SECTION  – temporary facilities and controls

1. General
   1. GENERAL requirements
      1. Include in the work construction of temporary facilities as required for the performance of the work as construction aids and as required by authorities having jurisdiction, or as otherwise specified. Install to meet needs of construction as work progresses. Maintain construction and temporary facilities during use, repair them when damaged, relocate them as required by the work, remove them at completion of need, and make good adjacent work and property affected by their installation.
      2. Include in the work, construction of temporary facilities to provide for construction safety such as: fences, barricades, bracing, supports, storage, sanitation and first aid facilities, fire protection, stand pipes, electrical supply, temporary heat, steam supply, ventilation, construction equipment with its supports and guards, stairs, ramps, platforms, runways, ladders, scaffolds, guardrails, temporary flooring, rubbish chutes, and walkway, morality and guard lights, all as required of the Construction by the Occupational Health and Safety Act of the Province of Ontario, latest edition, as well as all other regulations of the authorities having jurisdiction.
      3. Construct temporary work of new materials unless otherwise approved.
      4. Ensure that structural, mechanical, and electrical characteristics of temporary facilities are suitable and adequate for the use intended. Be responsible that no harm is caused to persons and property by failure of temporary facilities because of placing, locations, stability, protection, structural sufficiency, removal, or any other cause.
      5. Prepare shop drawings and specifications of temporary work and submit for approval of authorities having jurisdiction if so required. Submit duplicate copy to Consultant for his information.
      6. Locate temporary facilities where shown on Drawings or as directed.
      7. Apply two coats of paint, in approved colours, to temporary constructions, such as storage sheds; offices; supports; bracing and back side of signs; barricades; and where otherwise specified.
      8. Temporary Electric Service:
         1. Provide and maintain an adequate temporary electrical service for performance of the Work including, but not limited to, operation of electric pumps, motors, vibrators, and other power tools, hoisting and related construction and general illumination during the Work. Provide power at temporary storage sheds and field office when required.
         2. Make connections available to any part of the work within distance of a 3048mm (10') extension. Each Subcontractor shall be responsible for their own extension cords.
         3. Contractor shall provide and be responsible for payment of temporary power required for all equipment for construction use in excess of available existing sources.
         4. Provide and maintain any components and equipment necessary to transform supply power to necessary temporary power voltage.
         5. Contractor will be permitted use of existing power for construction purposes at no cost to the Contractor. Provide additional temporary power for individual tasks required by the technical sections.
      9. Temporary Lighting:
         1. Install lighting for the following:
            1. Emergency evacuation, safety, and security throughout the Project at intensity levels required by authorities having jurisdiction.
            2. Performance of work throughout work areas as required, evenly distributed, and at intensities to ensure proper installations and applications are achieved.
            3. Performance of finishing work in areas as required, evenly distributed, and of an intensity of at least 30-foot candles.
         2. Permanent lighting may be used during construction, provided lamps, fluorescent tubes and ballasts that are so used are replaced with new at time work is turned over to Owner.
      10. Temporary Heating and Ventilation:
          1. Provide and pay for temporary heating, cooling, and ventilating required for the Work, including attendance, maintenance, and fuel.
          2. Provide temporary heat and ventilation as required to:
             1. Facilitate continuous uninterrupted progress of the Work.
             2. Protect the Work and Products against damage and defacement caused by weather, harmful levels of temperature, humidity, and moisture.
             3. Provide ambient temperatures and humidity levels for proper storage, installation and curing of materials, in accordance with specified standards and manufacturer's requirements.
             4. Provide adequate ventilation to meet health regulations for safe working environment.
          3. Maintain work areas at not less than 7 deg C. Increase temperatures in isolated areas to 20 deg C as required by various sections of the specifications or by Product manufacturers.
          4. Solid fuel salamanders will not be permitted.
          5. Provide temporary heat or adequate protection by means of straw or other coverings to floor slabs, footings, or any part of building not specifically designed to withstand frost penetration.
