
SECTION 01350 - SPECIAL HOSPITAL PROCEDURES

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes special procedures for hospital Projects.

1.02 OWNER REQUIREMENTS

A. General Owner Rules:

1. Work rules, promulgated by Owner are to be followed by the Contractor, sub-contractors, and their employees, doing work within any and buildings owned or operated by the Owner.
2. The Work Rules are intended to minimize the impact of construction projects of the Contractor, sub-contractors, and their employees, on Patients, Visitors, and Staff.
3. The rules are to be communicated to all employees of the Contractor and sub-contractors prior to beginning any work.
4. Any disagreement or difficulty regarding these rules shall be brought to the attention of the Owner's Engineering Department's or Owner's Project Representative.
5. Owner's personnel with authority to halt/control construction evolutions will be introduced at the Preconstruction Meeting. These individuals will be empowered to halt construction should noise, vibration, infection control, or other situations that significantly affect normal Owner operations. All construction shall be halted should a situation be life threatening, regardless of who notifies construction personnel. Contractor shall inform the Owner's designee immediately upon work stoppage.
6. Contractors shall comply with the following:
 - a. Contractor shall report to the Owner's Engineering Department before starting the work.
 - b. Contractor shall provide a full time supervisor on site at all work times during the construction period. Full time supervision shall require at least one person on site who can supervise workmen, contracts, and make decisions on behalf of the Contractor.
 - 1) Each trade category is required to provide adequate site supervision as coordinated through the Owner's Representative running the project. All trades are contractually responsible for supervising their trades and coordinating efforts with others.
 - c. All construction workers inside the facilities are required to wear badges obtained from the Security Office.
 - d. There is no smoking anywhere in the Owner's building(s).
 - e. Fires, no matter how small, shall be reported and pull stations activated.
 - f. In case of a medical emergency on site, call 911 for on site medical help.
 - g. Remove or deactivate wedges or other door hold open devices immediately after moving items through the door opening.
 - h. Obtain cutting and welding permit from Owner's Engineering Department before commencing cutting and welding operations. Provide fire watch complete with appropriate fire extinguishers.
 - i. The minimum acceptable dress code on site shall be work pants, appropriate boots, and at least a T-shirt with no lurid, off color, sexist, or profanity type sayings imprinted on it. The Owner's Project Representative shall have the final say on this subject. Anyone not complying may be removed from the site at no extra cost to the Owner.
 - j. There are many varieties of people on site and to provide a good working environment for all people, all construction personnel shall refrain from using profanity on site. The Owner's Project Representative shall have the last say in determining whether or not someone should be removed from the site due to profanity violations.

- k. Contractor, sub-contractors, and their employees are expected to supply their own tools, equipment, and materials necessary to do the work. Borrowing Owner's tools, equipment, or materials is not permitted.
- l. Contractor is not permitted to start, stop, alter, adjust, or modify any Owner's equipment or system without written permission of the Owner's Project Representative. Any accidental change in the operating condition of any Owner's equipment or system must be reported to the Engineering Department or Owner's Project Representative immediately.
- m. Utility shutdowns or interruptions require a mandatory 24 hour notification and coordination with the Owner's Engineering Department or Owner's Project Representative.
- n. Contractors shall submit Material Safety Sheets to the Owner's Engineering Dept. Office or Owner's Project Representative for all chemical products to be used during the course of the Project. The Material Safety Data Sheets will become a part of the permanent records of the Owner. The Owner has Material Safety Data Sheets for all chemical products that a Contractor may be exposed to during the course of the Project. Material Safety Data Sheets are available for inspection on request.
- o. Contractor, prior to starting construction, shall verify location of nearest eyewash and drenching shower from Owner's Engineering Department or Owner's Project Representative.
- p. Behavior which could adversely effect the integrity or well-being of the Owner's building or its occupants is considered as an extremely serious incident and could lead to permanent removal of the responsible individual(s) and if necessary, the Contractor.
 - 1) Unacceptable behavior includes, but is not limited to, violation of Owner's fire, safety, security rules and regulations, profanity in any public or occupied area, theft, alcohol or other drug abuse or consumption on premises, or any behavior which jeopardizes the well-being of patients, or Owner's staff.
- q. Safety glasses shall be required to be worn at all times.
- r. Hard hats shall be required to be worn at all times.
- s. Radios, boom boxes, cassette players, etc. shall not be allowed within the building. In no case shall construction personnel disturb the existing patients in the building or the Owner's personnel.
- t. Construction and excavation areas shall have barriers erected and identified with easily understood hazard signs.
- u. Contractors shall park in area as directed by the Owner's Project Representative and obtain parking permits from the Security Office.
- v. Parking is not permitted on grass, sidewalks, or in driveways.
- w. Loading and unloading may be permitted at receiving dock. Owner's personnel will not receive or sign for any material delivered for construction purposes. Interference of Owner's use of receiving dock shall be kept to a minimum. Coordinate and make arrangement for dock use with the Owner's Project Representative.
 - 1) Delivery route must be clear, with signage, and a copy of the route made available to Owner's dock staff. Management of truck traffic to the Site must be consistently applied.
- x. Crane usage requires prior approval from the Owner's staff prior to crane arrival. Call for permit.
- y. It is the responsibility of the Contractor to maintain a clean and clear work site and ensure that Owner's office areas are clean for its next work shift. Contractors are responsible for their own cleanup, including sweeping of the area. Stockpiling debris on the Project Site, dumping debris directly on the ground, burning of debris, or placing debris in Owner's dumpsters, is not permitted. Combustible materials shall be handled and disposed of in a manner commensurate with the material.
- z. Hoses or electrical cords shall not cross public walkways, corridors, doorways, or similar locations where foot or wheelchair traffic would be impeded or made hazardous.

