# SECTON 01510 - TEMPORARY UTILITIES AND FACILITIES

## PART 1 GENERAL

### 1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General Conditions and other Division 1 Specification Sections, apply to this Section.

### 1.02 SUMMARY

A. This Section specifies requirements for temporary services and facilities including utilities, Construction and support facilities, security and protection, as specified below. The Scope of work includes installation, maintenance and removal of utilities.

B. Temporary utilities required include, but are not limited to:
   1. Temporary water service will be from the existing Janitor Closet W4-48.
   2. The Electrical Contractor shall maintain sufficient existing power and lighting for temporary electric for the building in accordance with OSHA, NEA and UL compliance installed per the National Electrical Code.

C. Temporary Construction and Support Facilities required include, but not limited to:
   1. No field offices or storage facilities will be permitted.
   2. Sanitary facilities shall be provided by General Trades Contractor and are to be located at the West Building Loading Dock as shown on drawing CL-CS-1.
   3. All dumpsters shall be by the General Trades Contractor and are to be located at the West Building Loading Dock as shown on Drawing CL-CS-1.
   4. Each Prime Contractor shall provide for their own hoisting and scaffolding.
   5. The existing freight elevator shall be utilized by all Prime Contractors to stage and remove materials to and from the 4th floor. Ground floor access is at the loading dock off 16th street. The contractors will have use of the freight elevator throughout the day but the Owner's operations will take precedence over construction activity. The Owner recommends that deliveries take place between the hours of 6:00 a.m. to 8:00 a.m.
   6. Each Prime Contractor shall furnish safety and first aid supplies.

D. Security and Protection Facilities required included, but are not limited to:
   1. General Trades Contractor shall provide temporary fire protection and extinguishers.
   2. Environmental protection shall be provided by all Trades.
   3. Securing of the building and property shall be provided by General Trades Contractor.

E. Quality Assurance
   1. Regulations: All trades shall comply with industry standards and applicable laws and regulations of authority having jurisdiction, including but not limited to:
      a. Municipal and L&I Building Code Requirements.
      b. State Building Codes.
      c. Health and Safety Regulations.

d. Utility Company Regulations.
e. Police, Fire Department, and Rescue Squad rules.
f. Environmental Protection Regulations.

F. Inspections: The Prime Contractor furnishing the temporary utility shall arrange for authorities having jurisdiction to inspect and test each temporary utility before use and obtain required certifications and permits. Provide copies of the results of all inspections and tests to the Owner and Construction Manager.

1.03 PROJECT CONDITIONS

A. Conditions of Use: Each Prime Contractor shall keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Take necessary fire prevention measures. Do not overload facilities or permit them to interfere with progress. Do not allow hazardous or unsanitary conditions or public nuisances to develop or persist on the site. Report any unsafe conditions noticed to the General Trades Contractor and to the Construction Manager immediately.

PART 2 - PRODUCTS

2.01 MATERIALS

A. General: Provide new materials or, if acceptable to the Architect and Construction Manager, undamaged previously used materials in serviceable condition may be used for temporary construction. Provide materials suitable for the use intended.

B. Lumber and Plywood: Comply with requirements in Division 6, Section "Rough Carpentry".

C. Tarpaulins: Provide waterproof or/and fire-resistant UL labeled tarpaulins with flame spread rating of 15 or less where appropriate. For temporary enclosures, provide translucent nylon reinforced laminated polyethylene or polyvinyl chloride fire retardant tarpaulins.

D. Water: Provide potable water approved by local Health Authorities. Each Prime Contractor is responsible for providing potable water as approved by local health authorities for their personnel.

2.02 EQUIPMENT

A. General: Provide new equipment or, if acceptable to the Architect/Construction Manager, undamaged previously used equipment in serviceable condition may be used for temporary construction. Provide equipment suitable for use intended.

B. Electrical Outlets: The Electrical Contractor shall provide properly configured NEMA polarized outlets to prevent insertion of 110-120 volt plugs into higher voltage outlets. Provide receptacle outlets equipped with ground fault circuit interrupters, reset button and pilot light, for connection of power tools and equipment.

C. Electrical Power Cords: Each Prime Contractor shall provide grounded extension cords. Use hard service cords where exposed to abrasion and traffic. Provide waterproof connectors to connect separate lengths of electric cords, if single lengths will not reach areas where Construction activities are in progress. Do not exceed safe length-voltage ratio.

D. Lamps and Light Fixtures: The Electrical Contractor utilize the existing light fixtures to achieve adequate illumination. Lighting and receptacles will not be on the same circuits.

