**SECTION 01.50.50**

**TEMPORARY FACILITIES AND CONTROLS**

**50.00 GENERAL REQUIREMENTS**

* 1. The Contractor shall be responsible for providing and maintaining all temporary facilities until Substantial Completion. Removal of such prior to Substantial Completion must be with the concurrence of the Architect. The Contractor bears full responsibility for re-providing any facility removed prior to Substantial Completion.
	2. Removal of all temporary facilities shall be a condition precedent to Substantial Completion unless directed otherwise by the Architect or specifically noted in the specifications.
	3. The Contractor must comply with all safety laws and regulations of the Commonwealth of Massachusetts, the United States Government, and local government agencies applicable to Work under this contract. The Contractor's attention is directed to the Commonwealth of Massachusetts, Department of Labor, and Division of Occupational Safety Regulations.

**50.01 TEMPORARY ELECTRICITY**

* 1. Temporary service and lighting shall be provided by a licensed electrician selected and paid for by the Contractor. This work shall be performed under the direct supervision of at least one master electrician, who will be present on the project at all times when such work is being performed. This service shall include coordination with the local utility and other authorities having jurisdiction.
	2. The Contractor may make use of the electricity available at the site, metered and paid for by the Owner.
	3. Where heavy duty electric equipment drawing current in excess of 15 amperes is involved, the trade requiring such excessive amperage shall provide temporary service to supply the power.
	4. All temporary work shall be provided in conformity with the National Electric Code, State laws, and requirements of the power company. Particular attention is called to Commonwealth of Massachusetts, Department of Labor Division of Occupational Safety Regulations.
	5. Temporary Electric Service and Lighting shall include but not be limited to:
		1. All labor, materials, and equipment necessary to supply temporary power of adequate capacity for the project.
		2. Transformers and meters, when required by the power company, furnished by the power company and paid for by the Contractor.
		3. Temporary work of a special nature, not otherwise specified hereunder, shall be provided, maintained, and paid for by the trade requiring same.
		4. The Contractor shall furnish, install, and maintain lamps in operating condition.
		5. The Contractor, and each Subcontractor, shall furnish their own extension cords and additional lamps as may be required for their work.
		6. All lamps installed in permanent lighting fixtures and used as temporary lights during the construction period shall be removed and replaced shortly before Substantial Completion by the appropriate set of lamps required to be provided under the Electrical section of the specifications.
		7. The temporary electrical facilities shall be dismantled and completely removed from the project site. This removal shall occur when the permanent electrical system is operational and accepted by the Architect. Removal shall be done by a properly licensed electrician.

**50.02 TEMPORARY FIRE PROTECTION**

* 1. The Contractor shall take necessary precautions to insure against fire during construction. The Contractor shall be responsible to insure that the area within contract limits is kept orderly and clean and that combustible rubbish and construction debris is promptly removed from the site.
	2. Installation of equipment suitable for fire protection shall be done as soon as possible after commencement of the Work. The Contractor's attention is directed to the requirements of the Commonwealth of Massachusetts, Department of Labor and Workforce Development Regulation 454 CMR.