B. Hot Work Requirements

1. Hot Work is defined as any activity producing flame, sparks, or heat. This includes, but is not limited to: welding, torch cutting, abrasive grinding, brazing, soldering, and space heaters.
2. All Hot Work to be performed inside the building, requires a permit to be issued by the Owner's Representative.
3. Subcontractor doing the Hot Work is responsible for obtaining a permit for Hot Work that will be performed inside the building.
4. Upon issuance of the Hot Work permit, the Subcontractor supervisor shall sign the Work permit verifying the acknowledgment and acceptance of its limitations.
5. Upon receiving the permit, the Subcontractor supervisor has the responsibility to review the permit with their employees explaining the precautions and limitations of the task and permit.
6. Workers must understand that all work must stop if there is a change in conditions that may increase the potential of fire.
7. A fire extinguisher rated no less than ABC (Multi-purpose type) is required to be within 25 feet of all Hot Work.
8. If sparks, flames, or heat are penetrating the next level, whether above or below, a fire watch will be stationed on that level. The person performing this fire watch is required to have at least a fire extinguisher rated no less than ABC (Multi-purpose type). The area where potential slag, sparks, or other debris generated by the Hot Work may fall or penetrate is required to be barricaded to protect other workers and the public.

C. Temporary Fire Protection

1. Each Subcontractor shall at all times exercise every precaution for prevention of fire and make timely and adequate provisions for protection and safety of persons and property in event of fire.
2. Each subcontractor shall provide fire protection for its portion of the Work. It shall furnish fire extinguishers and/or other fire fighting devices and equipment, of types and in such quantities as are adequate to insure a high degree of fire safety.
3. Whenever Work of a particularly hazardous nature is being done, the Subcontractor doing such Work shall provide additional or special fire protection as may be necessary.
4. Gasoline, if used on the job, must be contained in safety cans equipped with flame arrestors and spring loaded caps and stored in a safe place, protected from damage.
5. Gas welding equipment may not be used. Gasoline torches or burners shall not be permitted. When welding or flame cutting is permitted, Subcontractors shall provide a full time stand by watchman with a fire extinguisher mounted on a cart or other means of transportation located immediately adjacent to Work and ready for immediate use.
6. After the Owner has occupied any areas of the work, the following steps are to be followed, in conjunction with and under the supervision of the Owner's designated personnel, if and when a sprinkler system is to be shut down.
 - a. Shut down if a break, damage, or leak occurs (not including fire). This will be an emergency shut down and should be performed quickly to reduce water damage.
 - b. Determine which control valve controls the water supply to the area which is leaking.
 - c. Unlock the control valve.
 - d. Fully close the control valve. The number of turns may range from 20 to 40 turns, depending on the size of the valve. Count the number of turns needed to close the PI and 'Wall Indicator Valve. This information will come in handy later
 - e. Open the main drain valve of the system that is not shut down. Opening the main drain will relieve the water pressure and drain water in the system directly to the outside of the building. Water from the leak will slowly stop.
 - f. The following areas should be notified:
 - 1) The sprinkler alarm company; inform them that you are working on damage to a sprinkler system and there may be signals on the system as repairs are made.

