainpipe that exits from the building. Install the applicable traps, toilet flanges and other fittings connections under plumbing fixtures. Excavate outside the building to run the sewer pipe and provide a conduit for the water supply to enter under the building slab. Excavate the trench as shown on the Drawings. The trench depth will vary with the existing ground level and the slope of the pipe. The pipes shall be sloped at a minimum ¼-inch per foot. Install the solid drainage pipe in the trench and backfill with AASHTO #10 stone. Complete backfilling of the trench with excavated material outside the building and #2A coarse aggregate under the floor of the building.

28.8 - MEASUREMENT AND PAYMENT

This price and payment shall constitute full compensation to furnish and install new plumbing fixtures, sinks, shower cabinet, water closet, well pump and tank, domestic water and sanitary sewer branch plumbing piping systems, hot water heater, hose bids, trench and floor drains 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. 26 – SEWER GRINDER PUMP

26.1 - SCOPE

This work is providing and installing the grinder pump, alarm system, uni-lateral and tie-in of the septic system shown on the Drawings. The entire scope of work to fall under the Plumbing Construction Contract No. 3.

26.1 – MATERIALS

A. Grinder Pump – The grinder pump shall be an electric hard-wired powered with the following features and characteristics:

1. E/One Extreme Series DH152 120/240-volt, 60 Hz, 1 Ph, 1 HP grinder pump
2. HDPE Basin and Controls
3. 150 Gallon holding capacity with 15 gallon discharge at 0 psig
4. Internal check valve at grinder pump
4. Prewired Conduit
5. 4” Diameter Grommet Inlet. 1-1/4” Discharge Outlet.

B. Alarm System – Alarm is to be an E-One Sentry alarm panel, protect package plus. the alarm system shall be an electric float sensing system with a warning light and buzzer. The alarm shall be calibrated to go off when the tank reaches 90% capacity. All wiring, float sensors are to be included in a complete alarm system. Alarm must be capable of protecting the pump from over-pressures or run-dry situations.

C. Aggregate Bedding – The bedding for the grinder pump housing is to AASHTO #8 aggregate and backfilled with AASHTO #57 aggregate. The bedding for the pipe entering and exiting the grinder pump shall be AASHTO #8.

D. Pipe – Schedule 40 PVC conforming to ASTM D1784 and ASTM D1785 for the non-pressure feed lines. The pressured, forced line exiting the grinder pump is to be SDR 11 HDPE pipe.

26.3 - SUBMITTALS

Submit a catalog cut or other information for the grinder pump and alarm system from the manufacturers to the PGC for review and approval before ordering any materials.

26.4 - PROCEDURE

Mark the location of the grinder pump as shown on the drawings. Excavate to a depth so that the grinder pump access cover has at least 3 inches above finish grade but not more than 9”. The sides of excavation pit shall sloped back to stabilize the sides and prevent a potential cave in. Place a minimum base of 4-inch layer of

AASHTO #8 aggregate in the bottom of the hole to serve as a foundation for the device. Level and compact the aggregate to form an even bearing support surface for the grinder pump. Provide concrete anchor system as required by manufacturer to prevent uplift/floating of unit.

Place the grinder pump device into the excavated hole. Orient the device for the ease of connecting the supply line. Backfill around base of the tank and compact to an elevation just below the supply and pressured line. Connect the sewer pipe from the building to the grinder pump device. Connect the forced line side to the grinder pump. Backfill the supply lines and forced lines with moderate and careful compaction. Once the lines are securely backfilled, install the needed electrical connections and conduit to operate the grinder pump. Install the alarm system according to the manufacturer's instructions. Backfill the remaining voids of the excavation and match existing grade.

26.5 - MEASUREMENT AND PAYMENT

Lump Sum. Separate measurement and payment for excavation, aggregate bedding and piping according to the applicable sections of the Technical Specifications.

TECHNICAL SPECIFICATION SECTION No. 30 – LIGHTING AND ELECTRIC POWER DISTRIBUTION
***Separation of Contract, to be awarded separate* with "Contract 4".**

29.1 – SCOPE

This work is furnishing and installing all the normal and emergency power lighting fixtures with controls, electric power distribution systems wiring and devices for the new building as shown on the Drawings. This work includes installing all over-current protectors within the Single-Phase 400-amp electrical service and (2) 200-amp panels and installation of the telephone and data lines from the work room to the mechanical room and office.

29.2 – 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, outlets and equipment shall be determined at the site. The Contractor may install flush mount or recessed boxes in the heated bay on the FRP walls.

All work shall be manufactured, tested and installed accordance with the National Electric Code (NEC) 2017, the International Building Code (IBC) 2018 and all applicable local codes. The Contractor shall furnish a fire underwriter's certificate of inspection covering the work installed under this specification.

29.3 – MATERIALS

A. Circuit Panel Boxes – The circuit panel boxes shall be dead front design complying with NEMA PB 1 and be circuit breaker type. Panel-board bus shall be copper with copper ground bus. The enclosure shall be NEMA PB 1, Type 1 with a surface type cabinet front, screw fastened cover with hinged door and flush lock. Finish color is standard gray enamel. Provide 400-amp electrical service with (2) 42-space minimum panel boxes (200-amp) for the new building. Panel Boxes to be clearly indicated as "A" & "B" and circuits labeled as indicated on the Electrical Drawings. Acceptable manufacturers are Siemens, Eaton, Square-D or General Electric. No Homeline will be accepted.