          6. Furnish other temporary heating as required by various sections of the specifications or by Product manufacturers.
          7. Replace with new, any work damaged due to failure to provide adequate heat at no cost to Owner.
          8. If possible, and when approved by the Owner, the permanent heating and ventilation system may be used during construction. If approved, the Contractor shall be responsible for its operation, and for replacing and repairing damage it may suffer, and shall assume operation and maintenance of the system in all its parts and payment for fuel consumed.
          9. Operation and maintenance shall include inspection at least every two weeks of thermostats, valves, switches, lubrication, fan, belt and motor adjustment, cleaning and/or replacement of filters, and replacement of filters and re-servicing of system at completion of work.
          10. Connect electric motors only to permanent source of power, or otherwise provide proper source with correct design characteristics and with no fluctuation in voltage.
          11. Commence warranty period after re-servicing and from time the Owner takes over the premises.
      11. Temporary Water Supply:
          1. Provide water of potable quality for all construction purposes, at one location at least, on each floor area.
          2. Extend supply pipe or pipes from nearest available sources and maintain in good condition until no longer required.
          3. If possible, and when approved by the Owner, the permanent site water source be used to provide water during construction.
      12. Temporary Sanitary Facilities:
          1. Provide sanitary facilities for persons on the work site as approved by the authorities having jurisdiction. Install them in sufficient number and maintain them in a sanitary condition.
          2. Do not permit construction personnel to use washroom and toilet facilities on premises which have been installed as part of the new work or which are part of the existing building for use by non-construction personnel.
      13. Connections to Utilities:
          1. Make arrangements for connections to water, sewer, gas, electric, and telephone utilities as required for temporary use during construction.
          2. The Owner is responsible for payment of final connection charges that are part of service contracts between him and each utility.
   2. CONSTRUCTION AIDS
      1. Hoists and Cranes:
         1. Each Subcontractor is responsible for providing his own hoisting and crane operations. Equipment shall be operated by qualified hoist and/or crane operators.
         2. Where multiple trades are involved in high level work, the Contractor shall co-ordinate the hoisting and trade requirements.
      2. Building Enclosure:
         1. Include in work, temporary enclosures for building as required to protect it, in its entirety or in its parts, against the elements, to maintain environmental conditions required for work within the enclosure, and to prevent damage to materials stored within. Design enclosures to withstand wind pressures required for the building by authorities having jurisdiction.
         2. Use structural framing of building for support of temporary enclosure framing only upon verification that the load limits of the building frame will not be exceeded. Erect enclosures to allow complete accessibility for installation of materials during the time enclosures remain in place.
      3. Scaffolding:
         1. Each Subcontractor shall provide his own scaffolding.
         2. Scaffolding shall be erected clear of walls, and to ensure that it does not interfere with continuing work.
         3. Subcontractor shall be responsible for its examination for sufficiency of his scaffolding and be responsible for accidents due to its insufficiency.
      4. The Contractor will be responsible for co-ordination of scaffold work if multiple trade usage can be achieved from one installation.
   3. PROTECTION
      1. Provide temporary protection to construction as required by the Work, to protect it from damage.
      2. Box with wood or otherwise protect from damage, by continuing construction, finished sills, jambs, corners, and the like.
      3. Adequately protect the Work at all stages of operations and maintain protection until the Work is completed. Remove and replace, at no additional cost to Owner, damaged Work and materials that cannot be repaired or restored to the approval of the Consultant.
      4. Provide spare safety helmets for and enforce their use by Owner, Consultants, and representatives and authorized visitors to the site.
      5. In addition to requirements of authorities having jurisdiction, provide temporary protection and safeguards adequate to protect against:
         1. Accident or injury to workers and other persons on the site or adjacent work and properties.
         2. Damage to any part of the Work and to any adjoining or adjacent structure, property, services, and other similar items, by overloading, weather, frost, any other cause resulting from the execution of the Work.
         3. Protect work, existing property, adjacent tenant, and public property from damage during performance of Work. Should any part of the Work or any buildings, services, or similar items on or surrounding the areas of the work and adjacent to any road leading thereto become damaged or disfigured due to lack or failure of such protection, they shall be made good with material identical with the existing and adjoining surfaces, to the satisfaction of the authorities having jurisdiction and the Owner.