**50.03 TEMPORARY HEAT**

* 1. Providing temporary heating service and equipment in interior spaces:
		1. The Contractor shall be completely responsible for providing all equipment and labor required to comply with this section.
		2. The Contractor shall utilize the services of a qualified Heating subcontractor for providing Temporary Heat. These services shall be paid for by the Contractor.
	2. The Contractor shall provide a minimum temperature of 70 degrees Fahrenheit to all occupied areas of the Project (This shall include common and public areas affected by the work).
	3. The Contractor shall provide thermometers at places designated by the Architect in order to determine if specified temperatures are being maintained.
	4. Temporary heating system work shall be performed under the direct supervision of individuals properly licensed to perform the necessary work.
	5. All temporary work shall be provided in conformity with all applicable codes, State laws, and requirements of the utility company. Particular attention is called to Commonwealth of Massachusetts, Department of Labor Division of Occupational Safety Regulations.
	6. The Contractor shall pay the costs of all fuel and electricity required for temporary heating until Substantial Completion unless specified otherwise.
	7. Utilizing the Permanent Heating System for Temporary Heat:
		1. The Contractor may, with the approval of the Owner, elect to utilize the permanent heating system for temporary heat. This may be allowed if the building is enclosed and after the heating system has been tested and is ready to operate and providing the Contractor complies with all provisions stated elsewhere in the Contract Documents.
		2. If the permanent heating system cannot be utilized or if work requires a shutdown of the existing system the Contractor shall make arrangements, acceptable to the Owner, to comply with this requirement at no additional cost to the Owner.
		3. The Contractor shall furnish and pay the costs of any materials and equipment which are not part of the permanent heating system and which may be required to operate the permanent heating system on a temporary basis.
		4. The Contractor shall have a qualified heating mechanic check the heating system a minimum of twice daily, when no work is being performed at the site.
		5. It shall be the Contractor's responsibility to have all portions of the permanent heating system that are used for heating during construction thoroughly cleaned and restored to first class condition, to the satisfaction of the Owner.
		6. No parts of the air handling system shall be used until temporary filters have been installed satisfactory to the Architect. Such filters shall be kept clean and in efficient working condition, and at the time of Substantial Completion shall be replaced by the permanent filters at no cost to the Owner.
		7. The Owner's warranty for the permanent heating system shall begin on the date of Substantial Completion of the entire project
1. Installation of weather protection and heating devices shall comply with all safety regulations including provisions for adequate ventilation and fire protection devices.
	1. Unit heaters, if used, shall be of the smokeless type and be installed and operated in such a way that finished work will not be damaged. "Salamanders" shall not be used.
	2. Providing temporary heating service and equipment for exterior work:
		1. Temporary heat in outside areas shall be in compliance with MGL c149 §44G.
		2. Installation of weather protection and heating devices shall comply with all safety regulations including provisions for adequate ventilation and fire protection devices.
		3. Unit heaters, if used, shall be of the smokeless type and be installed and operated in such a way that finished work will not be damaged. "Salamanders" shall not be used.

**50.04 TEMPORARY TELECOMMUNICATIONS**

1. The Contractor shall be available through mobile phone service at all times and shall provide a 24 hour phone number and contact in case of emergencies.

**50.05 TEMPORARY WATER**

* 1. The Contractor may make use of the available water supply at the site for construction purposes, provided the permission of the Owner is obtained beforehand, water is verified at the source and only as long as the water is not used wastefully.
	2. The Contractor shall provide all necessary piping and hoses to utilize the available sources of water.
	3. The Contractor shall provide an adequate supply of cool potable drinking water with individual drinking cups for personnel on the job.

**50.06 TEMPORARY STRUCTURES AND MATERIAL HANDLING**

* 1. The Contractor shall provide such storage sheds, temporary buildings, or trailers as required for the performance of the Contract. Subcontractors shall provide their own temporary buildings and trailers. Storage shall be located where directed by the Owner.
	2. Materials shall be handled, stored, installed, cleaned, and protected in accordance with the best practice in the industry and, except where otherwise specified in the Contract Documents, in accordance with manufacturer's specifications and directions.
	3. The Contractor must obtain the permission of the Owner for the use of any storage facilities available on site, but the Owner assumes no responsibility for articles stored.
	4. Lawns, paving or other surfaces within areas used by the Contractor shall be restored to original condition when temporary structures are removed.

**50.07 SANITARY FACILITIES**

* 1. The Contractor shall provide and service an adequate number of toilet booths with chemical type toilets.
	2. The toilets shall be erected in a location approved by the Architect and shall be maintained by the Contractor in a clean and orderly condition in compliance with all local and state health requirements.
	3. Under no circumstances will the Contractor's personnel be allowed to use Resident's toilets.