E. Temporary Toilet Units: Provide self-contained single occupant toilet units of the chemical, aerated re-circulation, or combustion type, properly vented and fully enclosed with a glass fiber reinforced polyester shell or similar non-absorbent material. Provide one (1) unit for every fifteen (15) workmen on the project.

F. First Aid Supplies: All Contractors shall comply with governing regulations. All Contractors shall have a first aid kit and comply with all governing regulations.

G. Fire Extinguishers: Provide hand carried, portable UL rated, Class "A" Fire extinguishers for temporary office and similar spaces. In other locations, provide hand carried, portable, UL rated, Class "ABC" dry chemical extinguishers, or a combination of extinguishers of NFPA recommended classed for the exposures. Comply with NFPA 10 classification, extinguishing agent and size required by location and class of fire exposure.

## PART 3 - EXECUTION

### 3.01 TEMPORARY UTILITY INSTALLATION

A. Use qualified personnel for installation of temporary facilities. Locate facilities where they will serve the project adequately and result in minimum interference with performance of the work. Relocate and modify facilities as required.

B. Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by completed permanent facilities that have been authorized for use.

C. Permanent Facility Permanent Facility Warranties: Use of permanent facilities prior to substantial completion shall not reduce the one (1) year warranty period for permanent facilities from the date of substantial completion.

D. Temporary Electric Power Distribution
   1. As soon as Construction Manager notifies the Electrical Contractor after the start of the work at the project site, the Electrical Contractor shall provide temporary electrical power distribution system, sufficient to accommodate temporary lighting and construction operations including the use of power tools, but not including heavy duty electrical welding units, electric hoists, terrazzo grinders, electrical heating units and start up of specified building equipment which must be tested, started or placed into use prior to completion of its permanent power connections, Provide weatherproof, grounded wiring with overload protection, with direct wired

connections, where feasible, and for all voltages over 120 volts. Locate multiple outlets, not less than 10 gang spaced so that entire area of construction can be reached by power tools on a single extension cord of 100' maximum length.

a. The Owner / General Contractor shall pay for all building project electrical power usage via existing metering at the existing switchboard located at the Community College.
b. Electrical Contractor shall provide and pay for all installation, maintenance, servicing, operation and supervision of lines installed.
c. The Electrical Contractor shall provide service with ground fault circuit interrupter feature activated from each circuit of 20 amp or less rating.
d. Where a service of a type other than herein mentioned is required, the Contractor requiring the same shall install and pay all costs for such special service, including power requirements for temporary offices.
e. As permanent power distribution system is accepted as substantially complete, either entire system or usable portions thereof, the Electrical Contractor shall make suitable provisions for temporary use thereof, and remove unused portions of temporary system.
f. The Electrical Contractor shall maintain and operate permanent electrical supply and distribution system until time of final acceptance and transfer of operation to Owner's personnel.

E. Temporary Lighting

1. Whenever overhead floor or roof deck has been installed provide temporary lighting with local switching. Furnish and install sufficient lighting to ensure proper workmanship everywhere by combined daylight, general lighting and portable plug in task lighting. Electrical Contractor shall provide rough service incandescent lights of wattage no less than 150 watts in each room on each landing and or a minimum of 20 foot-candles. Lighting and receptacles shall not be on the same circuits.
2. Limit lighting installation to intensities which will accommodate normal access and workmanship requirements, recognizing that each Individual Contractor performing work requiring higher intensity lighting will provide supplementary plug in temporary lighting and localized areas where such work is in progress.
3. As permanent lighting system is substantially complete, for each area or usable portion thereof make suitable provisions for temporary use thereof and remove unused portions of temporary lighting system.
4. Electrical Contractor shall maintain and operate permanent lighting system until time of final acceptance and transfer of operation to Owner's personnel.
5. Electrical Contractor shall replace all lamps in permanent light fixtures that are burned out or noticeably dimmed by substantial use.

F. Temporary Electric Overhead Service if required

1. Furnish and install necessary hangers, supports, conduit, cabling, ground rods, grounding, disconnect switches, transformers, wall penetrations, poles, backboards, hardware, guy wires, anchors, etc required for overhead electric service.
2. Provide an electrical inspection for the temporary electric pole service. Provide copies of inspection reports to the Construction Manager.
3. The Electrical Contractor shall patch construction materials where temporary power has penetrated existing or new walls including brackets and support hardware. Landscape, grass areas, paved areas, concrete, etc where temporary

poles were removed or underground duct banks installed shall be restored to the original surface by the Electrical Contractor.