         4. Damaged work shall be made good by those performing work originally, or workers experienced or skilled in that particular type of work, at expense of those causing damage.
         5. Provide and maintain necessary temporary enclosures, hoardings, fences, gates, barriers, guards, hoists, cranes, stairs, ladders and scaffolding, walks, platforms, staging as necessary for the Work and protection of workers, public and others from injury, and for public access to adjacent buildings. All such apparatus shall meet requirements of the authorities having jurisdiction.
         6. Provide secure, rigid guard railings, hoardings, and barricades around openings, as required by authorities having jurisdiction and to maintain safety.
         7. Provide proper guard devices, signs, signals, and lights for the prevention of accidents.
         8. Maintain at night, sufficient, and suitable warning lights to prevent accidents and injuries to persons and/or property.
         9. Alter, remove and relocate or replace hoardings, barriers and entrances as required by the Work. Hazards requiring such protection shall be eliminated as soon as possible and protection devices removed. Maintain protection until state of construction allows their removal.
         10. Provide and maintain temporary weathertight protection for all exterior openings in walls, floors and roofs until the building is closed in.
         11. Close off floor areas where walls are not finished, seal off openings and enclose building interior work area. Polyethylene or other approved translucent material shall be framed in or around wall openings. Provide temporary doors, frames, hinges, locks, keys, and bolts as required.
         12. Should the work be stopped for any cause, provide protection and bracing for the Work.
      6. Lay protective 13mm (1/2") plywood over completed areas of roof on which other trades are to work.
   4. FIRE SAFETY REQUIREMENTS
      1. Comply with fire and safety regulations required by the authorities having jurisdiction.
      2. Take necessary precautions to eliminate fire hazards and to prevent damage to Work, building materials, equipment, and other property both public and private having to do with Work. Inspect Work at minimum weekly intervals for this purpose. Do not store combustible materials near or next to occupied areas of the building, or next to exit pathways.
      3. Store and locate products and equipment packed in cardboard cartons, wood crates and other combustible containers in orderly and accessible manner.
      4. Tarpaulins shall be fire-resistant.
      5. Open fires and burning of rubbish are not permitted on the site.
      6. Provide and maintain in working order, ULC labelled fire extinguishers or other approved fire extinguishing equipment, locate in prominent positions, in accordance with requirements of authorities having jurisdiction and insurance companies having jurisdiction, codes, regulations and bylaws in the building until the permanent fire protection system in the building is available.
      7. Provide temporary standpipe system, when required by authorities having jurisdiction.
      8. Except as otherwise specified herein, soldering, welding, and cutting operations shall be carried out in areas free of combustible and flammable contents, with walls, ceilings and floors of non-combustible construction or lined with non-combustible materials.
      9. When it is not practicable to undertake welding, soldering, and cutting operations in areas described in the previous paragraph, combustible and flammable materials shall either be removed minimum of 9144mm (30') from the work area or otherwise protected against ignition by sheet metal or other non-combustible material.
      10. When welding, soldering, or cutting is to be carried out near piping containing flammable gas, the section of piping located within 914mm (3') of the torch or other source of combustion shall be covered with wet, non-combustible insulating material at least 6mm (1/4") thick.
      11. Prior to initiating any open flame work or welding operation, discuss the proposed work with the Consultant and take necessary precautions to prevent inadvertent activation of the existing fire alarm system. Have sufficient suitable hand operated fire extinguishers on hand near the work area. Ensure that an additional person is readily available to operate fire extinguishers should the need arise.
   5. PERSONAL HEALTH AND SAFETY REQUIREMENTS
      1. Comply with all requirements of the Occupational Health and Safety Act, Ministry of Labour, Construction Safety Association, and all other authorities having jurisdiction in the place of the Work.
      2. Contractor shall submit company safety policy for review by Owner and Consultant. The policy must meet or exceed the requirements of the authorities having jurisdiction.