**50.08 TEMPORARY USE OF ELEVATOR**

* 1. Should the Contractor need to use the elevator, special arrangements shall be made with the Owner.
	2. The Contractor shall leave the elevator in the same condition as it was at the time it was turned over for temporary service. The Contractor shall pay for all expenses for repairs or replacement necessary to restore the apparatus to its original condition.

**50.09 HOISTING FACILITIES**

1. Except as otherwise specified, the Contractor shall provide, operate, and remove material hoists, cranes, and other hoisting as required for the performance of the Work by all trades. All such hoisting service shall be without cost to the Subcontractors.

**50.10 TEMPORARY STAGING, STAIRS, CHUTES**

* 1. Except as otherwise specified, the Contractor shall furnish, install, maintain in safe condition, and remove all scaffolds, staging, and planking over 8 ft. in height, as required for the use of all trades for proper execution of the Work.
	2. The Contractor shall furnish, install, maintain in safe condition, and remove all temporary ramps, stairs, ladders, and similar items as required for the use of all trades for the proper execution of the Work.
	3. Permanent stairs shall be erected as soon as possible, for which the Contractor shall provide temporary protective treads, risers, handrails, and shaft protection.
	4. The Contractor shall furnish, install, maintain, and remove covered chutes from openings in the exterior walls of upper floors. Such shall be in convenient locations and permit disposal of rubbish directly into trucks or disposal units.
	5. Debris shall not be allowed to fall freely from upper levels of the building. Materials shall not be dropped from open windows.

**50.11 TEMPORARY PARKING**

*Check with the LHA to determine if there are special needs concerning parking for workers during construction. Incorporate these conditions into this section.*

**50.12 TEMPORARY TRAFFIC CONTROL**

*Check with the LHA to determine if there are special needs concerning traffic created by equipment and delivery trucks during construction. Incorporate these conditions into this section.*

**50.13 TEMPORARY PROTECTION**

1. All dwelling units will be occupied during construction. The Contractor shall take all necessary precautions to ensure the public safety and convenience of the occupants during construction.
2. Any damage to buildings, roads, (public and private), bituminous concrete areas, fences, lawn areas, trees, shrubbery, poles, underground utilities, etc. shall be made good by and at the Contractor's own expense, all to the satisfaction of the Owner.
3. The Contractor shall patch, repair and/or replace all adjacent materials and surfaces damaged after the installation of new work at no expense to the Owner. All repair and replacement work shall match the existing in kind and appearance.

**50.15 NOISE AND DUST CONTROL**

1. The Contractor shall take special measures to protect the residents, neighbors, and general public from noise, dust, and other disturbances by:
2. Keeping common pedestrian and vehicular circulation areas clean and unobstructed;
3. Insulating work area from occupied portions as far as possible; and
4. Sealing dust and fumes from contaminating occupied spaces.

**50.16 TEMPORARY BARRICADES**

1. The Contractor shall:
	* 1. In addition to the weather protection during the months of November to March specified elsewhere, provide temporary watertight enclosures for openings in exterior walls and in roof decks when and as required to protect the Work from damage by inclement weather. Temporary enclosures shall be provided with adequate means of ventilation to prevent accumulation of moisture in the buildings.
		2. Provide temporary wood doors for exterior entrances and elsewhere as required. Permanent door enclosures shall not be used as temporary enclosures.
		3. Protect sills, jambs, and heads of openings through which materials are handled.
		4. Protect decks and slabs to receive work by other trades from any soiling which will prevent proper adhesion of subsequent Work. Decks and slabs shall be left clean and free of blemishes at the time other trades begin the application of their work.
		5. Protect concrete slabs to remain exposed and finished floors against mechanical damage, plaster droppings, oil, grease, paint, or other material which will stain the floor finish. Install and maintain adequate strips of building paper or other protection on finished floors in rooms where other trades will do future Work.
		6. Protect all surfaces to receive work by other trades from any soiling which will prevent proper execution of subsequent work
		7. Protect other areas, furniture, and private property of the residents and the Owner. Any areas damaged by the Contractor shall be restored to the original condition or compensated at the Contractor’s expense.
2. Roof surfaces and waterproofed surfaces shall not be subjected to traffic nor shall they be used for storage of materials. Where some activity must take place in order to carry out the Work, adequate protection must be provided.
3. After the installation of any Work is completed, the Contractor shall be responsible for its protection and for repairing, replacing, or cleaning any such Work which has been damaged by other trades or by any other cause, so that all Work is in first class condition at the time of Substantial Completion.