## 3.02 TEMPORARY CONSTRUCTION AND SUPPORT FACILITIES INSTALLATION

A. General
   1. No field offices will be permitted onsite.

B. Temporary Heating, Ventilating and Air Conditioning
   1. All permanent heating and air conditioning equipment used to supply temporary heat and air conditioning shall be completely cleaned and reconditioned by the HVAC Contractor prior to final acceptance. The Owner may elect to inspect all equipment and systems before final acceptance. Install new disposable filters and clean non-disposable filter prior to final acceptance. The one (1) year warrantee for permanent heating and air conditioning equipment shall become affective from the date of substantial completion. HVAC Contractor shall pay charges for extended warrantee for use of permanent systems prior to substantial completion.
   2. The HVAC Contractor shall replace the filters in the air handlers during the temporary heat and A/C period on an as needed basis as determined by the Construction Manager.
   3. The HVAC Contractor shall remove all soot, smudges, and other deposits from the walls, ceilings, and all exposed surfaces that are the result of the use of temporary heating equipment including the use of the permanent heating system for temporary heat purposes. The General Trades Contractor shall not do any finish work until all such surfaces are properly cleaned.

C. Temporary Ventilation: The trade requiring ventilation for work to expel fumes or to provide circulation of air is required to provide their own methods to induce the circulation or ventilation.

D. Field Offices
   1. Each Prime <u>must</u> maintain on the site a copy of all Contract Documents, Change Orders, supplemental drawings, shop drawings, and submissions and a set of as-built prints.
   2. Each Contractor shall maintain all OSHA required up to date Hazardous Communications Standards, MSDS information and emergency phone numbers and contract information.

E. Storage and Fabrication Sheds: No storage facilities will be permitted.

F. Sanitary Facilities
   1. General Trades Contractor shall provide temporary toilets. Comply with regulations and health codes for the type, number, location, operation and maintenance of fixtures and facilities. Install where facilities will best serve the Project's needs at a rate of one (1) unit for every fifteen (15) workmen.
      a. Provide toilet tissue and similar disposable materials for each facility.
   2. Toilets: Install self contained toilet units of appropriate quantity dictated by manpower on site. Shield toilets to ensure privacy. Use of pit type privies will not be permitted. Provide means of locking toilet facilities when construction is not in progress.
      a. Provide separate facilities for male and female personnel when both sexes

are working in any capacity at the project site.

3. Drinking Water Facilities: Each Prime Contractor shall provide containerized tap dispenser bottle water type drinking water units, including paper supply for his personnel.

G. Temporary Enclosures
1. The General Trades Contractor shall provide temporary enclosure, which shall include window openings, door openings, unit ventilator openings or any other openings in the exterior wall or roof. The definition of enclosed structure shall mean the block walls shall have been run and the roof decking and the roof insulation will have been installed before temporary heat and enclosures are to begin. It is not necessary for the exterior brickwork to be installed before enclosure work to begin. All activities are to be under the approval of the Construction Manager and building enclosures shall take place in the time frame as determined by the Construction Manager.
2. Dust control partitions are to be provided by the General Trades Contractor at each entry point to the space. All contractors are required to clean up debris caused by any operation.
3. Interior temporary partitions will be constructed as identified in the contract drawings.

H. Temporary Lifts and Hoists: Truck cranes and similar devices used for hoisting materials are considered "tools and equipment", and shall be provided by the Contractor requiring same.

1. Temporary Elevator Use: All contractors shall utilize the existing freight elevator for the movement of men and material. The contractors will have use of the freight elevator throughout the day but the Owner's operations will take precedence over construction activity. The Owner recommends that deliveries take place between the hours of 6:00 a.m. to 8:00 a.m.

I. Collection and Disposal of Waste
1. The General Trades Contractor shall serve as the lead contractor for coordinating and maintaining a clean project site.
2. Each Prime Contractor is responsible for general clean up and trash removal resulting from the work or employees of that contract. The General Trades Contractor shall provide dumpster(s) as required for the purpose of trash removal for all Prime Contractors. Hazardous materials shall not be placed in dumpster but should be removed from site by Prime Contractor responsible for the material. Do not hold materials more than seven (7) days during normal weather or three (3) days when the temperature is expected to rise above 80 degrees F. (27 degrees C). Handle hazardous, dangerous, or unsanitary water material separately from other waste, by containerizing properly. Dispose of material in a lawful manner.
3. Each prime contractor is responsible to maintain a clean, safe and organized site. This includes, but is not limited to, clean-up on an as needed basis, but not less than weekly as coordinated by the Construction Manager.
4. It shall be the General Trades Contractor's responsibilities to broom sweep the project on a weekly basis. The General Trades Contractor shall provide a minimum of one labor dedicated at least 8 hours per week for clean-up and trash removal till substantial completion of the new building construction. Identify cost of laborer as separate line item on schedule of values. This does not eliminate the responsibility

of other Contractors for clean up of material and waste caused by their actions or installation of work.