      3. Contractor shall employ and pay for services of safety supervisor in accordance with the requirements of the authorities having jurisdiction. Safety supervisor shall have training with the Construction Safety Association.
      4. Alcohol and/or drugs will not be allowed on the site. Anyone found in possession of alcohol and/or drugs shall be dismissed from the site immediately and without notice, maybe subject to civil and/or criminal proceedings.
      5. WHMIS program shall be fully enforced.
      6. Contractor shall be prepared to sign the "Guidelines For The Structure and Function Of The Joint Occupational Health and Safety Committee", if requested by the Owner.
      7. When carrying out soldering, welding, or cutting procedures, be it in shop or in the field, ensure that workers comply with the following:
         1. Wear appropriate protective clothing such as gloves, leather aprons and/or arm spark guards.
         2. Wear suitable goggles or face shields as appropriate.
         3. Protect co-workers from eye or other injuries through the use of fire-resistant portable shielding devices.
         4. Provide and use a portable fume eliminator at all times during welding, soldering, or cutting operations within the existing building.
   6. SECURITY
      1. Maintain security of construction site by control of access through enclosing barricades, and hoardings during times work is in progress, and by locking hardware.
      2. Properly close and lock the construction site at nights, Sundays, holidays, and other occasions when the Work is not in progress.
      3. The Owner assumes no responsibility for the safeguarding of tools or equipment from theft.
      4. Take precautions to guard construction site, premises, materials, and the public during and after working hours. During regular working hours, maintain watch to guard construction site and contents.
      5. Maintain security at all times if construction is shut down because of a strike or a lockout.
      6. Provide security guards and security lighting during all after hour work.
      7. Provide personnel to direct traffic as required during working hours.
   7. ACCESS ROADS, WALKS AND PARKING
      1. Access Roads and Walks:
         1. All construction vehicles and personnel required for construction shall use existing access roads and walks as determined at later date by Owner. When no longer required, or at completion of Work, make good, disturbed surfaces. Maintain roads and walks, removing dirt, mud, debris, ice, snow, and other obstructions during use.
         2. Provide for access of emergency vehicles at all times.
      2. Parking:
         1. Parking for Contractor's, subcontractors, suppliers and/or their employee's vehicles shall be limited to restricted area as designated by the Owner.
         2. The Owner, property management and their employees will not be responsible for parking fines incurred by the Contractor, Subcontractors, suppliers and/or their employees.
   8. SITE SIGNS
      1. No signs, bills or posters will be allowed on the site, other than site signs as follows:
         1. Project construction sign shall be supplied and installed by Owner under work of separate Contract.
         2. Place only specified project construction sign and notices regarding safety, caution, or instructions on or near site.
         3. No unauthorized signs, bills, posters, or advertisements of any kind are permitted. Should such unauthorized advertisements be applied to the temporary hoarding by the public or anyone else, upon discovery of such, the Contractor shall remove them on a weekly basis.
         4. Erect all notices as directed by Owner.
         5. Remove all notices on completion of the Contract.
   9. FIELD OFFICES AND SHEDS
      1. Field Offices:
         1. Provide temporary offices for Owner's, Consultant’s, and Contractor's use. They shall contain facilities as required for Contractor, a conference table and chairs for site meetings, and facilities for the Owner and the Consultants.
         2. Temporary field offices shall be designated on site until such time where an area located inside the constructed building, can be designated by the Owner. No other location shall be used for temporary field office. Temporary site office shall not exceed 3048mm (10') x 15240mm (50').
         3. Facilities shall consist of an office desk and chair, a two drawer filing cabinet, two chairs, use of a telephone, use of facsimile machine, and a layout table for drawings located so that when drawings are spread out their orientation is same as that of building under construction.
         4. Heat, cool and light offices to minimum code requirements for office buildings.
         5. Keep temporary field office clean and remove all rubbish at the end of each workday.
         6. Include construction and operating hardware, with security locks, as required by the Owner.
      2. Site Storage:
         1. Until such time where an area can be located inside the constructed building, designated by the Owner as a temporary site storage, provide storage trailers or construct weather-tight storage sheds for storage of materials that may be damaged or defaced by weather, in locations indicated by the Owner.