- 2) The Fire Department; inform them that you have an impairment and if you call them during this period for a fire, it may be in an unsprinkled area.
- 3) Factory Mutual; advise that you have a sprinkler impairment.
- 4) Corporate Loss Prevention; inform them of your status.
- g. Return to the closed valve and tag it with a valve shut tag. Record the closure on the record of valve closings.
- h. If the unit has a fire pump, check the pump and if running, it should be shut off. Be sure power is on to the pump, but it should not now be running.
7. Procedure for recharge after damage has been repaired:
 - a. Open the inspector's test drain for the system which is to be recharged.
 - b. Close the main drain for the system which is to be recharged.
 - c. If the unit has a fire pump, shut power off to the fire pump and jockey pump.
 - d. Slowly open the sprinkler control valve (PI, Wall Indicator Valve, or OS&Y). Count the number of turns to open. These must be the same as the number of turns to close the valve
 - e. Go to the inspector's test drain and observe. At first, there will be a combination of water and air discharged from the drain. Gradually, the air will stop and only a flow of water will be discharged. When that occurs, you can close the inspector's test valve.
 - f. Now, turn power back on to the jockey pump. When the jockey stops, you can then turn power back on to the fire pump. Do not use the fire pump to recharge the system
 - g. Remove the valve shut tag and now call Factory Mutual, the alarm company, the Fire Department, and Corporate Loss Prevention that your fire system is back in service. Make appropriate entry on the record of valve closings.
 - h. Send incident or fire report to Owner's Representative
8. Procedure for shut-down if a sprinkler head is opened due to fire:
 - a. The only person to order a sprinkler control valve shut following a fire is the local Fire Officer in charge. A valve should not be shut until the Fire Department has extinguished the fire and ordered the valve closed.
 - b. At this time, the procedure listed for shut-down if a break, damage, or leak occurs should be followed.

1.03 ALTERATION PROJECT PROCEDURES

- A. Perform alteration and removal work, including the alteration and removal work incidental to that shown or specified, to complete the alteration and removal work as shown on the Drawings or specified in this Section.
- B. Coordinate work of this section with other Division 1 Sections. Where requirements differ, the more stringent shall apply.
- C. In addition to work shown:
 1. Modify existing construction that interferes with new construction, to the extent of the interference. Coordinate proposed modifications with the Owner's Representative before proceeding.
 2. Cut and later patch holes and openings in existing construction necessary for connection of building work; for the passage or connection of structural members; and for the building alterations in connection with mechanical and electrical work.
 3. Properly repair surfaces left in place and scheduled to be exposed, that have been damaged due to alterations.
- D. Be responsible for a complete job, whether done as work under this Section or assigned to the particular trades involved.
- E. Include roof patching required to properly flash in new equipment curbs and pipe penetration curbs; verify the existing roofing materials and coordinate with Owner's Representative so as not to nullify any existing roofing warranties.

- F. Survey:
1. Prior to submitting shop drawings or beginning shop fabrication or field construction of Work in connection with the alterations, survey existing construction including structure, finish and equipment adjacent to construction to be removed. Be responsible for the accurate tie-in of the new work to the existing construction.
 2. Contractor is responsible for doing work in a complete and professional manner to result in a complete and workable solution to the construction project noted within this Project Manual. Coordination and supervision shall be the responsibility of the Contractor.
- G. Support Of Existing Structure
1. Prior to removing existing construction, provide temporary sheeting, underpinning, shoring and bracing to carry the loads and stresses withstood in place by the items to be removed as they pertain to work of this contract.
 2. Such temporary construction shall be placed so as not to block fire exit ways of the existing building, so as not to interfere with Owner's operations, and so as to allow space for performing the required alterations.
 3. Be responsible for the adequacy of temporary support of structure, as well as for damage to the existing building and contents thereof resulting from inadequate sheeting, underpinning, shoring and bracing.
 4. After materials and equipment are removed, inspect the structure and equipment to remain in place and notify the Owner's Representative of defects uncovered.
- H. Temporary Partitions And Closures
1. Temporary Partitions: Erect and maintain dustproof partitions and temporary enclosures to limit dust and dirt migration and to separate areas from fumes and noise as specified in Division 1 Section "Dust Control Procedures."
- I. Protections
1. Face of Building. Methods for transporting materials between ground and floor where work is to be done; and, for removing trash, rubbish and debris shall be safe methods which will not damage exterior face of building, endanger persons or damage property.
 2. Utilities. Protect existing utilities and services, as well as Owner's service systems, within and adjacent to the alteration operations, from damage on account of such operations. If utilities or services are uncovered that are not shown on the Drawings, advise the Owner's Representative and do not work in the immediate areas until instructed to do so.
 3. Disconnect, cap and abandon existing utilities and services exposed as a result of the alteration operations that are not required to remain in use; remove existing services as part of the demolition where so indicated or required; relocate existing services where so indicated or required.
- J. Workmanship
1. Make proper and approved connections of new Work to existing construction and necessary adjustments of either or both as required to produce a complete and finished job. Patching and new Work shall match existing construction, unless otherwise shown or specified, and shall comply with the applicable requirements of the individual technical Sections of the Specifications.