**50.17 TEMPORARY PROTECTIVE WALKWAYS**

1. The Contractor shall, at all times, leave an unobstructed way along walks and roadways, and shall maintain barriers and lights for the protection of all persons and property in all locations where materials are stored or work is in progress.

**50.18 TEMPORARY CONSTRUCTION FENCE**

1. The Contractor shall be responsible for providing and maintaining temporary fencing or barricades around the construction as may be necessary to assure the safety of all persons authorized or unauthorized. Such protective measures shall be located and constructed as required by local, state, and federal ordinances, laws, codes, or regulations.

**50.19 SECURITY**

1. The Contractor shall be responsible for providing all security precautions necessary to protect the Contractor's and Owner's interests.
2. Where excavation is involved, the Contractor shall be responsible for providing continuous watchmen service as necessary, to insure adequate protection of the general public.

**50.20 TEMPORARY STORM WATER POLLUTION CONTROL**

1. Protect excavations, trenches, buildings, and materials at all times from rain water, ground water, backing‑up, or leakage of sewers, drains, or other piping, or from water damage of any origin. Provide all pumps, piping, coverings, and other materials and equipment as required by job conditions to accomplish this requirement

**50.21 WEATHER PROTECTION**

* 1. The Contractor shall provide temporary enclosures and heat to permit work to be carried on during the months of November through March in compliance with MGL c.149 §44G (d). These specifications are not to be construed as requiring enclosures or heat for operations that are not economically feasible in the opinion of the Owner. Without limitation this includes such items as excavation, pile driving, steel erection, erection of certain exterior wall panels, roofing, and similar operations.
	2. "Weather Protection" means the temporary protection of that Work adversely affected by moisture, wind, and cold by covering, enclosing, and/or heating. This protection shall provide adequate working areas during the months of November through March as determined by the Owner and consistent with the construction schedule to permit the continuous progress of all Work necessary to maintain an orderly and efficient sequence of construction operations. The Contractor shall furnish and install "Weather Protection" material and be responsible for all costs, including heating required to maintain a minimum of 40 degrees F. at the working surface. This provision does not supersede any specific requirements for methods of construction, curing of materials, or the applicable conditions set forth in the Contract Documents with added regard to performance obligations of the Contractor.
	3. Within 30 calendar days after award of the Contract, the Contractor shall submit in writing, to the Architect for approval, three (3) copies of the proposed methods for "Weather Protection".
	4. The Contractor shall assume the entire responsibility for weather protection during construction (until Substantial Completion), and shall be liable for any damage to any Work caused by failure to supply proper weather protection and proper ventilation.
	5. Work damaged by frost shall be removed and replaced by and at the Contractor's expense and as directed by the Architect.
	6. It is to be specifically understood that the Contractor shall do no work under any conditions deemed unsuitable by the Contractor to the execution of the Work. This provision shall not constitute any waiver, release, or lessening of the Contractor's obligation to bring the Work to Substantial Completion within the period of time set forth in the Contract Documents.

**50.22 WIND PROTECTION**

1. Should high wind warnings be issued by the U.S. Weather Bureau, the Contractor shall take every precaution to minimize danger to persons, to the Work, and to the adjacent property.

**END OF SECTION 01.50.00**