         2. Provide floors raised 150 mm (6”) clear of ground for storage of Products.
         3. Include security locks, as required.
         4. Install lighting in storage areas and heat in those storage areas containing materials damaged by low temperature.
         5. Provide separate shed located where directed in writing by Consultant for storage of volatile materials.
         6. Owner is not responsible for securing Products or materials at the Place of the Work.
         7. Handle and store materials so as to prevent damage or defacement to the Work and surrounding property.
   10. DUST CONTROL
       1. Provide dust tight screens or barriers to localize dust generating activities for the protection of tenants, employees, equipment, adjacent and finished areas of Work, and the public. Maintain and relocate protection until Work is complete. Respond immediately to complaints of dust received from the public, authorities having jurisdiction, Owner, and Consultant.
       2. Obtain Consultant's approval of installed dustproof screens and protection methods before proceeding with construction/alteration work.
       3. Painted gypsum wallboard and metal stud dustproof screens shall extend to underside of structure and shall be erected to protect adjoining areas and rooms. Apply bead of sealant or other acceptable seal continuously around periphery of each face of partitioning to seal gypsum board/structure junction where dustproof screens abut fixed building components. Seal perimeter of cutouts, around fixtures and fittings and other penetrations. Tape or seal between adjacent boards. Separate construction areas from occupied areas.
       4. Provide protection for existing equipment sensitive to dust and noise. Prevent dust migration through HVAC or return air systems.
       5. Co-ordinate location of dust barriers and dust tight doors with Consultant.
       6. Install temporary packing at bottom of doors to areas where demolition/construction shall be performed to prevent dust seepage into existing spaces. Do not permit dust and dirt to escape beyond area being constructed/altered.
       7. Provide daily vacuuming of construction dust from existing areas as work progresses; this shall be considered a minimum requirement, increase vacuuming as necessary. The Owner may have vacuuming work done by others and cost deducted from Contractor's progress payments if this requirement is not fulfilled.
       8. Provide locked doors in barriers to permit access by Consultant, Owner, and Owner's security personnel to construction areas and to areas under Contractor's custody. Supply padlocks and construction cores.
       9. Remove dustproof screens at completion of work in areas and make good damaged or blemished areas. Patch and make good to access, altered and damaged areas caused by work and screens. Maintain integrity of fire or sound separation.
       10. Prevent nuisance to adjacent areas near the work from dust by taking additional appropriate anti-dust measures at such times as found necessary, and at other times complaints of dust are received from the Owner's representative and others.
   11. NOISE AND VIBRATION CONTROL
       1. Take measures to control noise and vibration generated by the Work.
       2. Take appropriate noise and vibration control measures at times found necessary, and at other times complaints of noise are received from the public, authorities having jurisdiction, Owner, and Consultant.
       3. These requirements are for the consideration of the public, tenants, and employees. Requirements shall not be construed as cause for elimination or restriction of Contractor's working schedule, claims for delay of work nor additional costs.
   12. FIRES
       1. Open burning fires on site will not be permitted.
   13. FIRST AID SERVICES
       1. Provide and maintain First Aid services as required by the authorities having jurisdiction, the Workplace Safety, and Insurance Board (WSIB) and Union Agreements.
   14. TRAFFIC CONTROL
       1. Do not block roads or impede traffic. Keep construction traffic to designated roads only. Provide flag-person to direct traffic as required.
       2. Provide a hard surface area at the Place of the Work for cleaning down trucks prior to entry onto municipal roads or private roads outside of the Place of the Work.
       3. Keep public and private roads free of dust, mud and debris resulting from truck, machinery and vehicular traffic related specifically to this Project, for the duration of Work.
       4. Clean roads regularly, public, or private. Wash down and scrape flush roads at least daily when earth moving operations take place. Maintain public property in accordance with requirements of authorities having jurisdiction.
2. Products

Not Used

1. Execution

Not Used

END OF SECTION