1.04 INFECTION CONTROL PROCEDURES

- A. General:
1. These procedures are intended to describe basic needs regarding the infection control issues and establish the basis for detailed specifications regarding this matter. Caution and imagination shall constantly be a part of the execution of the process of infection control.
 2. Containment: The area of demolition and construction shall be contained (sealed off) from adjacent building areas. The boundaries of containment include: elevators, chutes,

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- dumbwaiters, stairs, floor slabs above and below, demising walls (including doors across the corridors), and ceilings below.
3. Maintain negative air pressure, as compared to adjacent Owner and patient occupied areas, within the construction area at all times as specified in Division 1 Section "Dust Control Procedures."
- B. Containment Locations and Methods:
1. Elevators: Change controls to prevent elevators from opening within the containment area. Cover hoistway with air tight coverings, taped in place polyethylene film protected with plywood or gypsum board.
 2. Stairs Within Containment Areas: Stairways shall be accessible for Life Safety Emergencies. Stair doors shall be gasketed at jambs and head, equipped with an automatic drop seal at the bottom. Panic devices shall include alarms and a 15 second delay activation feature.
 3. Horizontal Exit Doors: Existing double egress doors shall remain useable for Life Safety emergency traffic, both directions, unless Interim Life Safety Measures (ILSM) can be used to delete or eliminate traffic.
 4. Existing Openings in Floor Slab Construction: Before any demolition work can commence, slabs above and below work areas shall be thoroughly inspected to locate holes or other openings through which air can pass. Openings shall be made air tight; use sealants, self-expanding foam, concrete, etc. To maintain the existing fire ratings, use only UL approved materials and methods. Concrete shall be used in a manner to secure the material in place. No new openings are to be made or existing slab penetrating items removed, until a negative air pressure status has been established within the construction containment space.
 5. Existing Openings in the Ceilings Below:
 - a. Any activity above an existing ceiling can cause dust to be dislodged and flow into spaces below. Lay-in acoustical ceilings are more apt to discharge dust than gypsum board ceilings, but there are minute cracks between light fixtures and gypsum board ceilings and similar cracks at diffusers and grilles. Sprinkler heads are another source for dust intrusion.
 - b. Therefore, as a part of containment, the cracks between ceiling mounted items and gypsum board ceilings shall be closed with a small, neat, continuous sealant bead.
 - c. Lay-in acoustic ceiling systems present a major containment challenge. The ceiling of rooms with acoustic lay-in ceilings shall be draped from below with polyethylene film, sealed with tape at the perimeter and at openings for lights; heating, ventilating, and air-conditioning (HVAC) items; and sprinklers, etc.
 - d. At times and places of particular concern, such as where work is occurring above an operating room, or other particularly sensitive space, the work shall occur when the space is not in use; and the space thoroughly cleaned before its use is resumed.
- C. Priorities:
1. Breaches (violations) of any of the procedures, protective barriers, protective conditions, etc., shall be dealt with in a high priority context, with appropriate correction or other actions taken immediately.
- D. Communications:
1. A direct line of communication shall be established such that adjacent (above, below, and adjacent) departments can directly communicate with the on-site project leadership. The intent is to be able to promptly resolve problems that may occur requiring an immediate response from the construction site.
- E. Phases of Infection Control:
1. Containment: Seal off construction / demolition area.
 2. Removal: Remove suspended / potentially infection related materials.
 3. Control: Prevent the re-occurrence of infectious conditions / materials.