5. In a case where a Prime Contractor fails to adequately clean up, the General Trades Contractor shall notify the Construction Manager in writing. The notification shall include the name of the Prime Contractor(s), and indicate the areas of the project that are in violation. Upon review, the Construction Manager may take corrective action and back-charge the responsible Prime Contractor.

## 3.03 SECURITY AND PROTECTION FACILITIES INSTALLATION

A. Do not change over from use of temporary security and protection facilities to permanent facilities until substantial completion or longer if requested by the Architect, except for the use of the permanent fire protection which shall be put into use as soon as available.

B. Temporary Fire Protection: Until fire protection needs are supplied by permanent facilities, the General Trades Contractor shall install and maintain temporary fire protection facilities of the types needed to protect against reasonable predictable and controllable fire losses. Comply with NFPA 10 "Standard for Portable Fire Extinguishers".
   1. Locate fire extinguishers where convenient and efficient for their intended purpose, but not less than two (2) extinguishers on each floor or 1 at each usable stairwell whichever is greater.
   2. Store combustible materials in containers in fire safe locations.
   3. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire protection facilities, stairways, and other access routes for fighting fires. Prohibit smoking in hazardous fire exposure areas.
   4. Provide supervision of welding operations, combustion type temporary heating units, and similar sources of fire ignition.
   5. Each Prime Contractor is responsible for providing fire protection mats, a man assigned to fire watch, temporary fire extinguishers, and proper notification to other trades during any welding process.

C. Permanent Fire Protection: At the earliest feasible date in each area of the project, the respective Prime Contractor shall complete installation of the permanent fire protection facility, including connected services, and place into operation and use. Instruct key personnel on use of facilities. Provide attendance record of each contractor's attendance to the Owner.

D. Security Enclosure and Lock Up
   1. The General Trades Contractor shall install substantial temporary enclosure of partially completed areas of construction. Provide locking entrances to prevent unauthorized entrance, vandalism, theft and similar violations of security.
   2. Each Prime Contractor is responsible for the secure storage to their own material and equipment on and off the site.

E. Environmental Protection: Provide protection, operate temporary facilities and conduct construction in ways and methods that comply with environmental regulations, and minimize the possibility that air, waterways, and subsoil might be contaminated or

polluted or that other undesirable effects might result. Avoid use of tools and equipment, which produce harmful noise. Restrict use of noise making tools and equipment to hours that will minimize complaints from persons or firms near the site. See Site Preparation for protection of site, Storm water Management/Erosion Control Measures.

3.04 OPERATION, TERMINATION AND REMOVAL

A. Supervision: Enforce discipline in use of temporary facilities. Limit availability of temporary facilities to essential and intended uses to minimize waste and abuse.

B. Maintenance: Maintain temporary facilities in good operating condition until removal. Protect from damage by freezing temperatures and similar elements. Maintain operation of temporary enclosures, heating, cooling humidity control, ventilation and similar facilities on a twenty four (24) hour day basis where required to achieve indicted results and to avoid possibility of damage.

C. Termination and Removal: Unless the Architect or Construction Manager request that it be maintained longer, remove each temporary facility when the need has ended. This is normally when replaced by authorized use of a permanent facility or no later than substantial completion. Complete, or if necessary, restore permanent construction that may have been delayed because of interference with the temporary facility. Repair damaged work, clean exposed surfaces and replace construction that cannot be satisfactorily repaired.
   1. Materials and facilities that constitute temporary facilities are property of the Contractor.

D. At Substantial Completion, clean and renovate permanent facilities that have been used during the construction period. Including but not limited to:
   1. The HVAC Contractor shall replace air filters and clean inside of ductwork and housings.
   2. The HVAC Contractor shall replace significantly worn parts and parts that have been subject to unusual operating conditions.
   3. The Electrical Contractor shall replace lamps that are burned out or noticeably dimmed by substantial hours or use.

END OF SECTION