C. Circuit Breakers – The circuit breakers are molded case circuit breakers conforming to NEMA AB 1, stab lock design. Circuit breakers must be equipped with integral thermal and instantaneous magnetic trip in each pole. Provide circuit breakers UL listed as Type SWD for lighting circuits. Do not use tandem circuit breakers. Acceptable manufacturers shall be Siemens, Cutler-Hammer, Square-D or General Electric. No Homeline will be accepted.

D. Wire – Metal Clad type MC AWG #6 through #12 wire with ground.

E. Outlet and Junction Boxes – Metal or PVC for surface or recessed mounting only in the heated bay and outside of the building. Provide closures for unused ports and waterproof covers for outside receptacle boxes. PVC "New Work" boxes can be used in walls.

F. Outlets and Switches – Rated for 20 amps (or more if required by equipment manufacturer), 120/277 and as manufactured by Hubbell, Bryant, Arrow-Hart, GE, P&S or Leviton. Light switches in the "break room, restroom and utility room" are to fitted with motion sensing switches. Where 3-way switches are found, install the motion sensing switch in the location that best scans the area.

G. Lighting Fixtures – The lighting fixture schedule is shown on the drawings.

H. Bulbs – Install the maximum wattage as recommended by the lighting fixture manufacturer.

I. Conduit – All non-MC exposed wiring shall be in conduit. Conduit shall be Schedule 40 PVC rigid non-metallic conduit conforming to NEMA TC-2 and UL651. Conduit fittings shall conform to NEMA TC-3 and UL514b or (EMT) Electrical Metallic Tubing conforming with NEC Article 358, UL-797 and ANSI C80.3. MC cable may be used in unheated areas if desired.

29.4 - PROCEDURE

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

Mount the circuit panel box and outlet boxes for the lighting fixtures, equipment power supplies and receptacles in the locations as shown on the Drawings.

Drill holes in the lumber wall framing to run wiring as necessary to all fixtures, equipment, and outlet locations. Use conduit in the heated and not heated bay areas of the building where wiring would be exposed. Secure the conduit with clamps approved by the manufacturer. Conduit must be extended and connected to all the outlet boxes. Use solvent cement for all conduit joints and connections. Pull wire through conduit without stripping insulation from the wires.

Install the light fixtures, switches and receptacles in the outlet boxes. Make the required conductor and ground connections. Install the light bulbs in the fixtures.

Trench for the electrical service from the existing service pole to the new building. Telephone and data lines to be installed from the office to the mechanical room. The tele/data lines from the pole will be installed by others in contractor provided conduit. Contractor may use same trench if maintain required separation.

29.5 - MEASUREMENT AND PAYMENT

This price and payment shall constitute full compensation for the installation of a new lighting fixtures and controls and electrical power distribution systems wiring and devices 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. 29 – ELECTRIC POWER SUPPLY CONNECTION
***Separation of Contract, to be awarded separate* with "Contract 4".**

29.1 - SCOPE

This work is furnishing and installing a new underground 400-AMP single phase electric service feed from the existing pole mounted transformer to the new forestry building. This work includes the installation of (2) 200-amp electrical distribution panels labeled "A" and "B".

Furnish and install new electrical conductors in conduit with expansion joints including all electrical accessories for new underground electrical feeds electrical circuitry from the existing Headquarters Main Electrical Service to the new storage building. All underground electrical circuits shall be installed in full compliance with the NEC. This work shall include all rough and final wiring required for connection of new circuitry to existing electrical sub-panel and fuel dispensing and monitoring equipment.

29.2 – MATERIALS

A. Conduit – Conduit shall be 3", 2½", 2" or 1¼"-inch minimum Schedule 40 PVC w/expansion joint and securing straps where needed. Any sweep elbows to be 36" minimum. Refer to drawing CS-1 and E-1 for approximate locations of conduit, sizes and lengths

B. Service Feed Line – (350kcmil) THHN 350 MCM Stranded Copper Black Wire , to meet UL Style MTW/1063/83/758 (Resistant to flame, moisture, and sunlight), and ASTM B3, B8 & B787 conductor.

C. Panel Feed Line – (250kcmil) THHN 250 MCM Stranded Copper Black Wire , to meet UL Style MTW/1063/83/758 (Resistant to flame, moisture, and sunlight), and ASTM B3, B8 & B787 conductor.

D. Grounding Rods – 8-foot long grounding rod(s) and connecting cable

E. Warning Tape – Complies to NEC 300.5(D)3.

F. Conduit Bedding – AASHTO #10 stone; refer to section 5 of the Technical Specifications.

26.3 - PROCEDURE

The Contractor is responsible for installing electrical components for the new underground electrical service including, service entrance conductors, grounding rod(s), meter socket, mask, and the accessories associated with this work from the pole. In certain circumstances,

the electric company mandates the conductors to be installed by their service technicians at no cost or a varying cost based on linear feet of wire.

The contractor is responsible for providing a conduit and conductors from the panel box, through the building envelope into the adjacent storage building to a previously installed subpanel. The contractor is responsible for making all electrical connections.

Contractor is responsible for all excavation, backfilling and trenching of conduits to meet building code depth to a minimum of 3’ deep and bedded in AASHTO #10 aggregate.

29.4 - MEASUREMENT AND PAYMENT

This price and payment shall constitute full compensation for the installation of a new overhead electrical service connection and supporting electrical service electrical gear and components to the building, including all new underground electrical circuitry supporting site electrical requirements 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.