- F. Containment:
1. Set up negative air flow fans. Direct flow away from fresh air intakes.
 2. Develop construction access means; identify stairway.
 3. Set-up dumpster / chute arrangement.
 4. Erect / construct horizontal barriers, fixed and operable (emergency exits).
 5. Develop vertical and horizontal barriers, seal openings in wall contiguous to adjacent occupied area and in floors above and below.
 6. Establish a method to demonstrate the presence of negative pressure in the containment area and to spot check the negative condition at any time (by Owner).
- G. Removal:
1. Inspect for presence of mold ; remove and dispose in sealed bags (or similar containers) and dispose of as infectious waste.
 2. Commence removal of demolition waste materials in areas where pipes, ducts, conduit, etc., penetrate floor slabs (above and below) and demising walls.
 3. Remove pipes, ducts, conduits, etc., and seal opening; performing work at such times as the areas above or below the work are vacated or deemed to not require being vacated. A coordination schedule is required.
 4. When such removal is complete, general demolition can commence. Demolition shall be completed before new construction work can commence. The entire area shall be thoroughly cleaned; vacuumed and damp mopped. NOTE: During demolition, dust control means shall exclude the use of water in any way that can cause water to stand, flow, drop, etc., as water (moisture) is a breeding material for aspergillus mold.
 5. As soon as work is placed in a new or existing floor slab opening, the clearance spaces shall be sealed. NOTE: Negative air flow forces, air movement, and volumes shall be adequate enough to provide negative air flow through any and all barrier openings at any and all times.
- H. Control / Maintenance:
1. Containment materials shall not be damaged or removed.
 2. Emergency exits shall not be used except for bonafide emergencies.
 3. Negative pressure conditions shall be maintained without interruption or exception.
 4. Breaches shall be contacted immediately, the cost borne by the Contractor responsible.
 5. Daily visual and / or measured inspections of the containment / negative pressure relation shall be made.
 6. Non-scheduled inspections may be made at any time.
 7. Periodic or routine (scheduled) damp mopping is likely to be required for dust control. Ordinary soap and water may be used. Final mopping shall be done with an approved germicide.
 8. Construction personnel shall be made aware of the Infection Control Policies and requirements, and be encouraged to follow them and promptly report deviations.
- I. Additional Requirements / Clarifications:
1. Work above highly medical activities, below shall require special and extra-ordinary procedures.
 - a. Joints, cracks, seams, etc., that could be the means for dust to move from above the ceilings into the activity below, shall be sealed as a part of the Containment Phase.
 - b. Work above highly medical activity, below ceilings shall occur only when the rooms below are fully protected. After work above has ceased and protective measures have been removed, the rooms shall be thoroughly cleaned before use.
 - c. At a time when construction has progressed to where all possible demolition is complete and finishes are in place, the Control / Maintenance activities can cease. Barrier materials, exhaust fans, etc., can be removed so that construction can be completed.
 - d. Should HVAC damper positions be changed as a result of this Project, record those changes, ascertain if those changes have caused other system changes, make

adjustments if required. When returning dampers to original positions, recheck the affect on the system and make adjustments if required.

- e. Infection Control is a High Priority and shall be treated seriously. Changes in job-site conditions and breeches in control and maintenance shall receive immediate response, attention, and action.

1.05 INTERIM LIFE SAFETY ITEMS

A. General:

1. The Interim Life Safety Measures are continued and documented so that the level of life safety is not diminished in any occupied area and a safe environment is maintained throughout construction of or alteration to buildings or grounds.
2. Interim Life Safety Measure (ILSM) are a series of administrative actions required to be taken to temporarily compensate for the hazard posed by existing NFPA 101 Life Safety Code (LSC) deficiencies or construction activities.
3. Implementation of ILSM is required in or adjacent to all construction areas and throughout building with existing LSC deficiencies. ILSM apply to all personnel including construction workers must be implemented upon project development and must be continuously enforced through project completion.
4. ILSM are intended to provide a level of life safety comparable to that described in Chapters 1-7.31 and the applicable occupancy chapters of the LSC. Each ILSM action must be documented through written policies and procedures. Except as stated frequencies for inspection testing, training, and monitoring and evaluation must be established by the organization.
5. Contractor Actions:
 - a. Ensure that exits provide free and unobstructed egress. Construction shall not commence until exits are available and are clearly marked. Personnel shall receive training if alternative exits must be designated. Buildings/areas under construction must maintain escape facilities for construction workers at all time. Means of egress in construction areas must be inspected daily.
 - b. Ensure free and unobstructed access to emergency department/service and for emergency forces.
 - c. Ensure that fire alarm, detection and suppression systems are not impaired. A temporary, but equivalent system shall be provided when any fire system is impaired. Temporary systems must be inspected and tested monthly.
 - d. Ensure temporary combustible materials that will not contribute to the development or spread of fire.
 - e. Provide additional fire-fighting equipment and use training for personnel.
 - f. Prohibit smoking in accordance with MA1.3.15 in or adjacent to all construction areas.
 - g. Develop and enforce storage, housekeeping, and debris-removal practices that reduce the flammable and combustible fire load of the building to the lowest level necessary for daily operations.
 - h. Conduct a minimum of two fire drills per shift per quarter.
 - i. Increase hazard surveillance of buildings, grounds, and equipment with special attention to excavations, construction areas, construction storage, and field offices.
 - j. Train personnel when structural or compartmentation features of fire safety are comprised.
 - k. Conduct organization wide safety education programs to assure awareness of any (LSC) deficiencies, construction hazards, and these ILSM.

END OF SECTION 01350